CloudNine™ LAW

User Guide

CloudNine™ LAW, Version 7.10.106

- **Getting Started**
- **Licensing**
- **Working with Cases and Projects**
- **Working with Fields**
- **Notifications**
- **Acquiring Documents**
- **Image Display**
- **Manipulating Documents**
- **Working with Native Documents**
- **Grid Displays**
- **Searching**
- **Coding**
- **Batch Processing**
- **OCR**
- **Managing Distributed Processes**
- **Deduplication**
- **Near-Duplicate & Email Thread Analysis**
- **Exporting**

cloudnine™

CloudNine™ LAW User Guide

CloudNine™ LAW
CloudNine™ Concordance®
CloudNine™ Explore
CloudNine™ Explore Web

Version: 7.10.106
Release Date: July 1, 2024

Table of Contents

Chapter 3 Reference Information

CloudNine™ LAW

User Guide

Welcome

Chapter

1

Welcome

CloudNine™ LAW helps legal professionals and their service providers meet the increasing demands in the discovery of printed and electronic documents. By integrating production-level scanning with robust e-discovery and data processing features, LAW is optimized to enable scalable execution of even the largest discovery projects, from running multiple computers to batch scan boxes of paper documents to importing millions of e-mails and attachments from mail stores, to full text indexing, querying, and exporting to many other popular litigation support applications.

In practice, LAW supports these key discovery processes:

Prefilter Large Document Sets

The CloudNine™ Explore and Explore Web modules are standalone prefiltering modules available as a complement to the CloudNine™ LAW suite. Use them to implement high volume electronic discovery productions. CloudNine™ Explore Web indexes, filters, and produces export sets. Culled documents are passed directly to LAW for full expansion and production.

Creating and Managing Cases

CloudNine™ LAW centers all activities, including data collection, processing, and export on the case. Each case corresponds to a database, which tracks all source files and production files, including graphics and text.

In the process of creating a new case, you select a database engine, create and name the database, establish a folder structure for documents, and define any additional database fields you will need later for coding. Optionally, to simplify future case creation, you can create case templates that specify pre-defined options.

Acquiring Documents

In this step you may do any of the following activities that bring documents into the case:

- Use Turbo Import, a new multi-agent ingestion engine designed to handle more import jobs, bigger data, and with a reduced infrastructure versus ED Loader.
- Import electronic discovery using ED Loader to extract text and to record document metadata in the case database.
- Scan paper documents to electronic format.
- Import items and metadata from existing cases and load files.
- Import existing TIFFs or other kinds of image files.
- Assign custodians at the batch or source level.
- Code documents with data fields.

Performing Quality Control

The exact nature and timing of quality control activities vary greatly, depending on the type and quality of source documents. Quality control typically involves multiple activities spread throughout the discovery project:

- Error correction, for example: reviewing and fixing processing errors, keeping detailed logs of warning and other error conditions, and alerting you to suspected file extensions.
- Tag documents that contain specific text or metadata attributes for the purpose of narrowing consideration to pertinent documents or pages.
- Deduplicate files that were imported during electronic discovery.
- Fix problems with TIFF files using built-in image cleanup tools.

Batch Processing

Batch Processing functionality helps to automate various processor-intensive jobs, including: document numbering, image cleanup, endorsing, conversion to TIFF or PDF, printing, and optical character recognition (OCR). LAW lets you take batch processing to a new level by combining the processing power of multiple computers to join distributed batch processing of large jobs.

Exporting

LAW provides a wide range of options for exporting to litigation support applications in a variety of standard formats, including: native files, images, coded data, and OCR text.

For information on LAW and other litigation support products by CloudNine™, please visit our website.

CloudNine™ LAW

User Guide

Using CloudNine LAW

Chapter

2

Using CloudNine LAW

Getting Started

Main User Interface

The main window for CloudNine™ LAW provides a top-level view of the case and provides access to the tools you use to perform discovery tasks.
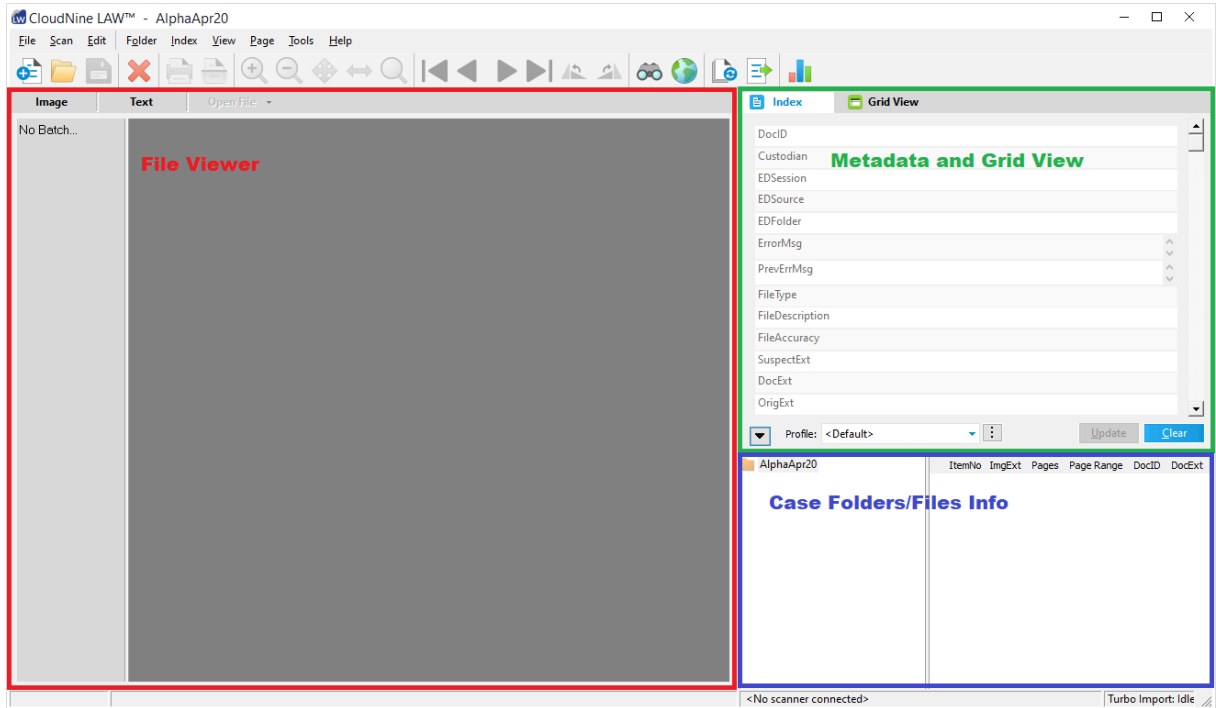
If a case is currently open, the associated case name will be visible in the title bar of the window. Directly below the window title bar are several menu options and a toolbar with easy access to commonly used features. The available menus will change depending on whether a case is currently open, and whether the case is a Turbo Import or ED Loader case. Below the toolbar are the three main viewing areas for LAW.

CloudNine™ LAW Main Menus

- **File** - Use this menu to create new files, open existing cases, print or send items, import items, and perform case administration.

- **Scan** - Provides utilities for selecting and configuring a scanner.

- **Edit**- Contains many quality control features. For example, you can use this menu to: insert items, replace items, work with attachments, and to merge, move, split, or auto-

number items. You can also view page details and properties, and delete documents, pages, and folders.

- **Folder** - Provides functionality for working with folders.

- **Index** - Provides access to tools for creating and managing fields, and for working with page IDs.

- **View** - Provides controls for manipulating the view of the currently selected image.

- **Page** - Provides page navigation, OCR flagging, and image enhancements.

- **Tools** - Provides access to tools for batch processing, export, deduplication, near duplication, annotations, barcodes, viewers for TIFFs and logs, OCR tools, full text indexing, searching, and options for CloudNine™ LAW.

- **Help** - Provides help topics, user manual, bug reporting, update checker, and versioning with licensing information.

CloudNine™ LAW Toolbar
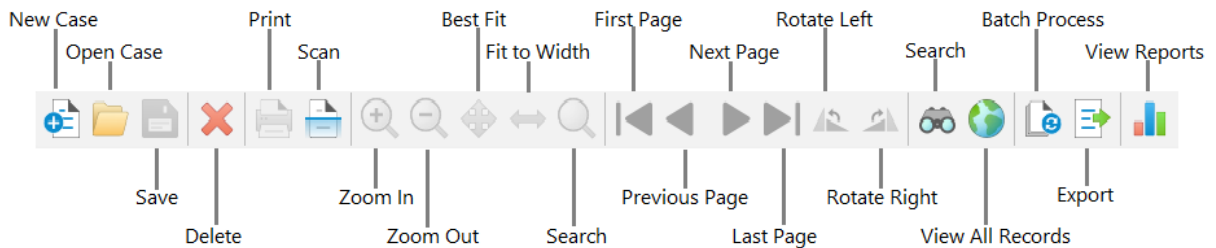
CloudNine™ LAW Main Viewing Areas

- File Viewer - section where you can view image or text files

- Metadata and Grid View - area where file metadata is displayed and search results are viewed

- Case Folders/Files Info - shows the folder structure for the current case, and lists the files and file info within each folder

CloudNine™ LAW Updates
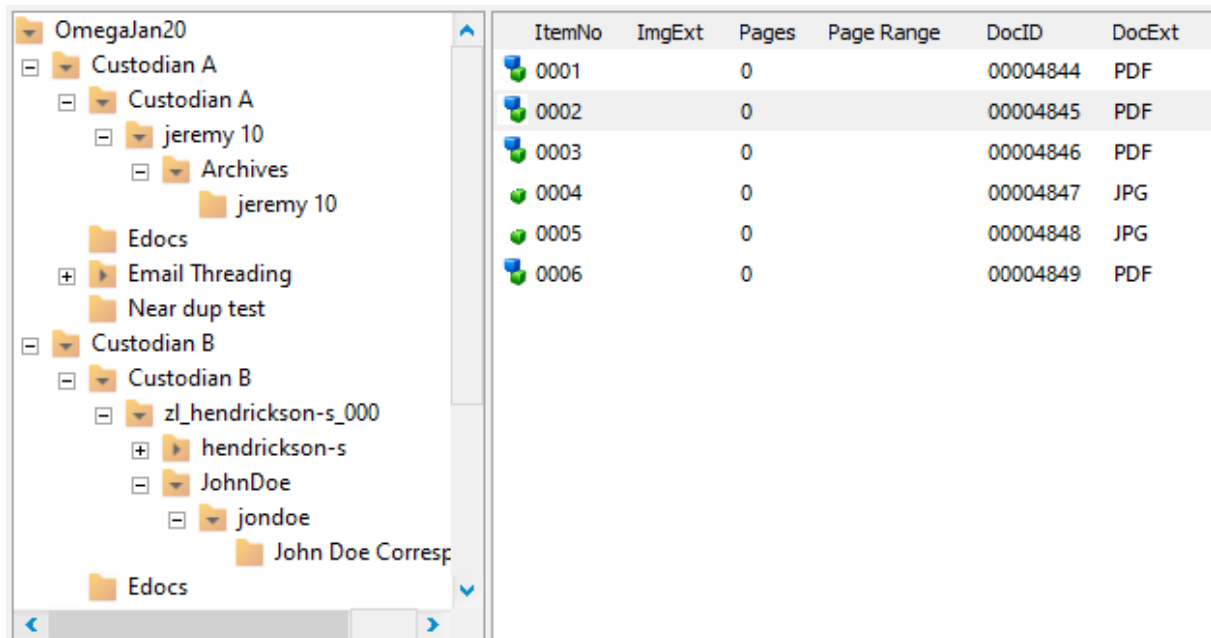
When CloudNine LAW opens, if an internet connection is available, it will check for any program updates and display **Update Available** if appropriate in the upper right corner.

You can disable this update check by selecting **Options** on the **Tools** menu. Go to the **Preferences** tab, and unselect **Notify if new version available**.

Folders and Files

A list of the case folders and the files they contain can be viewed in the lower right of the main LAW window.

Folder and Item Fields

The list on the right shows all the items within the selected folder. Items that are indented with two dashes are considered attachments to the non-indented record above. This list can contain any of the following details:

- **ItemNo** - Displays records contained within the folder, resetting to 0001 at the start of each new folder. An indented item indicates an attachment to the previous record.

- **ImgExt** - Identifies the type of image based on the image extension. This column will only be populated if an image document state exists.

- **Pages** - Identifies the Page Count of the document. This will only exist when an Image document state exists.

- **Page Range** - Displays the start and end page numbers within a document range. This will only exist when documents are in image format and a Page ID has been assigned.

- **DocID** - Identifies the DocID assigned when electronic files are loaded via the Electronic Discovery Loader or Turbo Import.

- **DocExt** - Identifies the document extension of the native file.
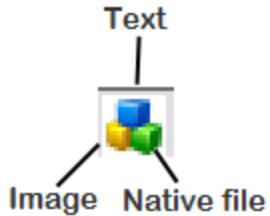
In addition to the details above, the first column in the item list includes one or more visual indicators identifying key information for the record:

- **Image** (Yellow Cube) - indicates an image exists for the record. The record must have been converted to TIFF or PDF, scanned or imported via raw images or a load file. This item is viewable in the image viewing area on the left.

- **Text** (Blue Cube) - indicates that text exists for the record. The text may be a result of extracted text, printed text, or OCR.

- **Native File** (Green Cube) - indicates a native file exists for the record.

Customizing the Item Fields

You can choose which information you want to see in the item list. Simply right-click on one of the column headers and then select or deselect the fields in the checkbox list that is displayed.

Viewing Images

You can use the **Image** tab in the File Viewer to see the image associated with the currently selected document, if applicable.
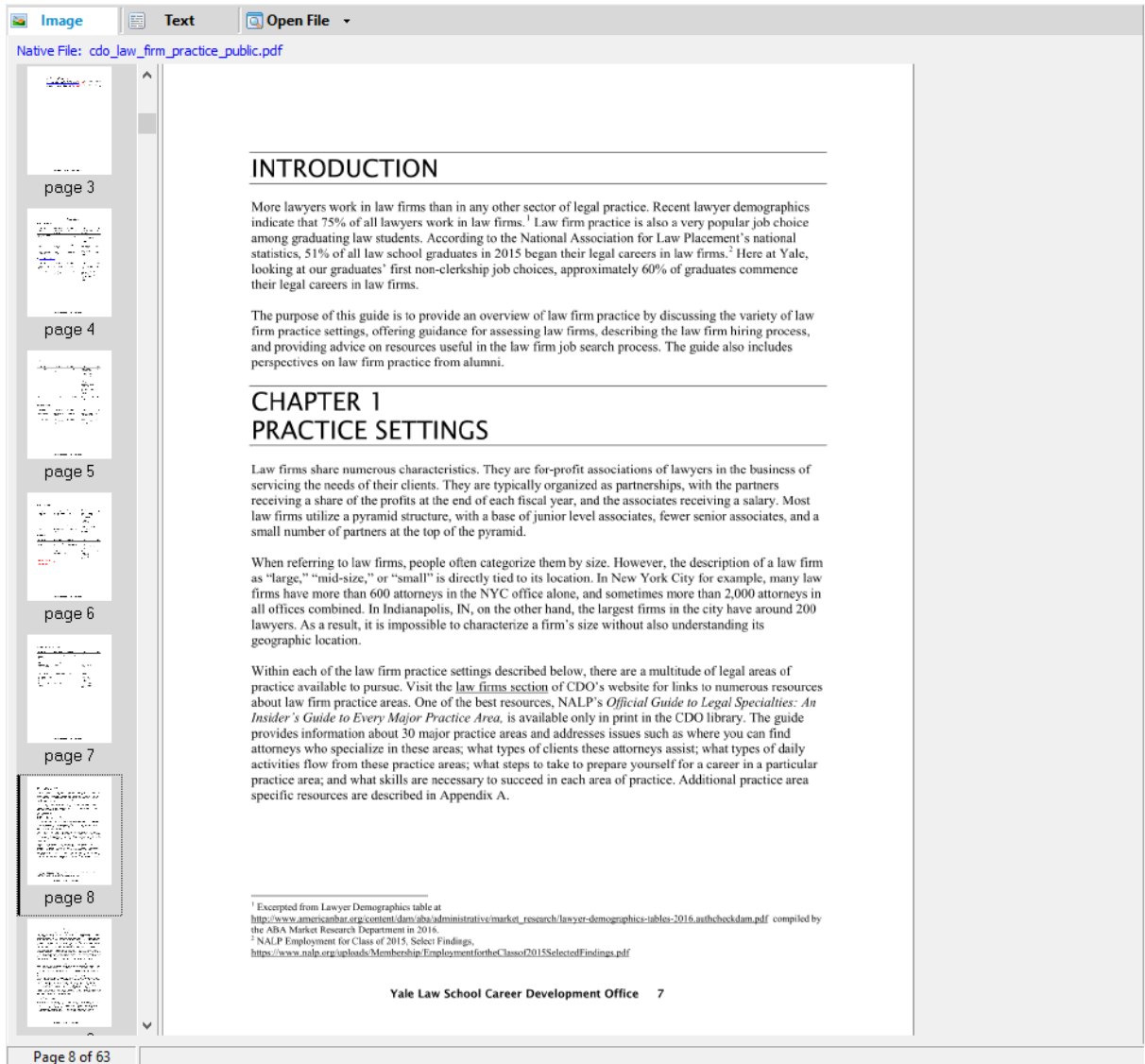
The image displayed corresponds to the document selected in the Folder/File Info section in the lower right-hand corner.

Thumbnails are displayed to the left of the Image Viewer, showing each page in the document.

For more information on working with pages in the image viewing area see Working with Images.

💡 You can choose to disable the Image Preview functionality if needed. See Disabling Image Preview. If the image preview is disabled, then the images will only be viewable after the files are tiffed.

Viewing Text

You can use the **Text** tab in the File Viewer to see the text associated with the currently selected document, if applicable.
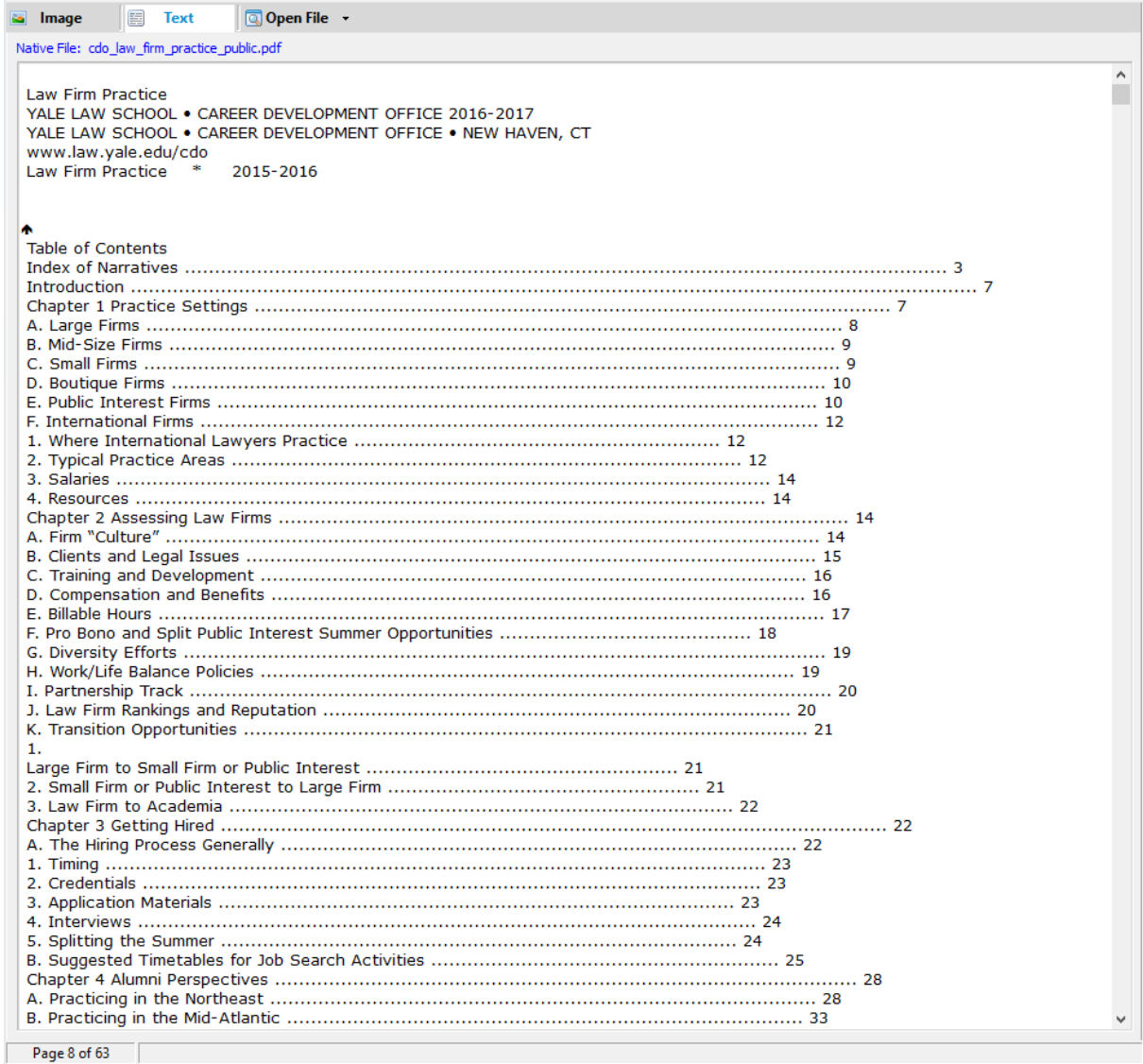
The text displayed corresponds to the document selected in the Folder/File Info section in the lower right-hand corner. There are four types of text files: text extracted during import, text extracted during conversion to TIFF, text obtained through OCR, and text files linked to a document.

The Text tab at the top of the File Viewer may include additional icons indicating an OCR status. For more information about the flags, see OCR Overview.

Opening Native Files

If a native file exists for a document, the **Open File** tab is enabled. You can use the dropdown to access options for opening the file with the application you choose, or click on the **Open File** tab to automatically open the file with the associated application based on the file type.
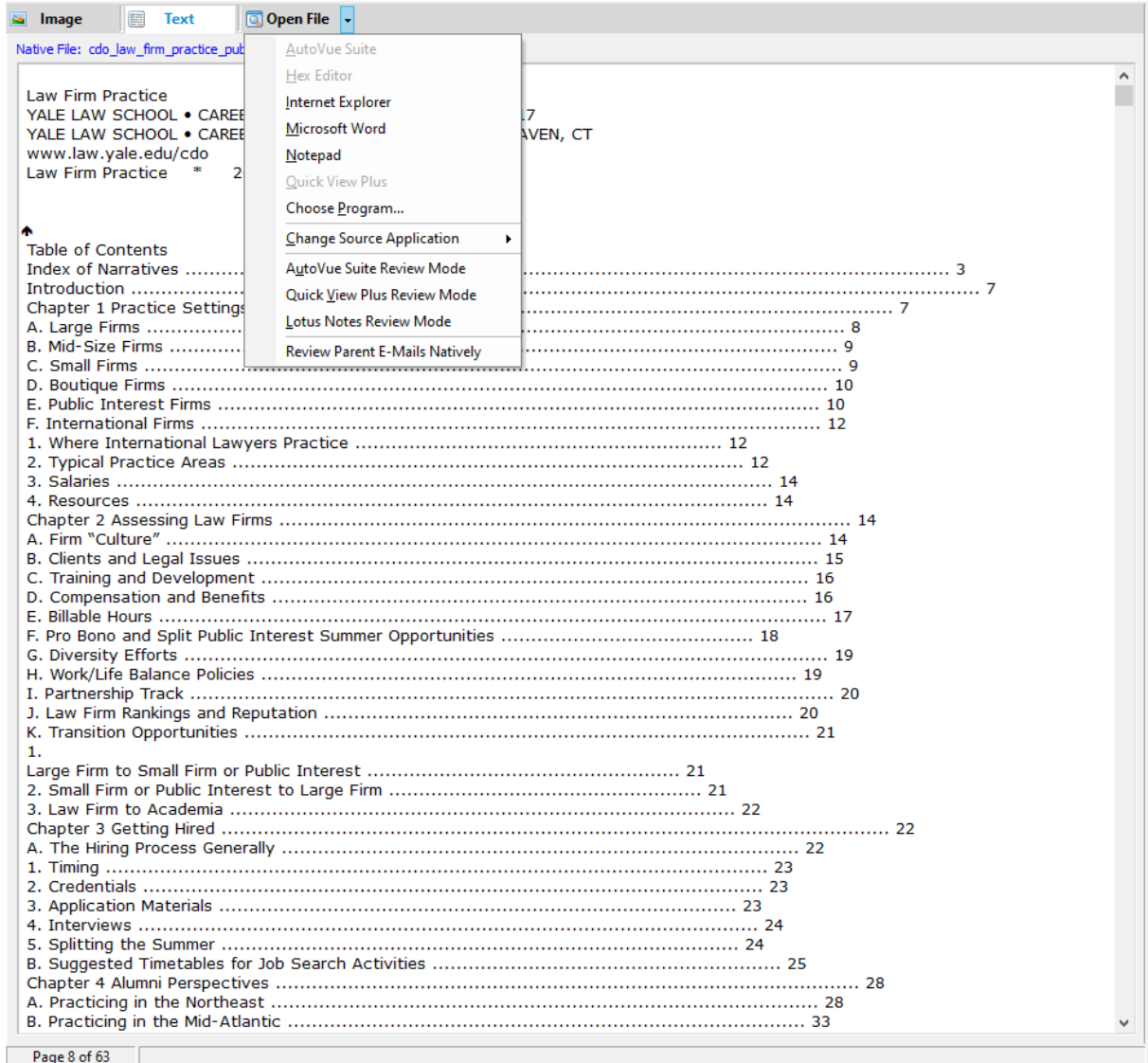
For more information on working with native files, see Launching Native Files.

Viewing Metadata

Within the top right of the LAW main window, the **Index** tab shows metadata corresponding to the selected document.
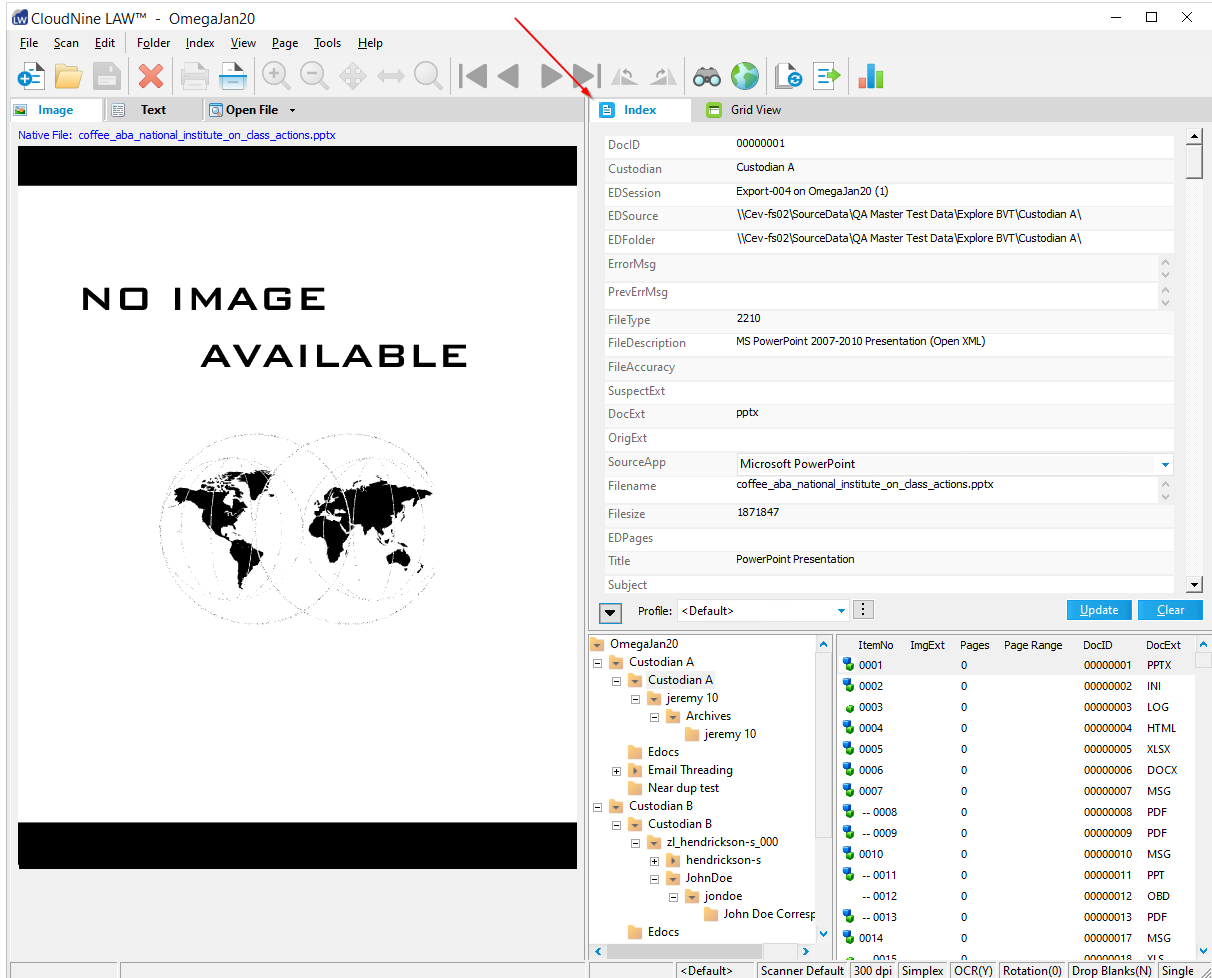
The metadata displayed corresponds to the document selected in the Folder/File Info section in the lower right-hand corner. Navigate through the metadata list via the scrollbar on the right. The fields that display are determined by the Profile that is selected at the bottom of the metadata display. For more information about customizing the field views, see Index Profiles.

Grid View

Within the top right of the LAW main window, the **Grid View** tab shows a tabular view of selected documents/pages. This is also known as the Embedded Grid View.
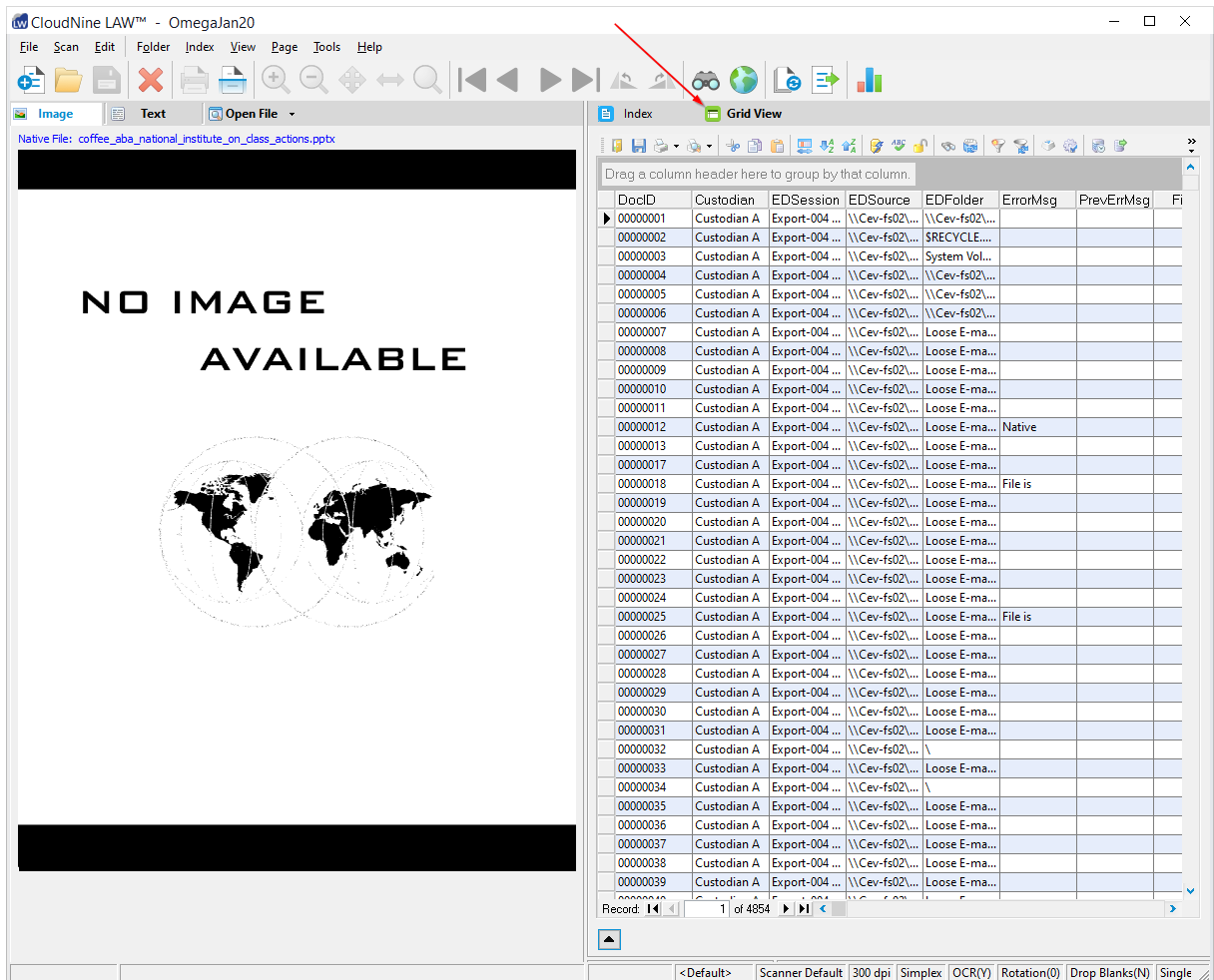
The Grid View is not populated by default. In order to view data in the embedded Grid View, run a query using the Query Builder and specify that the results should be sent to the embedded grid view. The Grid View has its own toolbar that is independent of the toolbar at the top of the main window.

For more information about grids, see <u>Launching the Grids</u>.

Working With Cases and Projects

Creating a New Case

The first process in CloudNine™ LAW is to create a new case. The following facts apply to cases:

- A *case* is the basic unit of organization in CloudNine™ LAW. It consists of a database that tracks source documents, extracted data, metadata, images, and other files.
- Before you can begin working in CloudNine™ LAW, you must create a case or open an existing case.

- A *case list* is a list managed in SQL that records the name and file path of all the cases that LAW has opened or created. The case list can be viewed in the New Case dialog.

- By default, a local case list is created in SQL for new installations. See Caselist Options for more information.

- Case lists are migrated in SQL database using the LAW Configuration Utility.

- Whenever multiple users share a case list, if one station adds or removes a case, the changes are immediately visible to all other stations.

⚠ When using LAW with UAC (User Account Control) enabled, it is recommended that you do not create cases under the Program Files or Program Files (x86) folder. This is a protected location in Windows and therefore the case folder is redirected to the virtual store. This virtual store is located in the profile of the current user (ex. C:\Users\<User>\AppData\Local\VirtualStore\Program Files (x86)\Law50\Cases). Some functions in LAW will not work properly when this data redirection occurs. To avoid this issue you can disable UAC (NOT recommended) or create cases in a network location or other location not treated as a protected location by Windows.

The C:\Program Files, C:\Program Files (x86), C:\Program Data, and My Documents directories are treated as protected locations and should not be used for storing case files.

⊟ **To create a new case**

1. On the **File** menu click **New Case** or alternatively click the New Case icon from the toolbar. The **New Case - Properties** dialog box appears.

2. Configure the case using options as described in the following table.

Option	Description
Case Name	The name should be unique and must adhere to file name requirements of the host operating system. For example, the case name may contains spaces but cannot contain any of the following special characters: \ / : * > <	 There is a 120 character limit for all case names.
Case Description	Type a description of the case in this optional field. Case descriptions are visible when you open a case.
Enable Electronic Discovery	Selected by default or if the prior case created was an electronic discovery case. When enabled the case is registered for electronic discovery and any files added are available to electronic discovery tools.
ED Loader	This enables the files to be imported through ED Loader.
Turbo Import	This enables the files to be imported through Turbo Import. Turbo Import cases are not eligible for importing (dii or opt) load files, or case to case imports.
Case Template	If enabled, you can select a template to apply to this case. A case template specifies a pre-determined of selections of case options. For more information see Case Templates.
Client or Project Name	If enabled, you can select a client or project name to associate with the case. Select Edit to display the Project Administration dialog to modify your project list.
Database Engine	Select your database type: either SQL Server or Access. Database: Defaults to the Case Name. Server Name: Name of the SQL server instance. Use Windows Authentication: This should be selected for Windows Authentication, otherwise you need to enter a User Name and Password that has access to your Database.
Case Paths	Specifies the paths where case files are stored. The Case and Image path may be entirely different. A UNC path is recommended. The case paths must point to a network drive that can be identically mapped for all stations if using multiple LAW Stations. For example, if you create a case on a mapped network drive Z:\SomeCase then any other computer intended

Option	Description
	to use that case must also be able to map a drive to `Z:\SomeCase`. Mapped drives are not recommend in the paths for Turbo Import databases.
Append case name to case paths	Creates new folders under the default directory for the case and image files using the same name as the case. This option is enabled by default. When disabled, all cases and images are stored in the default directory.

3. Click **OK**.

⊟ **What to name cases**

As the case list grows, it can help to implement a naming scheme for cases. Applying a consistent and intuitive naming scheme can make is easier to find cases and ensure that the right case is selected as the target for importing documents and for other processing.

There is a 120 character limit for all case names.

Below are some examples of possible naming schemes:

- Client_JobNumber_InvoiceID
- Client_Matter
- Client_Matter_JobNumber
- Date_CaseName
- CaseName_StartDate
- Client_JobNumber_Today'sDate
- Client_Invoice_JobNum

Case list Options

The case list in LAW is the table of contents for your LAW databases.

Migration of existing cases in LAW version 7.2+ is handled by the LAW Configuration Utility. See Migrating Existing Cases in version 7.2+

For LAW 7.0 or 7.1, you can migrate existing cases following these instructions:

1. Browse to C:\Program Files (x86)\LAW50\ and double-click on CaseListMigration.exe to open it.

2. **Case list Path:** Browse to the path of the case list and select caselist.mdb

3. **Server:** Enter the SQL server instance name

4. **Use Windows Authentication:** You may select this checkbox if you choose to use Windows authentication instead of SQL authentication. The **Username** and **Password** are populated by default should you choose to use SQL authentication.

5. Click the <u>S</u>tart button. When complete you will see a CaseListMigration dialogue box
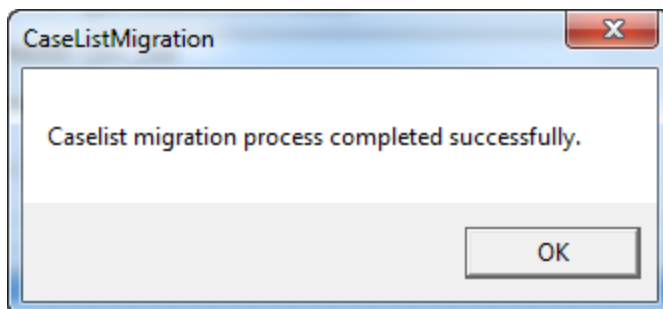
You can import from one or more caselist.mdb files if necessary. You must use the UNC path for the case list path and not a mapped drive.

Working with Existing Cases

There are several ways that you can work with cases:

- Open cases. There are several ways to open a case.
- View case properties. See section below for detailed list.
- Delete a case. When you delete a case, you have the choice of backing up the case before deleting it, or deleting the case without creating a backup.
- Disable SQL case database deletion. You can remove the options from within LAW that allow users to permanently delete SQL case databases.

⊟ **To open an existing case**

1. On the **File** menu click **Open Case**. The **Open Case** dialog box appears.
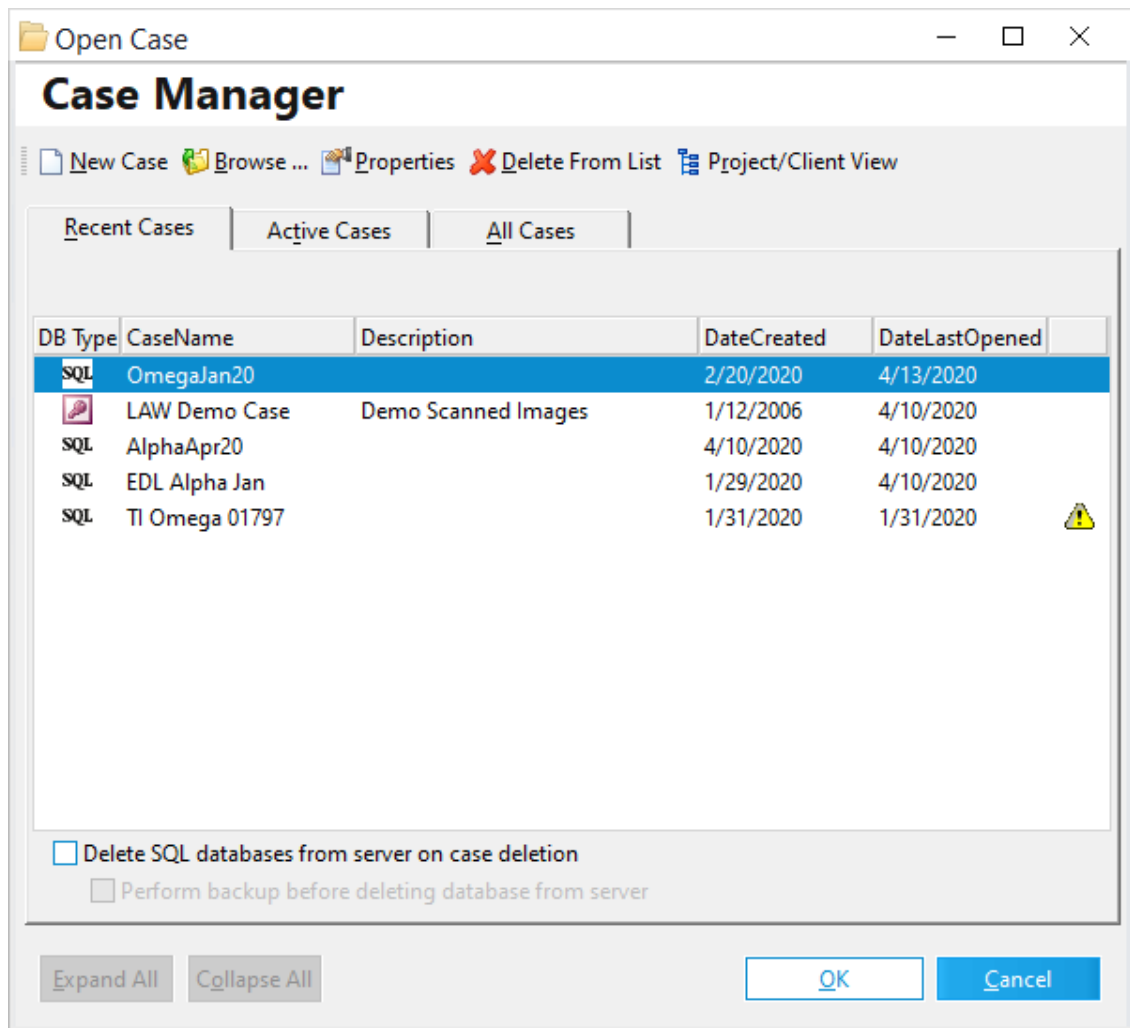
2. Navigate to a case by using either the **Recent Cases**, **Active Cases**, or **All Cases** tabs.

- **Recent Cases:** Lists the last ten cases that were opened.
- **Active Cases**: Lists only active cases
- **All Cases**: Lists all cases and includes searching capabilities. You can search for a case by either the case name or by the creation date. To utilize the Search feature, first select the desired search method: CaseName or DateCreated. As letters or numbers are entered into the adjacent box, the cases that correspond to those beginning characters appear in the list.

3. Select a case and then click **Open**.

⊟ To open a case by browsing

1. On the **File** menu click **Open Case**.

2. In the **Open Case** dialog box, click **Browse**.

3. Browse to the case folder and then select the project database or ini file (project.mdb, project.add, or project.ini).

4. Click **Open**. One of the following results occur:
   - The case opens and is added to the case list.
   - If the case is already in the case list, a message will appear stating that the case is already in the list.
   - If the case name conflicts with a case name already in the case list, you are prompted to enter a new case name.

⊟ To open a case using a DOS command

You can open a case by using a command by using the Run window or the command prompt.

For example, to open a LAW case called *LAW Demo Case*:

1. Click **Start** and then click **Run**.

2. Type the command, including quotes (""), into the text box, substituting your case name for LAW Demo Case:

   `"C:\Program Files\Law50\Law50.exe" LAW Demo Case`

3. Click **OK**.

⊟ To view case properties

1. On the **File** menu click **Open Case**. The **Open Case** dialog box appears.

2. Select a case and then click **Properties**. The **Case Properties** dialog box appears with the following information:

- Case Name

- Case Description

- Whether electronic discovery is enabled or not

- Whether ED Loader or Turbo Import is selected.

- Case template from which the case was derived

- Client or Project Name

- Case and Image Paths

- Created Date

- Last Opened Date

- Case status as active or deactivated, and date of deactivation

⊟ To delete a case

1. In the main form, on the **File** menu click **Open Case**. The **Open Case** dialog box opens.

2. Select a case.
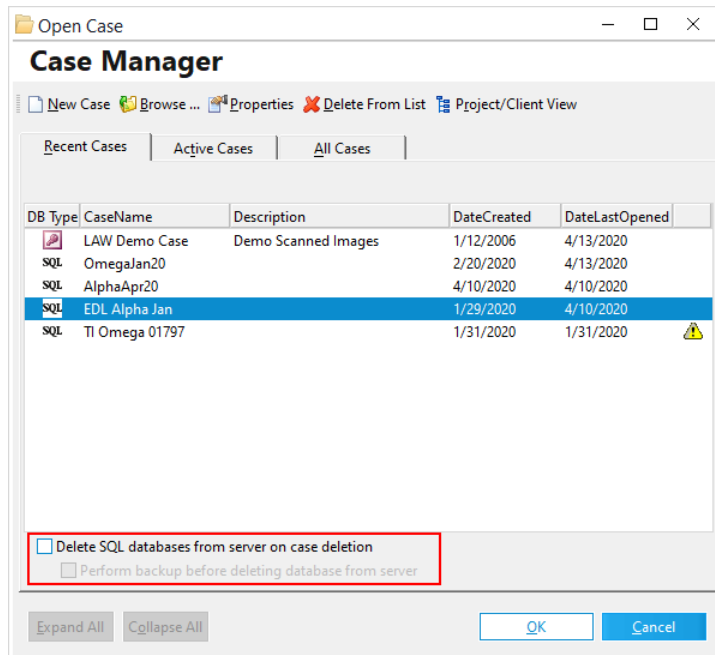
3. Select deletion options as needed:

- **Delete SQL databases from server on case deletion** will remove the database and log files from SQL Server.

- It is recommended to leave **Perform backup before deleting database from server** enabled.

4. Click **Delete from List**. The **Delete Case** dialog box appears to confirm deletion. Click **Yes** to proceed.

5. Follow prompts either to save the database, or permanently remove the database from the case list and from SQL Server.

⚠ Whenever you delete a case from SQL Server, you are strongly recommended to create a backup copy of your case database. You can disable the option to delete SQL case databases from within CloudNine™ LAW. For more information on disabling the LAW option to delete SQL case databases, see the next section in this topic.

⊟ **To remove options for deleting SQL databases**

You can remove the options that allow users to delete SQL databases. Removing these options can help to mitigate the risk of data loss caused by users mistakenly deleting the SQL database from within CloudNine™ LAW.

You can disable or re-enable options to delete SQL cases by editing the law50.ini file. After the options to delete SQL cases are disabled, you can still remove a case from the case list but this action does not delete the SQL database.

If you want to re-enable options to delete SQL databases, you can edit the INI file again and remove the lines described in the steps that follow.

1. Close CloudNine™ LAW.

2. Use Windows Explorer to open the installation directory for CloudNine™ LAW. The default path is C:\Program Files (x86)\Law50.

3. Open Notepad or some other text editor and then open law50.ini for editing.

4. Insert a new line.

5. Type the following on the new line:

   ```
   [Administration]
   ```

   ```
   DisableSQLDatabaseDeletes=1
   ```

6. Save the file and then close the text editor.

7. Start CloudNine™ LAW.

8. On the File menu, click **Open Case**. The **Open Case** dialog box opens.
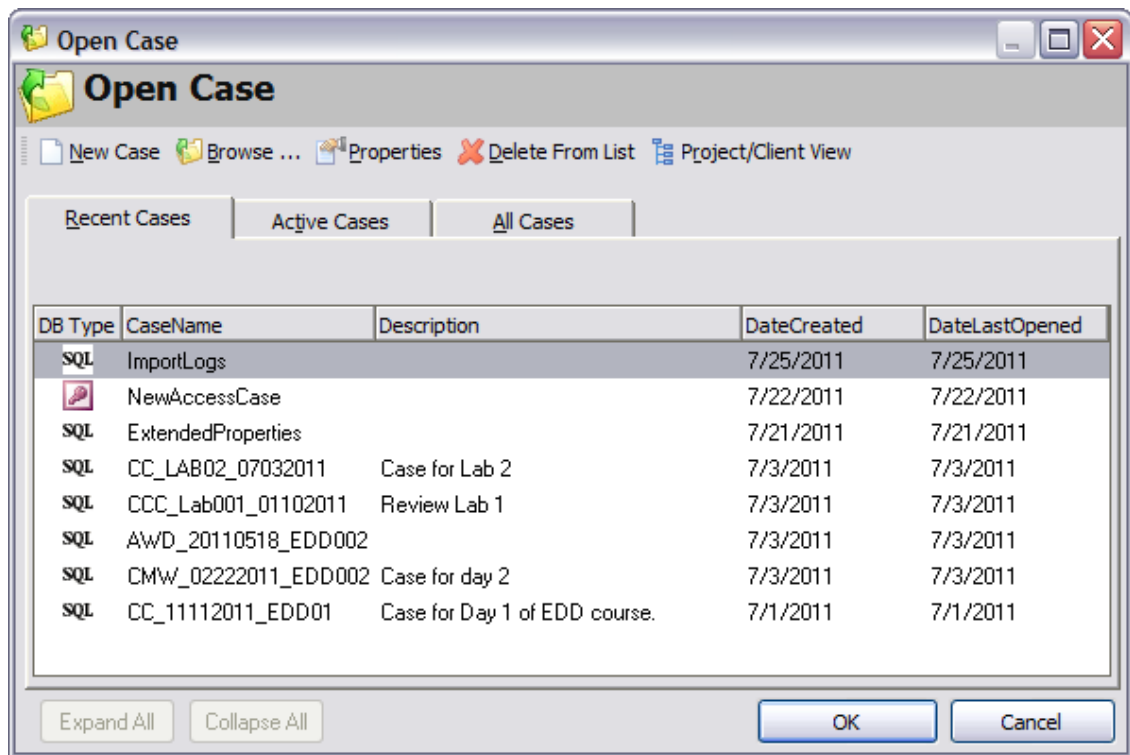
The option to delete SQL databases is no longer available.

Case Templates

You can save the folder structure and field for reuse when creating a new case in a case template. Case templates are saved in XML files in the `..\LAW50\Templates` folder. The file name is the same name as the template.

⊟ **To save a case template**

On a computer that has a LAW Admin license, you can save a case template from the File or Index menu.

To save a case template from the File menu:

1. On the **File** menu click **Administration**, and then click **Save Case Template**. The **Save Case Template** dialog box appears.
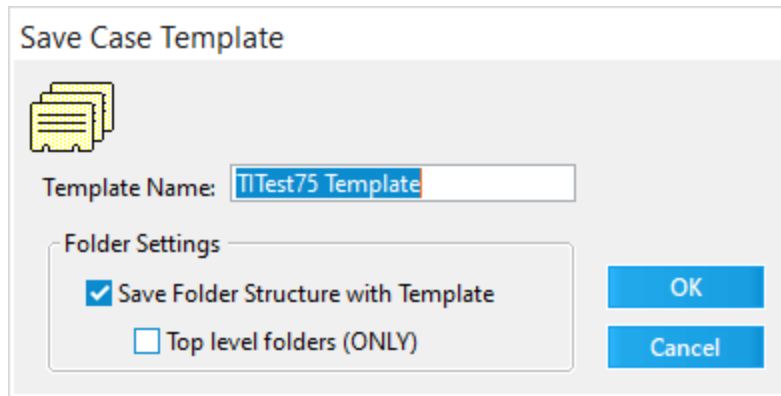
2. Apply a folder setting.

    - Select **Save Folder Structure with Template** to save the current folder structure and field information of the case.

    - Select **Top level folders (ONLY)** to configure the template so that it consists of field information and only the folders located one level below the root.

To save a case template from the Index menu:

1. On the **Index** menu click **Modify Fields**, and then click **Save Template**. The **Save Case Template** dialog box appears.

2. Apply a folder setting.

    - Select **Save Folder Structure** with Template to save the current folder structure and field information of the case.

    - Select **Top level folders (ONLY)** to configure the template so that it consists of field information and only the folders located one level below the root.

For more information on working with fields, see Creating Index Fields.

⊟ **To apply a case template**

To apply the case template at the time of case creation:

1. On the File menu click **New Case**.

2. Select a database and then click **OK**. The **New Case - Properties** form appears.

3. Clear **Enable Electronic Discovery for this case**.

📝 When you create a new case with Electronic Discovery enabled you cannot apply a case template at the same time, but you can apply a template to such a case

after you create it. See **To apply a template to an existing case** in this topic.

4. Select a template from the **Case Template** list.

5. Fill out the rest of the form, and then click **OK**. A previously created template is applied to the new case. The template will have index fields and may also specify a folder structure for the new case.

⊟ <u>**To apply a template to an existing case**</u>

1. Open a case.

2. On the **File** menu click **Administration**, and then click **Apply Case Template**. The **Select Case Template** dialog appears.
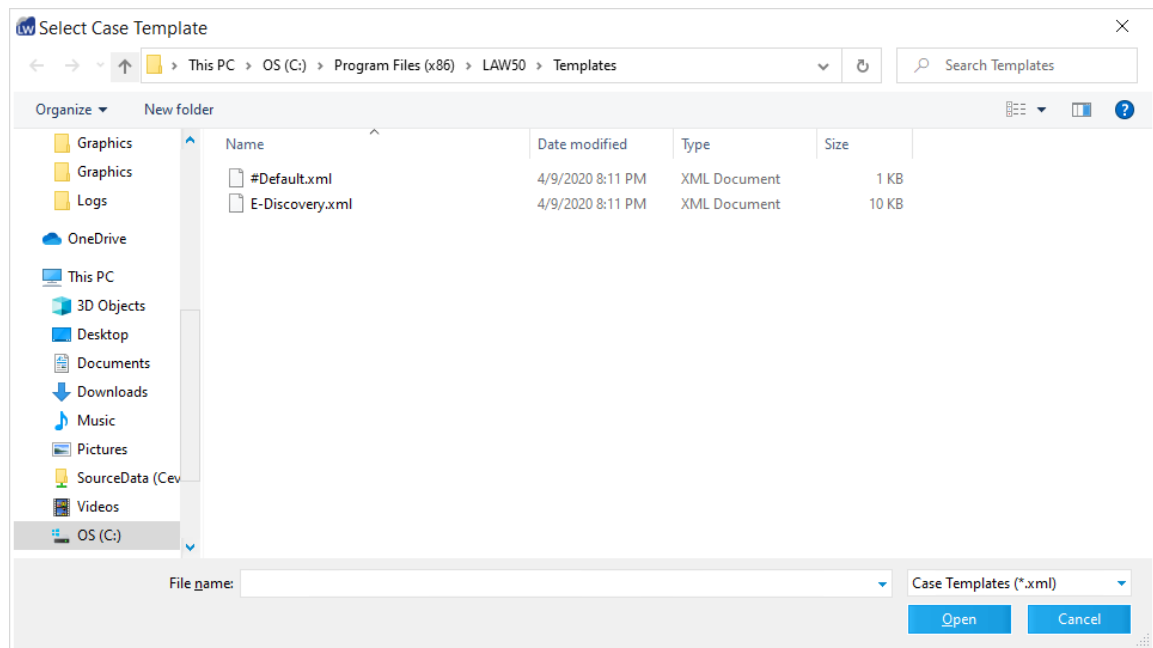
3. Select a template and then click **Open**.

4. A listing of the fields that will be added to the case appears. Any field names that are duplicates of existing fields are ignored. Click **Yes** to proceed.

   The index fields and folder structure (if any) stored in the template will be applied to the case in addition to any already existing fields and folders.

📝 To use an alternate method of applying a case template, on the **Index** menu click **Modify Fields**, and then click **Apply Template**. Follow the instructions above to apply the template.

□ To modify fields in the #Default.xml template file

The #Default.xml file is the default case template installed with CloudNine™ LAW. The #Default.xml file determines the default case properties, including fields, automatically defined for a case when a case is created, unless another case template is applied when the case is being created. To create this file,

1. Browse to the **C:\Program Files (x86)\Law50\Templates** folder.

2. Make a copy and past the "E-Discovery.xml" into the same folder and rename it "#Default.xml"

The #Default.xml file is stored in the Templates folder within the LAW installation folder (...\Progam Files\Law50\Templates). In CloudNine™ LAW, if you want each new case to be created with specific fields, you can modify the #Default.xml template file so that when a new case is created in CloudNine™ LAW, the case is automatically populated with the fields you defined in the #Default.xml file

1. Browse to **C:\Program Files (x86)\Law50\Templates** folder.

📝 If your LAW shortcut is pointing to a shared drive, please use the **#Default.xml** file in that location.

2. Before modifying the **#Default.xml** file, it is best practice to make a backup copy of the **#Default.xml**.

3. Right-click the **#Default.xml** file and open it in a text editor program.

4. Copy the text from **<Field1>** to **</Field1>** and paste it under the **</Field1>** line.

    <Field1>

           <FieldName>_FTIndex</FieldName> Correspond with the field name

           <FieldType>7</FieldType> Corresponds with the type of field please see table below.

           <MaxLength>0</MaxLength> Corresponds with the max length of the field. 0 = no limit

           <PageLevel>False</PageLevel> Corresponds if the field is page level or not

           <SpanHeight>1</SpanHeight> 'This applies to memo fields only

           <Indexed>True</Indexed> Corresponds if the field is indexed or not

           <Unique>False</Unique> Corresponds if the field is Unique or not

<Locked>True</Locked> Corresponds with if the field is editable or not

<System>True</System> Corresponds if the field is a system field or not.

<Visible>False</Visible> Corresponds with if the field is visible in the index and/or grid view automatically

</Field1>

5. Change **<Field1>** and **</Field1>** to the corresponding field name.

   An example would be, for the second added field, change it to <Field2> and </Field2>

6. Change the value between **<FieldName>** and **</FieldName>** to match the field name you want in your cases.

7. Change the value between **<FieldType>** and **</FieldType>** to the numeric value of the field you would like in the case. Please see field type value chart below:

   Field Type:

   0 = Text

   1 = Auto-Increment

   2 = List

   3 = Memo

   4 = Date

   5 = Numeric

   6 = Tag

   7 = Tiny Int

8. Change any of the other values that you want for setting up the field.

9. Save the file with the same name, **#Default.xml**.

10. Create a new case.

    The case will automatically be populated with the new and/or modified fields from the **#Default.xml** file. For more information about creating a new case, see Creating a New Case.

Working With Projects

In CloudNine™ LAW, assigning cases to projects can make it easier to find and manage cases. When you first create a case, you can assign it to a project or you can assign cases to projects after you create your cases. After cases are assigned to projects, you

can use a tree control that lists projects and member cases to easily navigate to the case you are interested in.

Organizing cases by project can be useful, for example, when you need to work with multiple cases from the same client.

The steps to create a new project vary, depending upon whether you create a project at the same time as you create a new case, or create a project for an existing case.

⊟ **To create a project when creating a new case**

1. On the **File** menu click **New Case** or alternatively click the New Case icon from the toolbar. The **New Case – Properties** dialog box appears.

2. Click **Edit** next to the **Client or Project Name**. The **Project Administration** dialog box appears.

3. In the **Project Administration** dialog box click **New Project**. The **New Project** dialog box appears.

4. Type a **Project Name** and a **Project Description**.

5. Next to **Project is Active**, keep the default, **Yes**, if the project will be initially active, otherwise select **No**.

6. Click **OK.** The new project is added to the list.

7. Click **OK** to close the **Project Administration** dialog.

□ **To create a project for an existing case**

1. On the **File** menu click **Open Case**.

2. In the **Open Case** dialog box, select a case and then click **Properties**. The **Case Properties** dialog box appears.

3. Click **Edit** next to the **Client or Project Name**. The **Project Administration** dialog box appears.

Project Administration

New Project   Edit Project   Delete Project

Name	Description	CreatedDate	Active	DateInactive

OK   Cancel

4. In the **Project Administration** dialog box click **New Project**. The **New Project** dialog box appears.

New Project

Project Name:

Project Description:
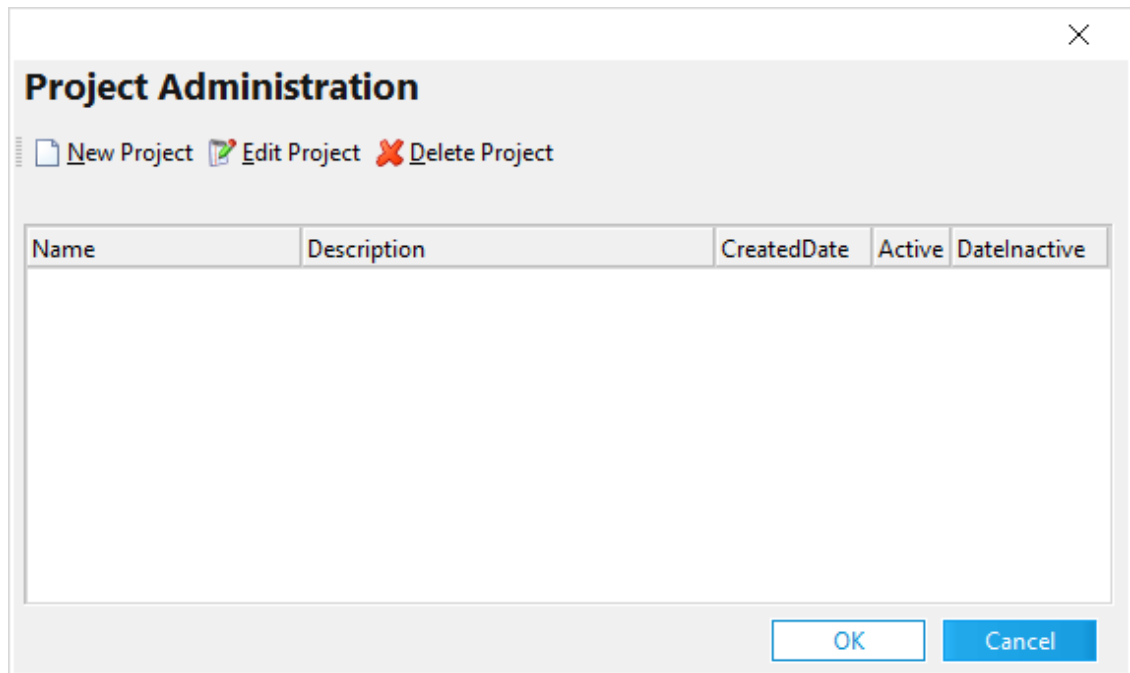
Created Date: 4/15/2020 3:30:39 PM
Project is Active: ● Yes ○ No
Date Deactivated: N/A

OK   Cancel
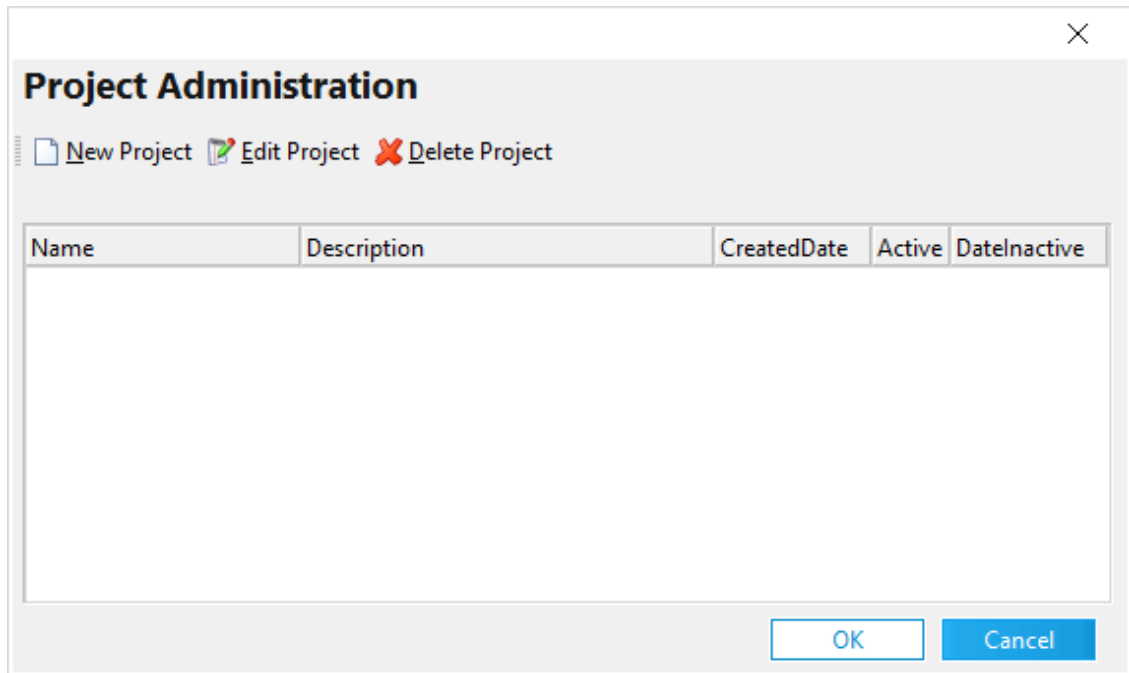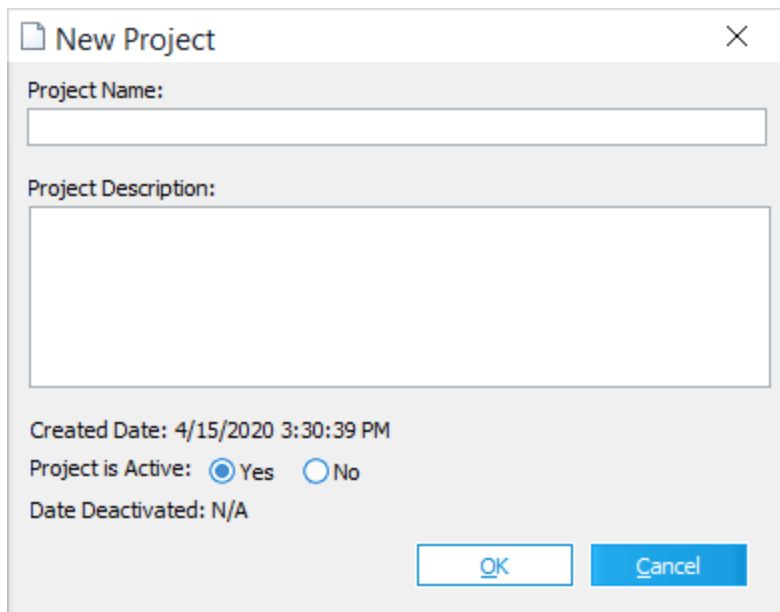
5. Type a **Project Name** and a **Project Description**.

6. Next to **Project is Active**, keep the default, **Yes**, if the project will be initially active, otherwise select **No**.

7. Click **OK.** The new project is added to the list.

8. Click **OK** to close the **Project Administration** dialog.

1. On the **File** menu click **Open Case**.

2. In the **Open Case** dialog box, select a case and then click **Properties**. The **Case Properties** dialog box appears.

3. Click **Edit** next to the **Client or Project Name**. The **Project Administration** dialog box appears.

4. In the **Project Administration** dialog box, select a project.

5. Click **Edit Project**.   The **Edit Project** dialog displays.

6. Edit the project name, description, or active status.

7. Click **OK**.

1. On the **File** menu click **Open Case**.

2. In the **Open Case** dialog box, select a case and then click **Properties**. The **Case Properties** dialog box appears.

3. Click **Edit** next to the **Client or Project Name**. The **Project Administration** dialog box appears.

4. In the **Project Administration** dialog box select a project.

5. Click **Delete Project**.

6. Click **OK** to confirm deletion and **OK** again to close the **Project Administration** dialog.

    The project name will revert to **<none>** for any CloudNine™ LAW case previously associated with the deleted project.

Establishing Folder Structures

Creating a folder structure in CloudNine™ LAW will allow better organization of documents and the ability to mimic the structure of the original documents. This helps scanner operators find their place in the case more easily and aids in finding and correcting scan

errors. The folder structure is also useful for EDD projects, allowing organization by media type or custodian, for example.

LAW provides a set of pre-defined folder suffixes to quickly create a folder structure, or you can customize the folder names as needed. When naming folders, one important item to note is that the folder structure generally determines the order of processing, i.e. folders are processed in alphabetical order.

📝 The files referenced in the document list are not necessarily physically stored in the folders shown in the folder tree. Displaying the records in this manner will allow the desired representation of folders and records to be maintained. For example, folders created via TIFF conversion in LAW are stored in <case root>\$Image Archive; however, the records will appear in the document list when clicking on the original folder structure created by ED Loader or Turbo Import during import. See the topic related to the type of function being performed in order to see how the associated files are stored.

⚠ The Folder Structures on this page are for Electronic Discovery enabled cases only. The folder structure can not be altered in Turbo Import enabled cases except by deleting or expanding & collapsing.

⊟ **To create a folder**

1. Create a new case or open an existing case.

2. On the **Folder** menu click **New**. The **New Folder** dialog appears.
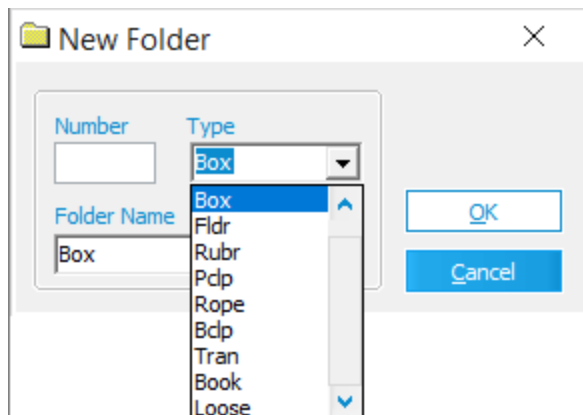
3. Configure the folder naming scheme.

To apply this naming scheme	Follow these steps
The folder name consist of a number followed by a predefined type code, for example, 002Box or 123Rubr.	1. In the **Number** field type a number. 2. In the **Type** list select a source type.

To apply this naming scheme	Follow these steps
	The **Folder Name** field previews the name of the folder that will be created.
The folder name consists of custom text.	1. Delete any text in the **Folder Name** field and then type the name of the folder.

5. Click **OK**. The new folder is created as a subfolder of the currently selected folder. To create a new folder on the same level as the current folder, select the parent of that folder prior to adding the new folder.

⊟ **To automatically create a folder series**

LAW also provides a quick and easy method for creating a series of folders. The Auto-Create feature automatically creates the next logical folder on the same level as the current folder. For example, if currently in "C:\Case1\0001Box\0001Fldr" and Auto-Create is selected, LAW creates "C:\Case1\0001Box\0002Fldr" and makes that the current folder.

- On the **Folder** menu click **Auto-Create**.

  Or

- Right-click a folder that will contain the folder series and then click **Auto-Create**.

Note the following considerations when auto-creating folders:

- If the next logical folder already exists, LAW will jump to that folder and make it the current folder.
- The next folder is created on the same level as the current one.
- Folders cannot be auto-created while the root image folder is selected, as this would create a folder outside of the root case folder.
- On the Folder menu if you select **Auto-Create N Folders** you can to create up to 999 folders automatically with names based on the current folder.

⊟ **To expand or collapse folders**

1. On the main interface in the tree view select a folder.

   - Any subfolders appear in the folder tree.
   - Any files contained in the folder appear in the document list below the folder tree.

2. As necessary you can expand or collapse folders and subfolders as described in the following table:

To perform this action	Do this
Expand a folder to view one level of subfolders.	• Click the plus sign next to the folder.
Expand all folders below the selected folder.	• On the **Folder** menu click **Expand**.
Collapse a folder.	• Click the minus sign next to the folder.
Collapse all folders below the selected folder.	• On the **Folder** menu click **Collapse**.

📝 The files referenced in the document list are not necessarily physically stored in the folders shown in the folder tree. Displaying the records in this manner will allow the desired representation of folders and records to be maintained. For example, folders created via TIFF conversion in LAW are stored in <case root>\$Image Archive; however, the records will appear in the document list when clicking on the original folder structure created by ED Loader or Turbo Import during import. See the topic related to the type of function being performed in order to see how the associated files are stored.

⊟ **To delete a folder**

1. Select a folder to delete.

2. On the **Folder** menu click **Delete**.

📝 To prevent accidental deletion of an entire folder tree, all subfolders of that folder must first be deleted. Similarly, the root case folder cannot be deleted from within CloudNine™ LAW.

⊟ **To rename or move a folder**

1. Select a folder to rename.

2. On the **Folder** menu click **Rename**.

    Note the following considerations when renaming folders:

    • The folder name must not contain any characters that the operating system cannot support (i.e. ? / \).

- The root case folder cannot be renamed.

- When a folder is renamed, the path for all documents in and below that folder must be updated to reflect the name change. This process can take some time if the folder is near the top of the case, depending on the number of documents affected by the name change.

- If the number of documents affected by folder renaming is near or greater than 10,000 the folder renaming process could fail due to file locking. The upper limit is typically > 10,000. If such an error occurs, you can edit a setting in the registry to allow the renaming of the folder to proceed. Contact CloudNine for specific details if this occurs.

⊟ To move folders

1. In the folder tree click the folder to be moved.

2. Do one of the following:

   - On the **Folder** menu click **Move**.

   Or

   - Right-click the folder and then click **Move**.

   The **Move Folder** dialog box displays the same folder structure as the tree in the main interface.

3. Select the folder into which the folder should be moved or create a new folder.

4. Click **Accept**.

   The folder will be moved to the designated location. This process may take longer to complete for folders containing a large number of documents.

   Note the following considerations when moving folders:

   - You can move any folder below the root folder that is displayed in the folder tree.

   - All subfolders and records contained in the folder will be moved to the new location as well.

⊟ Folder properties and document area summaries

Summaries for folder properties, images, and document area are available. These are described in the following table:

Type of summary	Description
Folder properties	LAW provides a means to get a quick summary of a folder that includes the actual location, size, and number of files and subfolders

Type of summary	Description
	within it. The size and number of files displayed will include all files in and below the current folder. To view the folder properties for a specific folder, click the desired folder and select Properties from the Folder menu.
Area of images and documents	LAW provides a summary view of the images contained within a folder and subfolders. The image summary displays a report of the number of documents and pages contained within a selected folder. LAW also calculates the **Total Area** of the documents contained within the folder. The total area information can be very useful for billing purposes. As noted in the message box (ED-enabled cases only), electronic files and their printed images are skipped during this image summary process. The number of skipped records will be listed in the summary output, in addition the number of scanned images. To calculate the square footage of the documents, LAW must open and read each image individually, which takes an additional amount of time. For a faster document or page count: • Use the Query Builder or Grid View to create a query on the selected folder, and then on the **Tools** menu click **Summary** to view the document and page totals. Or • Use the Case Summary feature. On the **File** menu click **Administration** and then click **Case Summary**. When you use Case Summary you select a date range prior to summarizing the data. The summary provides the number of pages flagged for optical character recognition (OCR) and the number of pages that the OCR process completed.

Working with Fields

Fields are storage containers that hold the various forms of metadata associated with case documents and pages. For example, each document in a case has a DocID field. The actual contents of the DocID field will vary from document to document. Field contents serve as the basis for searching, sorting, and many purposes that are project-specific.

For each case, LAW automatically creates a basic set of fields, such as DocID, OcrStatus, and many others. For a complete list of the predefined fields that are created with every case, see: Field Descriptions.

In addition to the fields that are created by default, you can create fields to suit your own purposes. Whether provided by default or created by you, every field in LAW belongs to one or another data type. For more information on data types in CloudNine™ LAW, see: Manipulating Fields.

This topic describes the types of data you can store in fields, whether a type can be applied to at the document or page level, and how fields are created.

⊟ Field types

Each field type stores a different type of data. Field types, the kind of data each can hold, whether it can be applied to a page or a document, and implementation notes are described in the following table:

Field type	Type of data it can hold	What it can be applied to	Notes
Text	text	Pages or documents	Can hold up to 255 characters.
AutoIncrement	text	Documents only	Automatically increments from one document to the next if no other value is specified.
Date	dates	Documents only	A date formatted as: mm/dd/yyyy
List	text	Documents only	You create a list of text items. Only these items will then appear in a drop-down list for the field on the **Index** tab. To modify listed values select the field and then click the **Edit List**. For detailed information on setting up List fields, see: Working with List Items.
Memo	text	Documents only	Can exceed 255 characters.

Field type	Type of data it can hold	What it can be applied to	Notes
			Note, you can use the Span Height option to adjust the number of rows displayed on the embedded grid. Memo fields cannot be indexed.
Numeric	numbers	Pages or documents	Can hold any numeric value between: -2147483647 and 2147483648.
Tag (Boolean)	Y or N (yes or no)	Pages or documents	In a grid, a check mark indicates Y. In Query Builder, use Y or N to designate a Yes or No value. See the Tagging Records section for more information.

⊟ System fields, extended properties, and user-defined fields

Some fields are created automatically by LAW as a part of creating a case and performing other operations. For example, LAW automatically creates DocID and PageNumber for you when you create a case. These are called system fields and are listed in the in the Field Descriptions topic.

Extended property fields are a special kind of system field that can be created during import of electronic discovery or extraction of custom metadata by the Batch Processing utility. When you use ED Loader to import items into your case or use the Document Processing/Analysis feature in the Batch Processing utility, you can set options to extract custom metadata from certain types of documents. This custom metadata is stored in fields called extended properties. The names of these fields all begin with *EP*. If a case has extended properties, its HasExtProps system field is set to Y. For more information on enabling extraction of custom metadata upon import, see: Metadata. For more information about extracting custom metadata using the Batch Processing utility, see: Extracting Custom Metadata. For more information on viewing extended properties in grids, see: Customizing the Grid View.

By comparison to system fields created by CloudNine™ LAW, user-defined fields, sometimes called custom fields, are fields that you create yourself to assist in performing any number of tasks. For example, you might want to create fields to store billing information, or to track where a document is in your production workflow. For more information on creating custom fields, see: Manipulating Fields. Note that custom fields are imported along with other case data when you import another case into the current case. For more information on importing cases, see: Importing Cases and Load Files.

⊟ Determining field scope

Fields scope, or whether a field may be applied to documents or to individual pages, is determined by its membership in one of three possible tables in the LAW case database:

- **Page table.** This table includes fields whose scope is set to the page level. For example, PageID can only be applied to individual pages within documents.
- **Document table.** This table includes fields whose scope is set to the document level. For example, DocID can only be applied to documents and not to individual pages.
- **Extended table.** This table includes fields whose origin is with the metadata of the source document. Extended properties are created during import to ED Loader if metadata extraction is enabled. Every extended property corresponds to custom metadata found in native documents and therefore apply to entire documents, and not to individual pages.

To determine whether any field belongs to the Page, Document, or Extended table

1. On the **Index** menu, click **Modify Fields**.

2. Scroll to the field name in question, and then check the value in the **Table** column for the field in question. Note also that extended properties are prefaced with *EP* in their names.
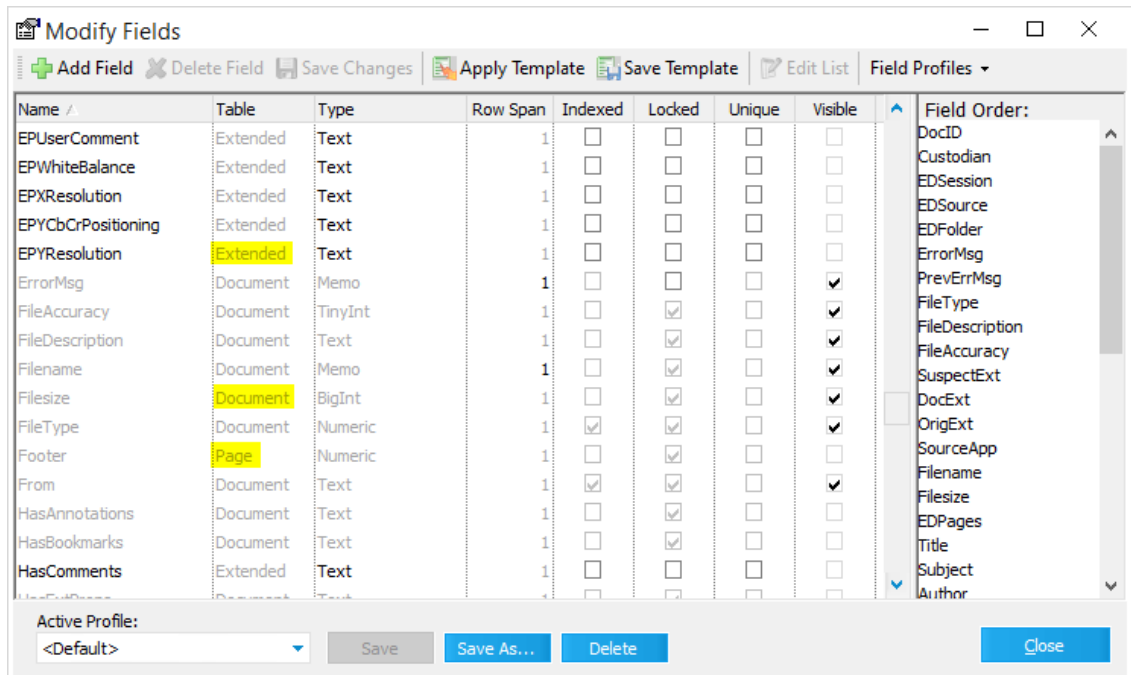
Manipulating Fields

The following facts apply to index fields in CloudNine™ LAW:

- LAW provides many built-in fields. However, you define as many new fields as you need to support specialized queries.

- When a new case is created, and **Enable Electronic Discovery for this case** is selected, all fields necessary for processing electronic discovery or Turbo Import (depending on the type selected) are created automatically.

- Field information for each record is displayed on the **Index** display on the main form to the right of the main image window.

- Use the **Modify Fields** dialog box to add, delete, and update existing fields.

To add, delete, and update existing fields

1. On the **Index** menu click **Modify Fields**. The **Modify Fields** dialog box appears.
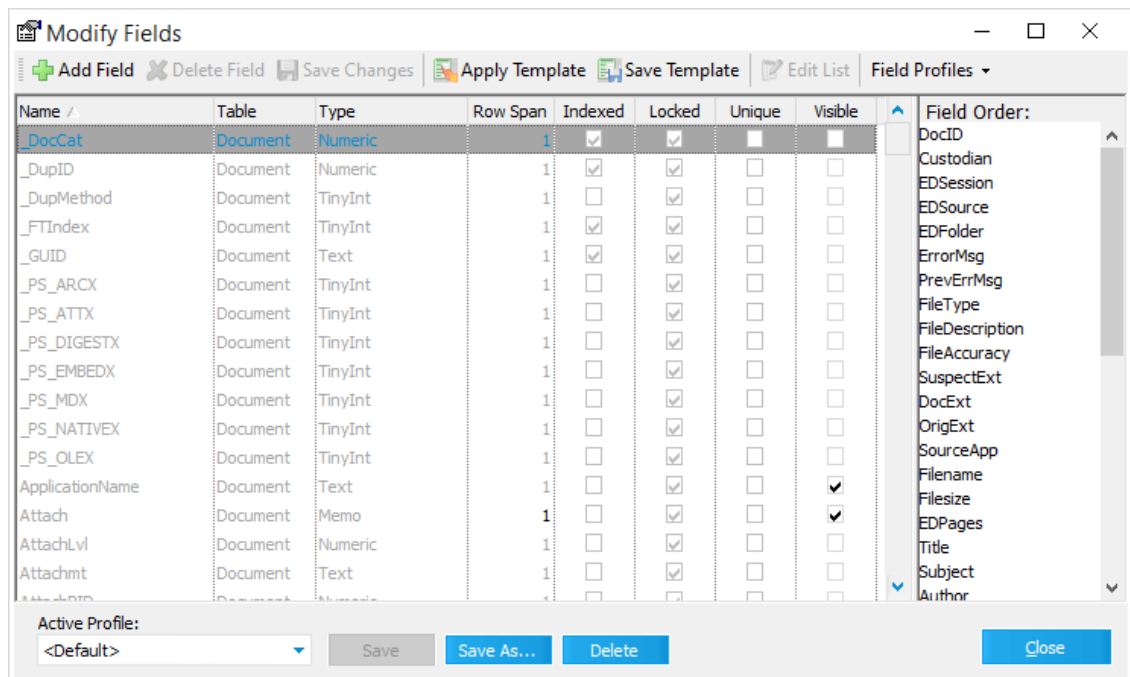
- Fields shown in gray are system fields and cannot be deleted or edited.
- Fields shown in black are user-defined fields.
- Fields of Type Memo will show the Row Span value in black.

2. Select a field and then apply the following options as needed:

- **Add Field:** Opens the **Add Field** dialog box.

- **Delete Field:** Deletes a user-defined index field.
- **Save Changes:** Saves changes after editing field properties.
- **Apply Template:** Applies an existing case template. See [Case Templates](#).
- **Save Template:** Saves a case template based on the current LAW case. See [Case Templates](#).
- **Edit List:** Starts the List Editor to allow editing of list field values.
- **Field Profiles:** Click the arrow to view a list of active profiles, open the **Manage Field Profiles** dialog, and save a new profile. For more information, see [Index Profiles](#).
- **Name:** Displays names of system and user-defined fields.
- **Table:** Indicates if a field is contained in the document-level or page-level table of the database.
- **Type:** Lists the type of field (see Field Types below).
- **Row Span:** Indicates how many rows of data will be visible in the Index display (Memo fields only).
- **Indexed:** Indicates if a field is indexed.
- **Locked:** Indicates if a field is locked. All system fields will be locked, meaning they cannot be edited.
- **Unique:** Indicates if a field is set to unique, meaning values in this field must be unique for each record.
- **Visible:** Indicates if the field is visible on the Index display.
- **Field Order:** Displays the order of fields in the Index display.
- **Active Profile:** Displays the name of the profile currently applied in the Index display.**
- **Save:** Saves any changes made to the active field profile.**
- **Save As:** Deletes a user-defined Index profile. to be used for storing field order and visibility.**
- **Delete:** Deletes the profile currently selected in the **Active Profile** field. The Default profile cannot be deleted.**

**For more information on index profiles, see [Index Profiles](#).

To create a new field

1. From the main window, on the **Index** menu, click **Modify Fields.** The **Modify Fields** dialog box opens.
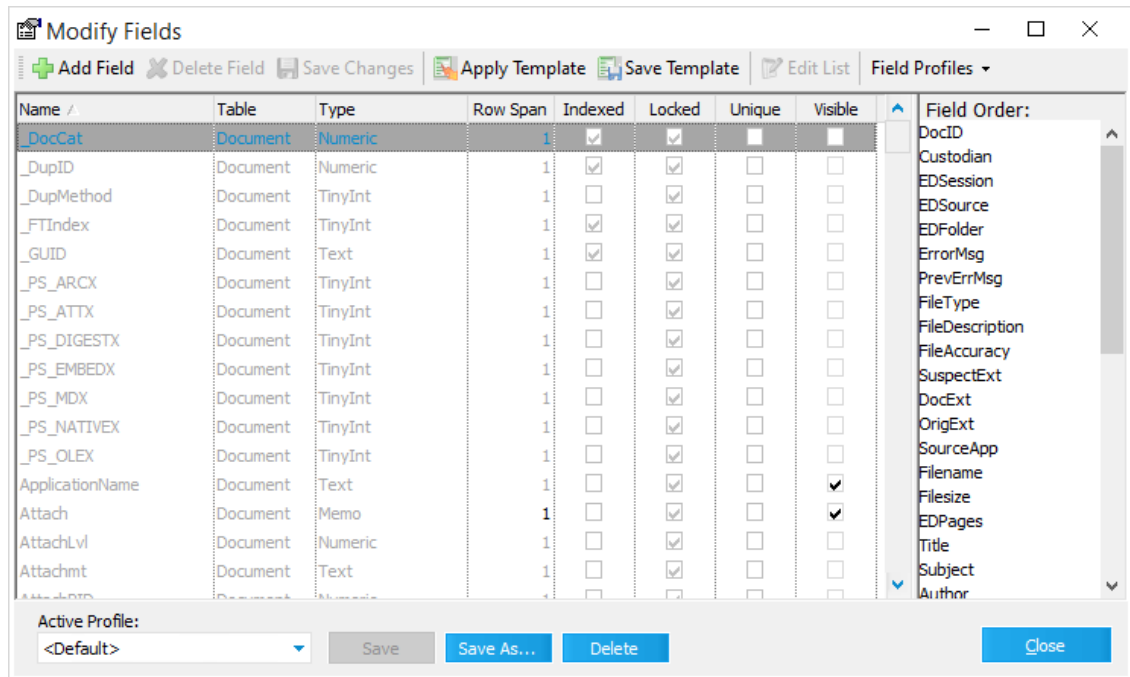
2. Click **Add Field**. The **Add Field** dialog box appears.
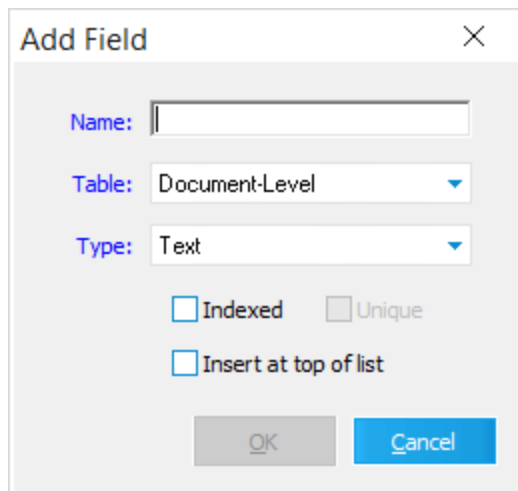
3. Type a unique name for the field.

📝 LAW reserves many field names. You will not be able to name a field with one of the reserved names or with any custom field that already exists. For more information see Field Descriptions.

4. In the **Table** list, select the level.

- **Document-level** applies the same value to all pages in a document.
- **Page-level** applies a unique value to each page in a document.

5. Select options for the database properties for the field:

Option	Description
Type	The type should reflect the kind of data that will be stored. Type choices are: • Auto-Increment • Date • List • Memo • Numeric • Tag (Boolean) • Text For a full description of these field types, see Working with Fields.
Indexed	Select this option only if the information in the field will be unique across records, and you are certain the information will be used frequently as a basis for queries. For example, do not apply an index to a Tag (Boolean) field type as this can reduce database performance.
Unique	Applies a uniqueness standard to data stored in the field. Use if the field will be used as a key value.
Insert at top of list	Adds the new field to the top of the current list of fields.

6. Click **OK**.

To apply an index to a field

In database terms, an *index* refers to a numerical list that the database engine applies to field data. The database engine uses this list instead of the actual data as the basis for sorting and searching. The end result of applying an index to a field is a potential boost in query performance. It is important to note that the database engine does not automatically create an index for any field. Instead, you must assign them yourself and exercise good judgment when doing so because if an index is applied to the wrong kind of field, performance can be impacted negatively.

It is recommended that you follow these guidelines when deciding which fields to apply an index to:

- Apply indexes only to fields that hold unique values.

- Apply indexes only to fields that you expect will be the subject of queries or that you expect will be used as a basis for sorting. There is a performance cost that the database engine incurs with applying an index. So you should apply indexes sparingly and only to those fields you expect you will use the most.

1. In the main application window, on the **Index** menu, click **Modify Fields**.

2. Find the field that you want to index in the list and select the checkbox in the **Indexed** column.

3. Select the checkbox in the **Unique** column if you want the values in the field to function as a unique identifier.

4. Click **Close**.

Considerations for changing field properties

Note the following important considerations before you change a field property:

- Certain field type conversions may cause a loss of data. For example, changing a text field to date field can cause all invalid date values to be cleared. Similarly, changing a memo field to text will cause truncate fields that have greater than 255 characters.

- A unique index cannot be added to an existing field if that field does not contain all unique values.

To delete a field

1. In the main application window, on the **Index** menu, click **Modify Fields**.

2. Select the field you want from the field list and then click **Delete**.

   The field and all data associated with it are deleted permanently from the database.

   System fields cannot be deleted. You can tell if a field is a system field if it is displayed in gray in the **Modify Fields** dialog box.

To manipulate field sequence and visibility

The **Field Order** section of the **Modify Fields** dialog box is used to specify the order in which fields will be displayed in the **Index** display on the main form.

To perform this action	Do this
Add a field to the pane.	• Select **Visible** for the desired field; the field will be added to the bottom of the list.
Move a field to a different location.	• Drag the field from the **Field Order** pane to the desired location, and then release the mouse button.
Move multiple fields simultaneously.	1. Use the CTRL or SHIFT key to select multiple fields. 2. While holding one of these keys, click and drag the fields to the new location and then release the mouse button. The fields will be re-ordered on the **Index** display after closing the **Modify Fields** dialog box.
Hide or show fields.	Right-click anywhere within the **Field Order** pane and then select an option: • **Hide Selected Fields:** Hides any fields selected in the Field Order pane. Use the Ctrl or Shift keys to select multiple fields. • **Hide All Fields:** Hides all fields that are currently displayed in the Field Order pane. • **Show All Fields (User-defined):** Leaving currently displayed fields intact, this option displays all user-defined fields in the current LAW case. • **Show All Fields:** Displays all system and user-defined fields existing in the current case.

Working with List Fields

You can work with list items by adding, removing, or editing the items available in a list field. You can import or export list items for reuse across cases. You can also add list items while coding.

To work with list items

1. From the main window in CloudNine™ LAW, on the **Index** menu, click **Modify Fields**. The **Modify Fields** dialog box opens.
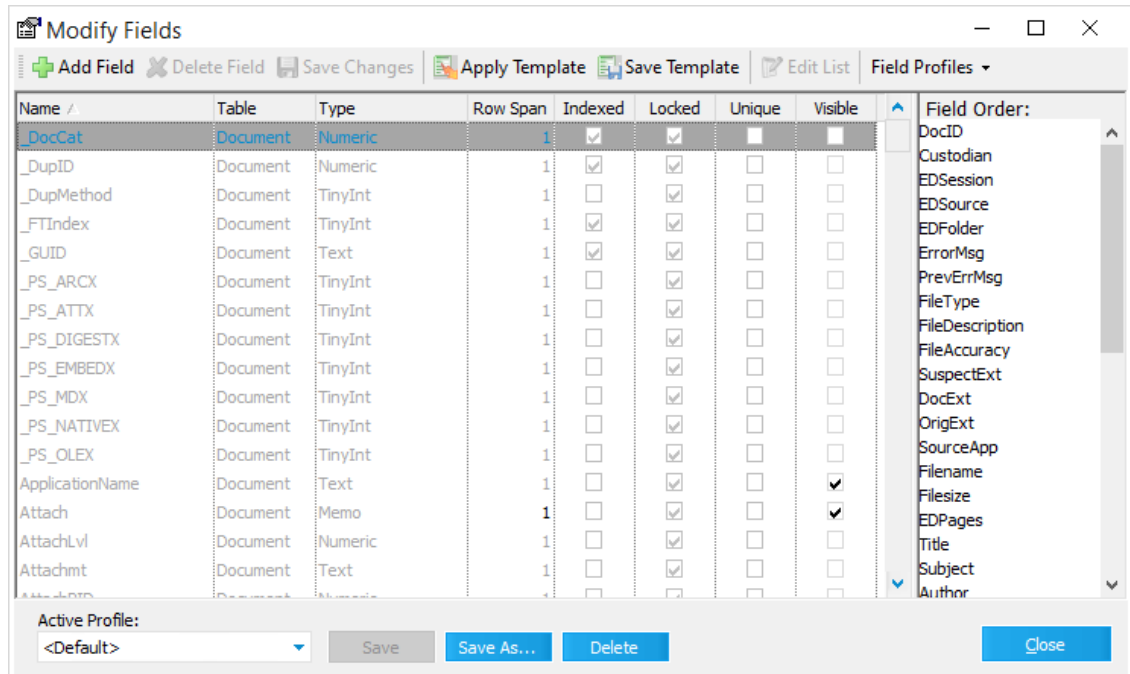
2. Select a field that has the **Type** column shown as **List**. Click the **Edit List** button. The **List Editor** dialog box opens.
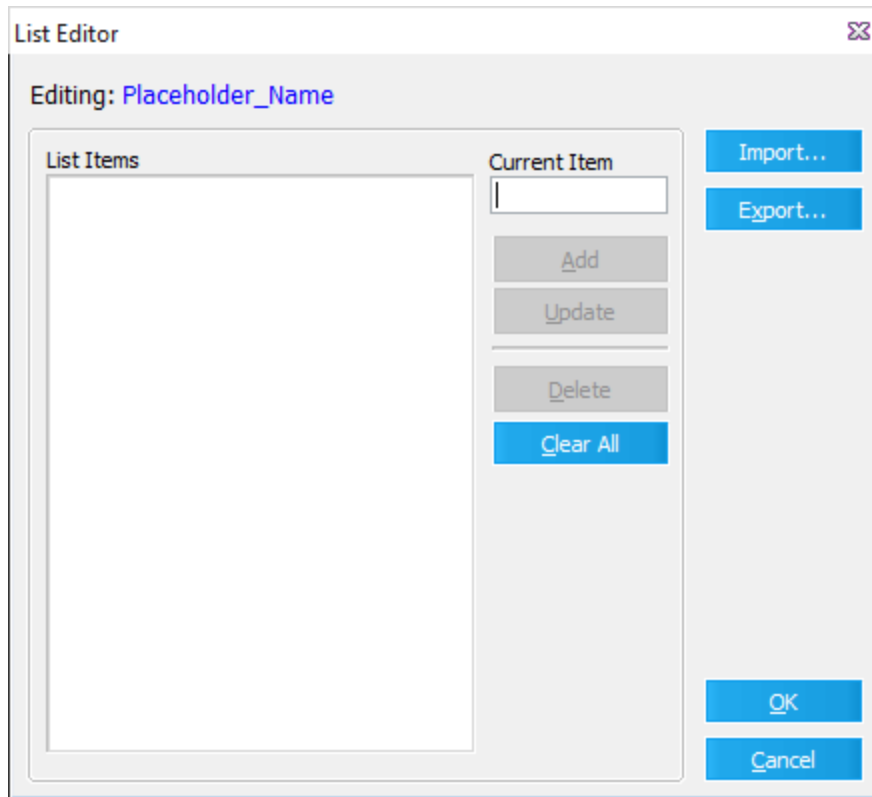
3. Use the List Editor to work with list items from list items as described in the following table:

To complete this task:	Perform these steps in the List Editor
Add items to a list.	• Type a unique value into the **Current Item** text box and then click **Add**. The new item appears in the list.
Delete a list item.	• Select a list item from the **List Items** pane and then click **Delete**. The selected item is removed from the current list.
Rename a list item.	• Select a list item from the **List Items** pane, type the new name in the **Current Item** text box, and then click **Update**. This name of the current item is updated.

To import or export list values

You can import or export existing list values for reuse. List items are imported and exported using list file. A list file is a text file with the .lst extension. After you setup list items on one workstation, use the List Editor to export list files, and then on other workstations, you can use the List Editor to import the list files. Sharing list files allows multiple users to use a common set of fields between cases.

1. From the main window in CloudNine™ LAW, on the **Index** menu, click **Modify Fields**. The **Modify Fields** dialog box opens.
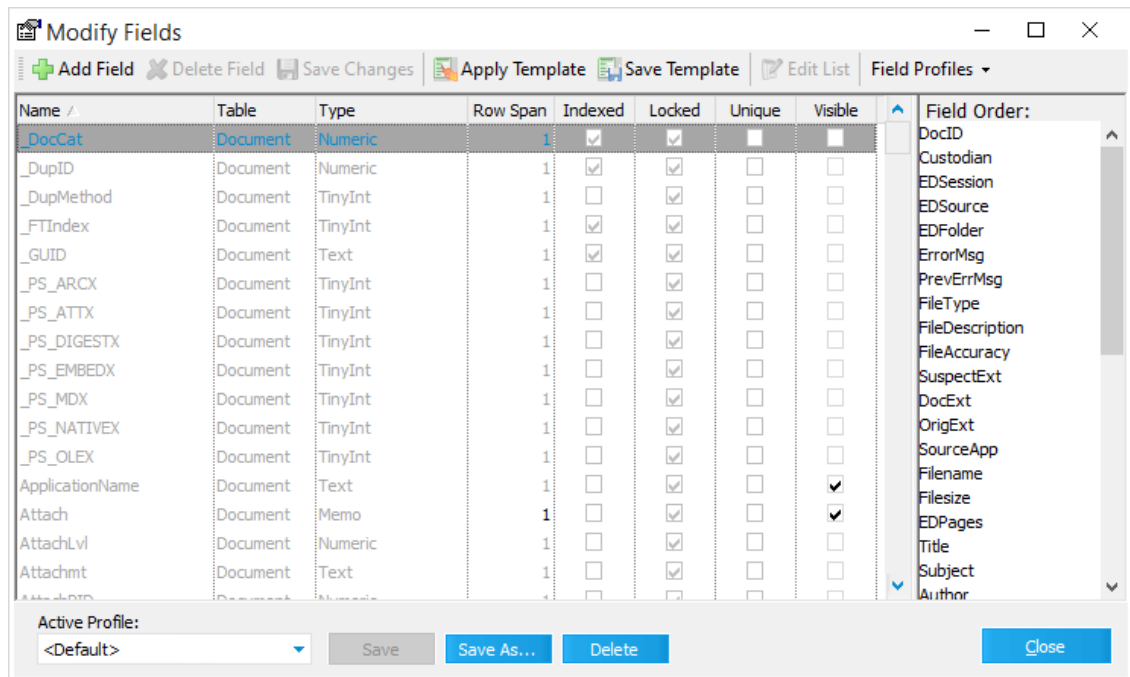
2. Select a field that has the **Type** column shown as **List** and then click **Edit List**. The **List Editor** displays.

3. To import existing entries from a list file click **Import**. To export existing entries to a list file, click **Export**.

To add list items while coding

You can add items to a list automatically when coding documents from the main form.

1. On the **Tools** menu, click **Options**, and then click the **Preferences** tab.

2. Select **Add all new list field values to list on update** and then click **OK**.

If a value is typed directly into a list field on the Index display, the value will be added to the list after you click Update.

Index Profiles

Index profiles store a list of fields that are visible for a case and the order in which the fields appear. Index profiles allow you to reuse views of index fields across cases.

Note the following facts about index profiles:

- You can setup an index profile once and then can reuse it multiple times.
- Field profiles can be used to easily switch between sets of fields in the **Index** panel.
- Profiles are stored in a text file with the .ifp file extension.
- The **Default** profile is a user-level profile included by default in each CloudNine™ LAW case. If you change the **Default** profile in a case, the changes will not persist to the **Default** in other existing or new cases.
- In electronic discovery-enabled cases, a number of popular EDD-related fields are displayed in the Index view automatically when the **Default** profile is selected.
- In non-EDD cases, no fields are displayed by default.

To edit an index profile

1. In the main window, on the **Index** menu, click **Modify Fields**.
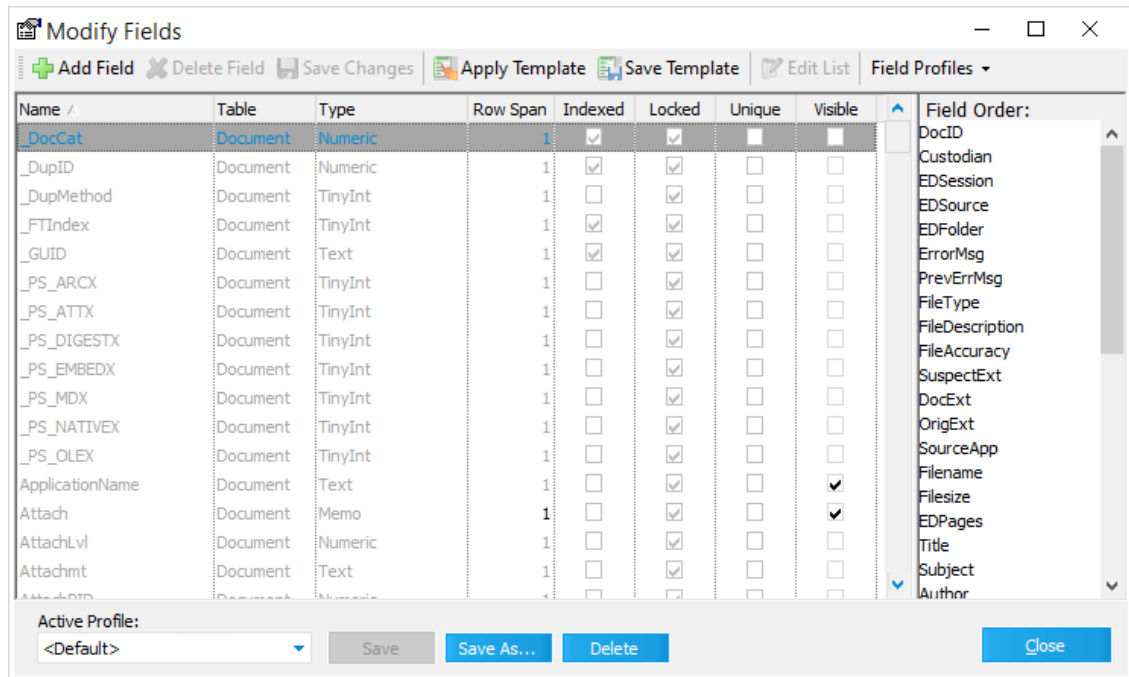
2. Configure fields as visible and sequence them as needed in the **Field Order** area.

3. Click **Save As** or click the dropdown arrow beside the **Field Profiles** button and then click **Save As**.

3. Select a storage level. Three storage levels are available when creating field profiles:

   • **User** - Available to the current user in the current case.

   • **Shared** - Available to any user in the LAW case in which the profile was created. If a profile is shared, LAW will automatically display "(Shared)" after the profile name.

   • **Global** - Available to any user in any LAW case. If a profile is global, LAW will automatically display "(Global)" after the profile name.

5. Type a name for the profile. The name must be a valid file name, as the .ifp profile storage file will be named according to the value entered in this dialog.

6. Click **Accept** to save the changes.

   The user and shared profiles are stored in the case folder structure ($UserData), while global profiles are stored in `<application path>\Shared`. To change the default storage location for global profiles, on the **Tools** menu, click **Options**, and then click **Preferences**.

7. To configure a new storage path click **Browse** and then select a folder.

   Any previously created global queries and profiles will need to be manually moved from the LAW50\Shared folder into this specified location to be detected as a global

query or profile by CloudNine™ LAW. Changing this path will affect saved global queries, global index field profiles, and global grid profiles.

Versions 5.3.08 and below used a different storage scheme for index profiles. All profiles were stored in a single INI file. When 5.3.14 or later is installed and a case is opened, the profiles will be copied from this indexprof.ini file and updated to match the new storage schema. The previous **Default** profile will be named **Default_Shared** to avoid conflict with the new **Default** profile in the current case.

To create a new profile

1. In the main window, on the **Index** menu, click **Modify Fields**.

2. Click the arrow next to the **Field Profiles** button.

   Profiles also can be applied or deleted from this dialog box.

To apply an index profile

- On the **Index** menu, click **Modify Fields** then select a profile in the **Active Profile** dropdown on the bottom left.

   Or

- On the main form **Index** panel select a profile from the **Profile** list.

To modify or delete an existing profile

1. In the main window, on the **Index** menu click **Modify Fields**.

2. Do one of the following:

- In the **Active Profile** drop-down, select a profile to modify or delete.
  - To modify a profile, edit fields and then click **Save**.
  - To delete a profile, click **Delete** and then click **Yes**.

   Or

3. Click the arrow next to the **Field Profiles** button.

4. Click **Manage Profiles**.

5. Select a profile to delete from the **Field Profiles** list.

6. On the **Edit** menu click **Delete**.

Notifications

In LAW you can have LAW automatically generate and send email notifications to specific email recipients when import, batch processing, and export jobs are completed. Notifications can be set up for individual cases or set up globally for all cases. Notifications are created and managed from the Notifications tab in the Options dialog box.

If there are errors sending an email notification, the error is written to the notification log located in the following directory: %CASEDIR%\$Logs\notifications.log.

To configure the SMTP settings

When setting up notifications, you can have LAW automatically detect the SMTP server, or you can manually configure the SMTP server information to send the notification emails from a specific SMTP server and email address in the SMTP Configuration section of the Notifications tab. By default, Automatically detect server is selected.

To have LAW automatically detect the SMTP server, make sure the Automatically detect server option is selected on the Notifications tab. When the Automatically detect server option is selected, the default email address for the notification email sender is LAW@noreply.com.

⚠ Automatically detect server does not work with a generic Outlook dummy profile in use. No notifications will be sent unless the profile is configured to use your network's SMTP during creation.

⚠ It is not recommended to use Automatically detect server and your personal Outlook email with emails imported into LAW as msgs and batch tiffing. This will result in your personal email address being displayed on the top of emails.
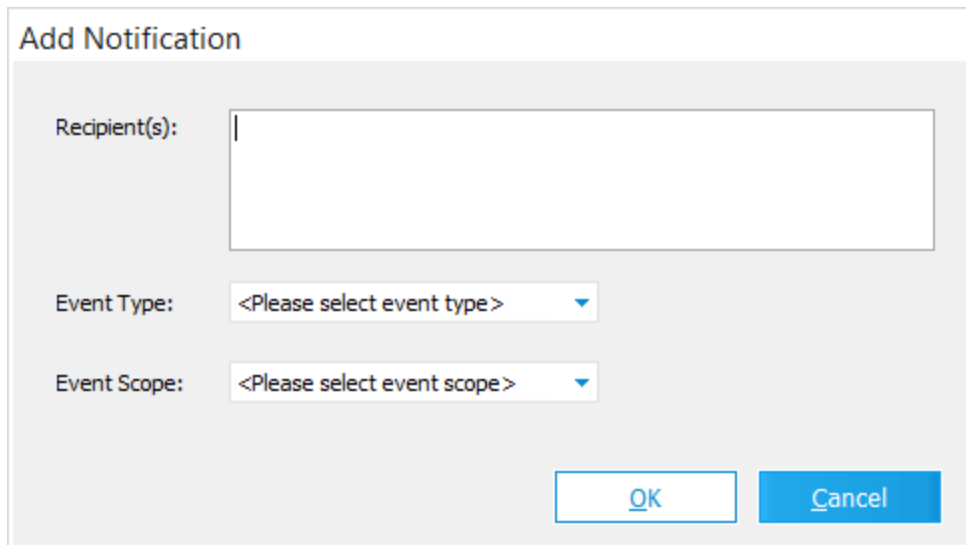
To manually configure the SMTP server information

1. From the main window in LAW, on the **Tools** menu, click **Options**.

2. Click the **Notifications** tab.

3. In the **SMTP Configuration** section, select the **Manual Configuration** option.

4. In the **Host** field, type the SMTP mail server address. For example:
   smtp.gmail.com

5. In the **User** and **Password** fields enter appropriate credentials that should be used as the sender for the email notifications.

6. In the **Port** field, enter the port number for connecting to the SMTP server.

7. If TLS is required, select the "Use TLS" checkbox.

💡 You will need to configure the email used to allow apps to send emails through the specified email account. For gmail, for example, you may need to modify settings in your google Apps accounts (i.e. turn on "Less secure apps" from My Account). As this changes the security of that email account, you may want to configure a separate email account for this purpose alone.

To create a notification

1. From the main window in LAW, on the **Tools** menu, click **Options**.

2. Click the **Notifications** tab.

3. Click the **Add New** button. Clicking the **Add New** button opens the **Add Notification** dialog box.

4. In the **Recipients** box, enter the email addresses where you want to send the email notification.

   To enter multiple email addresses, place a semi-colon, **;**, between each email address.

5. In the **Event Type** list, click one of the following:

   - **Batch Complete.** Sends an email notification whenever a batch process is completed or canceled, and when a distributed batch process is completed.

   - **Export Complete.** Sends an email notification whenever an export job is completed or canceled.

   - **Import Complete.** Sends an email notification whenever an Electronic Discovery import job is completed. (This is not enabled for Turbo Import enabled cases.)

6. In the **Event Scope** list, click one of the following:

   - **All Cases.** The notification applies to all LAW cases. Notification will be displayed in the Notifications list on the Notifications tab for all cases.

   - **Current Case.** The notification only applies to the current LAW case. Notification will only be displayed in the Notifications list on the Notifications tab for the case the notification was created in.

7. Click **OK**. Clicking **OK** saves the notification and adds the notification to the **Notifications** list on the **Notifications** tab.

To edit a notification

1. In the **Options** dialog box, click the **Notifications** tab.

2. In the **Notifications** list, select the notification you want to edit.

3. Click the **Edit** button.

4. Clicking the **Edit** button opens the **Edit Notification** dialog box.
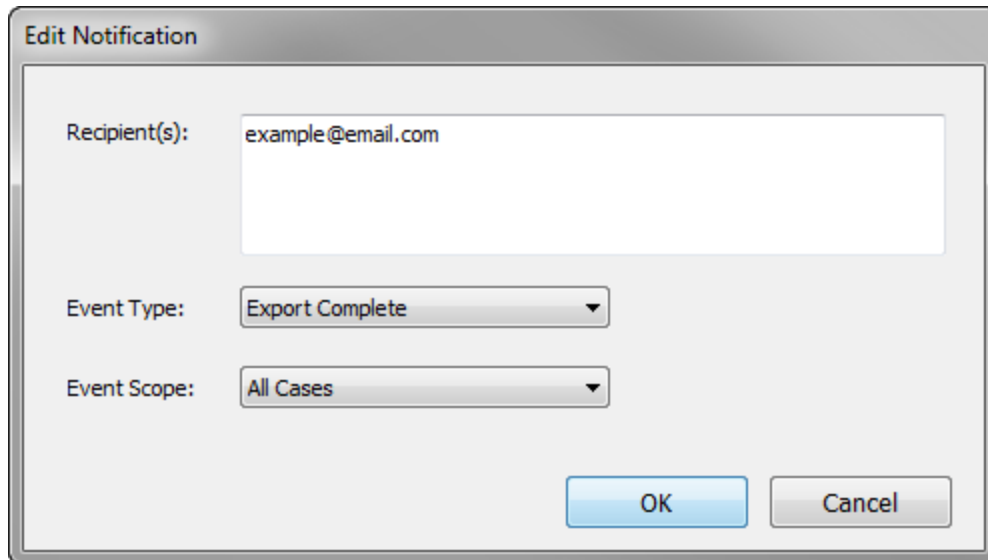
5. Edit the notification.

6. Click **OK** to save your changes.

To delete a notification

1. In the **Options** dialog box, click the **Notifications** tab.

2. In the **Notifications** list, click the notification you want to delete.

3. Click the **Delete** button.

4. Click **Yes** when asked, *Would you like to proceed?*.

    Clicking **Yes** deletes the notification.

To test a notification

You can test a notification to make sure it is set up correctly.

1. In the **Options** dialog box, click the **Notifications** tab.

2. In the **Notifications** list, click the notification you want to test.

3. Click the **Test Notification** button.

4. LAW sends a test email to the email addresses entered in the Recipients box in the Add Notification and Edit Notification dialog boxes.

    The email Subject field contains one of the following:

    - For imports - **LAW Notification: [Import Complete] on [case name]**
    - For batch processes - **LAW Notification: [Batch Complete] on [case name]**
    - For exports - **LAW Notification: [Export Complete] on [case name]**

    The email body for all types of notifications is: **--- THIS IS A TEST NOTIFICATION ---**

💡 If you receive an error message, in regards to "SMTP authentication failed after sending password.", then confirm that you configured the email used to allow apps to send emails through your email account. For example in Microsoft, in Gmail, and with Yahoo. As this changes the security of your email, you may want to configure an email account for this purpose alone.

⊟ **Information provided in the notification email messages**

Here are the contents of each notification email message:

Import Complete message:

Subject: LAW Notification: [Import Complete] on [case name]

Session Title: Name of the import session.

Creator: User name of the user that created the import.

Import Count: Total number of records imported into LAW.

Excluded: Total number of records excluded from the import.

Duplicates: Total number of duplicate records identified during the import.

Errors: Total number of errors encountered during the import.

Warnings: Total number of warnings generated during the import.

Batch Complete message (standalone batch process):

Subject: LAW Notification: [Batch Complete] on [case name]

Batch Type: Standalone

Batch Status: Complete or Cancelled

Total Items: Total number of items in the batch.

Error Count: Total number of errors encountered the during batch process.

Active Processes: Processes completed during the batch process. For example: TIFF Conversion, Endorse Image, OCR

Elapsed time: Total processing time for the batch process.

Total pages: Total number of pages processed during the batch process.

Average speed: Average number of pages processed per hour during the batch process.

Batch Complete message (distributed batch process):

Subject: LAW Notification: [Batch Complete] on [case name]

Batch Name: Name of the distributed batch process job.

Batch Type: Distributed

Batch Status: Complete

Total Items: Total number of items in the distributed batch.

Error Count: Total number of errors encountered during distributed batch process. Total includes all errors logged for the entire batch, not just errors logged by the current workstation.

Active Processes: Processes completed during the distributed batch process. For example: TIFF Conversion, Endorse Image, OCR

Elapsed time: Total processing time for the distributed batch process.

Total pages: Total number of pages processed during the distributed batch process.

Average speed: Average number of pages processed per hour during the distributed batch process.

Export Complete message:

Subject: LAW Notification: [Export Complete] on [case name]

Profile Name: Export profile name.

Export Path: The full path to the export directory.

Creator: User name of the user that created the export.

[export message] *The process was completed with warnings.*

Total Records: Total number of records exported.

Total Files: Total number of files exported.

Total Size: Total file size of all files exported.

Elapsed Time: Total processing time for the export.

Average Speed: The average total file size processed per hour during the export.

Acquiring Documents

You can use LAW to acquire documents in any of several ways:

- Import using ED Loader. ED Loader is the utility you run to import electronic documents. ED Loader supports indexing during import and provides other advanced import features. For more information, see: Importing Electronic Discovery.

- Import using Turbo Import. Turbo Import is the utility you run to import electronic documents using multiple cores and stations for processing. For more information, see: Importing by Turbo Import

- Using a scanner. You can add document images to a LAW case by using a scanner. You can control scanner operation for many scanner models directly from within CloudNine™ LAW. For more information, see: Scanning Documents.

- Importing cases from LAW and other litigation support applications. LAW allows you to import documents into the current case from other LAW cases and from load files created by other litigation support applications. For more information, see: Importing Cases and Load Files.

- Importing image stores. You can import existing images directly into a LAW case. For more information, see: Importing Raw Images.

- Importing replacement images. You can import images to replace current images. For more information, see: Importing Replacement Images.

Importing Electronic Discovery

You use the Electronic Discovery Loader (ED Loader) utility to import electronic documents into a case setup for ED Loader.

ED Loader Settings Prior to importing

Before importing into LAW through ED Loader, it is necessary to configure your Outlook correctly.

⊟ Office 365 Desktop Installation

Office 365 functions similar to Office 2016 except that there is a cloud/virtual version and a desktop installed version. For functionality with LAW the desktop version needs to be installed. Please see Microsoft's website on how to confirm if you have the installed version of Office 365. What Office 365 business product or license do I have? Please contact Microsoft support for any questions in regards to their licensing.

Due to some changes that Microsoft did to Outlook 2016. PSTs on a mapped drive are experiencing errors using the drag and drop method into ED Loader.
https://support.microsoft.com/en-us/help/4051806/error-add-pst-outlook-2016

As a workaround add the following ini setting to EDLoader.app.config.ini

[EMAIL_SETTINGS]
UseTempProfileForPst=1

If you have Office 365 32-bit desktop version installed then the Outlook configuration is the same as Outlook 2016. Office 365 64-bit desktop version is not supported.

Setting up a dummy Outlook profile

Outlook 2016

1. Close completely out of Law and Microsoft Outlook.
2. Go to Windows Control Panel > **Mail (Microsoft Outlook 2016) (32-bit)**
3. Select **Show Profiles**
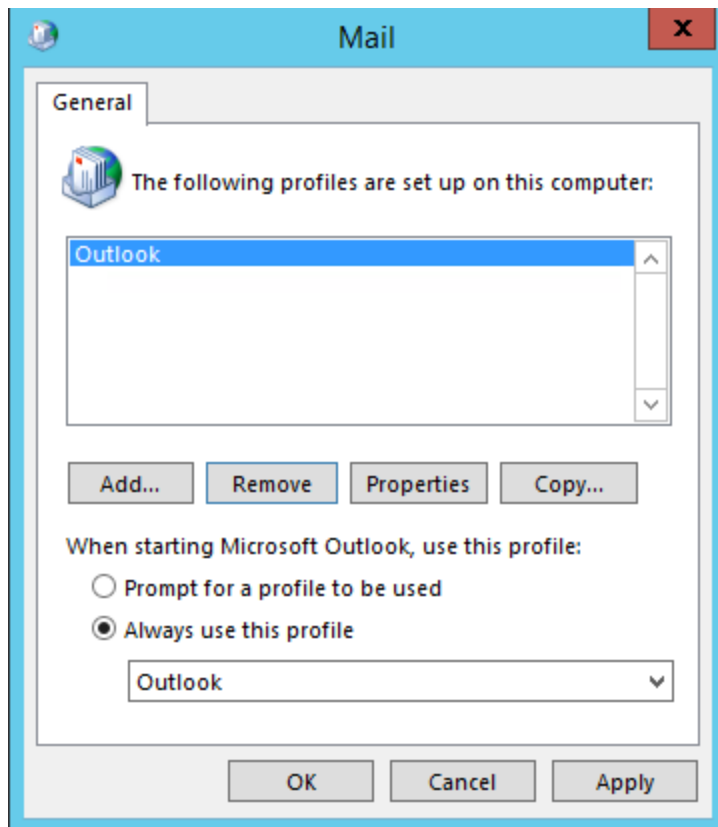
4. Select **Add**, type in an underscore for the profile name, then hit **OK**.
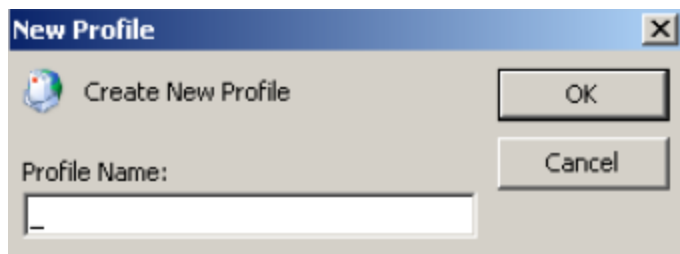
5. Deselect **Set up Outlook Mobile on my phone, too**, then select **Connect to a different account**.

6. Select **Manual setup** or **additional server types**, then **Next**.

7. Select **Pop or IMAP**, then **Next**.

8. Fill in the highlighted values with an underscore except for Email Address which will be: _@_.com

9. Deselect **Automatically test account settings when Next is clicked**.

10. Deselect **Remember password**, then select **Next**.
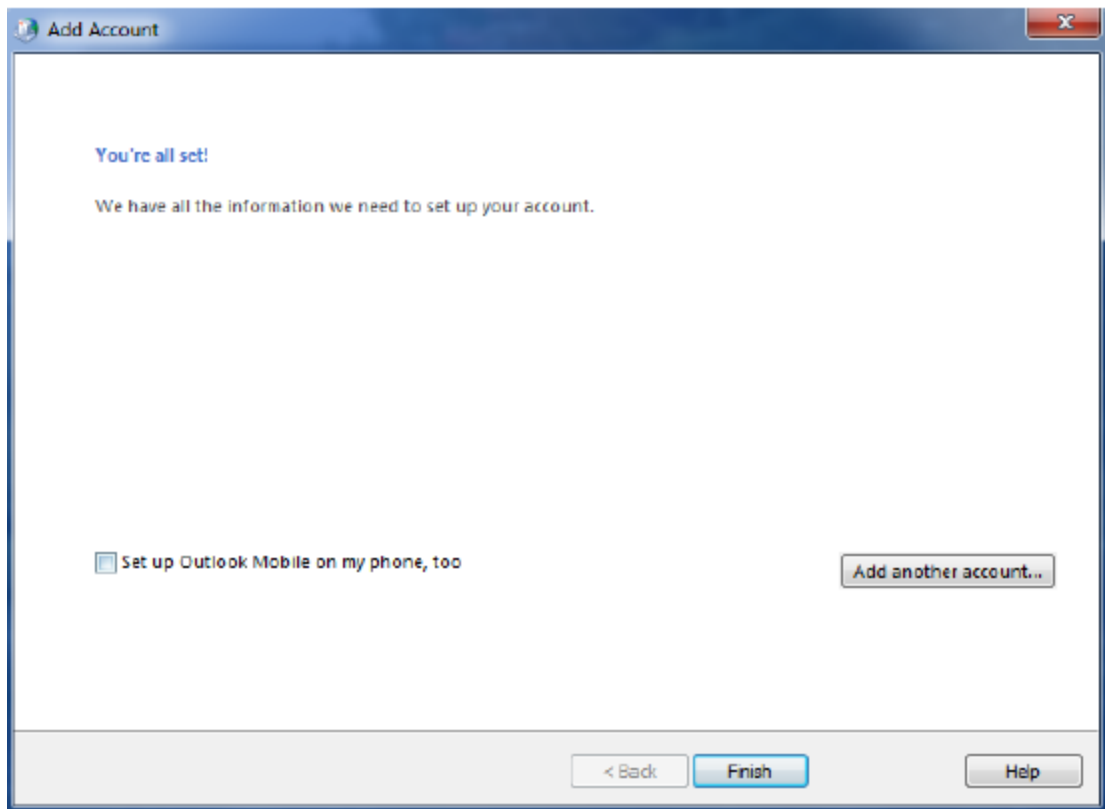
11. Deselect **Set up Outlook Mobile on my phone, too**, then choose **Finish**.
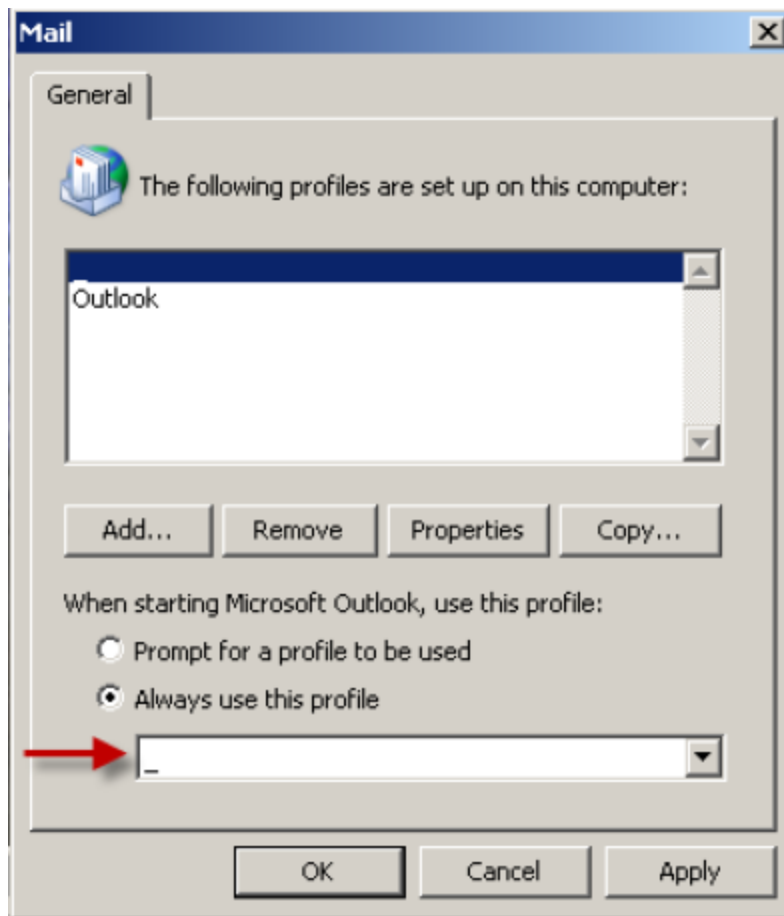
12. The last step is to select **Always use this profile**, your new profile, and **OK**.

⊟ **Outlook 2013**

1. Close completely out of Law and Microsoft Outlook.
2. Go to Windows Control Panel > Mail
3. Select **Show Profiles**
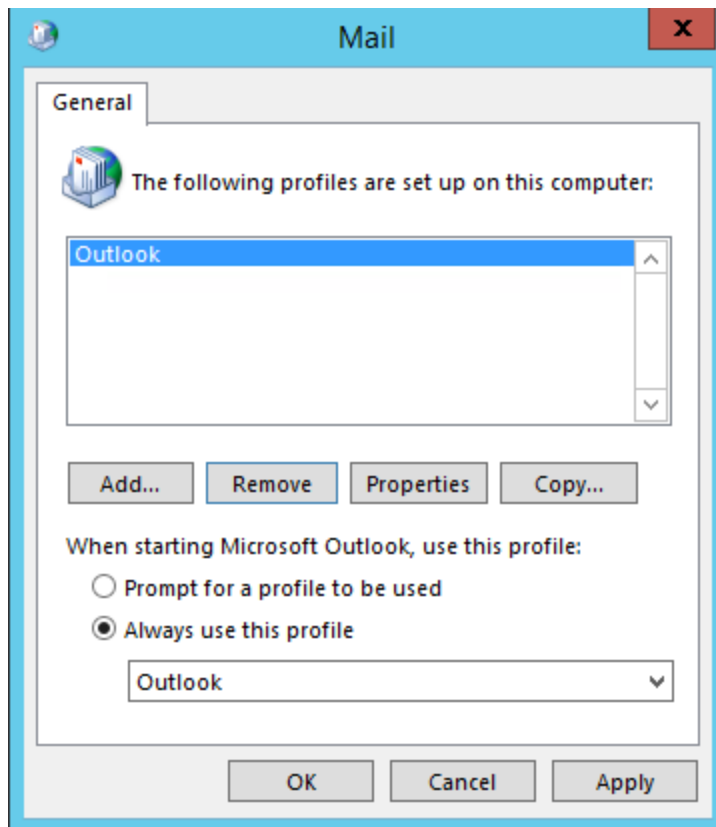
4. Select **Add**, type in an underscore for the profile name, then hit **OK**.

5. Select **Manual setup or additional server types**, then **Next**.

6. Select **Pop or IMAP**, then **Next**.

7. Fill in the highlighted values with an underscore except for Email Address which will be: _@_.com

8. Deselect **Automatically test account settings when Next is clicked**.

9. Deselect **Remember password**, then select **Next**.

10. Then choose **Finish**.

11. The last step is to select **Always use this profile**, your new profile, and **OK**.
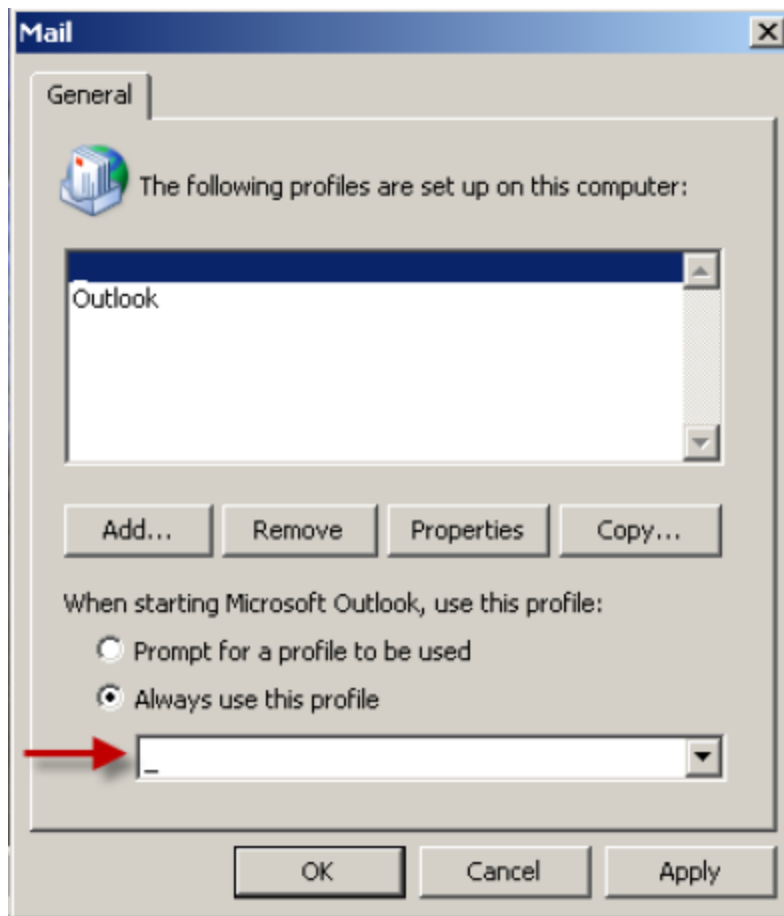
◻ **Outlook 2010**

1. Close completely out of Law and Microsoft Outlook.
2. Go to Windows Control Panel > Mail
3. Select **Show Profiles**
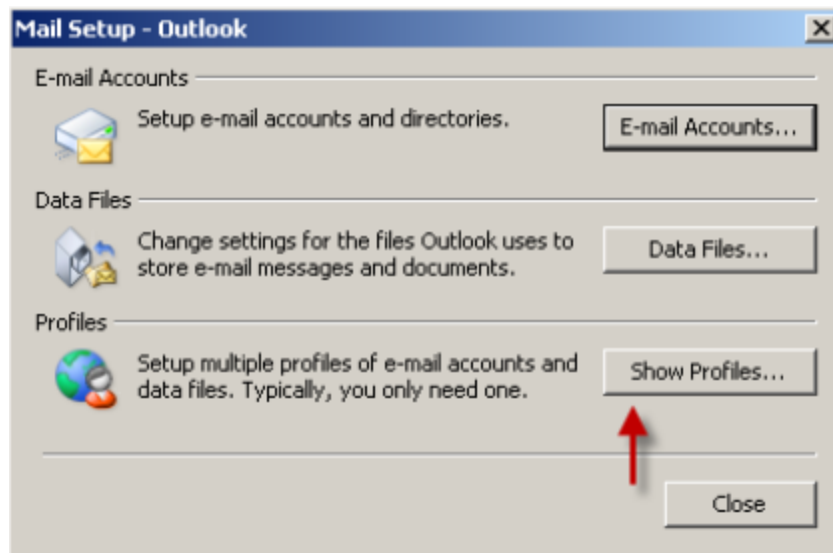
4. Select **Add**
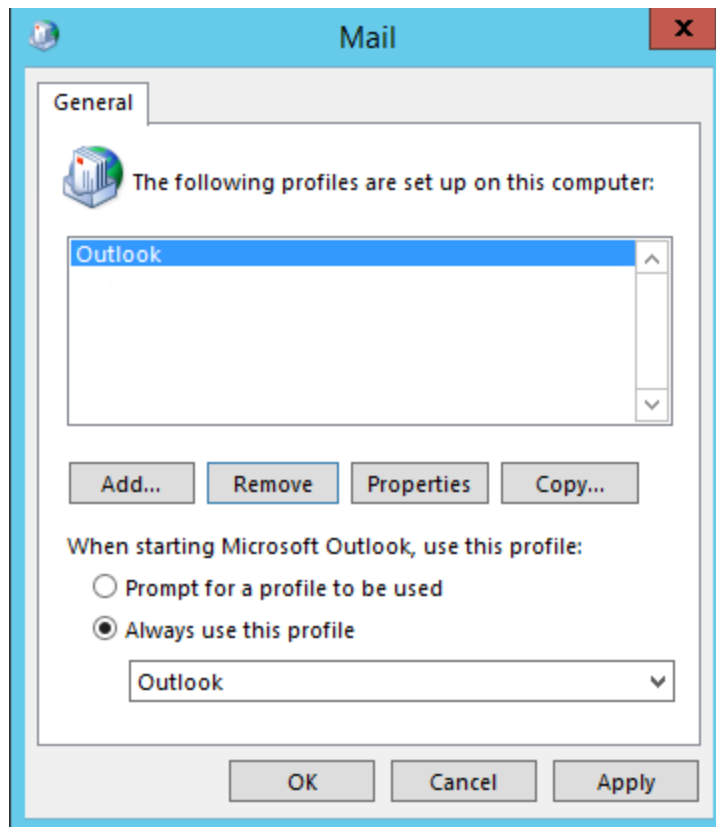
5. Type in an underscore for the profile name, then select **OK**.
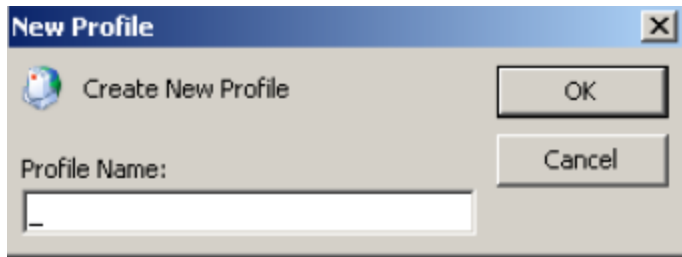
6. Select **Manually configure server settings**, then **Next**.
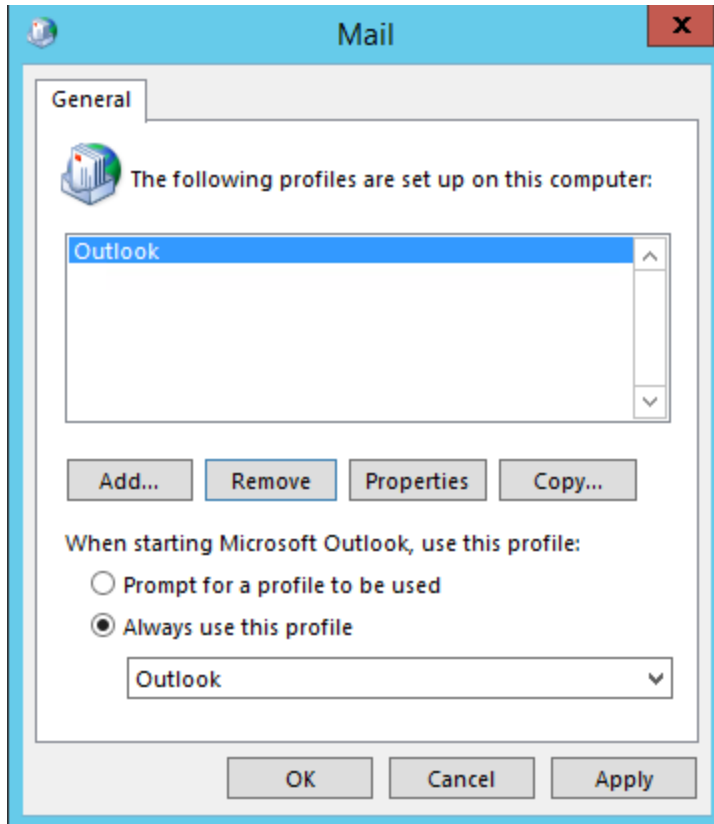
7. Select **Internet E-mail** or POP3 as the e-mail service, then **Next**.
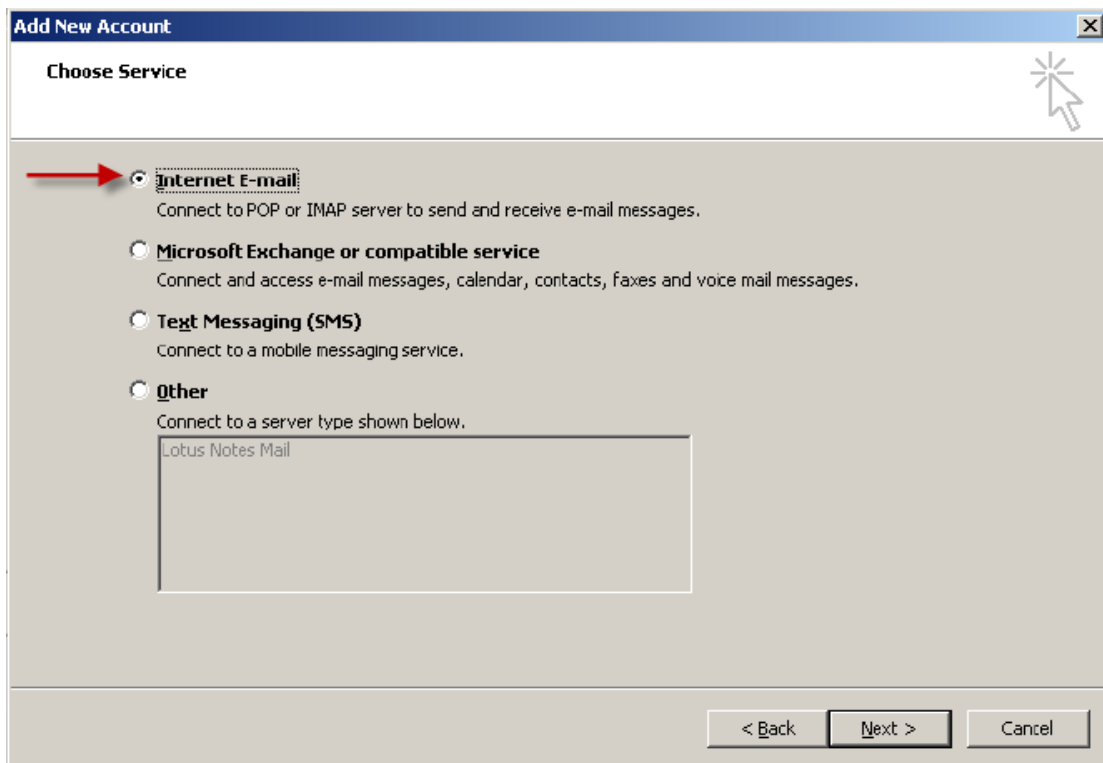
8. Put an underscore in all fields except E-mail Address and Password. Type "_@_.com" in E-mail Address and leave Password blank. De-select **Test Account Settings**, then **Next**.
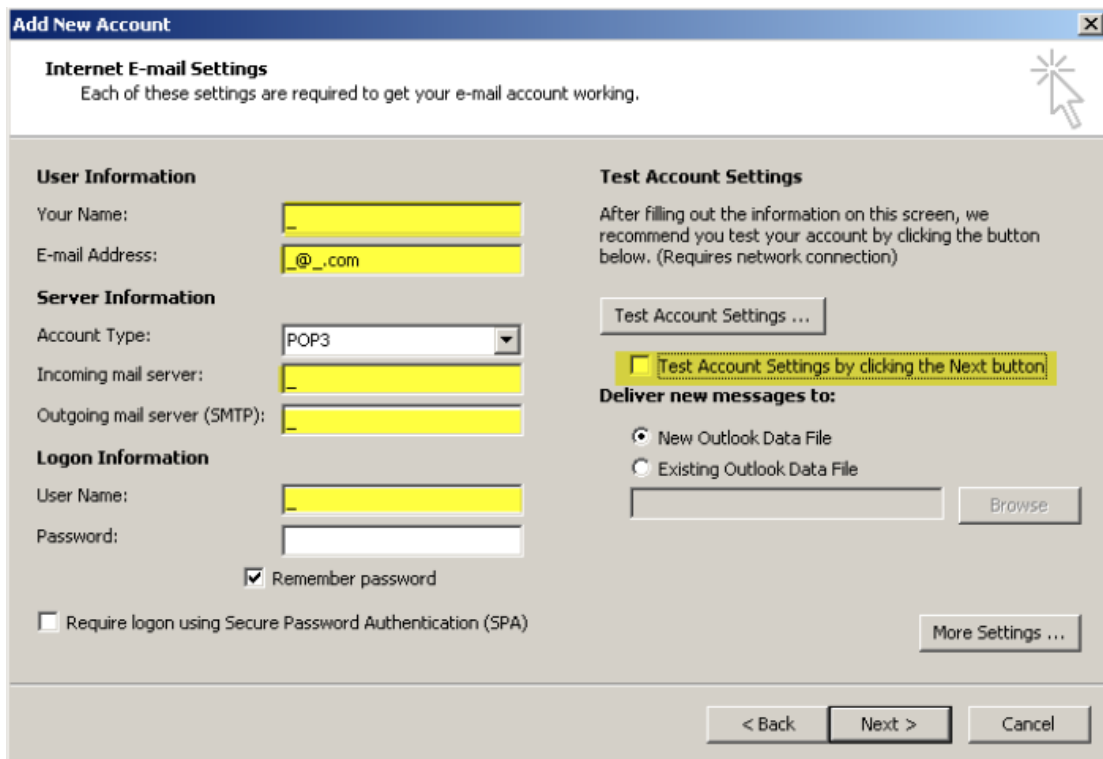
9. Select **Finish**, then select the newly created dummy profile under **Always use this profile**.
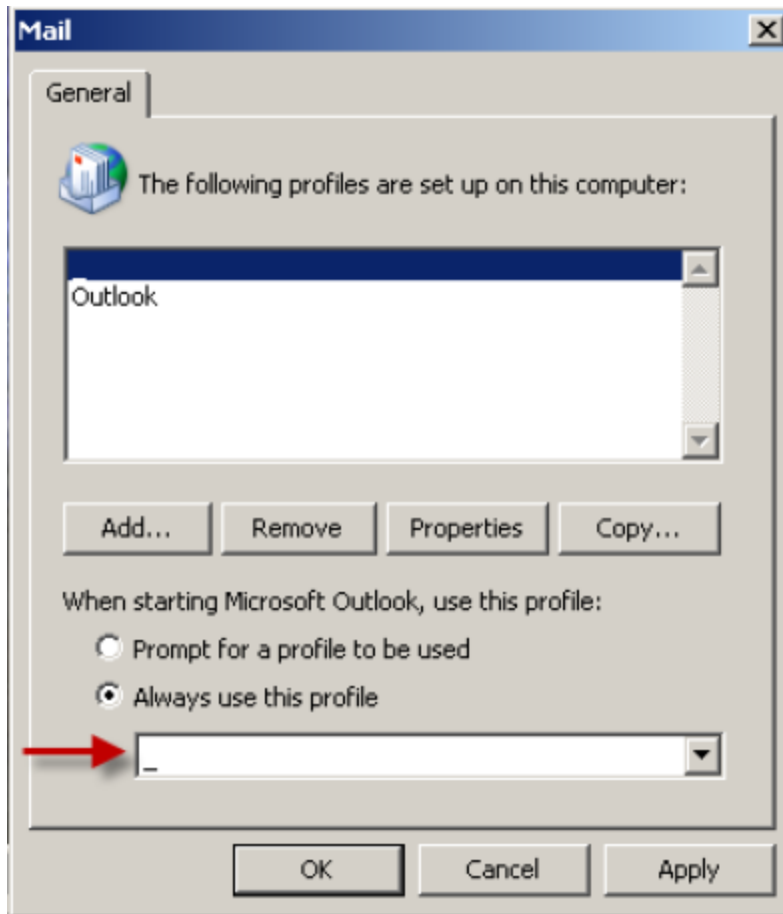
10. Then select **OK**.

⊟ **Outlook Version Limitations**

Outlook Version	PST size limitations for processing
Outlook 2007	Maximum pst size of 20 GB
Outlook 2010	Maximum pst size of 50 GB
Outlook 2013	Maximum pst size of 50 GB
Outlook 2016	Maximum pst size of 50 GB

⚠ The maximum pst size for Outlook 2010 and higher can be adjusted in the registry to exceed the above limits. This registry item should be performed on all machines involved in the ED Loader processing (distributed process). Microsoft's Knowledge Base

3GB Switch for 32-Bit Versions of Outlook

Instructions for enabling in Outlook 3GB of processing memory as opposed to the 2GB default. In order for this to be of benefit in your environment the workstation needs at least 4GB of RAM.

To enable the 3GB switch:
1.   Right-click on the Command Prompt icon in the Accessories program group of the Start menu. Click Run as Administrator.
2.   At the command prompt, enter:bcdedit /set IncreaseUserVa 3072
3.   Restart the computer.

To disable the 3GB switch:
1.   Right-click on the Command Prompt icon in the Accessories program group of the Start menu. Click Run as Administrator.
2.   At the command prompt, enter:bcdedit /deletevalue IncreaseUserVa
3.   Restart the computer.

Starting an Import Session

After opening an ED Loader enabled case, starting an import session involves the following tasks:

- Open ED Loader (LAW Electronic Discovery Loader)
- Set a default target folder
- Select a default custodian
- Create a session label
- Specify a DocID seed

The following sections for this topic describe how to complete these tasks.
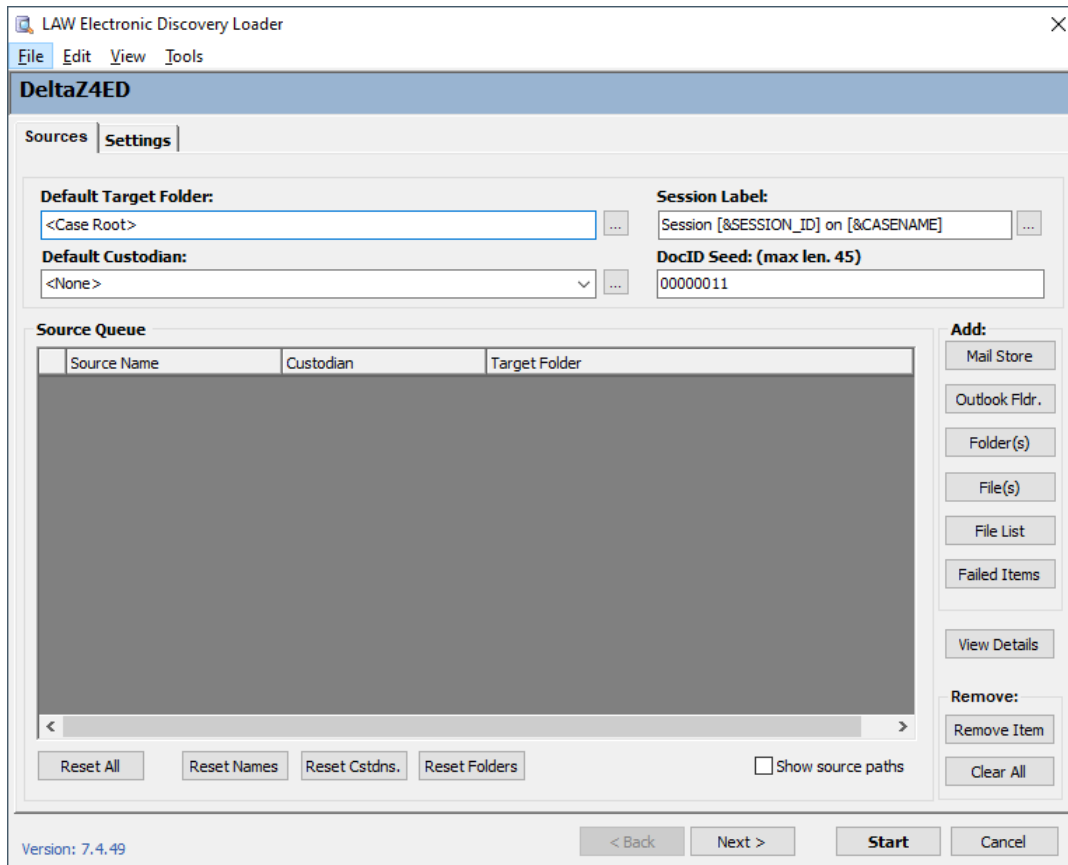
Preparing to start an import session

Before you start an ED Loader session, you can configure variables that control ED Loader operation and especially how specified type of sources are handled.

1. On the **File** menu, click **Import**, and then click **Electronic Discovery**. ED Loader opens.

2. On the **Sources** tab you can set any of the following session variables as needed:

   - Default target folder
   - Default custodian
   - Session label
   - DocID seed

These options may be set either before or after selecting the sources to be loaded.

> 📝 **Default Target Folder** and **Default Custodian** apply to all sources unless further configuration is performed at the source level. For more information see Source Queue.

⊟ **Setting the default target folder**

The location of electronic discovery documents to be imported is based on the default target folder setting.

Note the following facts when you set the default target folder:

- The value in the **Default Target Folder** is relative to the path of the case folder. For example, if the case is located in C:\Case1 and you type Example Case_0001 into the Default Target Folder field, the actual path will resolve as: C:\Case1\Example_Case0001.
- When you start ED Loader in a case, the default target folder is automatically populated with the name of the currently selected folder.
- If the root folder of the case is the currently selected folder, then the value of Default Target Folder is <Case Root>.
- If you enter a folder name that does not currently exist in the case, LAW will create it prior to import.

⊟ **To customize a session label**

Session Label uniquely identifies each ED Loader session for a case. Session labels can be useful to filter records by session or to review session logs. The default value is the start date and time of the session.

1. Start ED Loader.

2. Do one of the following:

   - Type directly in the **Session Label** field.

   Or

   - Click the button next to **Session Label**.

   The **Session Label Editor** starts.

3. Edit the text in the **Session Label** field as needed.

   - Double-click any variable in the list to add it to the **Session Label** text box.
   - Click **Reset** to remove all text from **Session Label**.

3. Click **Accept**.

⊟ <u>**To designate a custodian**</u>

A custodian is the person designated as responsible for the safekeeping and availability of a document or source. After import, the custodian you select is assigned to the **Custodian** field for the document.

1. Start ED Loader. By default the **Sources** tab is open.

2. If the custodian name you want does not appear in the **Default Custodian** field, do one of the following:

   - Delete **<None>** and then type the name there.

   Or

   - Select the name you want from the list in the **Default Custodian** field.

   Or

   - Click the button next to **Default Custodian** list, and then add, update, or import custodian names using the Custodian Manager.
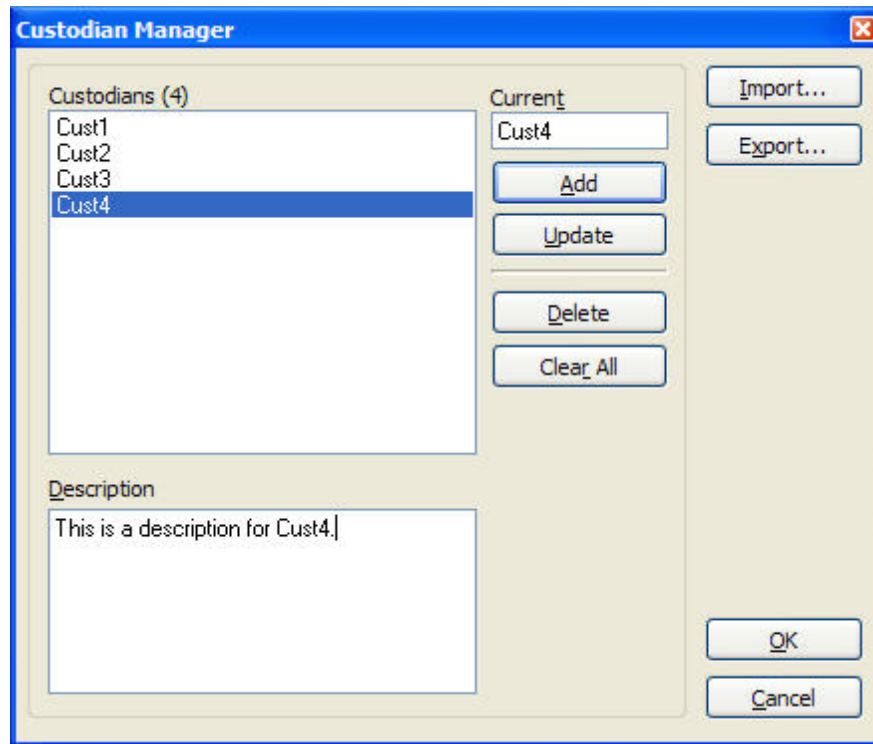
More information about importing custodian lists

- A list of custodians may be imported or exported to a list file.
- A file list is a text file with the .lst extension.
- A list files contains just the custodian names without quotes separated by hard returns.

⊟ **To set a seed value for DocID**

Note the following about choosing a seed value to use for the document identification (DocID) field:

- The DocID is a unique identifier assigned to each document.
- ED Loader uses the **DocID** seed as the starting value for each document you import.
- ED Loader increments the specified seed value for each record.
- The seed value can be a mix of numbers and letters.
- The DocID field may contain up to 50 characters.
- The default DocID seed for material imported using the distributed ED loader follows this format: SessionNumber.Document.Item, for example: 10000.000001.000023.

💡 To ensure the DocID is unique to each record when loading from multiple workstations, devise a file numbering scheme that uniquely identifies the workstation used to process documents, for example: ScannerPC1_000001, ScannerPC2_000001, etc.

⊟ Starting ED Loader

1. On the **File** menu, click **Import**, and then click **Electronic Discovery**. The LAW Electronic Discovery Loader utility opens.

2. Add sources as needed. For more information on adding sources see Specifying Sources.

3. Configure the import session as needed. For more information on configuring an import session see Configuring Import Settings.

4. Click **Start**.

5. In the **Confirm Settings** dialog box, review the import settings.

Confirm Settings

General

Enable distributed processing	FALSE
Override system time zone during processing	FALSE
Time Zone	(GMT-05:00) Eastern Time (US & Canada)

Output

Scheme	Relative (Output path is relative to selection) (Applicable to EDoc selections only)
Category As Top Level Folder	FALSE
Source Name As Top Level Folder	TRUE
Ensure Root Output Folder Is Unique	TRUE
DocID Seed	00000011

Deduplication

Enabled	FALSE
Email metadata hash fields	Attachments (filename list), BCC, Body (plain-text), CC, From, IntMsgId, Subject, To
Enable deduplication of non-email PST items	TRUE

NIST (NSRL) Filter

Enabled	FALSE

E-Mail

Sorting	From , Direction: Descending
Output Format (Outlook)	HTML
Convert Dates To GMT	FALSE
Preserve X.400 Addresses	TRUE
Incorporate Attachment Content in E-mail Hash	FALSE
Extract inline images (Lotus)	TRUE

Archives

[OK]   [Cancel]

6. Click **OK**.

Specifying Sources

Specifying sources involves not only the choice of source documents to add to the import operation, but the final quality checks, such as reviewing the queue of items to import and generating a file type report prior to import.

A source is a folder or files selected for import by means of the Electronic Discovery (ED) Loader. You can add sources by using the **Sources** tab on the **LAW Electronic Discovery Loader** window or by dragging and dropping.

📝 ED Loader imports Files using Windows API unless a file list is utilized. The exception to this is the files within an archive as the files within an archive cannot be sorted or organized and are extracted in using the archive's organization.

⊟ **To add sources to ED Loader**

1. On the **LAW Electronic Discovery Loader** window go to the **Sources** tab.

2. Select one or more sources to import. For more information see the Source Types section of this topic.

3. Go to the **Settings** tab.

4. Configure selection options for folders and archives as needed:

   • **Automatically set E-Doc folder sources to Recurse when I add them via drag and drop.** Ensures that the subfolders of the selected folders are processed.

   • **Scan folder selections for supported mail stores when added to the queue**. Enables scanning of all folder selections for Outlook and Lotus Notes mail stores. If found, the files are processed as mail stores rather than e-docs.

   • **Scan supported archives.** Enables scanning of archives (i.e., zip or rar) for mail stores.

   • **Add selected folder to queue when mail store scan is active**. Adds folders containing mail stores to the queue in addition to any mail stores found. For example, if a folder is selected that contains 5 Excel files and 1 Outlook PST file, enabling this option will result in two sources being added to the queue: one file set consisting of 5 Excel files and 1 Outlook PST file.

5. Do one of the following to add items to the queue:

   • Use Windows Explorer to drag and drop items from the file system.

   • Click one of the source type buttons and navigate to a source. For more information on source types, see the following section in this topic.

⊟ **Overview of source types**

Options are available for selecting any of the five different types of sources.
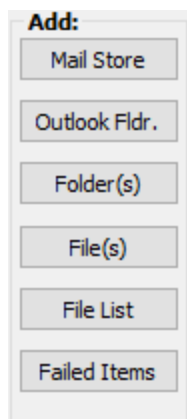
These options are described in the following table:

Option	Use it to
Mail Store	**Add mail store sources.** LAW currently supports Outlook (*.pst and *.ost) mail stores as well as Lotus Notes (*.nsf) mail stores. • When the **Select Mail Store** dialog appears, browse to the mail store(s) and then click **<Open>**. The store(s) will be added to the Source Queue.
Outlook Fldr.	**Select Outlook folders for import.** 1. In the **Select Outlook Folder(s)** dialog box, select the folders you want to process. 2. Select **Recurse Subfolders** if you want the subfolders of selected folders also to be processed. The items in parentheses beside each folder represent the number of items in the folder (first number) and the number of unread messages (second number). 3. Click **Accept.** The selected folders are added to the queue. The mail store(s) containing the folders to be processed must be opened in Outlook prior to starting this option.
Folder(s)	**Select one or more folders to import.**

Option	Use it to
	1. In the **Select Folder(s) dialog** box select the folders you want to process. 2. **Select Recurse Subfolders** if you want the subfolders of selected folders also to be processed. 3. Select **Scan selection(s) for mailstores** to search any selected folders for supported mail stores. If any stores are found, they will be listed separately in the queue and processed as mail stores. Disable this option if you want the mail stores contained in the selected folders to be either processed as e-docs or excluded completely, depending on the state of the **Exclude mailstores from e-doc processing** option located on the **Settings** tab. See Exclusions for more information.
File(s)	**Select one or more files. Use this option to open any type of electronic document, other than Outlook PST files, including MBOX files.** • In the **Select File(s)** dialog box select one or more files from a folder to process. You can use the CTRL and SHIFT keys to select multiple files and CTRL+A may be used to select all files in a folder.
File List	**Select a file list to import.** 1. In the **Select File List** dialog box browse to the file containing the file paths. 2. Click **Open** to add the source to the queue. A file list is a text file with paths to files for import. The file extension does not matter. The file must contain full paths to the files, separated by hard returns, without quotes. If the file contains relative paths, the file list must be placed in a location that will allow the ED Loader to complete the path. For example, if the file list contains a listing of EDOCS\0001.xls, then the file list should be placed one level above the EDOCS folder.
Failed Items	Select **Failed Items.** Use this option to repopulate the ED Loader Source Queue with documents that failed to fully import through previous ED Loader Sessions. See Reprocessing Failed Items for more information on how to configure and utilize this feature.

⊟ **To remove sources**

Sources can be removed from the queue by using a **Remove** option.

Remove:

Remove Item
Clear All
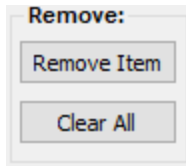
- **Remove Item** - Removes one source at a time from the queue. To use, click a source in the queue to be removed and then click **Remove Item**.
- **Clear All** - Removes all sources from the queue.

⊟ To view source details

- On the **Sources** tab click **View Details**.

  Or

- On the **View** menu click **Source Details**.

  If the source consists of a file set or file list, all file names will be displayed.

⊟ Long paths

If the path to a source exceeds 260 characters, which is the Windows limit:

- ED Loader copies the files to a temporary location to allow successful processing of the files.
- A warning will be logged in the Session Viewer logs.

The Source Queue lists the sources ready for processing that have been added during the current session. You should review the Source Queue as a last check before you initiate an import operation. Source Queue is located on the **Sources** tab in the Electronic Discovery Loader.

The Source Queue may also be used to configure source-level information, such as the custodian assigned to a source.
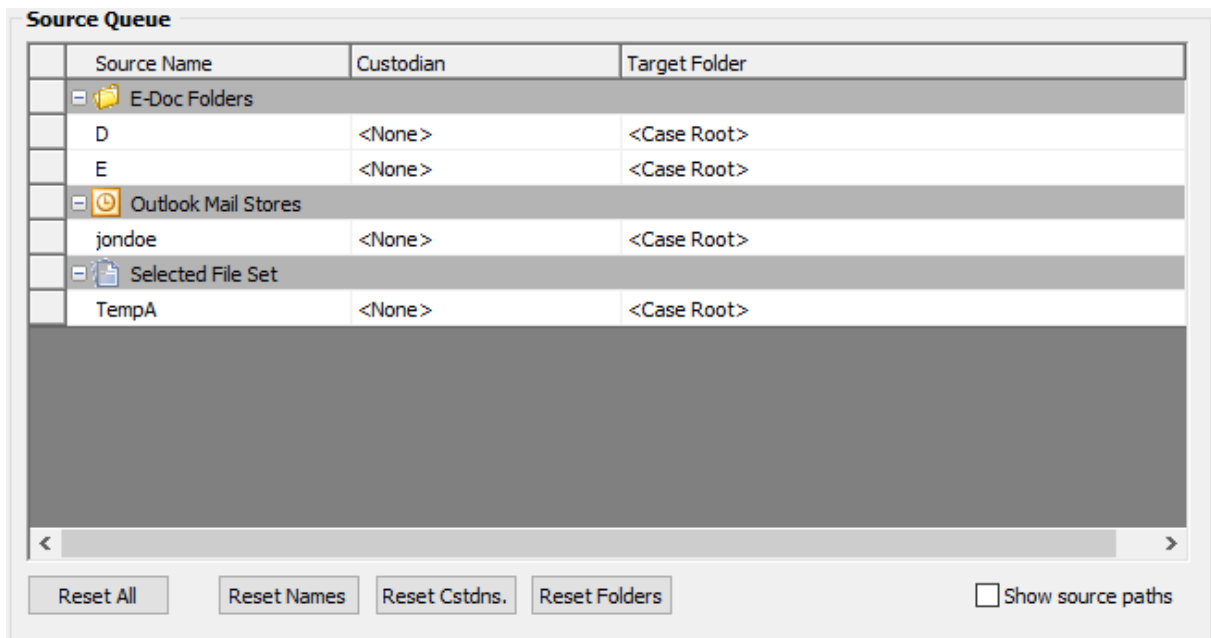
To configure source-level options

After sources have been added to the queue, configure the following source-level options as needed:

- **Source Name** - When the option to **Use source name as top level folder** is enabled in the **Output** settings (see Output section), the name is used for the top-level folder, and documents are imported below it.

  - The source name may be edited by simply typing the desired name directly into the text box. When a source name is changed, the new name will appear in green.

  - Source names may appear in green by default if the option to "Ensure source names are unique when they are added to the queue" is enabled and duplicate source names are detected. The duplicate source name will be appended with a '-001'.

- **Custodian** - The custodian may be edited at a source level by either choosing a different value from the drop-down list in the **Custodian** field or by typing the a new value in the field.

  - When a custodian is changed at a source level, the custodian name becomes green.

  - If the custodian should be the same for all sources, assign a custodian in the **Default custodian** field. This field is located above the **Source Queue**.

- **Target Folder** - The selected sources will be imported into the designated LAW folder.

  - If all sources should be imported below the same target folder, select the folder in the 'Default target folder' text box located above the Source Queue in the session configuration settings.

- To change the target folder for a particular source, click within the Target Folder text box for the source and either type a new folder or folder path or click the box within the field to launch the Select Target Folder dialog. This dialog may be used to choose an existing folder for the target location or to create a new folder.

⊟ To reset source-level settings

- Open the **Source Queue** and then click one of the following:
- **Reset All -** Resets the Custodian, Source Name, and Target Folder fields back to the defaults.
- **Reset Names** - Resets the **Source Name** field to the default.
- **Reset Cstdns.** - Resets the **Custodian** field to the default.
- **Reset Folders** - Resets the **Target Folder** field to the default.

These options are also available from the **Edit** menu.

⊟ To view paths to sources

- On the **View** menu click **Show source paths** or click the **Show source paths** button next to the **Target Folder** column.

Note the following:

- For **File Sets**, the total file count is displayed after the path in the **Source Path** column.
- For **File Lists**, the path (including filename) of the file list will be displayed.
- For folders, if **Recurse Subfolders** is selected to include subfolders, a plus sign + is displayed at the end of the source path.

The File Type Summary in the ED Loader can generate a summary of the selected source files prior to importing. The summary will process and log e-docs, archive contents, and e-mail attachments. It does not expand loose e-mails or compound documents.

The summary will include items such as total file counts, counts based on file type, total size, and size of files per file type. This feature may also be used to generate a report of this information.

⊟ To create a summary

1. Add items to the ED Loader Source Queue. See Adding and Removing Sources for more information.

2. On the **Tools** menu click **Summarize Queue**. The **File Type Summary Progress** dialog appears.

📝 Currently, if a Microsoft Outlook OST file in present in the source queue, the Summarize Queue function does not run and a Store Mgmt Error is generated indicating the .ost file is not a personal folders file.

Until this issue is fixed, if any OST files are present in the source queue, the OST files need to be removed from the source queue before creating a summary.

The **File Type Summary** dialog box displays the results.

Extension	File Count	Description	Size (KB)	Warnings
7z	1	7Z File	8	0
dat	3	DAT File	977	0
doc	3	Microsoft Word 97 - 2003 Document	106	0
jpg	2	JPG File	314	0
msg	1	Outlook Item	75	0
pdf	6	Adobe Acrobat Document	2667	0
pst	1	Outlook Data File	128233	0
rar	1	RAR File	33	0
xls	1	Microsoft Excel 97-2003 Worksheet	23	0
zip	1	Compressed (zipped) Folder	1	0

Viewing All Files, 20 Files   Total: 129.33 MB

You can view report details using the tabs in the **File Type Summary**:

- **All** - Displays a listing of files found in the queue, organized by file extension. E-docs, archives, archive contents, loose e-mail messages, and e-mail attachments from mail stores will be included in the summary. Loose e-mail and compound documents are not expanded in the summary, so the attachments/embedded files from these types of files will not be included. E-mail messages from mail stores are also not included in the summary, but the number of e-mails can be viewed using the reporting feature (explained below).

- **E-Docs** - Displays a listing of e-docs only. This tab will include loose e-docs, archives (i.e. zip files), and archive contents. Compound documents are not expanded so files embedded within the parent documents will not be included in the summary or reports.

- **E-mail Att.** - Displays a listing of e-mail attachments found in mail stores. Loose e-mail items are not expanded so their attachments will not appear in the summary or reports.
- **Identified** - This tab will only be populated once the optional identification process has been executed, allowing users to view the true file types of the items contained in the queue. Note: This process is only available for items listed in the E-Docs tab.

⊟ To view file groups

1. Do one of the following:

   - On the **View** menu click **Files**.

   Or

   - Click the **Files** button.

   The view shows each file in the group, the total size of the group, each individual file size, and any warnings that may have occurred during the summary or file identification process.

2. Navigate among file groups or open files as needed.

   - Click **Prev Set** and **Next Set** to navigate among groups.
   - For electronic documents, to open the file, click **Open**.

⊟ To identify file types

You can use the file identification process to validate the files included in the summary. The file engine will determine the true file type based on the header of each file.

- On the **Tools** menu click **Identify Files**.

Or

- Click the **Identify Files** button.

  The **Identified** tab will display the results of this process and is linked to the file type manager database, which allows users to set the Include/Exclude flags directly from this view. File identification automatically takes place when sources are loaded into LAW via ED Loader, so running this process prior to loading provides a preview of the file types as they will be displayed in CloudNine™ LAW.

⊟ Working with summaries

To save a summary

- On the **File** menu click **Save As**.

Or

- Click the **Save As** button.

Saved summary databases will be saved as .EDSD files in the location selected by the user.

To reload a summary

1. Start **ED Loader**.

2. On the **File** menu click **Open Summary**.

3. Browse to the saved .EDSD file.

   The File Type Summary dialog box appears displaying the results of the saved summary.

To add the sources to the ED Loader Source Queue

- On the **Tools** menu click **Enqueue** from the **File Type Summary** dialog.

   The sources will be loaded into the Source Queue and are ready for import into CloudNine™ LAW.

⊟ **To create a summary report**

1. Create a summary.

2. In the **File Type Summary** dialog box click **Tools** and then click **Reports**.   The **View Report** dialog appears.
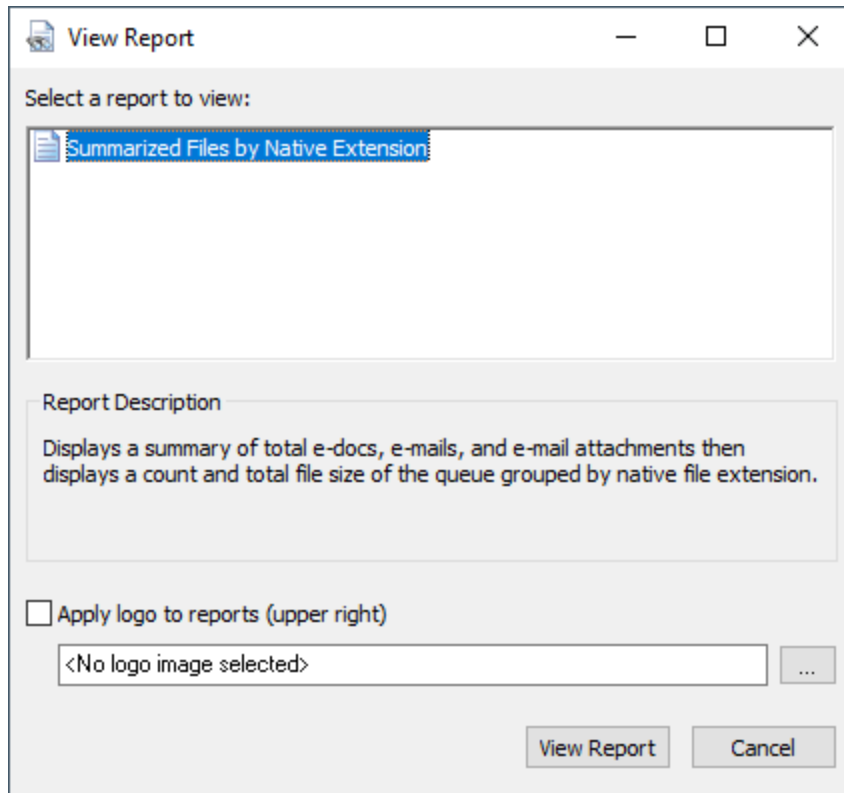
3. To add a logo to the report select **Apply logo to report** and then browse to the logo image file.

4. Click **View Report**.

   After you create the report you can print or save it.

Configuring Import Settings

ED Loader provides general configuration options as well as options that are specific to the type of source you are importing.

LAW supports the extraction from these kinds of archive files:

- CAB
- RAR
- JAR
- GZIP
- TAR
- Z

- ZIP
- ZIPX
- 7Z

📝 LZH files will be imported, but no files are extracted upon import.

⊟ **To configure archive import**

1. On the File menu click **Import** and then click **Electronic Discovery**.

2. Click the **Settings** tab and then click **Archives**. The **Archives** options display.
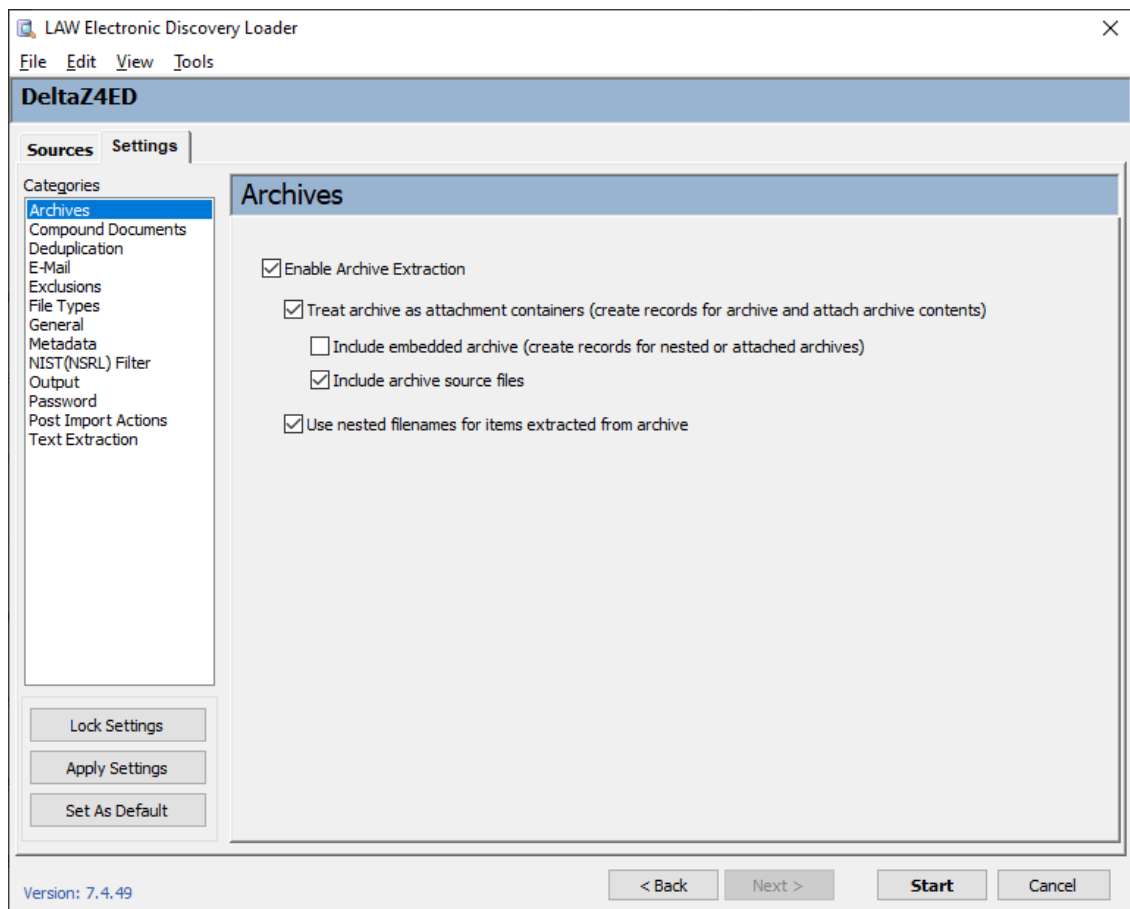
3. Configure archive import as needed using the following options:

- **Enable Archive Extraction** - When selected, LAW will extract contents of the supported archive file types (see above list).
- **Treat archive as attachment containers** - When selected, if importing an archive file, ED Loader creates a record for the archive. If the archive contains loose message files or mail stores then the ThreadId field is not populated for the mail

items. If left unselected, the ThreadID field for loose message files or mail stores found in archives is populated.

- **Include embedded archive** - This option creates records for any nested or attached archives found.

- **Include archive source files** - This option allows users to choose whether or not to copy the native archive file into the typical native file structure in the case. Users may choose not to copy the file to save space and the file is often not needed once the contents are extracted.

- **Use nested filename for items extracted from archive** - The archive filename will precede the filename of each extracted item in the **Filename** field, as follows: archive.zip?filename.doc

Compound documents are composed of a container document and embedded documents. For example, a Word document may contain an embedded spreadsheet. The embedded spreadsheet is considered to be embedded one level down from the container document. LAW supports up to 99 levels of embedded compound documents. So if the embedded spreadsheet includes an embedded PowerPoint file (second level down) that further includes an embedded PDF (third level down), LAW can extract all four files.

⊟ **To enable extraction of compound documents**

1. On the **File** menu, click **Import**, and then click **Electronic Discovery**.

   Clicking **Electronic Discovery** opens the **Sources** tab in the **LAW Electronic Discovery Loader** dialog box.

2. Click the **Settings** tab and then click **Compound Documents.** The **Compound Documents** options display.
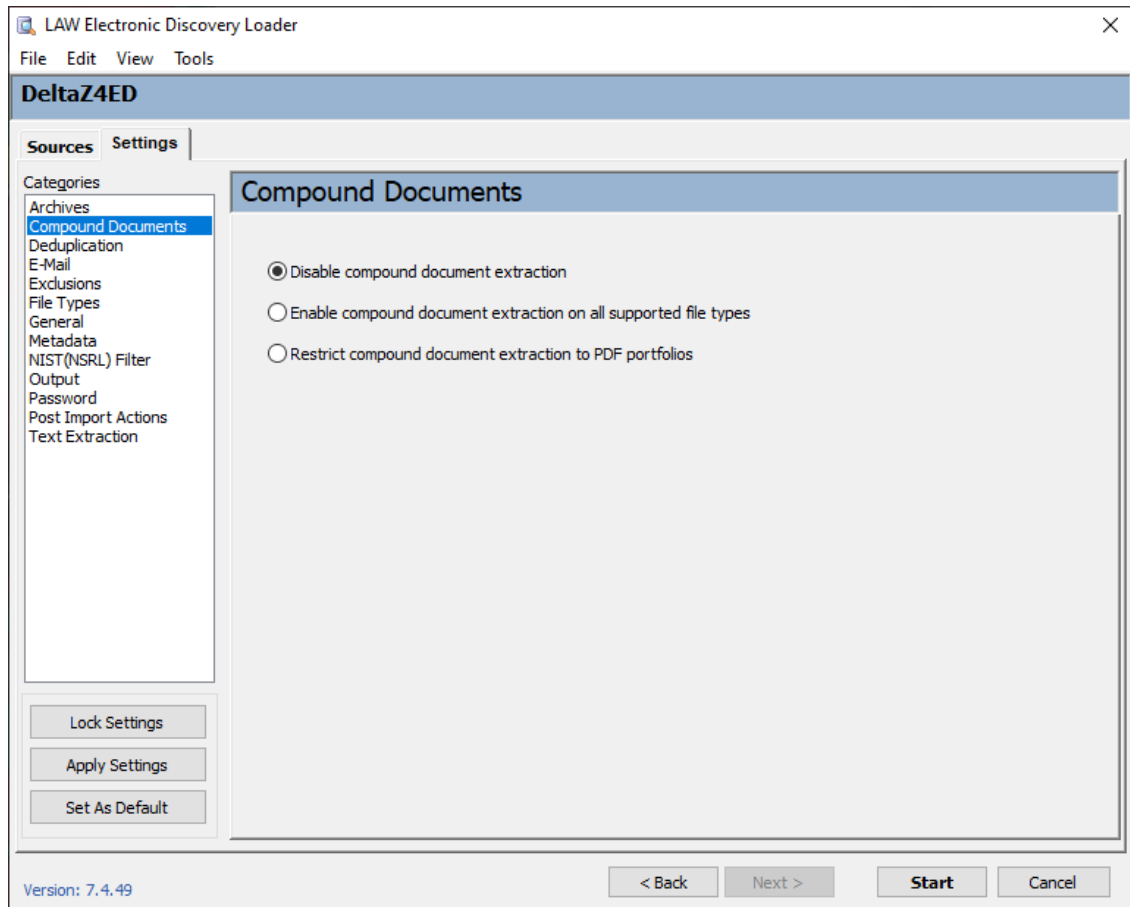
3. Click one of the following options:

- **Disable compound document extraction**

  Disables the compound document extraction feature during the import.

- **Enable compound document extraction on all supported file types**

  Any file containing an embedded file is imported as a parent document, and any embedded file within the parent file is imported as an attachment to the parent file.

- **Restrict compound document extraction to PDF portfolios**

  Only PDF portfolios are imported as compound documents. When this option is selected each file in a PDF portfolio is imported as a top-level file instead of the PDF portfolio being imported as the parent file with all of the files within the PDF portfolio being imported only as attachments to the parent PDF portfolio.

If an embedded file cannot be opened, a warning will be generated and logged in the Session Viewer and ErrorMsg field.

📝 By default, LAW does not retain the PDF portfolio container. However, you can extract a PDF portfolio container file by going to the EDLoader.case.config.ini file

and changing the OLE_IncludePDFPortfolioContainer property value to 1. Then run ED Loader with either the **Enable compound document extraction on all supported file types** or the **Restrict compound document extraction to PDF portfolios** option selected.

⊟ **Supported embedded file types**

The following file types are supported for extraction from compound documents:

- Microsoft Word/RTF
- Microsoft Excel
- Microsoft PowerPoint
- Adobe Acrobat PDF
- SnapShot
- Microsoft Visio
- Microsoft Outlook.FileAttach (Word-authored e-mail with inline attachments, generally stored in RTF)
- Microsoft Project
- Package*

*A Package is a general type of embed; it can be a text file or a zip file, for example. Any of the above types may also be embedded as a package type depending on the software installed when a user embeds the file. For example, if a user were to embed an Excel spreadsheet into a Word document, and Excel is not installed, the spreadsheet will be embedded as Package.

Supported containers file types and embedded files

The following table lists common embedded file types that LAW supports for extraction:

⚠ Office 95 and earlier versions of Office are not supported with CloudNine™ LAW.

Description	Detection	Extraction
Non-Microsoft Office Formats		
Adobe Acrobat (pdf)	Y	Y
Rich text format (rtf) *Converted to Word format for extraction. Original file is preserved.	Y	Y
Office 2007 and above see System Requirements for full listings. **(with LAW versions 6.8+)**		

Description	Detection	Extraction
Excel Spreadsheet (OpenXml)	Y	Y
MS Office Data File (OpenXml)	Y	Y
PowerPoint Presentation (OpenXml)	Y*	Y*
*Compound documents not fully supported in this format		
Word (OpenXml)	Y	Y
Office 2013, Office 2010, Office 2007 (with LAW versions 6.7 and 6.6)		
Excel Spreadsheet (OpenXml)	Y	Y
MS Office Data File (OpenXml)	Y	Y
PowerPoint Presentation (OpenXml)	Y	Y
Word (OpenXml)	Y	Y
Office 2003		
Word	Y	Y
Word (xml)	Y	N
Excel	Y	Y
Excel (xml) *Compound documents not supported in this format	*N	*N
OneNote	N	N
PowerPoint	Y	Y
Project	Y	Y
Project (xml) *Compound documents not supported in this format	*N	*N
Publisher	**Y	Y
Visio	N	N
Visio (xml) *Currently not recognized by file engine	*Y	N
Office 2002/XP, Office 2000		
Word	Y	Y
Excel	Y	Y

Description	Detection	Extraction
PowerPoint	**Y	N
Publisher	Y	Y
Project	Y	Y
Visio	N	N
Office 97		
Word	Y	Y
Excel	Y	Y
PowerPoint	Y	Y
Project	Y	Y

**Detection of embeds in these types is limited to the types of files supported for extraction (see above list).

Deduplication is the process of identifying duplicate files during the discovery process and removing them from further processing and analysis. Deduplication is a necessary step in managing the volume of data that must be analyzed.

A duplicate file is an exact copy of another file. Deduplication is necessary in many situations involving electronic documents because multiple identical documents are a typical feature of large record sets. For example, in electronic discovery sets containing e-mail archives for an organization, it is not uncommon for multiple e-mail accounts to contain the exact same widely distributed e-mail or file attachment.

CloudNine™ LAW identifies duplicate files by comparing hashes of files. A hash is a numerical representation of a file whose value is based on the file contents or other attributes. In essence, the file is subjected to an encryption process that yields a unique value. An exact copy of a file will yield the same hash value. In the case of electronic documents, the file is hashed. For e-mail, metadata fields are hashed. You can set the encryption key in the deduplication settings.

The scope of the project will determine whether or not deduplication will be performed and which methods will be used.

In addition to deduplicating prior to the import process, LAW also allows you to deduplicate at these other times in a pre-discovery workflow:

- After the import against other records in the case by using the Deduplication Utility.

- After the import against other records in the case and other LAW cases by using Inter-Case Deduplication.

⊟ **To configure deduplication**

1. On the **File** menu click **Import** and then click **Electronic Discovery**.

2. Click the **Settings** tab and then click **Deduplication**. The **Deduplication** options display.
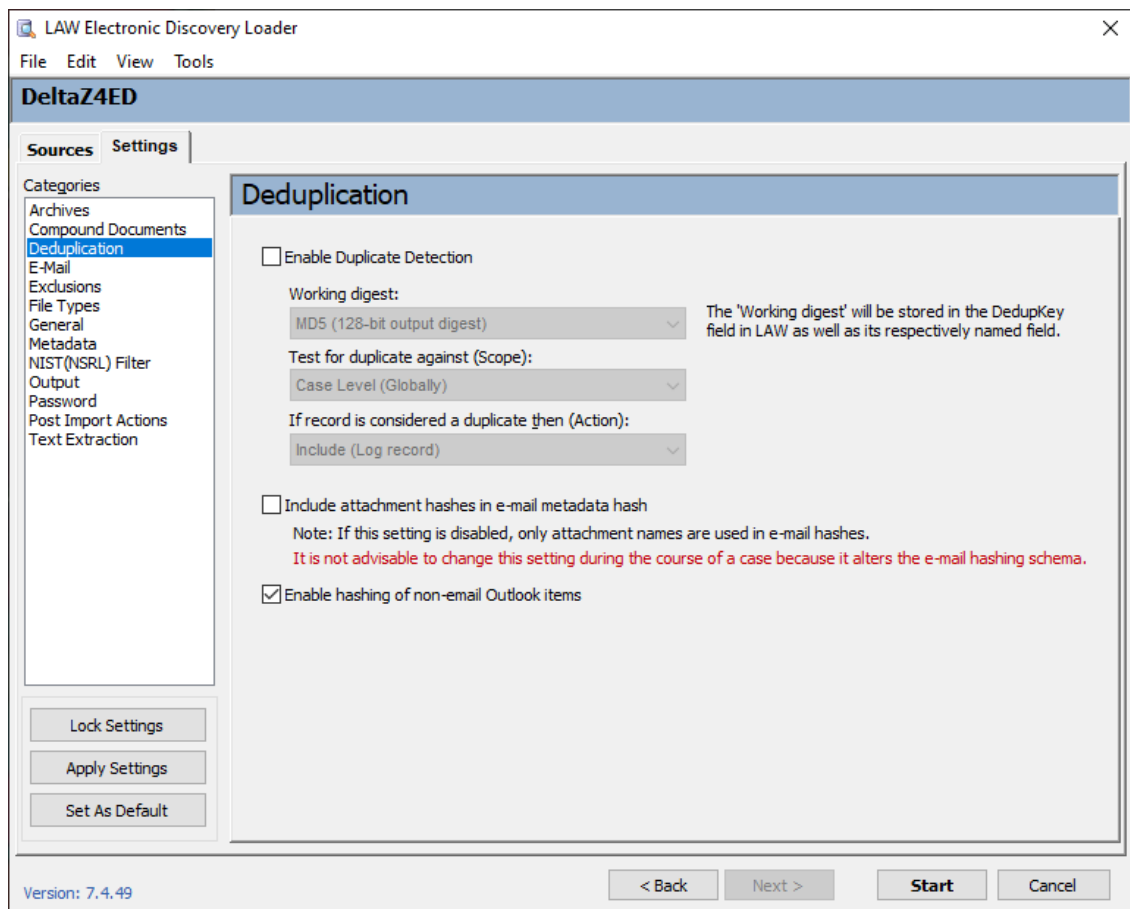
3. Choose from among the following options:

- **Enable Duplicate Detection.** Enables duplicate checking for the current session.

- **Working digest.** The working digest is the method of hashing that will be conducted to determine duplicates. A hash value can be thought of as the DNA of a file. The hash values are obtained through metadata fields (e-mail) or by hashing the entire file (e-docs). LAW uses two types of hashing methods:

- MD5: 128-bit output
- SHA-1: 160-bit output

- **Test for duplicate against (Scope).** This option identifies the scope for deduplication. During the import process, deduplication can be performed at one of two levels:
  - **Case Level (Globally).** Deduplicates documents against the entire incoming collection and against existing records in the LAW case.
  - **Custodian Level.** Deduplicates documents against records with identical custodian values.

- **If record is considered a duplicate then (Action).** This setting determines the action to take once a duplicate is located. Three options are available:
  - **Include.** Creates a record for the duplicate in the database and copies the native file into the case folder.
  - **Partially exclude.** Creates a record in the database but does not copy the native file.
  - **Exclude.** Does not create a record, no text is extracted, and the native file is not copied to the case folder.

- **Include attachment hashes in e-mail metadata hash.** When enabled, the ED Loader will include the hashes of attached files in the parent e-mail's metadata hash. When disabled, the Attach field is incorporated in with the metadata hash which only contains the file names of attached files.

⚠ Note the following warnings prior to running a deduplication session:

  - While enabling the **Include attachment hashes in e-mail metadata hash** setting is recommended, it is not advisable to change this setting during the course of a case as it will alter the e-mail hashing schema, as noted in the interface. The desired state of this setting should be determined prior to the first import into new cases and should not be changed. This setting was not available in versions prior to 5.5.07.

  - If the current case has already been deduplicated via the Inter-Case Deduplication utility, a warning will appear (see below) when starting the ED Loader import if deduplication is enabled.

  - Use of the ED Loader deduplication on imported records after the case has already been deduplicated against other cases using the Inter-Case Deduplication utility is not recommended. Doing so will present a mixture of internal and external duplicates and could cause problems when purging, filtering, or reviewing duplicate records.

  - Proceeding with the ED Loader deduplication after the case has been deduplicated with the Inter-Case Deduplication utility will result in the external deduplication database being placed in Rebuild/Flush mode. At this point, the current case should be removed from the external database. Also, before running the internal deduplication, it is recommended that the Deduplication Status Reset command is executed to clear the values assigned by the Inter-

Case Deduplication utility to prevent the mixture of internal and external duplicates.

- **Enable hashing of non-email Outlook items.** Determines whether hash values are generated for non-email items in an Outlook PST file during the ED Loader import.

  Non-email PST items include Microsoft Outlook calendar items, contacts, journal entries, notes, and tasks. When the check box is selected, deduplication is performed on the non-email items in a PST file.

  By default, the check box is selected for cases created in LAW version 6.9.*x* or later. For cases created in LAW version 6.8.*x* or earlier, the check box is not selected by default.

The E-Mail settings identify how e-mails are sorted when loaded into CloudNine™ LAW, the format in which they are saved, and the format of the date field values.

⊟ **To access and configure e-mail import**

1. On the **File** menu, select **Import** and then click **Electronic Discovery**.

2. Click the **Settings** tab and then click **E-Mail.** The **E-Mail** options display.
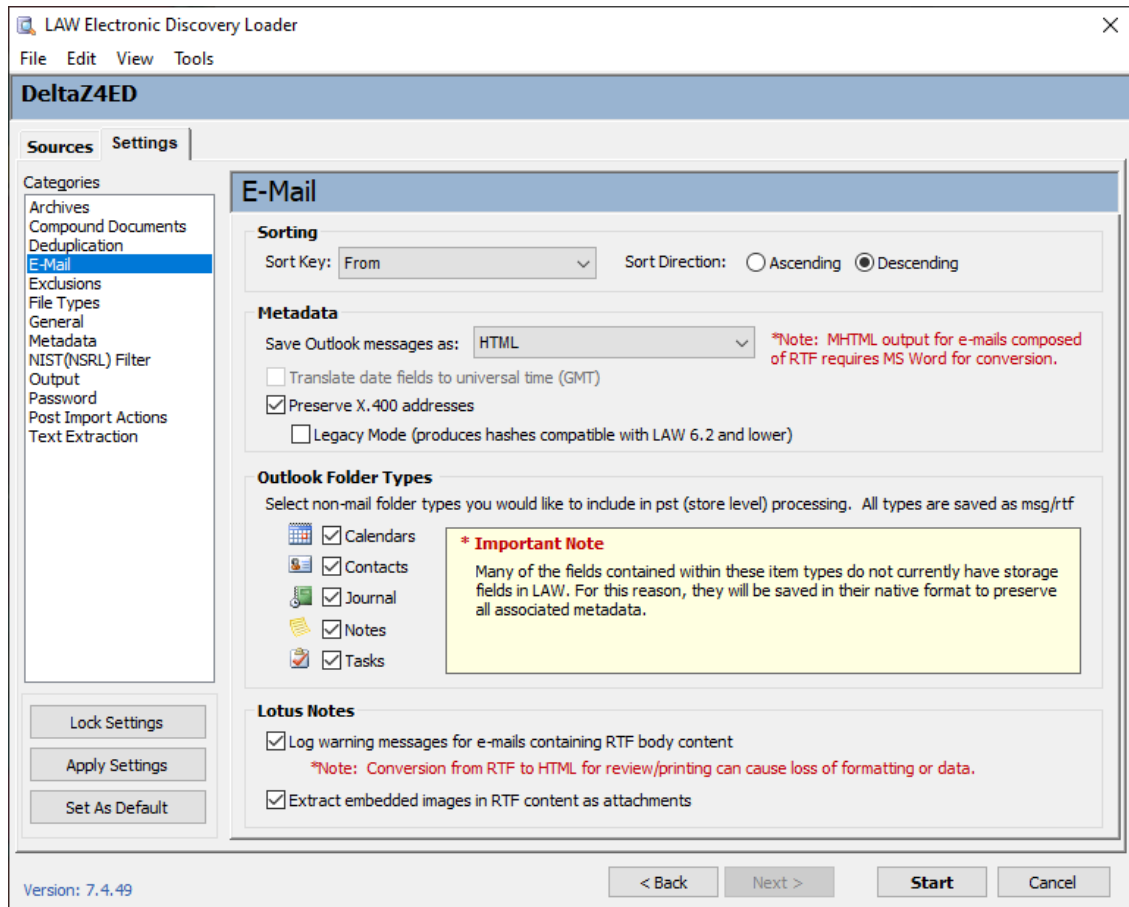
3. Choose from among the following options:

- **Sort Key** - When loading e-mails from mail stores, it is important to identify how the files are imported into LAW and later produced. Four fields can be used to sort the e-mails during extraction: From, Received, Sent On, and Subject. For example, if Received is chosen, e-mails are imported by the date the e-mail was received. Note, these settings do not apply to MBOX messages.

   📝 Microsoft Outlook *.ost files can only be sorted by the From and Subject fields.

   📝 If you are importing password-protected PST files, do not select SentOn in the Sort Key drop-down list box. Password-protected PST files cannot be sorted by SentOn during import.

- **Sort Direction** - The direction of the sort may be **Ascending** (oldest to newest) or **Descending** (newest to oldest).

- **Save Outlook messages as** - Select the output format of Outlook messages as they are imported with the ED Loader. The four options are:

- **HTML** - Messages are saved to HTML files with the exception of messages containing embedded OLE items that cannot be rendered in HTML, such as an Excel worksheet. These embedded images and non-mail items such as calendars, contacts, and tasks, are saved as native Outlook files (*.msg). Embedded images in HTML messages are saved in the same folder as the converted message. These images are not LAW records. Instead they are linked to the HTML file for proper rendering. They are listed in a dependency file (*.dep) with the same root name as the native file. During Export, linked images are exported along with the native file so the HTML file can be properly rendered with associated images.
- **HTML/MHTML (based on format)** - The format of the output file is determined based on the format of the e-mail message. Messages formatted as RTF, non-mail items, or HTML messages, including HTML with linked images, are saved as MHTML. All other messages are saved as HTML.
- **HTML/RTF (based on format)** - The format of the output file is determined based on the format of the e-mail message. Messages formatted as RTF and non-mail items are saved as RTF. Text or HTML messages are saved as HTML. RTF messages are saved directly from Outlook, so the GMT date option is not applied to the display of the converted file.

📝 The use of ED Loader on a 64-bit machine with Outlook 2010 is not yet supported.

⚠ Messages saved as RTF will not contain the BCC information in the RTF output. This is a function of Outlook and how it renders messages to RTF. The BCC field, if present, will however still be captured in the database and in the extracted text.

📝 Subtle formatting differences may exist between HTML and RTF messages. However, this is the preferred setting if native rendering (MSG) is not required due to the potential of lost images or embedded objects when saving an RTF-formatted message as HTML.

- **MSG** - Messages are saved as native Outlook files (*.msg) with the exception of e-mails that contain extremely large recipient lists (typically over 5,000). These messages can cause Outlook and the ED Loader to hang. Messages that cannot be saved as MSG files are saved as HTML files.
- **MHTML** - All items are saved as MHTML files (*.mht). MHTML files are web archives that allow the embedding of images directly in an HTML file. This eliminates the need for any linked images or dependent files. Similar to the HTML/RTF setting, e-mails are converted to HTML or RTF based on their original format, and then converted to MHTML files.

📝 RTF messages and items use Microsoft Word to convert RTF to MHTML. If Word is not installed, any RTF output remains as RTF during the import. Due to the secondary conversion from RTF to MHTML using Word, processing speed is significantly slower when using this setting. Print speeds are also significantly slower with MHTML files. Use this setting only if it is absolutely necessary.

- **Translate date fields to universal time (GMT)** - The Translate date fields to universal time check box is only enabled for cases created before LAW version

5.8.14. When the Translate date fields to universal time check box is selected, the times on incoming e-mail messages are converted to GMT (Greenwich Mean Time) during the ED Loader import.

- **Preserve X.400 addresses** - When enabled, ED Loader maintains the X.400 e-mail address if an SMTP address cannot be found for a sender or recipient. The e-mail address is not converted to the SMTP address. This option is enabled by default. Disabling this setting, if a valid SMTP address is not present, the resulting auto-generated SMTP addresses may not be accurate.

> If the internet headers contain an SMTP address, the SMTP address will be used, even if the Preserve X.400 addresses check box is selected. SMTP addresses in internet headers always get precedence over X.400 addresses.

- **Legacy Mode (produces hashes compatible with LAW 6.2 and lower)** - When enabled, this setting disables the extraction of SMTP sender addresses from Internet headers when they are not available in the MAPI properties for Outlook messages so that e-mails are hashed consistently with previous versions of LAW (version 6.2 or earlier).

> The Legacy Mode setting should not be used for new cases created and processed with version 6.3 or later.

- **Outlook Folder Types** - Allows the loading of non-mail folder types such as calendar items and contacts when processing Outlook folders or mail stores.
- **Lotus Notes** options:

  Log warning messages for e-mails containing RTF body content - This option logs a warning message when rich text format (RTF) is found in the e-mail body. If the e-mail body contains RTF, you can lose formatting or data when you convert the RTF to HTML.

  Extract embedded images in RTF content as attachments - Use this option to extract images embedded in the *body*, or RTF of e-mail items. Images appear as attachments to the e-mail item. The state of this option is recorded in the case INI file. You can check details of this option in the Summary tab of the Summary Viewer.

> In ED Loader you can set a time zone that applies to imported mail items. For more information see ED Loader General Settings.

Exclusions settings are conditional settings that can be used to prevent certain types of records from being loaded to CloudNine™ LAW.

To access and configure import exclusions

1. On the **File** menu, select **Import** and then click **Electronic Discovery**.

2. Click the **Settings** tab and then click **Exclusions**. The **Exclusions** options display.
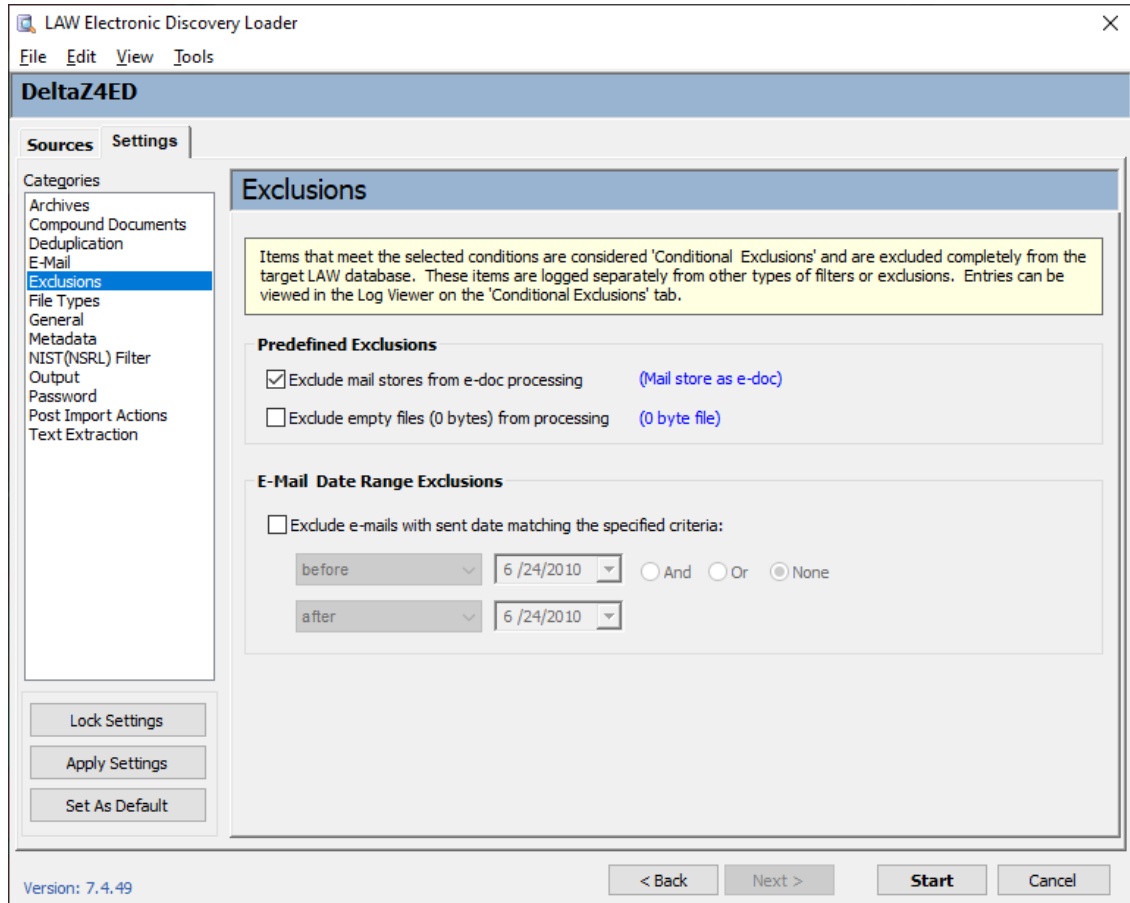
3. Choose from among the following options:

- **Exclude mail stores from e-doc processing (Mail store as e-doc)** - Prevents mail stores from being processed as e-docs. For example, if a mail store is contained in a folder that is selected for processing, the mail store would be recorded as a single e-doc record when this option is disabled. The mail store will still be processed as a mail store if it is added to the Source Queue.

- **Exclude empty files (0 bytes) from processing (0 byte file)** - Prevents any native file that is empty (0 byte file size) from being copied or written to the database.

- **E-Mail Date Range Exclusions** - Prevents e-mail sent between a specified date range from being imported.

  - Select a condition, for example **on or after**.

  - Select a date to which the condition applies.

- If necessary, select **AND** or **OR** and then specify another condition and date.

File type settings allow users to identify specific files for processing. CloudNine™ LAW supports import of all file types. Even if a file type is not supported for printing or conversion, metadata and text may still be extracted. After importing a file, if application is installed on the computer that is capable of opening and printing it, then the file can be processed to TIFF, PDF, or paper.

Files that could not be converted to TIFF can still be exported and delivered in native file format. Provided the reviewer has the native file application, the file can be opened and reviewed. For this reason, loading all file types into LAW is recommended. However, it is understandable that users may not wish to import certain file types, such as common system files.

To access and configure file type options

1. On the **File** menu click **Import** and then click **Electronic Discovery**.

2. Click the **Settings** tab and then click **File Types**. The **File Types** options display.
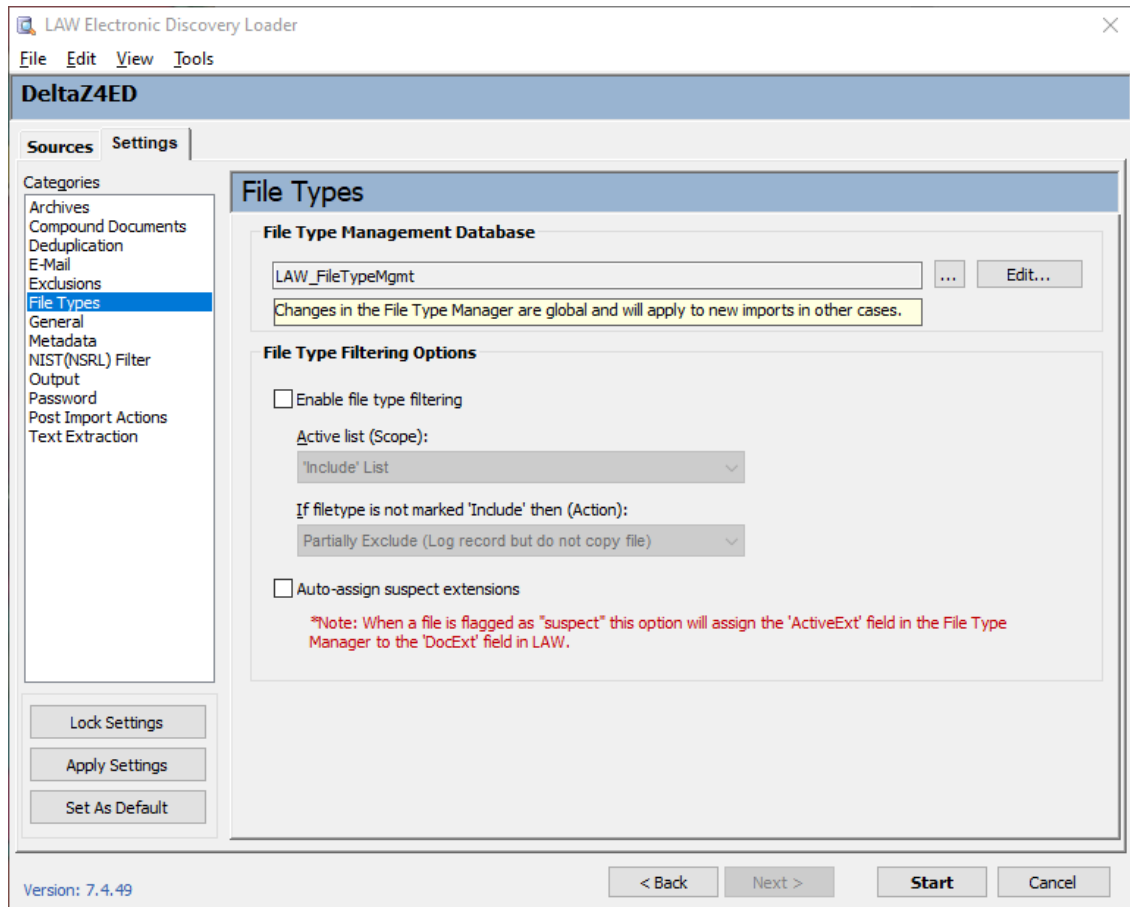
3. The file type management database is selected in the LAW Configuration Utility.

4. Configure options for file types as needed:

- **Enable File Filtering** - If this option is disabled, all files will be imported. If enabled, the files imported will depend on the selected scope.

    Active List (Scope) - Specifies a list that identifies files to import. You can identify a list as an **Include** list or as an **Exclude** list.

    If filetype is not marked 'Include' then (Action): Options include:

    Include - This option will copy the native file and log a record in the database.

    Partially Exclude - This option will not copy the native file but will log a record in the database.

    Exclude - This option will not copy the native file or log a record in the database.

Note the following facts about using these kinds of lists:

- If the **Include** list is selected, file types marked as **Include** in the **File Type Manager**'s **Include list** will be imported. Files that are not checked in the **Include** list will be excluded.

- If the Exclude list is selected, file types marked as **Exclude** in the list are excluded from import. File types that are not marked as **Exclude** in the list will be imported.

- Lists are evaluated independently of each other. If the **Include** list is selected as the active list, or scope, the **Exclude** list is not considered during the import and vice versa.

- **Auto-assign suspect extensions** - assigns inferred extensions to files identified with suspect extensions.

5. Click **Edit**. The **Manage File Types** dialog box opens.
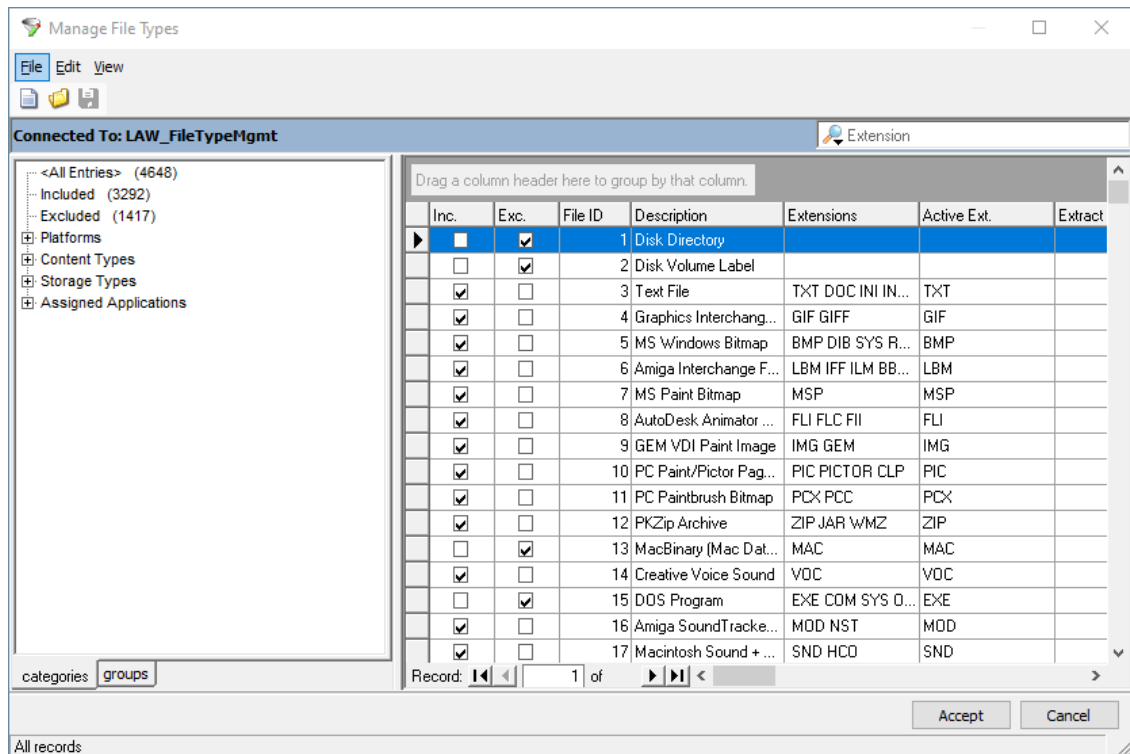
⚠ Changes in the File Type Manager are global and will apply to new imports in other cases. Both Turbo Import and Electronic Discovery cases are affected.

6. Configure file inclusion and exclusion lists, and other options:

- **Inc.** Files marked as **Include** will be imported if the active list is set to the Include list.

- **Exc.** If Exclude is set as the active list, then anything not marked as **Exclude** will be imported.

- **Multiple file type databases can be created**. This feature can be useful when establishing procedures on specific files to exclude from processing. The File menu in the File Type Manager is used to create new file type databases, open existing databases, and save changes to the current database.

- Assign default source applications for each file type.

- Select whether or not to extract text from each file type.

- **Auto Assign Suspect Extensions** - Performs maintenance actions if a file extension does not match the actual file type. When enabled, if the extension of the incoming file does not match any extensions in the **Extensions** field in the **File Type Manager** for the assigned **file ID,** LAW assigns a new extension from the **Active Ext.** field to the **DocExt** field, and records the original extension in the **OrigExt** field.

📝 If **Auto Assign Suspect Extensions** is not enabled and a suspect file is found, the **SuspectExt** field is marked as **Y**, but the **OrigExt** field is not populated and the **DocExt** field keeps the original file extension.

⊟ **File Type Management with SQL Server Version 6.18+**

Prior to version 6.18, the File Type Management database was only available in Access. Version 6.18 allows the opportunity to transfer the database into SQL. SQL allows a central location for FTM database storage that all work stations can use. You can also create Case specific databases.

⊟ **Creating a SQL based File Type Management database as the default**

After installing LAW version 6.18+, you will have the opportunity to transfer the Access File Type Management database to a SQL server.

1. On the **File** menu, select **Import** and then select **Electronic Discovery**.

2. The first time after upgrading the version of LAW and opening Electronic Discovery, Server Connection Information will open to provide the option for configuring use in SQL.

3. To continue with an Access File Type Management database, select **Cancel**.
4. Configure options for the File Type Manager Connection.

Field	Possible Values	Description
Server Name	Computer Name\SQL Express	This is the name of the SQL instance of which you will store the file type management database.
Use Windows Authentication		Enable if you use Windows Authentication for the SQL instance's login security.
User Name	Law_User	The default login for the SQL instance is law_user.
Password	*************	The default password for the law_user is stored. (Contact technical support for assistance.)
Database	LAW5_Management	The default name is LAW5_Management. *

*LAW5_Management is the default. If not using the default, then it is recommended to start each file type management database with (FTM) followed by the same naming sequence for example: FTM no MOV files or FTM exclude excels. This helps to distinguish the file type management databases in your SQL server from other databases.

⊟ **Creating a case Specific File Type Management database**

After installing LAW version 6.18+, you will have the opportunity to transfer the Access File Type Management database to a SQL server.

1. On the **File** menu, select **Import** and then select **Electronic Discovery**.

2. The LAW Electronic Discovery Loader will open in a new window.
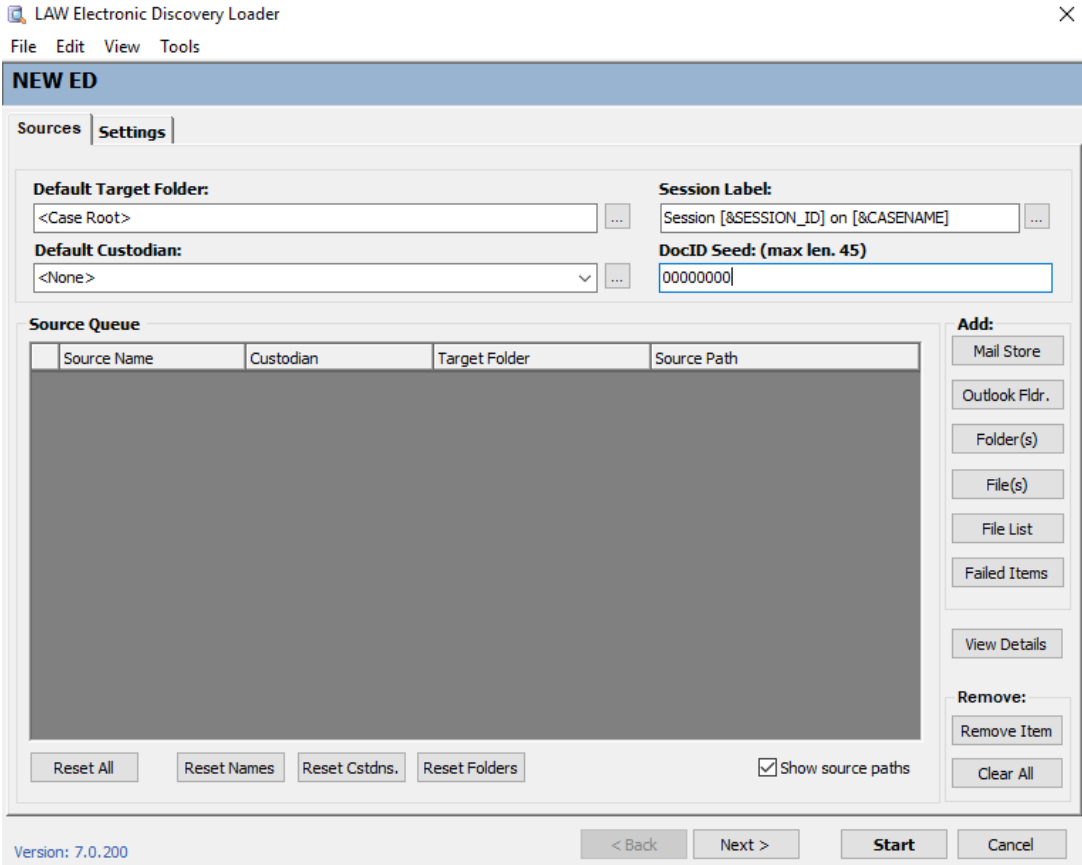
3. Select the **Settings** tab, then select **File Types**.
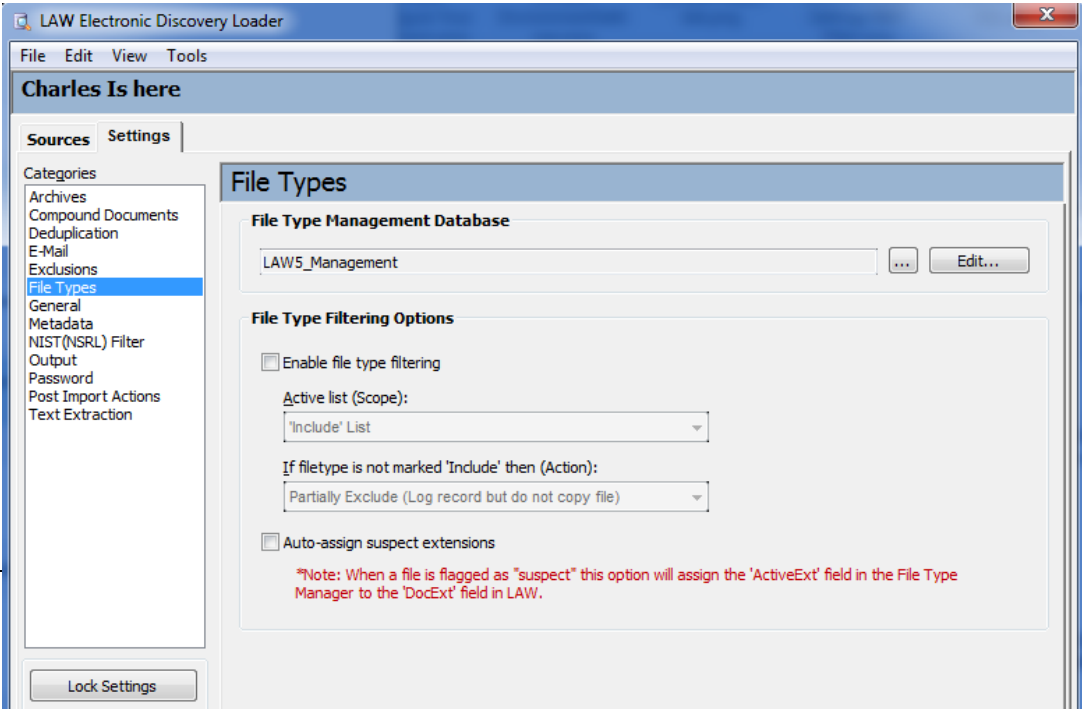
The General category of ED Loader options identifies source selection and the file type management database. You also use the General category to enable distributed processing of an import job.

To access and configure general options

1. On the **File** menu, select **Import** and then click **Electronic Discovery**.

2. Click the **Settings** tab and then click **General.** The **General** options display.
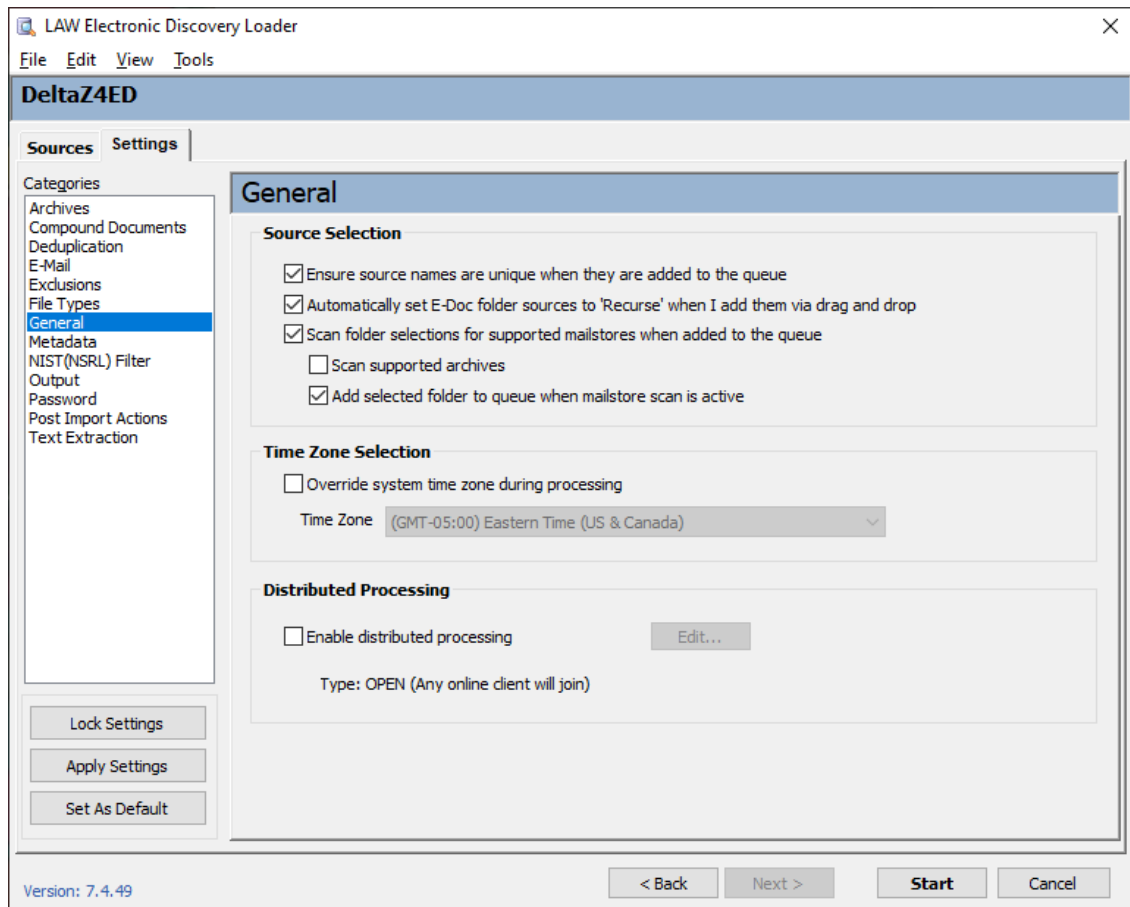
3. Choose from among the following options:

   - **Ensure source names are unique when they are added to the queue** - When enabled, ensures there are no duplicate source names in the Source Queue. This feature is particularly useful when dealing with multiple mail stores with a source name of "Personal Folders." In this example, the first occurrence of the mail store will be named Personal Folders, while any subsequent mail stores will be added as Personal Folders-001, Personal Folders-002, and so on.

- **Automatically set E-Doc folder sources to 'Recurse' when I add them via drag and drop** - If using the drag and drop method to select sources for processing, enabling this option adds the selected folder and all subfolders to the source queue. If this option is not enabled, only the selected folder is added to the queue.

- **Scan folder selections for supported mail stores when added to the queue** - Ensures the ED Loader searches for supported mail stores in folders that are selected for processing and adds them to the queue as mail stores. This option is also located in the **Select Folders** dialog when selecting sources. Two sub-options are available:

  - **Scan supported archives** - When enabled, this option ED Loader searches supported archive files for supported mail stores. If a mail store is found, the Extract Stores dialog box opens. You can then select a location where ED Loader can extract the mail store(s) prior to processing. After mail stores are extracted they are added to the queue.

  - **Add selected folder to queue when mailstore scan is active** - Forces the selected folders to be added to the queue as e-doc folders following the scan for mail stores. For example, if a folder is selected that contains 5 XLS files and 1 PST mail store, and this option is enabled, two sources will be added to the queue (one file set (5 XLS files and one PST mail store.) In this example, if the option is disabled, only the mail store would be added to the queue and the folder of XLS files would not be processed.

- **Active database** - If file type filtering will be used, this option will identify which database is referenced during the import. New databases may be created and existing databases may be applied in the File Type Manager. See the File Types section for additional information.

- **Time Zone Selection** - Shifts all date and time fields to the selected time zone. The default is the Time Zone registered in Windows for the local computer. Note that this setting also automatically changes the time zone for the imported items when you e-print or convert documents to TIFF files. The date and time information in the print output of items match the imported metadata.

⚠   When you are doing single-document TIFF conversion, the time zones that are associated with image or PDF files do not automatically adjust to match the time zones of the native files. In such circumstances, if you need dates to match between the native files and image or PDF files, you can manually change the time zone on your system prior to printing to match the time zone of the native files. For more information about converting documents to TIFF or PDF, see Converting Documents to TIFF

- **Enable Distributed Processing** - Allows other LAW computers to share in the processing of a case.
  - Click **Edit**, select an invitation type, schedule a time to run the job, select clients to participate in the job and then click **Accept**.
  - For more implementation details regarding Distributed ED Loader sessions see Distributed Electronic Discovery.

- After you start a distributed loading session, you can monitor its progress and perform other management tasks using the LAW Management Console (LMC). For more information on managing distributed import jobs, see: Using the LMC.

You can configure ED Loader to selectively import custom metadata from various types of documents.

You can also extract custom metadata from documents after documents have been imported into LAW using the Document Processing/Analysis feature in the Batch Processing utility. For more information, see Extracting Custom Metadata.

To access and configure metadata options

1. On the **File** menu, select **Import** and then click **Electronic Discovery**.

2. Click the **Settings** tab and then click **Metadata**. The **Metadata** options display.
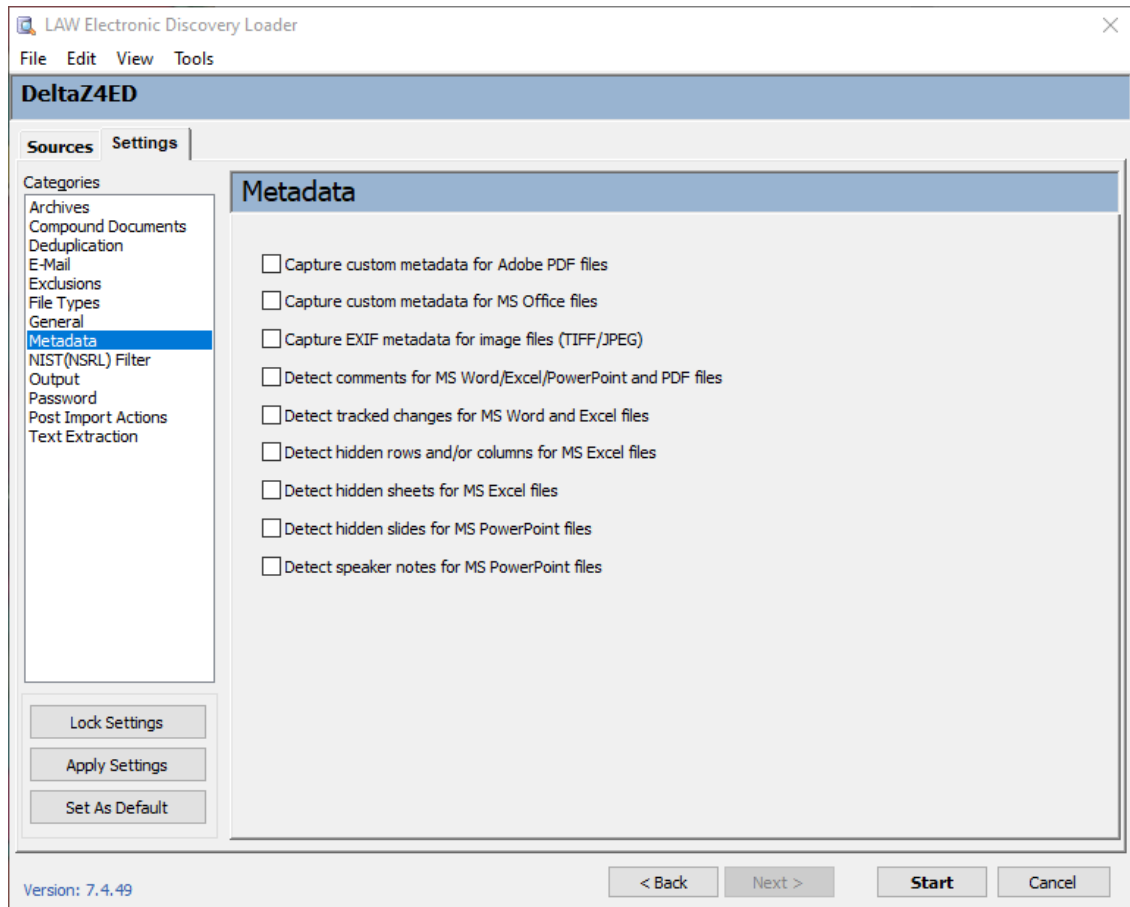
3. Choose from among the following options:

- **Capture custom metadata for Adobe PDF files.** Extracts metadata field names and values that were assigned to the original Adobe Acrobat PDF. Such fields might include the names of e-mail attachments, or of PDF's embedded in other files such as in a Micrsoft Word document.

- **Capture custom metadata for MS Office files**. Extracts metadata field names and values that were assigned to Microsoft Office file, except for Publisher and Access files. Field names and data are brought into the LAW case as *extended properties*. See note below.

- **Capture EXIF metadata for image files (TIFF/JPEG)**. Extracts metadata field names and values from EXIF files. If found, custom metadata fields are added to the case database with field names preceded by **EP**.

- **Detect comments for MS Word/Excel/PowerPoint and PDF files.** If comments in Microsoft Word, Excel, and PowerPoint files or sticky notes in Adobe Acrobat PDF files are detected, assigns a **Y** to the **HasComments** field.

- **Detect tracked changes for MS Word and Excel files**. If tracked changes are found, assigns a **Y** to the **HasTrackChanges** system field.

- **Detect hidden rows and/or columns for MS Excel files.** If hidden columns or rows are found, assigns a **Y** to **HasHiddenRow** and **HasHiddenColumn**, respectively.

- **Detect hidden sheets for MS Excel files.** If hidden sheets are found, assigns a **Y** to the **HasHiddenSheet** field.
- **Detect hidden slides for MS PowerPoint files.** If hidden slides are found, assigns a **Y** to the **HiddenSlides** field.
- **Detect speaker notes for MS PowerPoint files.** If speaker notes are found, assigns a **Y** to the **SpeakerNotes** field.

Extended property metadata is placed in *extended property* fields that are created when the documents are imported or the metadata is extracted by the Batch Processing utility. The names of all extended property fields start with *EP*. The remainder of the field name depends on the name of the field as it exists in the source document. For example, if a Word document is imported that contains a custom metadata field called Typist, LAW will create a metadata field during the import or batch processing called *EPTypist*. Deleting a document will delete all corresponding extended properties for that document. For more information on extended properties, see: [Extended Properties in Grid Views](#).

The chief purpose of NIST filtering is to focus investigation on user-generated data by removing from consideration files that are of types that are unlikely to be responsive. Examples of such file types include system files and executable files. The National Institute of Standards and Technology (NIST) is an agency of the U.S. Department of Commerce that maintains and publishes a database of known computer file profiles. This database is referred to as a reference data set (RDS) and is compiled by NIST's National Software Reference Library (NSRL).

The NIST filter uses the RDS database to compare files against a known set of software applications. The NIST filter is typically employed in forensics cases to scan for and remove system files and application logic files from consideration as case documents. When you enable the NIST(NSRL) filter, you can select one of the following actions for the import to take when a NIST(NSRL) record is detected:

- Include (Log record). Creates a record for the NIST file in the database and copies the native file into the case folder.

- Partially exclude (Log record but do not copy file). Creates a record in the database but does not copy the native file.

- Exclude (Do not log record or copy file). Does not create a record, no text is extracted, and the native file is not copied to the case folder.

The following facts should be considered on when using the NIST filter:

- To make use of this option you must first download the database of known file types from the NIST website.
- E-mails are not tested against this filter although their attachments are tested.

- If an archive's hash is present in the NSRL database, then it is automatically marked as a NIST item and depending on your settings it will be filtered out and its contents are not evaluated or logged to CloudNine™ LAW. This also applies to embedded/attached archives. If the archive's hash is not present, then its contents are evaluated on a file-by-file basis.

- Enabling this option will mark as NIST files, any files present in the configured hash database using the documents' SHA-1 hash values.

For more information about the RDS database, visit the NSRL website. Please contact technical support if the website NIST/NSRL government website isn't available.

The rest of this topic discusses NIST filters when used in the context of document import with ED Loader.

SQL Server NIST Configuration
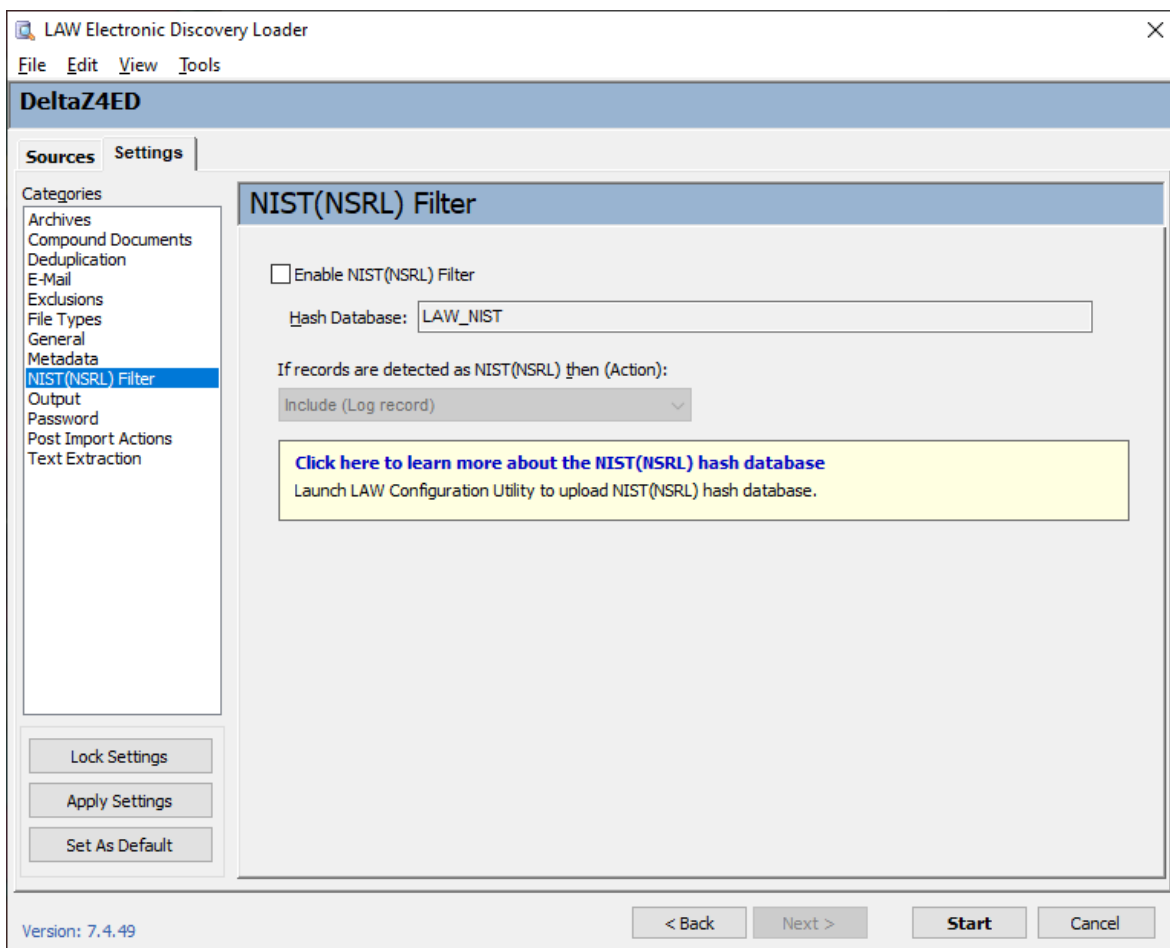
To Enable NIST (NSRL) Filter filtering

1. Open an Electronic Discovery Loader enabled case.

2. From the **File** menu select **Import** then **Electronic Discovery**.

3. Select the S**ettings** tab.

4. Select the **NIST(NSRL) Filter** category.

5. Enable **NIST(NSRL) Filter.**

6. The Hash Database is configured through the LAW Configuration Utility.

If records are detected as NIST(NSRL) then (Action): Select one of the following options from the drop down.

- **Include (Log record)** - Creates a record for the NIST record in the database and copies the native file into the case folder.

- **Partially Exclude (Log record but do not copy file)** - Creates a record in the database but does not copy the native file.

- **Exclude (Do not log record or copy file)** - Does not create a record, no text is extracted, and the native file is not copied to the case folder.

How to create a NIST database in SQL

Launch the LAW Configuration Utility

Go to the NIST tab in the Configure Environment section.

The NIST database must be configured and appended through the LAW Configuration Utility.

The output settings determine how selected sources are identified and organized in the tree view of CloudNine™ LAW.

To access and configure output options

1. On the **File** menu, select **Import** and then click **Electronic Discovery**.

2. Click the **Settings** tab and then click **Output**. The **Output** options display.
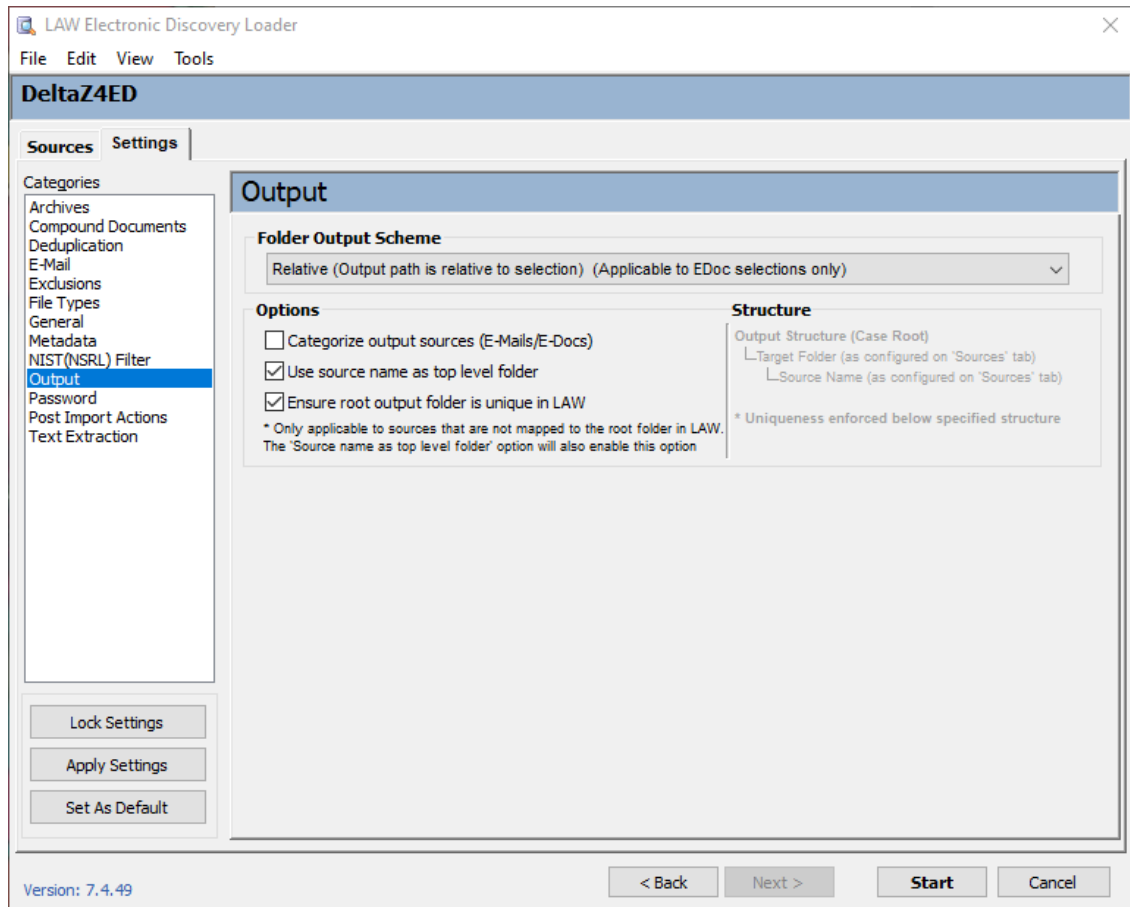
3. Configure output options as needed:

- **Folder Output Scheme**

  - **Relative (Output path is relative to selection) (Applicable to EDoc selection only)** - This option applies to e-doc selections only. The path created in the tree view starts with the selected folder, or with the folder containing the selected files. Use this setting if you want to shorten paths. It can also help to limit issues that result from path naming limitations of operating systems. This option does not apply to mail stores. Paths within mail stores are always mirrored on import.

  - **Mirrored** - Re-creates the entire folder structure of the selected electronic files in the tree view of the main window of CloudNine™ LAW.

- **Options**

  - **Categorize output sources (E-Mails/E-Docs)** - When enabled, all mail store sources will be imported into an "E-Mail" folder and all e-doc sources (including loose e-mail) will be imported into an "E-Doc" folder.

  - **Use source name as top level folder** - The Source Name, as displayed in the Source Queue on the Sources tab, will be used as the top level folder name for each source when imported into CloudNine™ LAW.

  - **Ensure root output folder is unique in LAW** - Ensures the target folder for each source is unique in CloudNine™ LAW. This only applies when <Case Root> is NOT

set as the target folder for a source or sources. For example, if this option is checked and the other two output options (listed above) are not checked and a user loads to folders that are both named "EDOC" into a folder in LAW named 001CD, LAW will import one of the EDOC folders into a 001CD-001 folder and the other EDOC folder into a 001CD-002 folder. This will prevent records in both EDOC folders from being loaded into one folder.

- **Structure** - Previews of the folder structure in LAW (following the import), depending on the selected Output options.

In version 6.17.96+ you can configure ED Loader to use passwords for processing encrypted files.   The Passwords tab allows you to enter any known passwords for password-protected Adobe Acrobat PDF, office files (ex. PPT, PPTX, DOC, DOCX, XLS and XLSX files), Pkzip, Zipx and 7zip files. All passwords in the passwords section are case-sensitive. If the password for a file is Abc123, then Abc123 would need to be entered; abc123 will not unlock the file.

💡 ED Loader passwords will temporarily decrypt the previously mentioned file types and extract both metadata and content from the protected documents.

💡 Passwords are global.
You have one list of passwords for all LAW databases on that computer. If you are working in Case A, add passwords, and switch to Case B; then you will see the same password list in Case B. See Sharing the password list across multiple computers.

⚠ If you are imaging the encrypted files then you will need to enter the passwords again in your Tiff settings.

⚠ The encrypted files will remain encrypted when exported.

To access and configure your passwords for office and pdf files

1. On the **File** menu click **Import** and then click **Electronic Discovery**.

2. Click the **Settings** tab and then click **Password**.
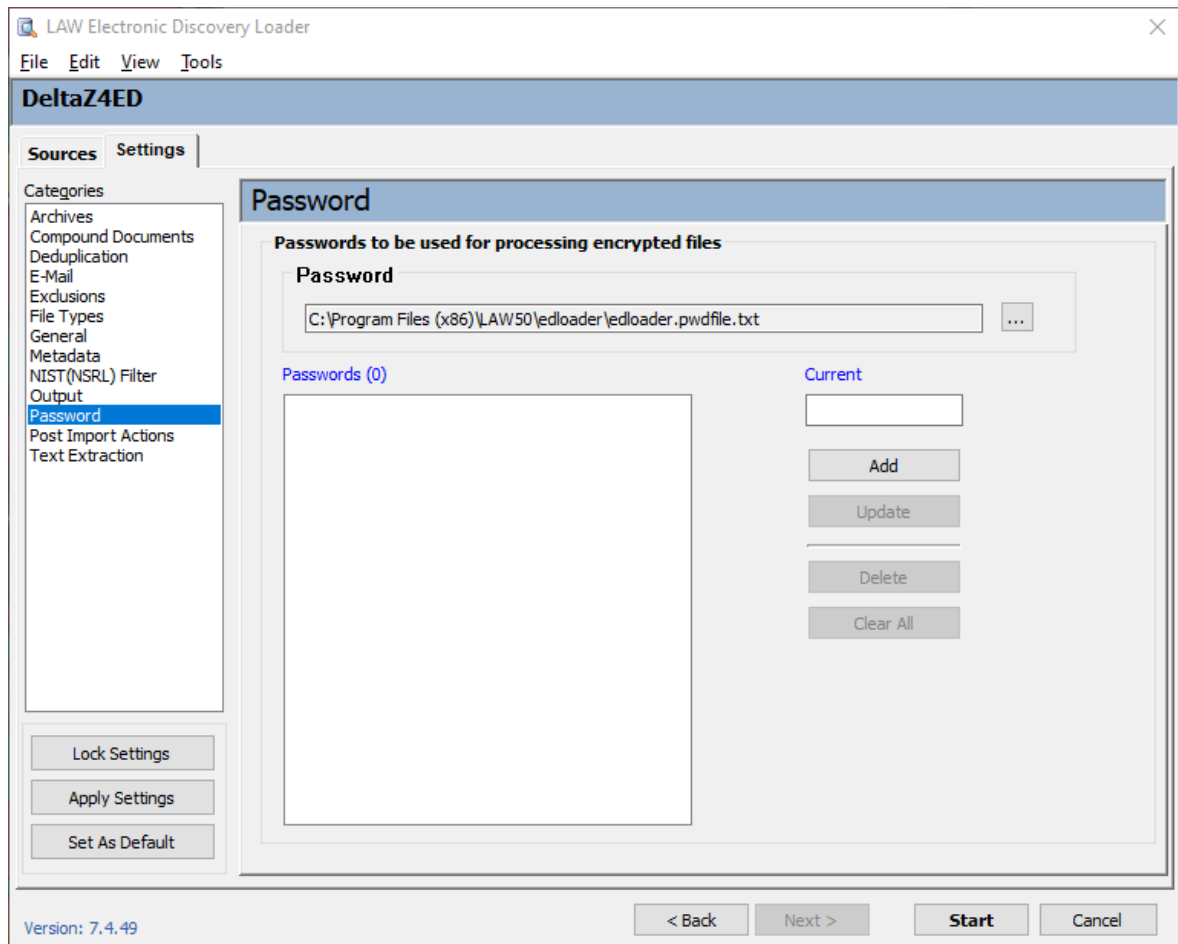
☑ All passwords are case sensitive without character limitations.

To Add a password.

1. Enter the password in the box under Current.

2. Then select Add.

3. Repeat the process for as many passwords as needed.

To Update a password.

1. Select the password that you need to correct under Passwords(#).

2. Then edit the password in the Current box.

3. Select Update when your changes are complete.
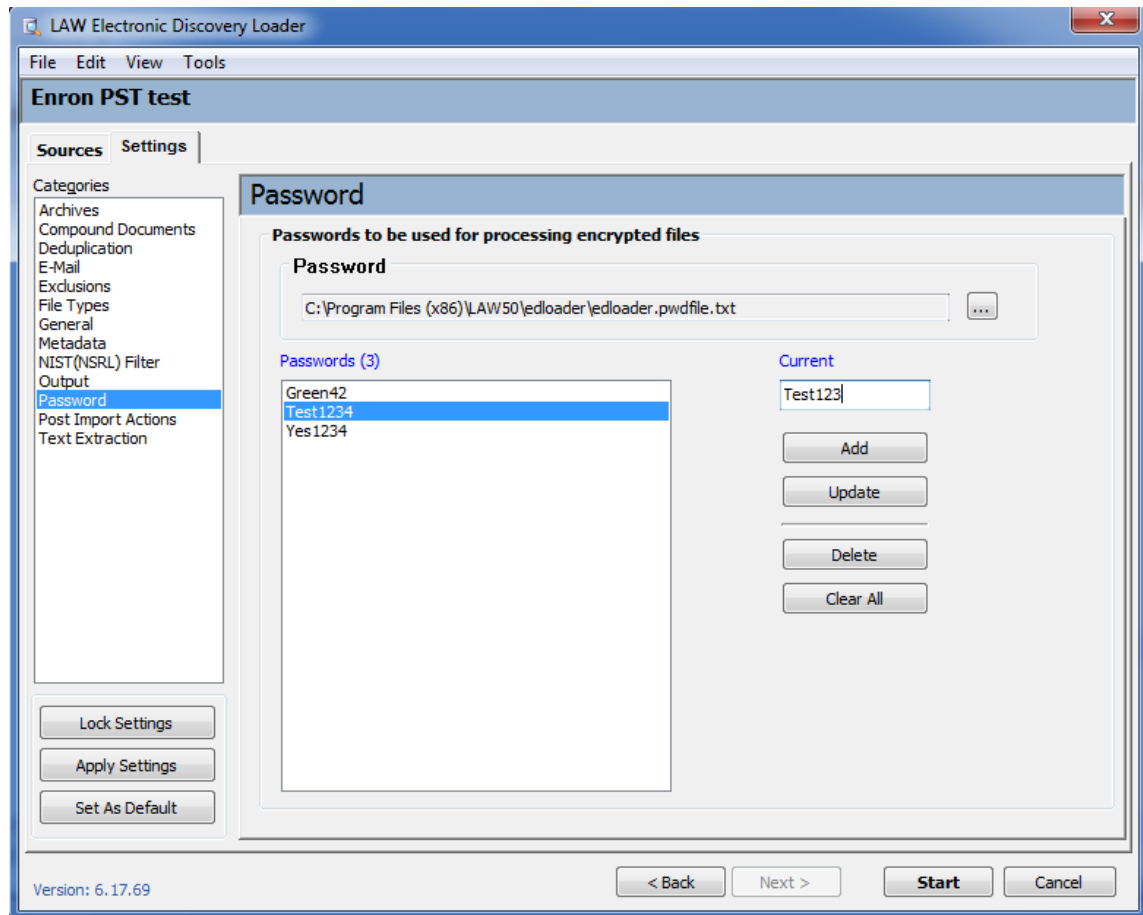
To Delete a password.

1. Select the password that you need to delete under Passwords(#).

2. Then select **Delete**.
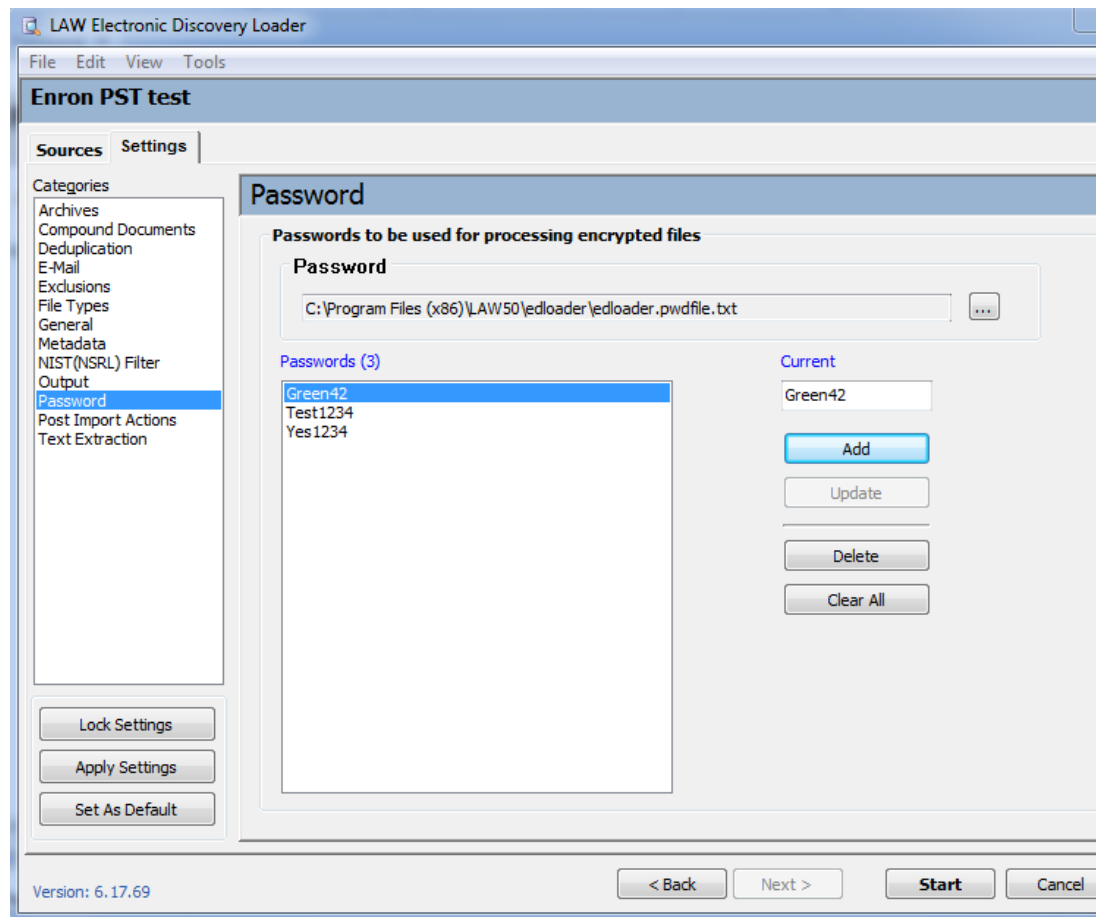
3. You will then get a prompt, "Are you certain you want to delete the selected password?
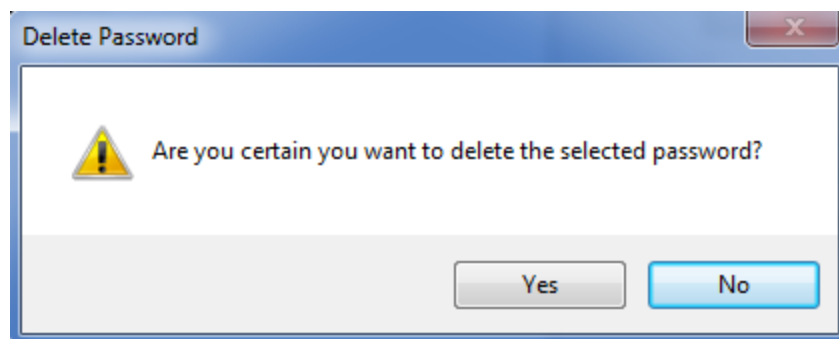
4. Select **Yes** and the selected password will be removed from the list.

5. Selecting **No** will bring you back to the Password screen without deleting the password.

<u>**To Delete all passwords.**</u>

1.   Select **Clear All**.
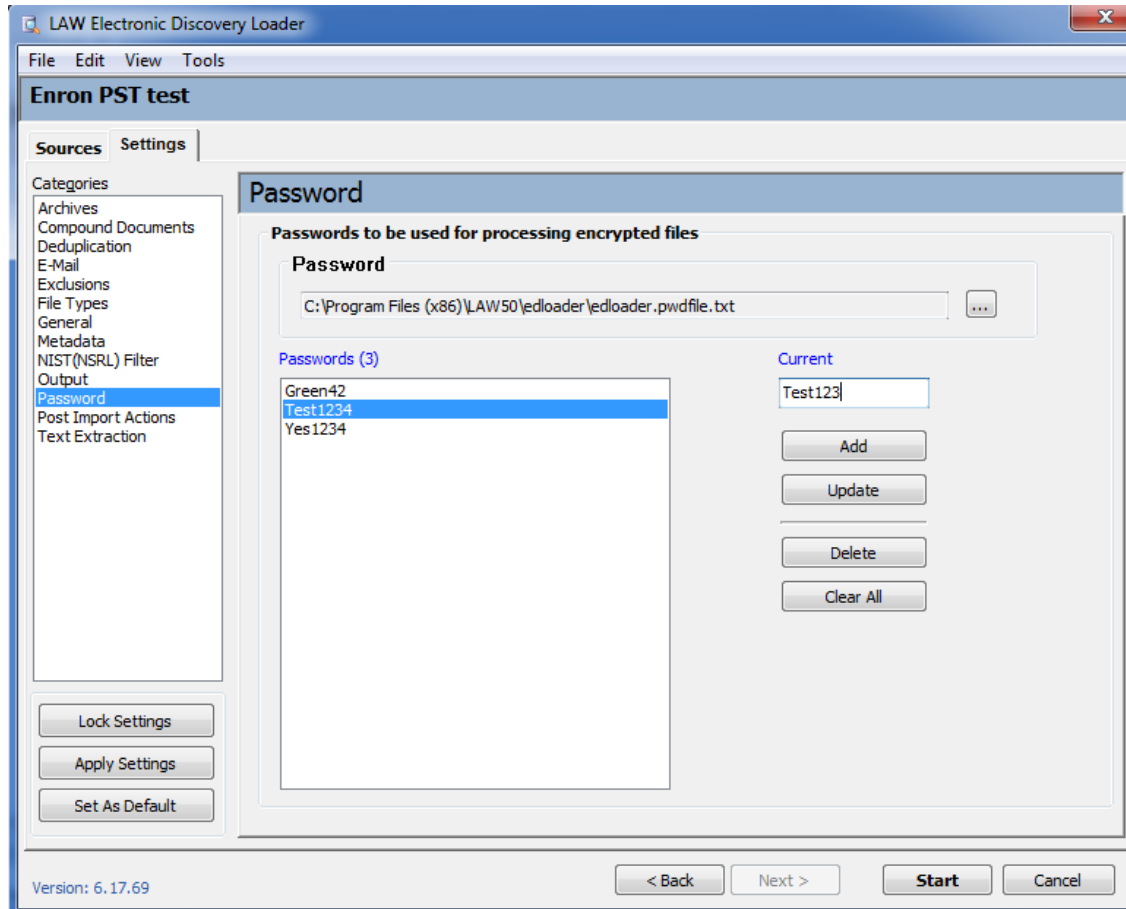
2.   You will then get a prompt, "Are you certain you want to delete all passwords?
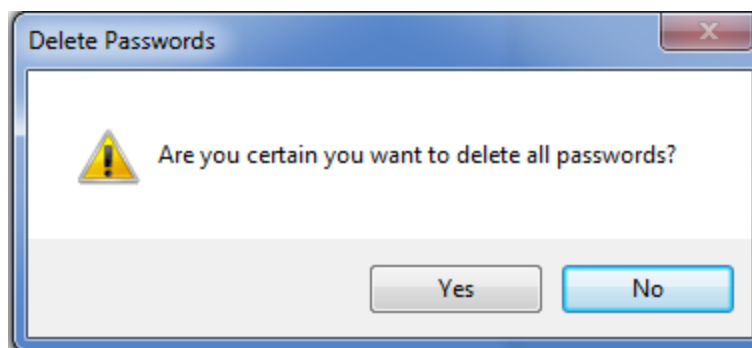
3.   Select **Yes** and all passwords will be removed from the list.

4.   Selecting **No** will bring you back to the Password screen without deleting the passwords.

⊟ **Sharing the password list across multiple computers.**

1. Close LAW.

2. Open a File Explorer window.

3. Browse to **C:\Program Files (x86)\LAW50\EDLoader**.

✎   When using LAW with UAC (User Account Control) enabled, the LAW50 folder may be redirected to the virtual store. The virtual store is located in the profile of the current user, for example:

C:\Users\<User>\AppData\Local\VirtualStore\Program Files (x86) \Law50\EDLoader.

4. Copy the edloader.pwdfile.txt file.

5. Browse out to a location on the network that all computers can access for example the network share where cases are stored.

6. Paste the edloader.pwdfile.txt file to the above location.

7. Copy the UNC path of the new location for the edloader.pwdfile.txt.

8. Lauch LAW.

9. Open the case/database.

10. Go to **File>Import>Electronic Discovery>Settings>Passwords**.
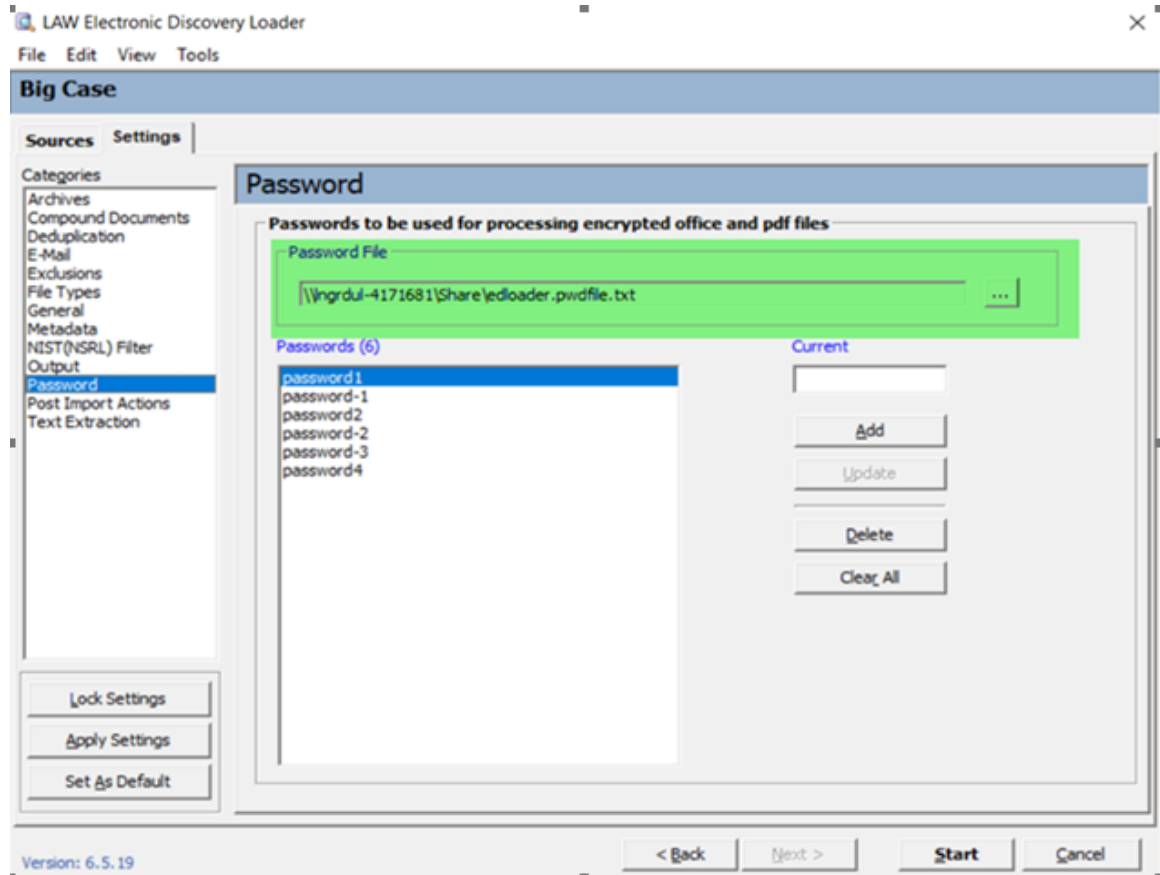
11. Select the ellipses next to the original path.

12. Paste the path from step 7 into the file browser that is open.

13. Select **edloader.pwdfile.txt**.

14. Select Open.

15. The path has now been changed for this computer. Repeat the above process from step 7 for other computers on your network.

⚠ If you add a new computer, or uninstall LAW, then you will need to repeat the above process for the new or reinstall of CloudNine™ LAW.

📝 By default, if the password is configured on this computer and a distributed import is ran, then the passwords loaded here will be utilized on all computers involved in the distributed import.

💡 This feature can be used with the Reprocessing Failed items feature for files from prior imports (imports using version 6.15.083+) that failed due to password encryption.

Post-import actions configure CloudNine™ LAW to continue to perform the next tasks in a workflow unattended, without the need of user intervention.

If no options are selected and your case is SQL Server-based, you are prompted to index documents.

To access and configure post import actions

1. On the **File** menu, select **Import** and then click **Electronic Discovery**.

2. Click the **Settings** tab and then click **Post Import Actions**. The **Post Import Actions** options display.
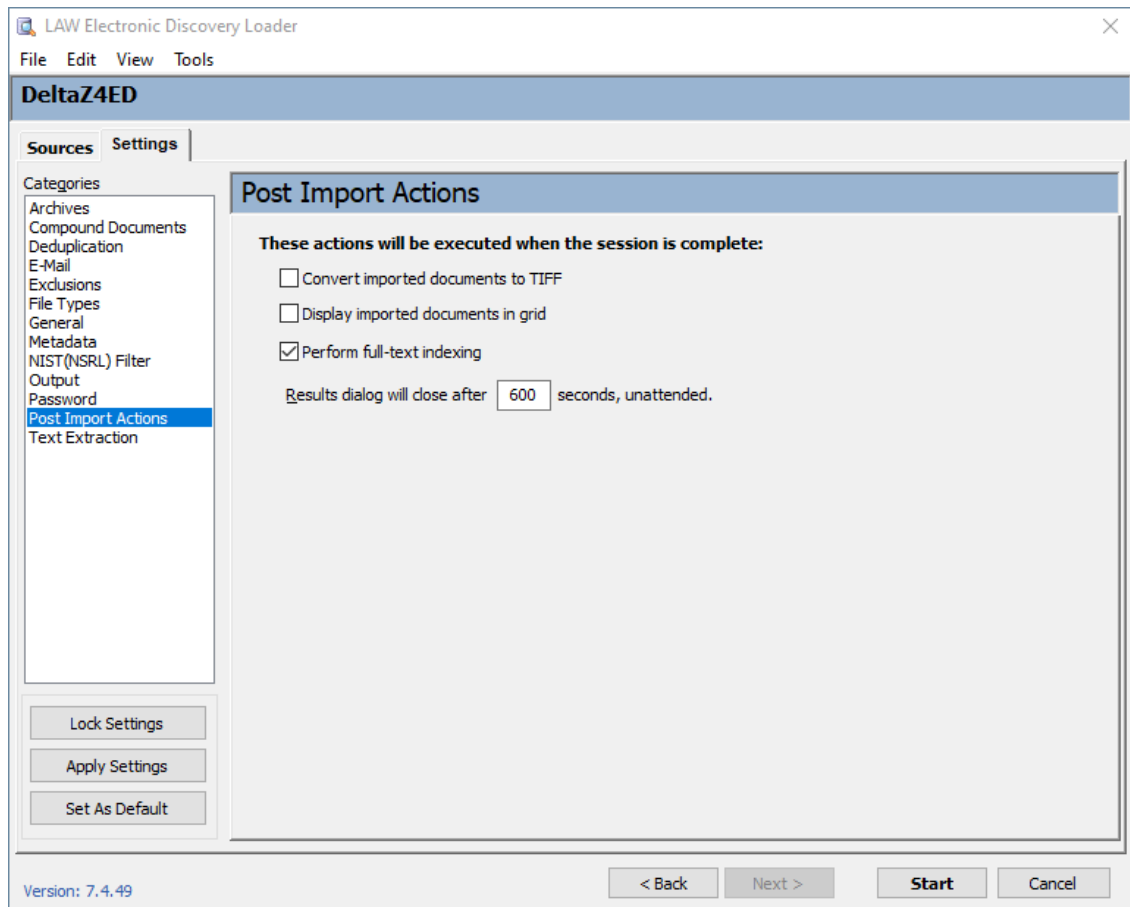
3. Configure post-import actions as needed:

   • **Convert imported documents to TIFF** - When enabled, the **Display imported documents in grid** option will be automatically selected and grayed out. LAW will automatically attempt to convert the imported documents to TIFF images after it has closed the results dialog and after a specified number of seconds.

   ⚠ If you plan to enable the option to convert imported documents to TIFF, configure TIFF conversion settings *before* you run an ED Loader session.

- **Display imported documents in grid** - Following the import, LAW will close the results dialog after the specified number or seconds. Then, the grid view will launch and display only the records imported during that session.

- **Perform full-text indexing** - When enabled, LAW will automatically begin indexing any documents flagged to be indexed immediately after closing the results dialog that appears following the import.

- **Results dialog will close after <N> seconds, unattended** - Allows users to specify the number of seconds to pass before the results dialog is closed and the selected post import action takes place. The default is 600 seconds. This option is active only if one of the above options is selected.

1. On the **File** menu, select **Import** and then click **Electronic Discovery**.

2. Click the **Settings** tab and then click **Text Extraction**. The **Text Extraction** options display.
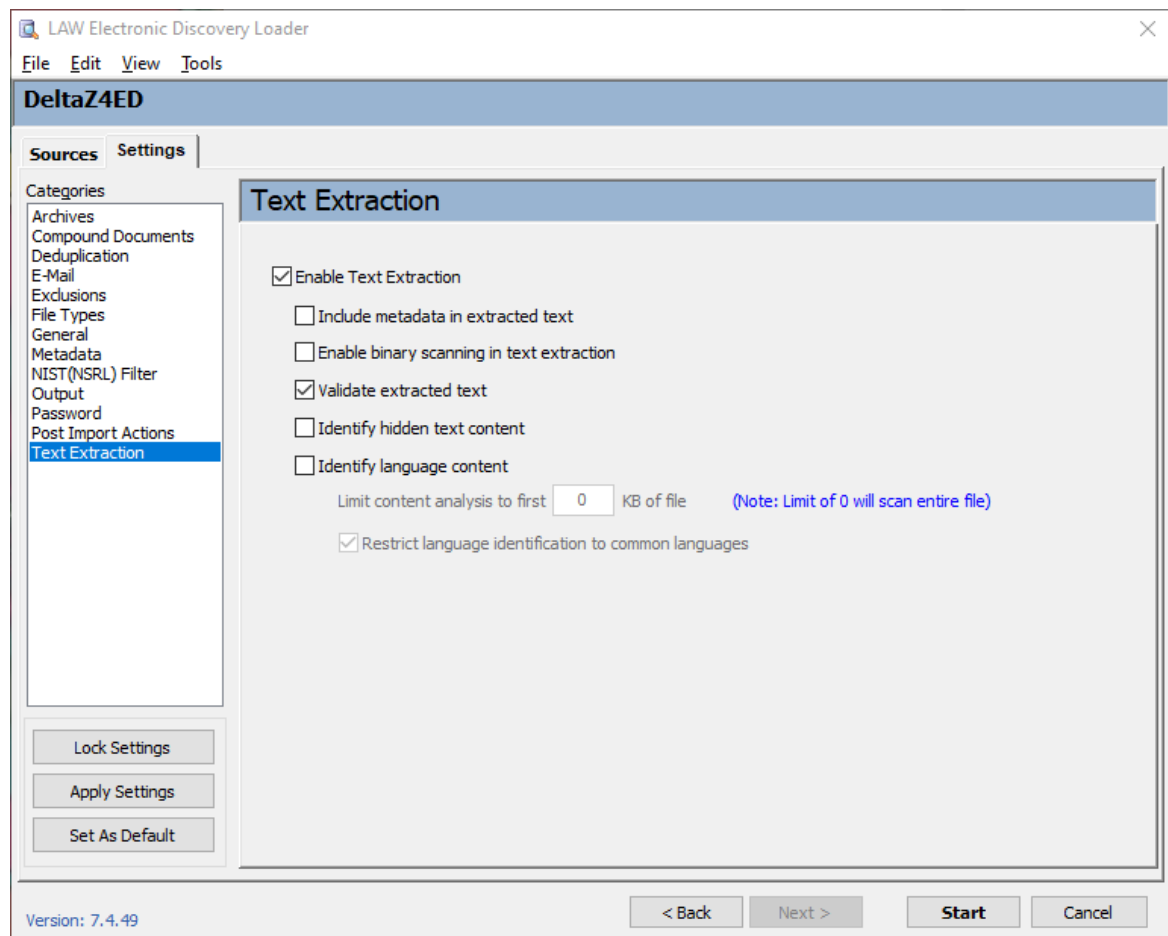
3. Configure text extraction options as needed:

Option	Description
Enable Text Extraction	Enables text extraction options from applicable files during an ED Loader import session. You must select this option to access any other options for text extraction.
Include metadata in extracted text	Includes any available document properties in the extracted text file, for example: Author, Title, etc.
Enable binary scanning in text extraction	Forces all file types to be scanned for text. This option works by overriding the **Ext. Text** flag in the File Type Manager (see [File Types](#)). If you enable this option, it is recommended that you also enable the **Validate extracted text** option.
Validate extracted text	Scans each text file for readable text. Use this option to filter text files containing only form feed and other control characters. Text files that do not contain readable text are marked as invalid and discarded.
Identify hidden text content	Detects specific kinds of hidden text in Word, Excel, and PowerPoint documents. Hidden text can be found in these forms: • Text that is hidden inside shape controls, for example, text boxes, etc. • Text formatted as Hidden. • Hidden spreadsheets, spreadsheet columns, and spreadsheet cells. • Hidden slides. If hidden text is detected the following actions occur: • The hidden text is added to the start of the extracted text for the document under the Text tab. • The hidden text appears at the top of the document in a section marked with **<<< START HIDDEN CONTENT >>><< END HIDDEN CONTENT >>>**. Page numbers within the hidden content area can help you determine the context for the hidden text. • The **HiddenText** field for the document is assigned a **Y**. **Note** • Enabling this option may decrease import speeds.

Option	Description
Identify language content	Identifies the first 5 languages used in each document.
	When you create a new case or when you open a case that was created using a previous version of CloudNine™ LAW, a field named **Language** is created that stores language identifiers.
	Note the following:
	• Single word sentences are not evaluated.
	• A language with only one occurrence in the document is ignored.
	• After the first language is identified, to be added Language field, the second through fifth languages require a hit percentage of at least 15% of document text.
	• Enabling this option may decrease import speeds. To improve speeds, try using the option to limit analysis to the first kilobytes of each file.
Limit content analysis to first _ KB of file	Limiting analysis can help to enhance performance.
Restrict language identification to common languages	Limiting identification to common languages can help to enhance accuracy.
	Note the following:
	• This setting is enabled by default and persists between sessions.
	• When this setting is enabled, only the following languages are detected:
	Arabic
	Bengali
	Chinese: Simplified Chinese, and Traditional Chinese
	Czech
	Danish
	Dutch
	English
	Finnish
	French
	German
	Greek
	Hebrew
	Hindi
	Hungarian

Option	Description
	Italian
	Japanese
	Korean
	Latin
	Norwegian Bokmål
	Norwegian Nynorsk
	Polish
	Portuguese
	Russian
	Spanish
	Swedish
	• If a supported language is not encountered, a value of **Unknown** is returned. This value might also be returned if only a small amount of content is available.
	• When multiple languages are detected, they are delimited with semi-colon.

You can setup import session defaults, such as locking and unlocking settings, saving the current settings as default, or set the settings and the DocID seed in current use as the default for future sessions.

```
Lock Settings
Apply Settings
Set As Default
```
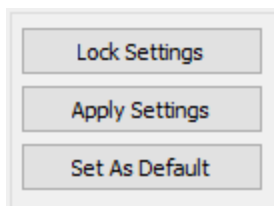
Use the Settings tab in ED Loader to select among options for saving ED Loader settings:

Lock Settings or **Unlock Settings** - Toggles between locking and unlocking import settings. When locked, settings cannot be changed.

• **Apply Settings** - Saves the currently selected settings and applies them if you restart ED Loader. Use this option if you want to temporarily close ED Loader before running the import session. Settings are saved to a case-level ED Loader configuration file. For more information on stopping and restarting ED Loader sessions, see Cancelling and Resuming Sessions.

• **Set as Default** - Saves the current **Settings** tab selections and the **DocID** seed as default for all cases started with the same LAW executable.

Reprocessing Failed Items in Electronic Discovery

This feature will enable reprocessing of records that had one of the following errors during prior Electronic Discovery sessions: Write failed, Attachment Extraction failed, Embedded Image Extraction failed, and/or Compound Doc.Extraction failed.

⊟ **How to determine whether to process Failed Items**

⊟ **Different scenarios and Reprocess behaviors**

- Password protected compound document
  The compound document will be copied to the reprocess folder ($Repository\$Files) for reprocessing.

- Password protected archive
  The archive document will be copied to the reprocess folder for reprocessing.

- Archive contains password protected document with "Treat archive as attachment container" option selected
  The parent archive is logged into Law successfully
  The password protected document will be copied to the reprocess folder for reprocessing.

  - Archive contains password protected document without "Treat archive as attachment container" option
    The parent archive is not logged into Law
    The password protected document will be copied to the reprocess folder for reprocessing.

- Archive embedded with password protected archive with "Treat archive as attachment container" and "Include embedded archive" options
  The parent archive is logged into Law successfully.
  The embedded password protected archive will be copied to the reprocess folder for reprocessing.

- Archive embedded with password protected archive with "Treat archive as attachment container" option and without "Include embedded archive" option
  Only the parent archive is logged into Law successfully.

- Password protected archive embedded with another archive with "Treat archive as attachment container" and "Include embedded archive" options
  The password protected archive will be copied to the reprocess folder for reprocessing.

- Archive embedded within email item.
  The parent archive and email item is imported into law successfully.
  The password protected document will be copied to the reprocess folder for reprocessing.

- Emails with password protected attachments

The parent document (Email) is processed successfully.
The password protected attachment(s) will be placed into the reprocess folder for reprocessing.

You can determine if reprocessing is needed by either checking your prior ED Loader Session Logs for processing errors/warnings or select the **Failed Items** tab.

⊟ **To Check the ED Loader Session Logs for processing errors/warnings**

1. **Review the Session Log** by opening the Session Viewer. For more information on the Session Viewer, see: Session Browser and Session Viewer.

   - Look for records listed in the **Incomplete** or **Commit** tabs.

   - If records are listed in either of these tabs, they were not imported.

   - Records appearing in the **Incomplete** tab might be able to be resolved by resuming the ED Loader session. If this does not work, try reprocessing the files.

   - Records appearing in the **Commit** tabs will need to be re-processed.

   - The **Insert** feature may be used if maintaining order is necessary.

2. **Review the ErrorMsg field** in the CloudNine™ LAW case database to identify errors and determine what action will take place to resolve the error

⊟ **Select the Failed Items tab**

   - Once the Failed Items tab has been selected then LAW will search the "$Repository" in the case directory for native files that are copied to "$Repository \$Files", and the metadata information is copied to the "$Repository \$Metadata" folder.

   - If there are no records in either folder then you will get the prompt "**Failed item repository not found**."
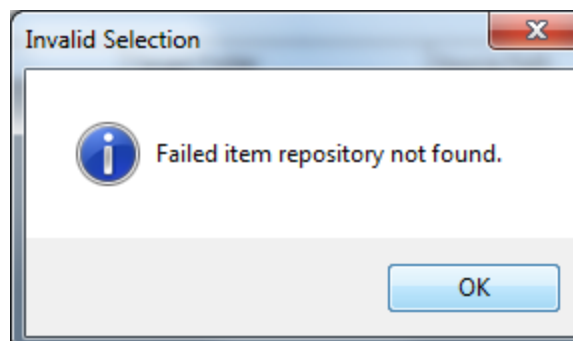
   - After selecting **OK, LAW Electronic Discovery Loader** will have **Failed Items** grayed out.

   - If there are records to be processed then LAW will scan the $Repository for mailstores.

   - If no mail stores are present then following is displayed.
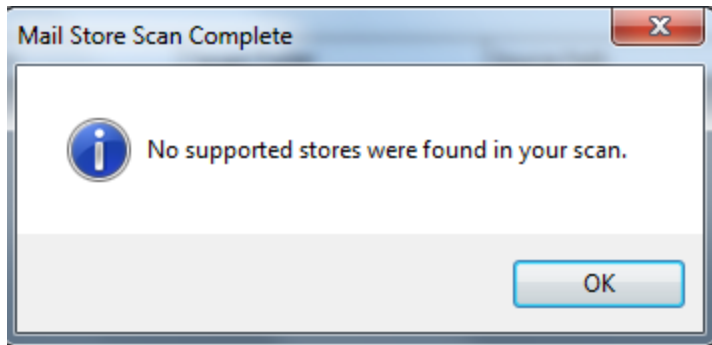
After selecting **OK**, **LAW Electronic Discovery Loader** displays $Files to be processed and the Source Path to the files in $Repository.
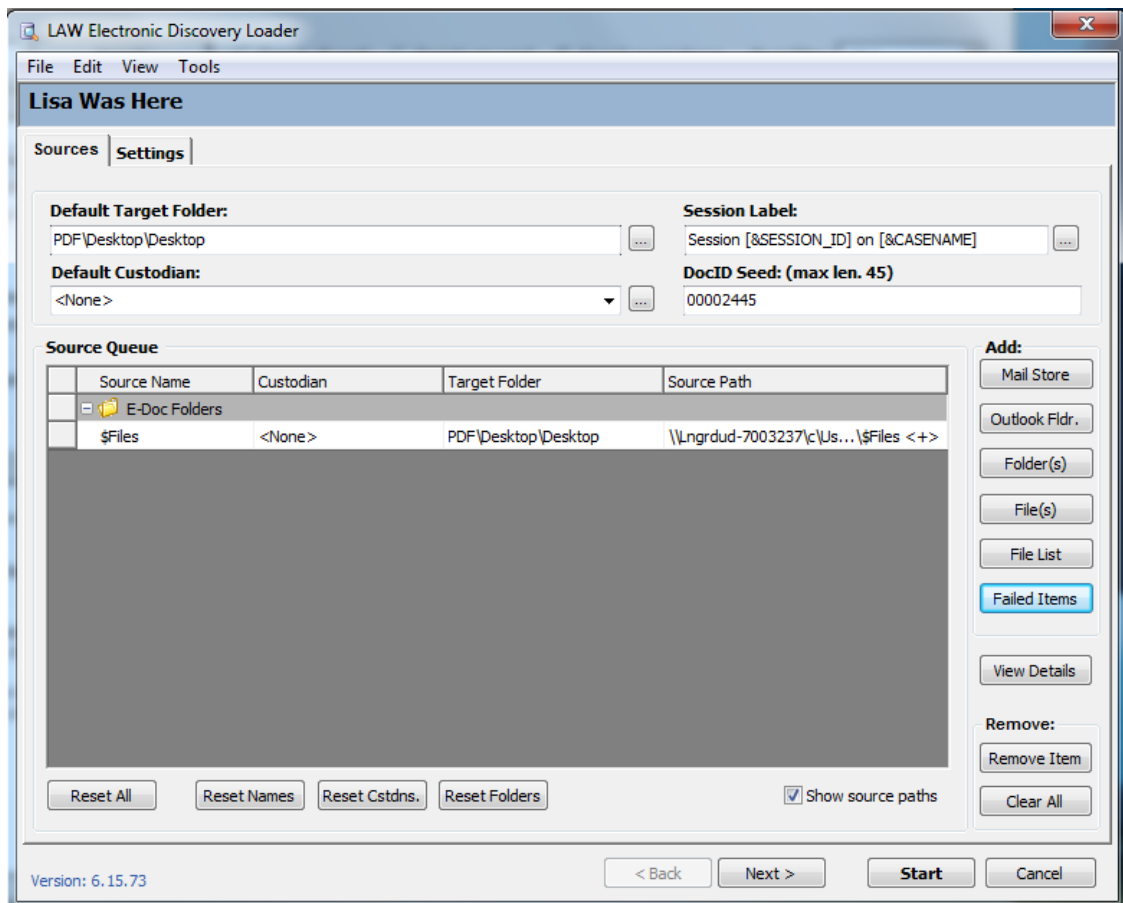
⊟ **How to Reprocess Failed Items**

To reprocess failed items, a new button named **Failed Items** has been added to LAW Electronic Discovery Loader. Once the button is selected the "$Repository" folder is added to the Source queue.
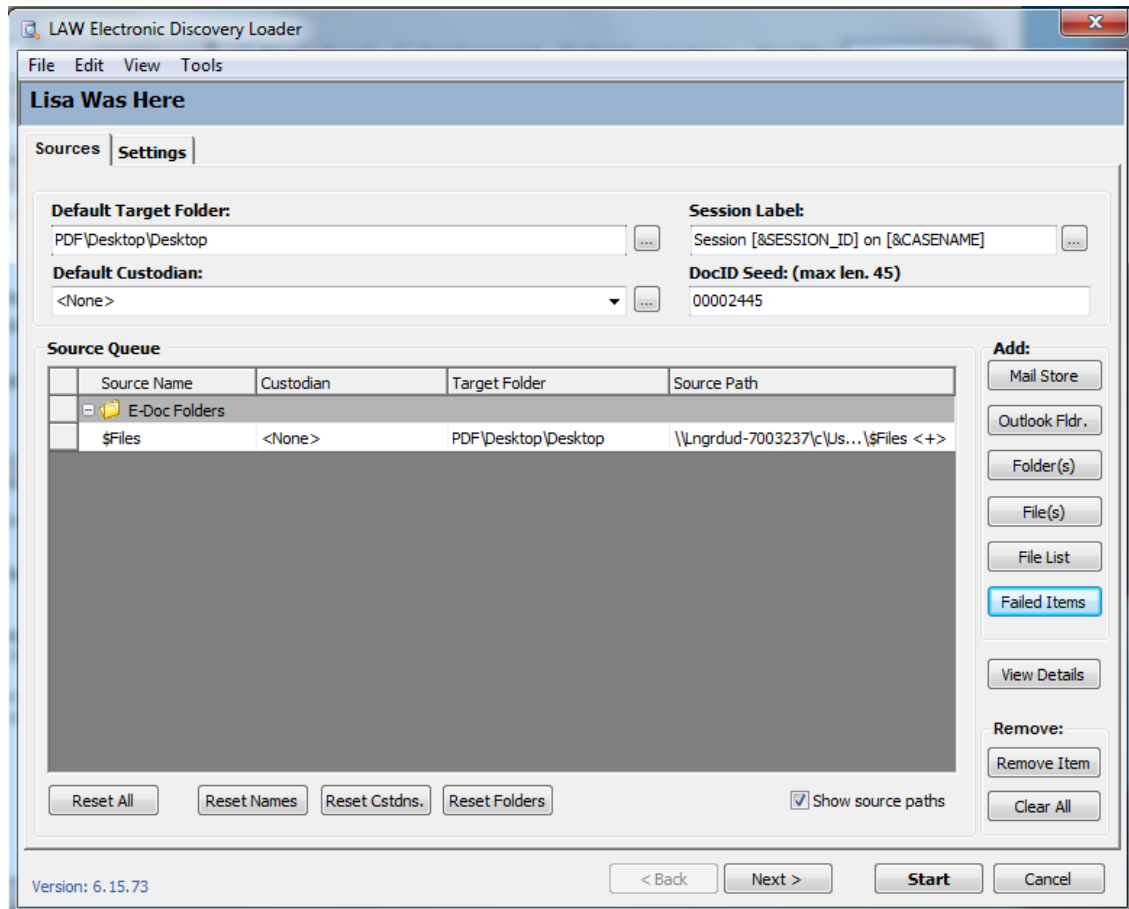
⚠ Selecting **Failed Items** and then **Start** without first resolving the problem that caused the records to error during import will result in another copy of the errored file being imported into your database.

📝 Failed items are records from prior imports(since installing version 6.15.83) that failed for one of the following reasons: Write failed, Attachment Extraction failed, Embedded Image Extraction failed, and/or Compound Doc.Extraction failed.

Before reprocessing failed items through EDLoader, you will need to resolve the cause for the records to error.

⊟ **Reprocessing password protected records**

Browse to the case folder/$Repository folder. The native files are copied to $Repository \$Files, and the metadata information is copied to the $Repository \$Metadata folder.

Open the $Files folder. All files will be listed with a unique identifier that corresponds to the metadata referenced in the $Metadata folder. Opening the file in the $Metadata folder in Notepad will provide the following metadata values: FolderPath, EntryID, SourceID, LawPath, EMailClient, ConversationIndex, ThreadID, ItemGUID, ReprocessedCount, ParentID, SourceFolderPath,

SourceFileName, and FileName. The following example has two Windows Explorer windows ($Files and $Metadata) and a $Metadata file open in Notepad.

In version 6.17.96+ you can add the [password](#) to ed loader before reprocessing the office files, 7zip, and pkzip files.

$Metadata folder and files are for reference only. Making changes to the $Metadata files will affect the ability to reprocess the records with errors.
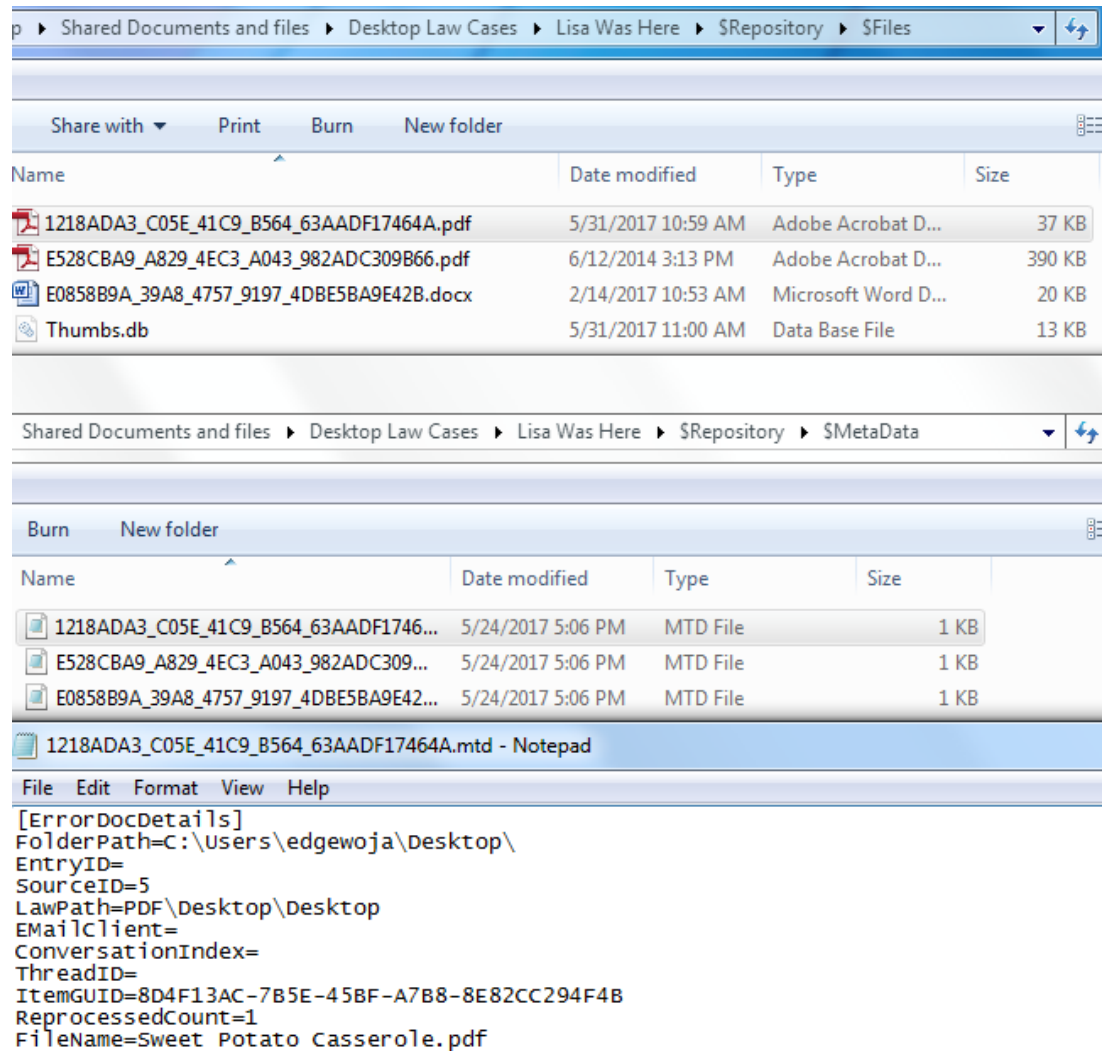
The $Metadata file can be used to locate the FileName that matches the corresponding unique identifier in the $Files folder.

1. Open the record in $Files using the correct password.
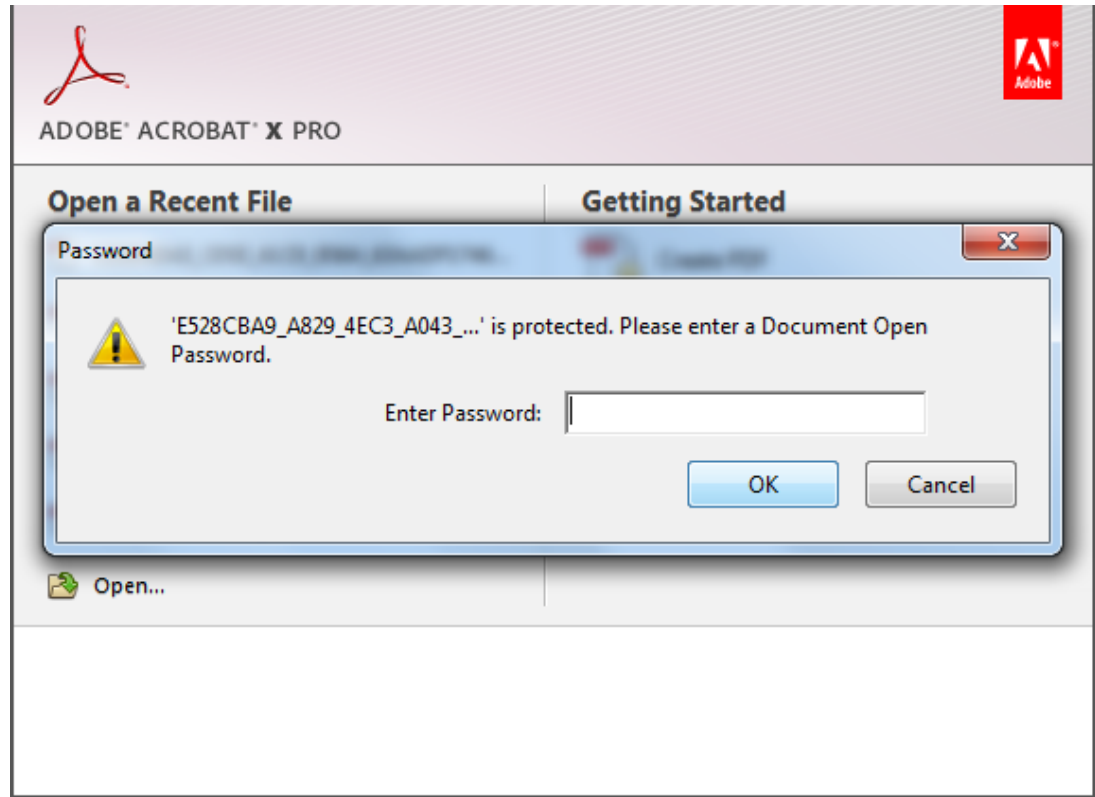
2. Change the security settings disabling the need for a password.

3. Then save the record into the same $Files folder and with the original unique identifier as the filename.

⊟ **Reprocessing records with other errors**

For records that fail due to processing errors or metadata extraction errors, confirm that your Windows login has read/write permission to the case folder and all subfolders and files, %Temp%, and %appdata%. Ensure that there isn't another program that is trying to access your source files during import.

If metadata extraction errors caused a record not to import then you may want to turn off metadata options during import and process post import by Extracting Custom Metadata

⊟ **After resolving errors that generated failed items during the original import**

Select **Failed Items** in **LAW Electronic Discovery Loader**.

Change any import settings that need to be altered and select **Start**.

The Failed Items that have been resolved will now be imported into the database in the corresponding folder with the rest of the files from that source.

If the item is re-processed successfully, then the backed up file and its metadata info will be deleted from the "$Repository" folder.

If the item was an attachment, then the Parent document id will be added to the ErrorMsg field. This can be used to manually attach the item back to its parent.

Re-processed items will be in the corresponding source folder however these records are located at the end of that folder. These records can be moved and or attached to parent records as needed. Moving Documents and Pages Working with Attachments

Querying for reprocessed records in your database

You can determine which items were re-processed using the **Database Query Builder**.

1. Select Search Records on the LAW toolbar.

2. In the **Database Query Builder** select **_DocCat** in the **Field Name** dropdown.

3. On the far right of the field name, click the ellipses button. The **Custom Value Selection** dialog displays.
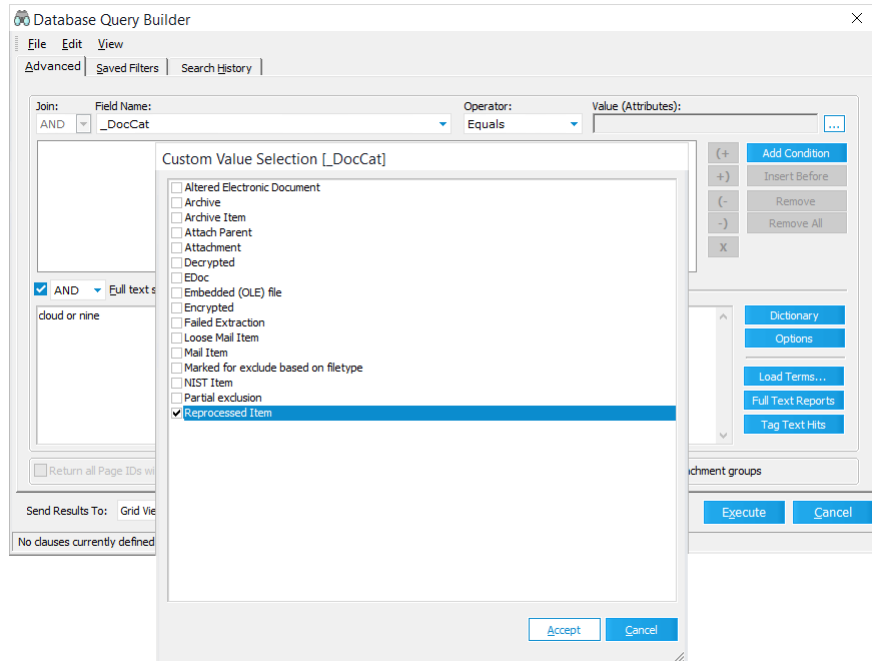
4. Select **Reprocessed Item**. Click **Accept** to close the **Custom Value Selection**.

5. Click **Execute** in the **Database Query Builder**. **Search Results** display.

6. Select **Field List** from the **View** menu, and make sure you have selected **_DocCat** so that it will display.

7. The **_DocCat** field will show the following values for reprocessed documents:

   - 131073 for successfully reprocessed documents

   - 131201 for reprocessed documents that still have errors

   📝 Re-processed items will be in the corresponding source folder however these records are located at the end of that folder. These records can be moved and or attached to parent records as needed. Moving Documents and Pages Working with Attachments

Reviewing Sessions

Reviewing the session after import is an important measure you should take to ensure the all aspects of the import operation completed satisfactorily.

During the import of electronic discovery, ED Loader flags any record whose file import triggered errors or warnings. It is considered a best practice to review all errors and warnings after each import session and then to respond accordingly.

After import, the quality control process should involve the following basic steps:

1. **Review the Session Log** by opening the Session Viewer. For more information on the Session Viewer, see: Session Browser and Session Viewer.

   - Look for records listed in the **Incomplete** or **Commit** tabs.

   - If records are listed in either of these tabs, they were not imported.

   - Records appearing in the **Incomplete** tab might be able to be resolved by resuming the ED Loader session. If this does not work, try reprocessing the files.

   - Records appearing in the **Commit** tabs will need to be re-processed.

   - The **Insert** feature may be used if maintaining order is necessary.

2. **Review the ErrorMsg field** in the CloudNine™ LAW case to identify errors and determine what action will take place to resolve the error.

3. **Review the TextXStatus field** to identify records that did not have text extracted. Extraction of text may be prevented either by an error or by a configuration setting that excludes a file type. These files may need to be converted to TIFF to obtain printed text or OCR text.

After an Electronic Discovery Loader (ED Loader) session, you can open the Session Browser to review an overview of the import session. From the Session Browser, you can open the Session Viewer that opens the log containing a detailed report of the session. The log provides details such as warnings and any errors that occurred during the import process.

To view an import session summary (Session Browser)

Start the Session Browser in either one of the following ways:

- After an import operation, in the results dialog box, click **View Logs**.

    Or

- From **LAW Electronic Discovery Loader**, on the **File** menu, click **Open Session**.

    Or

- On the main LAW dialog, on the **Tools** menu, click **Session Browser**.
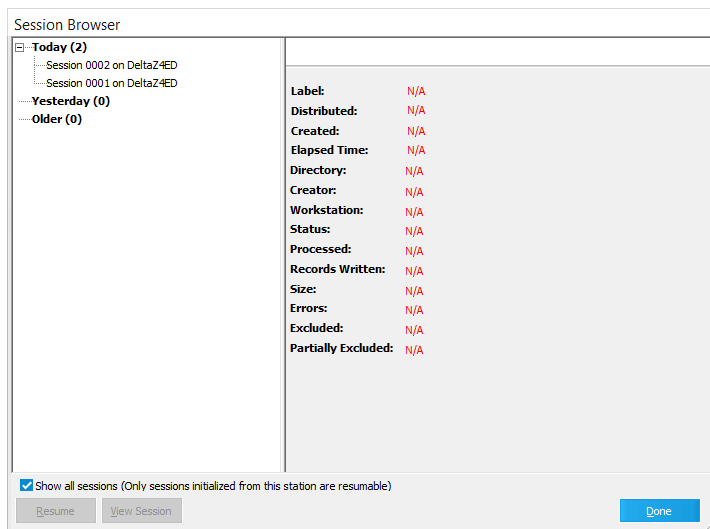
In the **Session Browser**, select the Session on the left to display. The following items are available for review:

- **Label**. The session label.
- **Distributed**. Whether the import was distributed or not. For more information on distributed imports, see: Distributed ED Loader.
- **Created**. Date and time the session was created.
- **Elapsed Time**. The time taken to process items by that specific machine in that session. If the session was a standalone session then this value should be equal

to the total session time. If the session is distributed in nature then this value will represent the total duration for which that specific machine was actively importing documents in the distributed session and this value can be lesser than the actual session duration.

- **Directory**. The directory where the import log is located.
- **Creator**. The user name associated with the user who created the session.
- **Workstation**. The workstation name where the session was created.
- **Status**. The status of the session; whether it completed or not.
- **Processed**. The number of documents processed.
- **Records Written**. The number of case records written.
- **Size**. The size of all files combined that were processed.
- **Errors**. The number of errors that occurred during the session.
- **Excluded**. The number of files that were excluded from processing.
- **Partially Excluded**. The number of files that were partially excluded from the session.

To learn more about the details concerning these items, open the Session Viewer for this session. See the next section of this topic for more information.

💡 Why does the Session Browser show different information than the Turbo Import Report?

Turbo Import Case, the Session Viewer shows the total of all data that was imported in the "session". It's possible to have more than one Import Set being imported during a session, as more than one user could have started an import or users may have re-processed errors from Import Sets that were previously imported; those would be included in the current session.

For post-processing scenarios where you require reporting (after importing, reprocessing of errors), the Turbo Import report will allow you to report that information as a "snapshot" of the current state of the Import Set(s).

⊟ **To view import session details (Session Viewer)**

From the **Session Browser**, select the appropriate session on the left and click **View Session**. The **Session Viewer** opens.
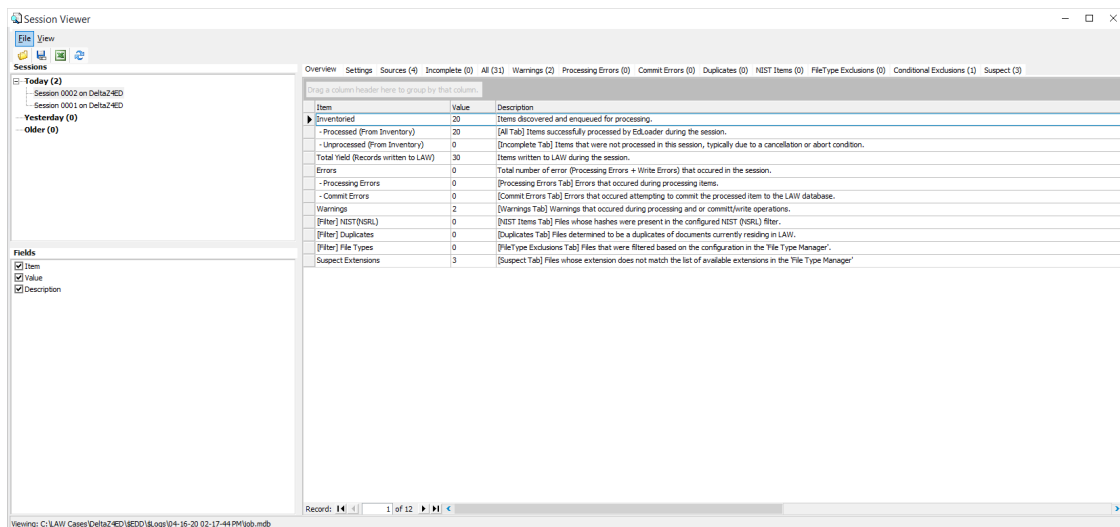
3. Select the tabs in the **Session Viewer** dialog box to access information about the currently selected session.

   The number of records listed in each tab is shown beside the tab name in parentheses. The tabs in the **Session Viewer** dialog box are described in the following table:

Use this tab	When you want to review
Overview	Session totals, such as the number of items processed, errors, and filtered items.
Settings	ED Loader options. Edit settings from the EDLoader.case.config.ini (located in root LAW case folder), and the state of those settings during the selected session. The VisibleInUi field will indicate if the setting is visible in the ED Loader interface, or if it only exists in the EDLoader.case.config.ini. The SettingKey displays the name of the setting in the configuration file, while the UnderlyingValue field displays the value of the setting in the configuration file.
Sources	Sources that were included in the session and any error messages about them.
Incomplete	Records that did not import completely.
All	All of the records that were imported during the current session.
Warnings	Warning messages generated during import.
Processing Errors	Records that generated an processing error. Processing errors result typically when a file cannot be opened, as for example, might be the case when a file is password protected.

Use this tab	When you want to review
	Typically, a document that generates a processing error is still imported despite the error, and if so, the error message will be logged to the ErrorMsg field for affected records.
Commit Errors	Documents that failed to import because of a disk write error. Commit errors can result for example, when a disk is full or nearly full, or if there was an error in the connection to the file source during the import. Typically, the import failed for any document listed in this tab.
Duplicates	Records that were flagged as duplicates during the import process. These records may or may not have been imported, depending on the selected action in the [Deduplication](#) settings.
NIST Exclusions	Records that were filtered based on the [NIST/NSRL](#) database. These records are not written to the LAW case database.
FileType Exclusions	Records that were filtered based on the Include or Exclude list. The documents may or may not have been imported, depending on the selected action in the [File Types](#) settings.
Conditional Exclusions	Records that were excluded based on the [Exclusions](#) settings. These documents are not written to the LAW database.
Suspect	Records that were determined to be suspect files based on the file extension. LAW validates all files to ensure the original file extension reflects the actual file type. An example of a suspect file would be a Word .doc file that was renamed and given a .pdf extension. If the **Auto Assign Suspect Extensions** option is enabled in this situation, the .dox extension would be assigned to the DocExt field, and the .pdf extension would be assigned to the OrigExt field. See [File Types](#) for more information.

To export session data

The data contained within the tabs in the Session Viewer may be exported to a separate file or to an Excel spreadsheet.

To save the currently selected tab

1. Start the Session Viewer. See the section at the start of this topic for instructions.

2. On the **File** menu, click **Save As**.

3. Select a file type:

   - **CSV** - for comma-separated value

- **TXT** - for text file

4. Select a path to save the file and a file name.

5. Click **Save**.

6. Click **Yes** at the prompt to view the output file or click **No** to view the file later.

To save all tabs in the Session Viewer to file

1. Start the Session Viewer. See the section at the start of this topic for instructions.

2. On the **File** menu, click **Export To Excel**.

3. Select a location and file name for the output file and then click **Save**.

   Each tab will appear in its own worksheet in the output Excel file.

⊟ Other session review options

Other session review options are listed as follows:

- **Session List**

  This area of the Session Viewer provides a list of sessions that were initialized on the current machine in the currently selected LAW case. The sessions will be named according to the user-defined Session Labels (specified in the ED Loader prior to import).

- **Fields**

  The Fields section lists the fields available for display for the currently selected tab.

- **Item Properties**

  The Item Properties panel displays metadata and other information specific to the selected record. The properties for attachment records will contain information about the parent record as well.

After documents are loaded via ED Loader, you can use the ED Reports feature to generate reports of the types of files imported, and whether or not each file type is supported.

⊟ To create summary reports

1. Open a grid by doing one of the following:

   • On the **Tools** menu, click **Display All Records**.

   Or

   • Click the globe icon on the main toolbar.

   Or

   • Run a query.

   Or

   • Select a folder and then click **Grid View** or **Grid View (Recurse)**.

2. With a standalone grid open, on the **Tools** menu, click **ED Reports**. The **Report Preview** dialog box appears.
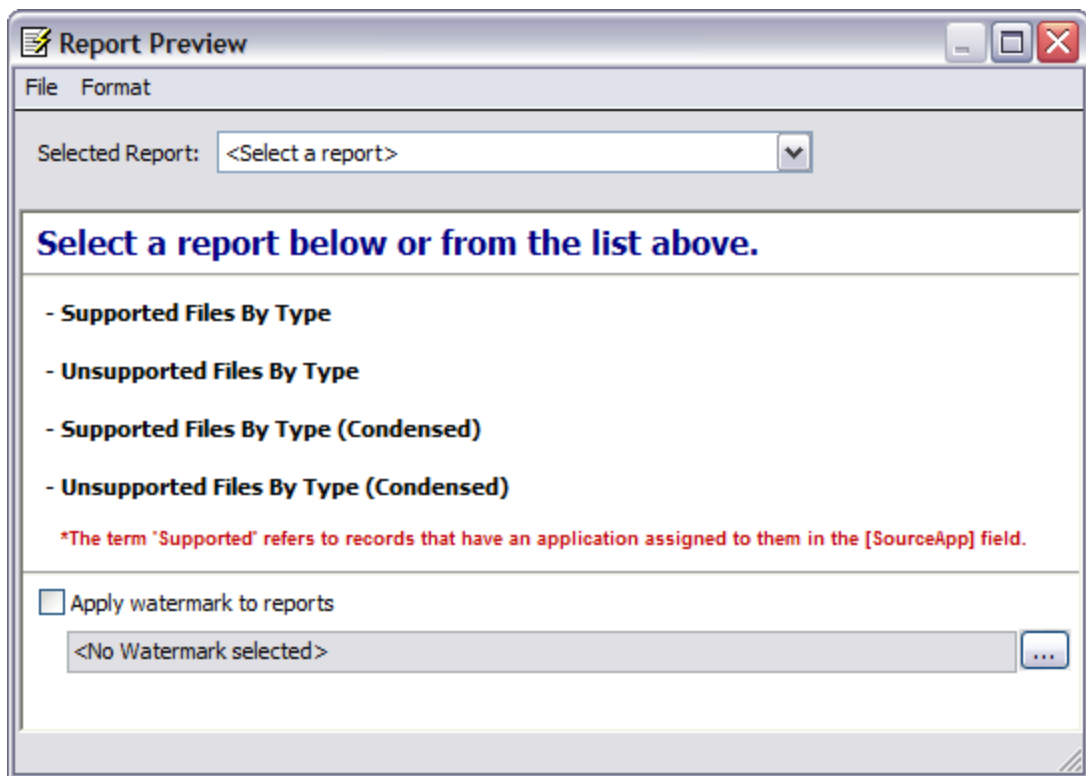
3. Select an option as needed:

   • To number the file path entries for either the **Supported Files By Type** report or the **Unsupported Files by Type Report**, on the **Format** menu, select **File Numbering**.

   • To apply a watermark to the report, select **Apply watermark to reports** and then browse to an image file.

4. Select a report from the list or choose a report from the **Selected Report** list. A preview of the report appears in the **Report Preview** dialog box.
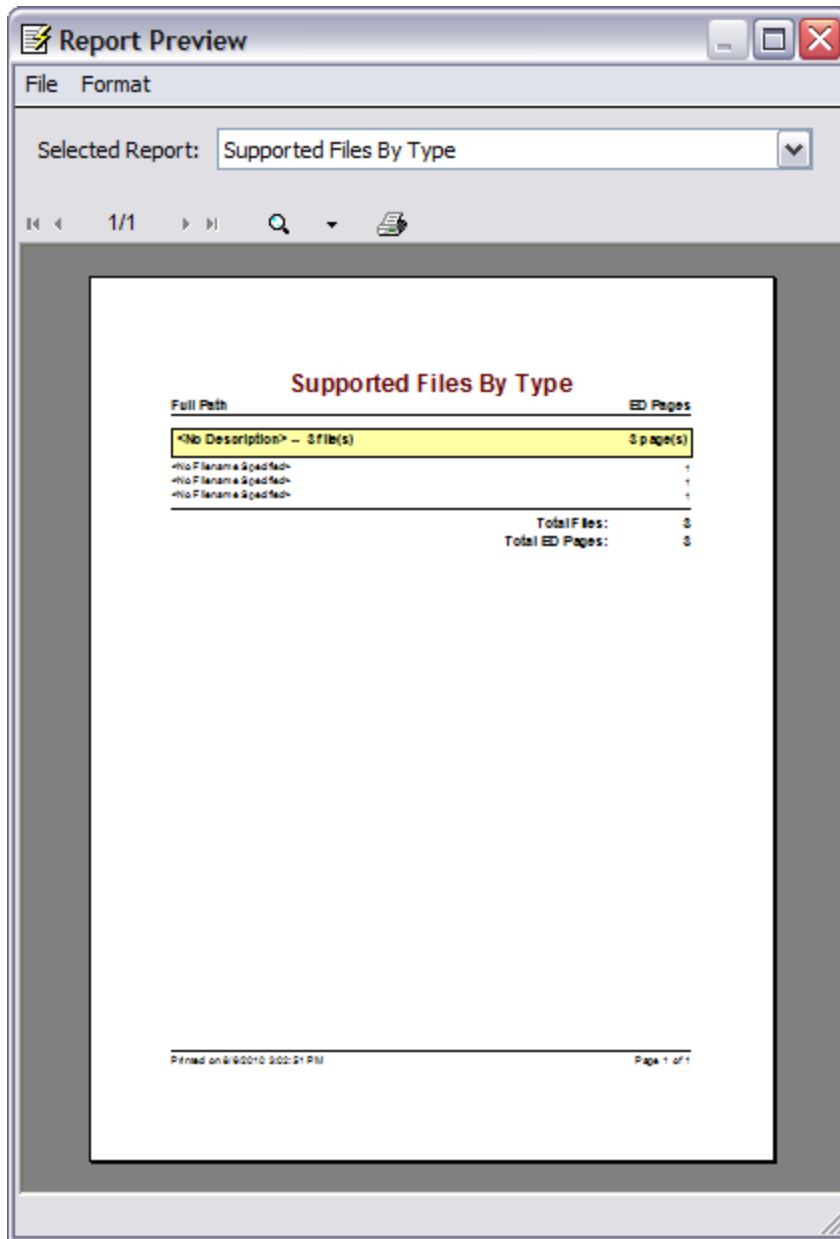
5. In the **Report Preview** dialog box you may select from among the following options:

When you want to	Do this
Save the report as a PDF or HTM file.	1. On the **File** menu, click **Save** or **Save As**. 2. Name the file, select either PDF or HTM, and then click **Save**.
Print the report.	• On the **File** menu, click **Print**

When you want to	Do this
	Or • Click the printer icon.
Apply file numbering to the report.	On the **Format** menu, select **File Numbering**.
Select a different report to preview.	• In the **Selected Report** list, select a different report.
Browse pages of the report.	• Select the page browsing controls.
Change the view of the preview page.	• Click the magnifying glass icon and then select a viewing option.

Report types

The reports that you may choose from are described as follows:

- **Supported Files by Type**: Lists all supported files loaded via ED Loader, grouped by file type. The term 'supported' refers to records that have an application assigned in the SourceApp field. The report contains paths to each file, a total count of supported files, and a count of supported files for each file type. If the EDPages field contains data, these values will also be included in the report.

🖉 The EDPages field contains data when the Extract ED Pages Counts or the E-Print process is run on the documents.

- **Unsupported Files by Type**: Lists all unsupported files loaded via ED Loader, grouped by file type. The term 'unsupported' refers to records that do NOT have an application assigned in the SourceApp field (<No Source Specified>). The report contains paths to each file, a total count of unsupported files, and a count of unsupported files for each file type. If the EDPages field contains data these values will also be included in the report.

- **Supported Files by Type (Condensed)**: This report is similar to the Supported Files by Type report, but does not include paths/filenames to each individual file. The report contains a total count of supported files and a count of supported files for each file type. If the EDPages field contains data, these values will also be included in the report.

- **Unsupported Files by Type (Condensed)**: This report is similar to the Unsupported Files by Type report, but does not include paths/filenames to each individual file. The report contains a total count of unsupported files and a count of unsupported files for each file type. If the EDPages field contains data, these values will also be included in the report.

Importing E-Mail Files

In addition to other types of electronic documents, you can use the ED Loader utility to import files containing e-mail and related items. Examples of items related to e-mail include calendar items, meetings notes, and others. The types of items provided by each program vary.

ED Loader recognizes the following file formats:

- Lotus Notes databases
- Mbox format mail files
- Outlook data files
- Outlook Express Saved Mail Messages

CloudNine™ Explore can generate MSG files or HTM to extracted from password-protected PST files and from OST files, and send these to ED Loader. For more information on CloudNine™ Explore, see CloudNine™ Explore Web documentation.

Microsoft Outlook 2010 64-bit is not currently supported when using ED Loader.

To import e-mail and related items

1. On the **File** menu, click **Import** and then click **Electronic Discovery**.

   The LAW Electronic Discovery Loader utility (ED Loader) opens.
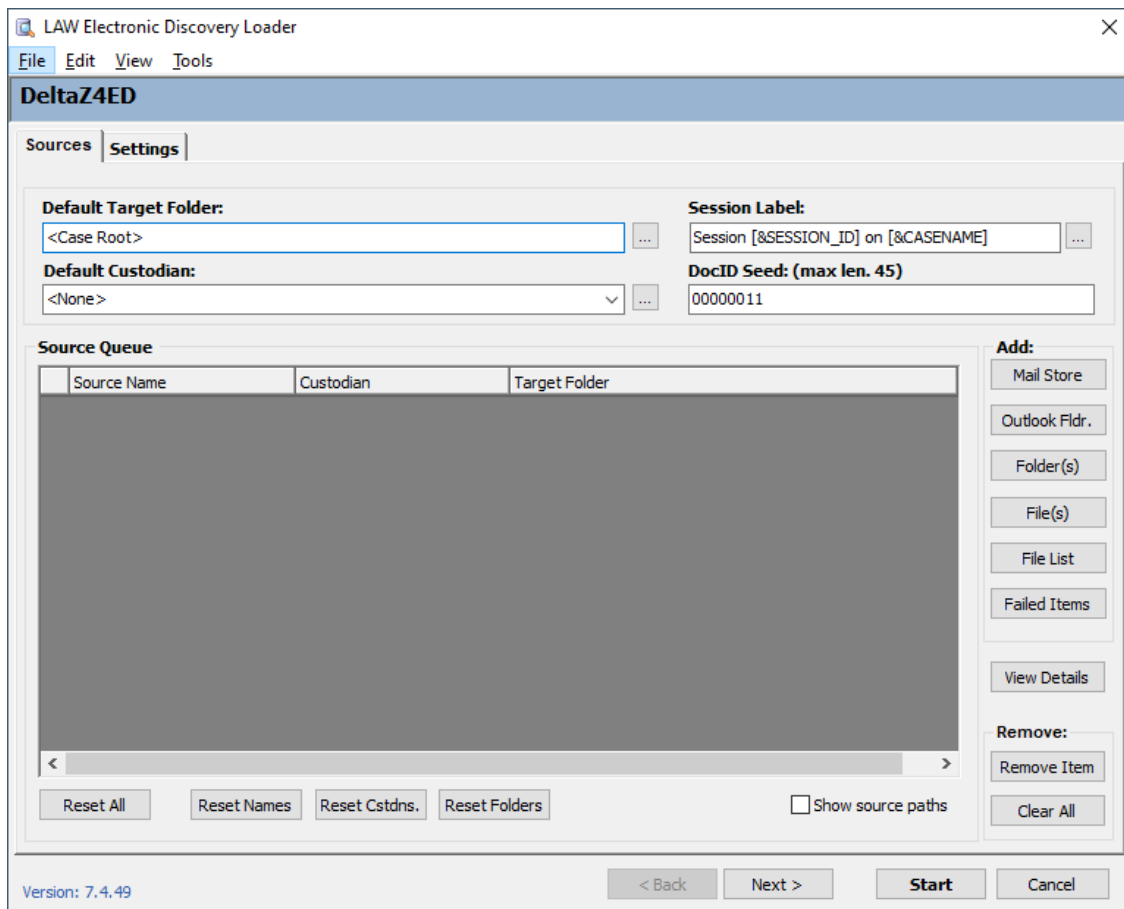
2. Identify source files to import as follows:

Format	Source application	Extension	Import option
Lotus Notes databases	Lotus Notes	.nsf	Mail Store
Mbox format mail file	Eudora, Netscape, etc.	.mbox .msf	File(s) or File List
Outlook data file	Outlook	.pst .ost	Mail Store
Outlook folder	Outlook	Select folders directly from an Outlook-style tree control.	Outlook Fldr.

Format	Source application	Extension	Import option
Outlook Express Saved Mail Message	Outlook Express	.dbx .eml	File(s) or File List

3. Specify a **session label** and a **DocID Seed** as needed.

4. Optionally, click **Next** to specify other import options for Outlook items.

5. Click **Start**.

   When the import completes, you are provided with a message stating the number of items imported, and then you are given the option to view the log file generated for the import action.

⊟ Mbox import details

Note the following when using ED Loader to import MBox mail stores:

- When you import Mbox email stores, ED Loader extracts individual messages from within the mail store and processes each message as a separate e-mail item.
- ED Loader creates log entries for e-mail metadata, and extracts all attachments.
- ED Loader saves each message in the mail store as an individual file. These files are saved to the working directory of ED Loader.
- There are many e-mail clients that use the Mbox format, for example: Alpine, Claws Mail, Cone, Eudora, Gnus, Kmail, Mozilla Mail & Newsgroups, Mozilla Thunderbird, Mulberry, Mutt, Netscape Messenger, Netscape Messenger 9, Novell Evolution, Opera Mail, Pine, Pocomail, SeaMonkey, and The Bat!.
- Mbox files can have the following file IDs:
  - 862 – Berkeley UNIX Mailbox Format
  - 3563 – Netscape E-Mail message
  - 863 – Eudora MBOX files
  - 3050 – MBX Mail Folder

⊟ Embedded mail store import details

Embedded mail store files can be imported from CloudNine™ Explore using ED Loader.

- When an embedded mail store is queued for import into ED Loader, the target folder for the file is the _EmbeddedStores folder. The value in the parenthesis, (), refers to the ExploreId or mail store.

For example: **_EmbeddedStores\PSTinZip.pst (12345)**

- The embedded mail store file name has a 25 character limit. If the mail store name exceeds 25 characters, the embedded mail store file name is truncated and (...) is displayed after the first 20 characters of the mail store file name.

  For example: If the mail store file name is **ThisIsAVeryVeryVeryVeryVeryVeryVeryLongFilename.pst**, the target folder and truncated file name will be **_EmbeddedStores\ThisIsAVeryVeryVeryV(...) (123456)**

- All supported mail store types (PST, OST, NSF, MBX, and DBX) are put into their EDLoader source when they are embedded.
- The default source label for mail stores includes the mail store file extensions for embedded PST, OST, NSF, MBX, and DBX files.

📝 The default source label for mail stores also includes the mail store file extensions for non-embedded PST, OST, and NSF files.

- Files imported into LAW from the embedded mail store file will have the same file name as if the mail store file was imported directly into ED Loader.

- The full path to the embedded mail store file and its contents is store in the SourceFile field in LAW for the lifetime of the LAW case.

⊟ **Lotus Notes item types**

In addition to e-mail you can use ED Loader to import other types of Lotus Notes items. Item types include:

- All Day Event
- Anniversary
- Appointment
- Meeting
- Memo
- Notice
- Reminder
- Task (Single Task)

The output file is in HTML format. The output begins with a text header that identifies the extracted text as belonging to a meeting item.

To import Lotus Notes items see the section entitled <u>To import e-mail and related items</u> in this topic.

⊟ Passing an e-mail thread to a review application

You can pass email threads from LAW to review application by configuring your review application to handle the ThreadID field.

ED-enabled cases created using LAW 6.0 and later, contain the ThreadID field. This field tracks e-mail threads from Outlook stores and from loose MSG files.

Note the following about the ThreadID field:

- It is populated with the leftmost 22 characters of ConversationIndex field.
- Attachments to e-mails receiving a value for the ThreadID are populated with the ThreadID of the corresponding parent e-mail.
- Opening an existing ED-enabled case will add the ThreadID field to the case.
- ThreadID is not visible by default on the main form or on grids.
- The ThreadID field is not indexed.
- When you use ED Loader to import an e-mail that has one or more attachments, the ThreadID of attachments are assigned to the same ThreadID as the parent e-mail. Keeping the ThreadID the same between parents and their attachments can help to find and filter messages that might be related by business logic but not necessarily by indexed keywords found in message subject or content.
- To enable this threading feature, in ED Loader, on the Text Extraction settings, select Enable Archive Extraction. For more information on enabling text extraction, see: Text Extraction.

Importing Instant Messages (IM)

You can use the ED Loader utility to extract text produced by instant messaging (IM) clients. ED Loader processes the following IM formats:

- Yahoo IM
- MSN Messenger
- AOL IM

Extracted text is saved to an HTML file. The HTML file contains the following information about messages:

- Date and time sent
- From
- To
- Message

Additional details specific to the Yahoo and AOL IM formats are provided in the following table:

IM Format	Notes
Yahoo IM	The archive file name should be in the format: **date_personid.dat**. For example, 20101103-MikeP.dat. The sender name is taken from the file name. If the selected archive file is not located within the directory installed by Yahoo, then the name that appears in the **To** field is displayed as "*Remote User*." Messages that were generated by Yahoo messenger are not displayed. In the case of conference messaging, the To list will contain the names of the participants who exchanged messages with the group. File transfer details are not available in the archive file.
AOL (AIM7)	The archive file for AIM does not provide user sign in or sign out details, or file transfer details. In the case of conference messaging, the **To** list will contain the names of the participants who exchanged messages with the group.

Inserting Attachments After Import

If Electronic Discovery Loader (ED Loader) was unable to extract embedded or attached files from a compound document, it still might be possible to get the attachment from the parent file and then insert it as an attachment into the case. Note the following considerations before you start the process of inserting attachments after import:

- It might not be worth the trouble to import document attachments. For example, if the embedded file is a logo, or some other image that is not relevant to the case, it may not be worth the trouble of taking corrective action on the record. If the embedded file contains possibly relevant data, you should consider fixing the extraction error.

- The most common fix for failed extraction is to manually save the attachment, and then insert it into the appropriate location. It is important to note that manually saving the embedded file will alter the metadata of the file.

⊟ **To insert documents as attachments**

1. Review the import log ErrMsg field to locate any errors with importing embedded compound documents.

2. Use the source application of the compound document to open the document and save any embedded or attached files that were not imported.

📝 Saving the embedded file will alter its metadata.

3. In the main form, select the compound document parent file.

4. On the **Edit** menu, click **Insert.**

5. Click **E-Document Attachment(s)** and then click either **Before Current** or **After Current**. The LAW Electronic Discovery dialog box (ED Loader) opens in insert mode.

6. Add the embedded file to the **Source Queue**; click one of the buttons in the **Add** area, select the attachment files, and then click **Start**. Selected files are inserted as attachments to the selected document.

For more information on adding or removing sources from ED Loader, see Adding/Removing Sources.

Extracting Missing Text After Import

When you import electronic documents, even if you select the option to extract text during the import, you may still experience errors importing text for supported documents. Missing text after import is most common for these kinds of files:

- PDF files where the format is image-only and does not contain embedded text.
- JPEGs or other image files that might contain text, but only as part of the image.
- Encrypted or locked files.

After you import, the first step is to identify files where the text extraction process failed. Depending on the type of error encountered, you can take action to extract the missing text.

To find missing text by grouping

If a file type is supported for text extraction, but text extraction failed CloudNine™ LAW generates an error message. The error message appears in the **ErrorMsg** field and the **TextXStatus** field is marked with the value **E**. You can isolate text extraction errors using the grouping or searching functions of a grid display.

To find errors by grouping in a grid

1. Open either grid view.
   - If the **TextXStatus** field is not a displayed column, right-click on a column header to open the **Field List** dialog, select **TextXStatus** and then close the **Field List** dialog. The **TextXStatus** now appears.

2. In the grid, group by the **TextXStatus** field to see if any **E** values are present.

3. Expand the **E** group, then right-click on an **E** value in the **TextXStatus** field. The **Filter** options will appear.

4. Click **Choose Filter** by **Selection**. Only those records containing an E value in the **TextXStatus** field will be returned.

To find missing text by searching

With larger cases, locating files with missing text by performing a search may be quicker than using the grouping method.

1. In the main user interface on the **Tools** menu, click **Search Records**.

   The Database Query Builder appears.

2. Add a condition by choosing the following:
   - **Field Name** = `TextXStatus`

- **Operator** = Equal
- **Value** = E

3. Click **<Add Condition>**.

   The condition will appear in the clause window.

4. Click **<Execute>**.

   The search is performed returning only the records containing a **TextXStatus** value of an **E**.

⊟ **To extract missing text**

You may still be able to obtain text files for records where text extraction failed during import. The general process for addressing text extraction errors follows these basic steps:

1. Find files where the **TextXStatus** is either **N** or **E**. **TextXStatus** of **N** indicates the file could not have text extracted based on its file type. **TextXStatus** of **E** indicates the file type is supported but text extraction resulted in an error.

2. Fix these files as necessary based on the reason text could not be extracted:
   - For files that are locked or encrypted, get the passwords, open files in native applications, and then perform import again with text extraction.
   - For files not locked or encrypted, use a batch process to convert them to TIFF, and extract text during TIFF conversion. Prior to conversion, in the TIFF conversion settings, enable the **Save text with images** option. The **TextPStatus** will indicate if text was printed to file at the time of TIFF conversion.
   - For any other graphics or PDF files where text is visible but otherwise inaccessible, perform optical character recognition (OCR).

Cancelling and Resuming Sessions

The Electronic Discovery (ED) Loader may be easily canceled during an import and then restarted at a later time.

⊟ **To cancel a session**

- When an ED Loader import session is running, click **Cancel** and then follow the prompts to fully cancel the session.

📝 If you cancel an ED Loader session when the **Progress** dialog box is open, you will

see the **Confirm Cancellation** dialog box.
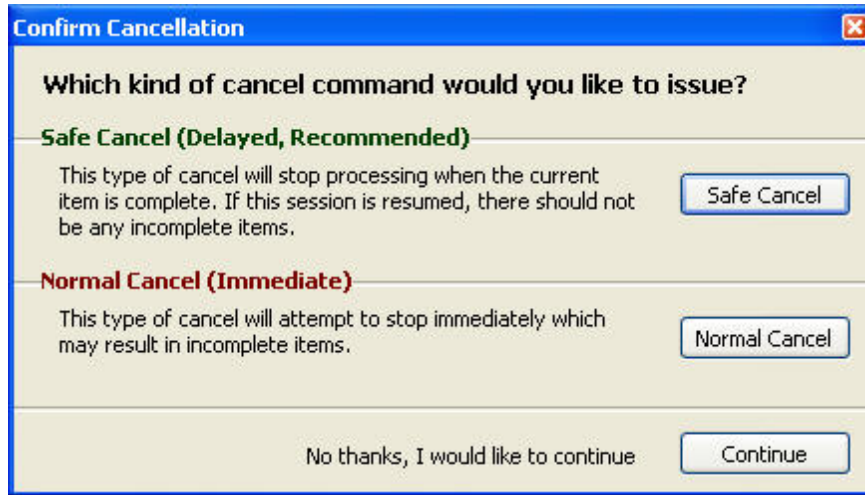
Click one of the following:

- **Safe Cancel.** (Recommended) To complete the current item and then stop.
- **Normal Cancel**. To stop the session immediately. This option may result in incomplete items.
- **Continue**. To continue processing the current session.

⊟ **To resume a session**

You can restart any session that was previously started on the current workstation and then canceled.

1. On the **File** menu, click **Import**, and then click **Electronic Discovery**.

2. The CloudNine™ LAW Electronic Discovery Loader starts.

3. On the **File** menu, click **Sessions**. The **Session Browser** dialog box opens. Incomplete sessions will show as **Canceled recoverable** in the Status message.
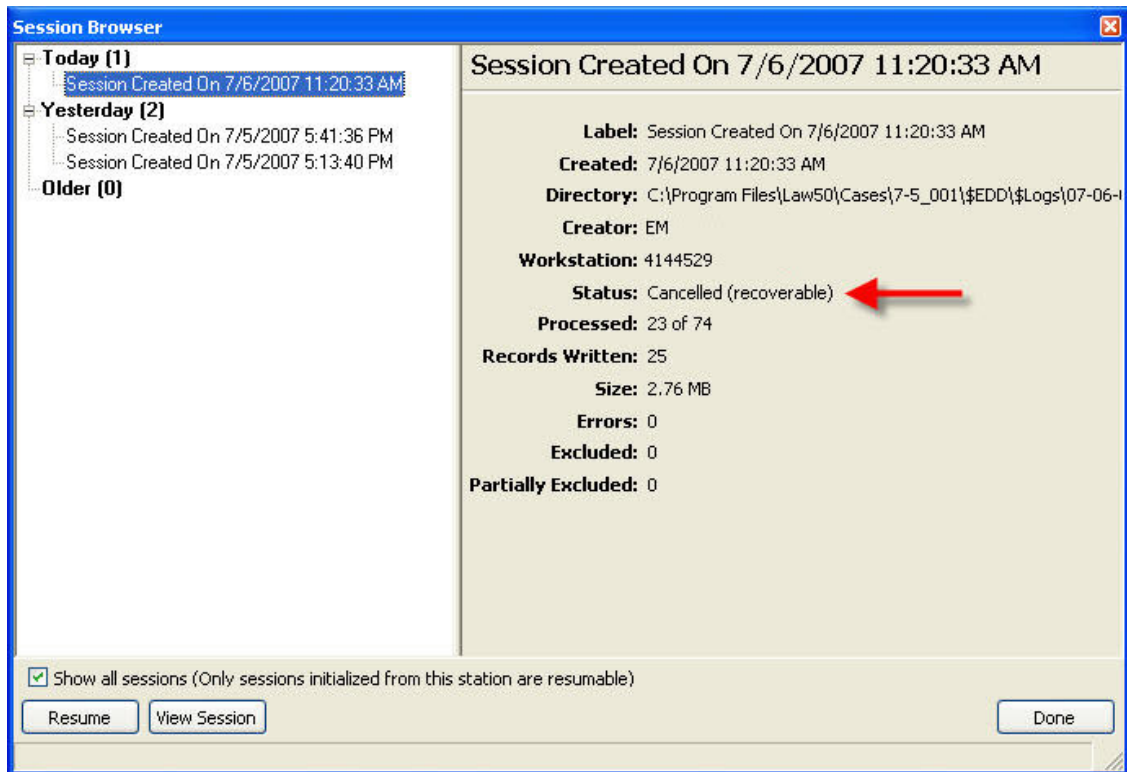
4. Select an uncompleted session and then click **Resume**.

5. The incomplete session restarts.

📝 Note the following facts when restarting import sessions:
   - Only sessions initialized from the current workstation may be resumed.
   - Sessions that end unexpectedly due to some sort of crash may generate a restart prompt when the ED Loader is re-launched from the same machine in the same LAW case.
   - If the connection to a SQL Server is lost during the ED Loader import process, the ED Loader will display a notification on the Progress dialog just above the total progress bar. During this time, the Loader will attempt to reconnect to the database and continue processing. The import process can be stopped at this time by clicking the **Cancel** button.

Distributed ED Loader

An ED Loader session may be configured to allow multiple computers to participate in the import session. You start the distributed session in ED Loader on one computer with LAW running on it. When you configure the import session, you specify sources for import. All

sources must be accessible by all other computers that will participate in the distributed session. Sources can be held on a network share for this purpose. After you specify sources to process, you continue to configure your import session by enabling the option to allow distributed processing. At that time, you also select other computers to participate in the import session.

💡 When importing e-discovery using multiple LAW workstations with ED Loader, the workstations importing e-discovery should not import to the same target folder at the same time.

We recommend having each LAW workstation participating in the e-discovery import use a different target folder for sources. Not following this procedure could cause issues with the order of documents per folder and retaining parent/child relationships. The target folders for an ED Loader import are defined in the Target Folder column on the Sources tab in ED Loader.

When the distributed ED Loader session is running, you can use the LAW Management Console (LMC) to monitor the progress of the session, view the status of individual computers, and perform other session management tasks. For more information on using the LMC see LMC Overview.

💡 When performing distributed processes, it is best practice to have all machines participating in the distributed processes running the same version of CloudNine™ LAW. Running distributed processes on machines with different versions of LAW may cause unexpected results.

⊟ **Starting a distributed ED Loader session**

1. Place sources for import on a network share that is visible to all computers participating in the import session. Be sure all computers have full access privileges to the share.

2. On the **File** menu, click **Import**, and then click **Electronic Discovery**. The LAW Electronic Discovery Loader utility (ED Loader) opens.
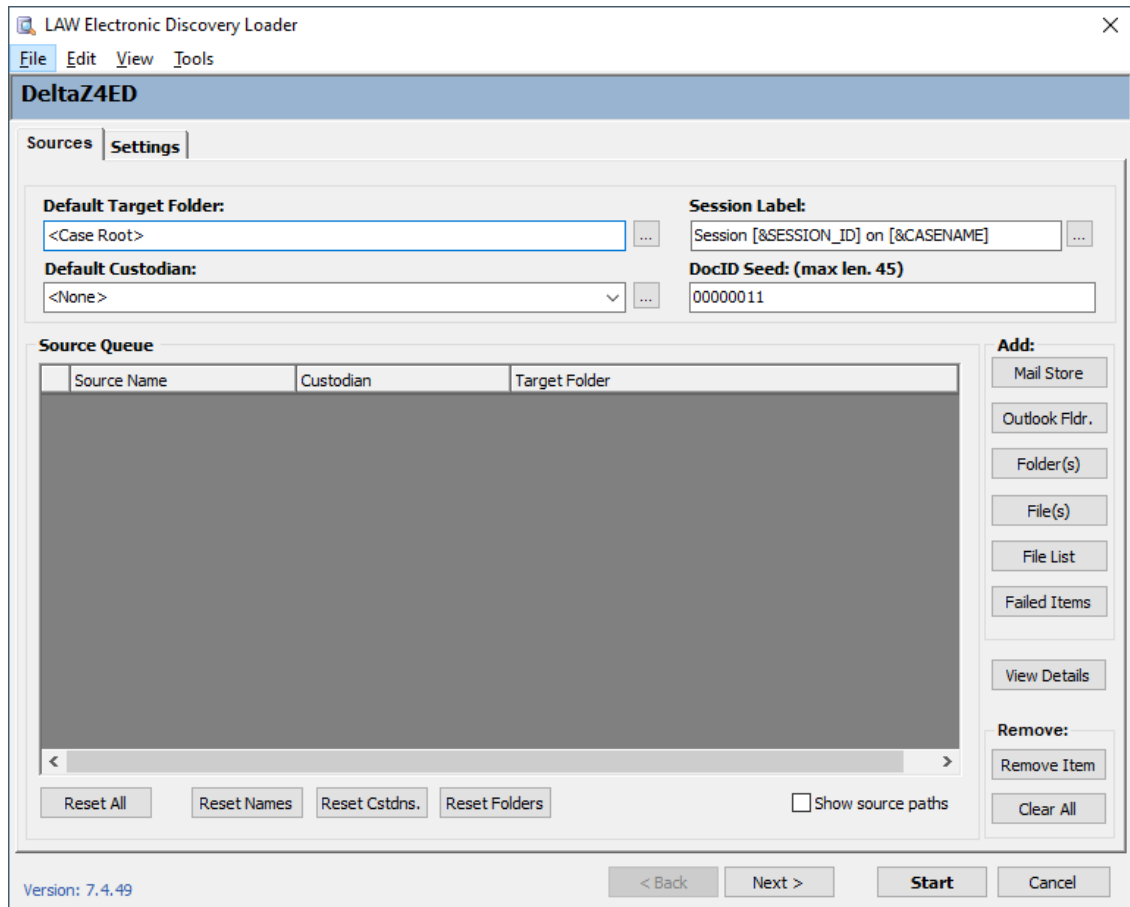
3. Add sources as needed. For more information on adding sources see Specifying Sources.

💡 When importing e-discovery using multiple LAW workstations with ED Loader, the workstations importing e-discovery should not import to the same target folder at the same time.

We recommend having each LAW workstation participating in the e-discovery import use a different target folder for sources. Not following this procedure could cause issues with the order of documents per folder and retaining parent/child relationships. The target folders for an ED Loader import are defined in the Target Folder column on the Sources tab in ED Loader.

4. Click the **General** tab and then, in the **Categories** section, click **General**.
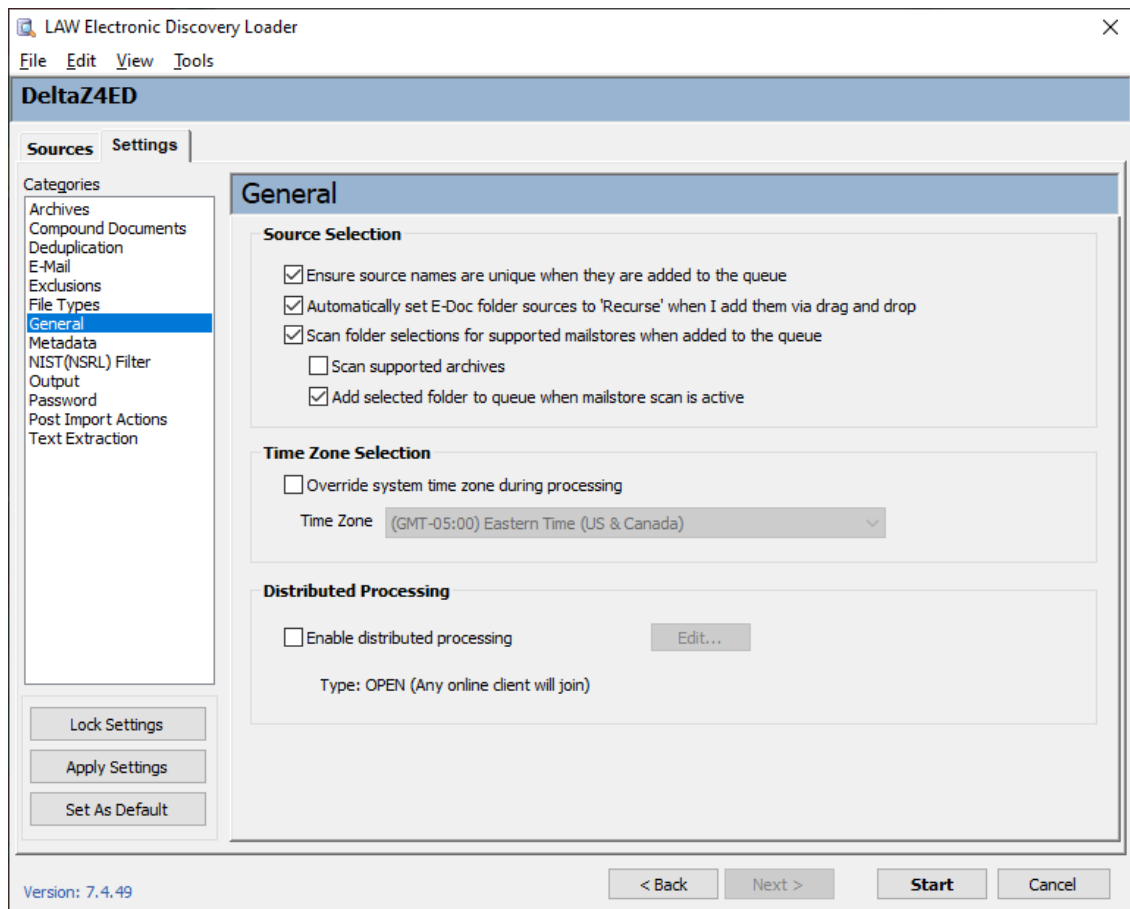
5. Select **Enable Distributed Processing**.

6. Click **Edit**. The **Create/Modify Job Invitation** dialog box appears.

7. Select an invitation type.

   - **Closed.** (Default) None of the LMC instances will be able to auto-join LAW to the shared batch. LAW workstations can still be joined to the job manually.

   - **Open.** All LMC instances automatically join LAW to the shared batch.

   - **Restricted.** Only selected LMC instances will automatically join the process.

   If you choose **Restricted**, select computers that can participate in the batch process from among available computers in the **Clients** area of the dialog box.

8. In the **Limit no. of stations for the job** field, enter the maximum number of workstations that can process data for the import job at any given time.

   The **Limit no. of stations for the job** field defaults to **0**. When the **Limit no. of stations for the job** field is set to **0**, all available workstations will process data for the job.

9. Configure a scheduling restriction as needed. This option prevents the job from starting until after the date and time that you specify.

10. Click **Accept**.

    After the shared batch is initialized on a machine, the job appears below the **Jobs** node in the LMC, and other LAW workstations can join the job.

11. Configure other import session settings as needed. For more information on configuring an import session see Configuring Import Settings.

12. Click **Start**.
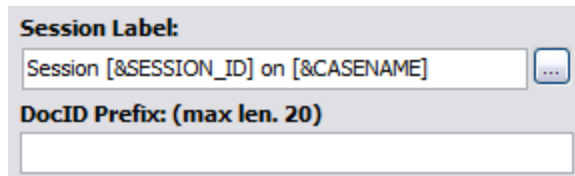
13. In the **Confirm Settings** dialog box, review the import settings.

14. Click **OK**.

⊟ Implementation details

When you implement distributed electronic discovery the following details apply:

- **Post Import Actions**. Post-import actions are disabled for distributed ED Loader sessions.

- **Session Label and DocID Prefix**. The session label and DocId seed reflect the distributed ED Loader session. The session label defaults to **Session [&SESSION_ID] on [@CASENAME]**. The DocID value is blank by default. If you leave it blank and then run run the distributed ED Loader session the numerical values are automatically assigned using the following scheme: *SessionNumber.DocumentNumber.ItemNumber*.

Session Label:

Session [&SESSION_ID] on [&CASENAME]   ...

DocID Prefix: (max len. 20)

- **Mapped drives versus UNC paths**. All computers enrolled in a distributed ED Loader session must connect to the source file folder using the same mapped drive letter or the same UNC path. While there can be a performance gain when you use a mapped drive, using a UNC path is simpler to setup and less prone to error.

- **E-mail store processing**. When processing e-mail stores, such as PST files and NSF files, only one client can process any single e-mail store.

- **Folder size and processing time per client**. Only one client can process the items in a single folder at a time. Relative differences in folder sizes are reflected in time required for an individual client to process folders. A client that is processing a folder with a large volume of data will spend more time than a client that is processing a relatively smaller volume of data.

⊟ Determining the computer that ran the import

You can review individual documents to determine which workstation executed the import.

1. From the main form in CloudNine™ LAW, on the **Index** menu, click **Modify Fields**.

2. Scroll to **ImportStation**.

3. Select **Visible**.

4. Click **Save As**, name the profile, and then click **Accept**.

5. Click **Close**.

6. In the main form in CloudNine™ LAW, select a document from the folder list.

7. Scroll to the **ImportStation** field.

   The name of the computer that performed the import is listed.

Importing by Turbo Import

You use the Turbo Import Loader (Turbo Import) utility to import electronic documents quickly into a Turbo Import enabled case.

💡 An Import Agent license is needed for creating a Turbo Import case.

Configuring Turbo Import Settings

After you create a Turbo Import enabled case in CloudNine™ LAW, the next step is configure your Turbo Import settings and to import files into your case. Turbo import provides general configuration options as well as options that are specific to the type of source you are importing.

Configuring Turbo Import settings

1. On the **File** menu, click **Import**, and then select **Turbo Import**.

2. The CloudNine LAW Turbo Import utility opens.
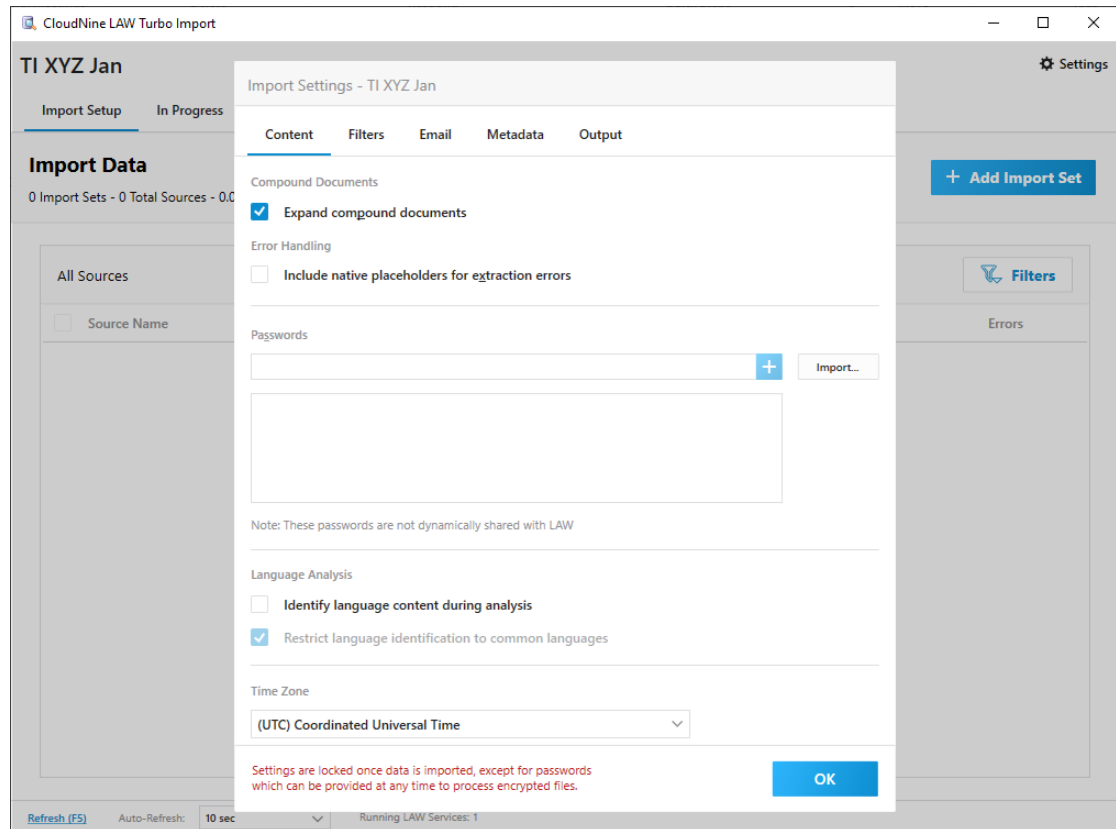
The Turbo Import title bar is displayed on every section of the Turbo Import utility.

The upper left hand corner lets you know that you are in the CloudNine™ Turbo Import utility.

The case name is displayed in bold letters beneath "CloudNine Turbo Import Utility".

Import, Progress, and Errors are the available tabs within the Turbo Import utility. The currently selected tab will be indicated with a blue underscore.

The Settings can be accessed from the upper right hand corner of the window by selecting **Settings** or it is displayed the first time that you open the Turbo Import for a new case.

⚠ You must select **OK** to proceed to the import section of Turbo Import. You can change the settings again prior to importing records by selecting the **Settings** (gear) button. If you select the **Settings** button to change the import settings then the option to cancel without making changes to the current setting changes is available.

💡 For a newly created database, the Import Settings will open first for configuring the database settings.
For databases that have already started a Turbo Import or configured the import settings, the Import tab will be displayed. Settings can be selected by choosing the **Settings** button from the Turbo Import.

<u>**Screen Refresh:**</u>

The screen can be quickly refreshed by selecting **Refresh** at the bottom of the window or by selecting the **(F5)** key.

The page will Auto-Refresh at a set interval. The interval for the auto-refresh can be changed by selecting the drop down. The possible intervals are 5 seconds, 10 seconds, 30 seconds, 1 minute, or 5 minutes.

💡 The Auto-Refresh interval is only set for the time that you have the Turbo Import window open. Once you close the Turbo Import window, the interval reverts to 10 seconds.

The **Content** tab contains the settings for how Turbo Import will process the content being imported into LAW. This includes **Compound Documents, Error Handling, Passwords, Language Analysis**, and **Time Zone** settings.

⚠ Settings can be viewed, but not changed once a Turbo Import has been started for a case except for the Passwords and File Type Management database.

⊟ **Configuring Turbo Import Content settings.**

1. On the **File** menu, click **Import**, and then select **Turbo Import**. The CloudNine LAW Turbo Import utility opens directly to the settings (**Content** tab) for new databases.

⚠ You must select OK to proceed to the import section of Turbo Import. You can change the settings again prior to importing records by selecting the **Settings** button. If you select the **Settings** button to change the import settings then the option to cancel without making changes to the current setting changes is available.

💡 For a newly created database, the Import Settings will open first for configuring the database settings.
For databases that have already started a Turbo Import or configured the import settings, the Import tab will be displayed. Settings can be selected by choosing the **Settings** button from the Turbo Import.

⊟ Compound Documents

Compound documents are composed of a container document and embedded documents. For example, a Word document may contain an embedded spreadsheet. The embedded spreadsheet is considered to be embedded one level down from the container document. LAW supports up to 99 levels of embedded compound documents. So if the embedded spreadsheet includes an embedded PowerPoint file (second level down) that further includes an embedded PDF (third level down), LAW can extract all four files.

The **Expand compound documents** check box determines whether embedded documents are expanded and indexed separately from their parent document when compound documents are imported into LAW.

When the **Expand compound documents** check box is selected, compound documents are expanded and imported as attachments of their parent document, and the embedded files will be searchable in LAW.

- Parent document will have its text and the child's(children's) text.
- Child document will have only its text.

⊟ To disable extraction of compound documents

The default setting is enabled, which does expand embedded documents. Once this setting is disabled and the Turbo Import has been started then the settings are locked for all future imports in this database.

1. On the **File** menu, click **Import**, and then click **Turbo Import**. The CloudNine™ LAW Turbo Import utility opens.

2. **Import Settings** opens in the window and will open first to the **Content** tab.

3. Unselect **Expand compound documents** to disable the feature.

Disabling the check box prior to importing files or folders into the database is the only way to disable this feature.

If an embedded file cannot be opened, a warning will be generated and logged in the Session Viewer and ErrorMsg field.

⊟ Supported embedded file types

The following file types are supported for extraction from compound documents:

•Microsoft Word/RTF

•Microsoft Excel

•Microsoft PowerPoint

•Adobe Acrobat PDF

•SnapShot

•Microsoft Visio

•Microsoft Outlook.FileAttach (Word-authored e-mail with inline attachments, generally stored in RTF)

•Microsoft Project

•Package*

*A Package is a general type of embed; it can be a text file or a zip file, for example. Any of the above types may also be embedded as a package type depending on the software installed when a user embeds the file. For example, if a user were to embed an Excel spreadsheet into a Word document, and Excel is not installed, the spreadsheet will be embedded as Package.

Supported containers file types and embedded files

The following table lists common embedded file types that LAW supports for extraction:

Office 95 and earlier versions of Office are not supported with CloudNine™ LAW.

Description	Detection	Extraction
Non-Microsoft Office Formats		
Adobe Acrobat (pdf)	Y	Y
Rich text format (rtf) *Converted to Word format for extraction. Original file is preserved.	Y	Y
Office 2007 and above see System Requirements for full listings. (with LAW versions 6.8+)		
Excel Spreadsheet (OpenXml)	Y	Y
MS Office Data File (OpenXml)	Y	Y
PowerPoint Presentation (OpenXml) *Compound documents not fully supported in this format	Y*	Y*
Word (OpenXml)	Y	Y
Office 2013, Office 2010, Office 2007 (with LAW versions 6.7 and 6.6)		
Excel Spreadsheet (OpenXml)	Y	Y
MS Office Data File (OpenXml)	Y	Y
PowerPoint Presentation (OpenXml)	Y	Y

Description	Detection	Extraction
Word (OpenXml)	Y	Y
Office 2003		
Word	Y	Y
Word (xml)	Y	N
Excel	Y	Y
Excel (xml) *Compound documents not supported in this format	*N	*N
OneNote	N	N
PowerPoint	Y	Y
Project	Y	Y
Project (xml) *Compound documents not supported in this format	*N	*N
Publisher	**Y	Y
Visio	N	N
Visio (xml) *Currently not recognized by file engine	*Y	N
Office 2002/XP, Office 2000		
Word	Y	Y
Excel	Y	Y
PowerPoint	**Y	N
Publisher	Y	Y
Project	Y	Y
Visio	N	N
Office 97		
Word	Y	Y
Excel	Y	Y
PowerPoint	Y	Y

Description	Detection	Extraction
Project	Y	Y

**Detection of embeds in these types is limited to the types of files supported for extraction (see above list).

Error Handling

Include native placeholders for extraction errors - Creating placeholders for contained/embedded/attached files that have an error during native extraction. The option can be enabled or disabled.

The default setting is disabled, which doesn't include placeholders for errors during the import process. Once this setting is enabled and the Turbo Import has been started then the settings are locked for all future imports in this database. When include native placeholders is enabled and Turbo Loader fails to extract the native file for a document, LAW will have a native text file for that document with the error details. LAW ErrorMsg field will be populated in both scenarios.

1. On the **File** menu, click **Import**, and then click **Turbo Import**.

2. The CloudNine™ LAW Turbo Import utility opens.
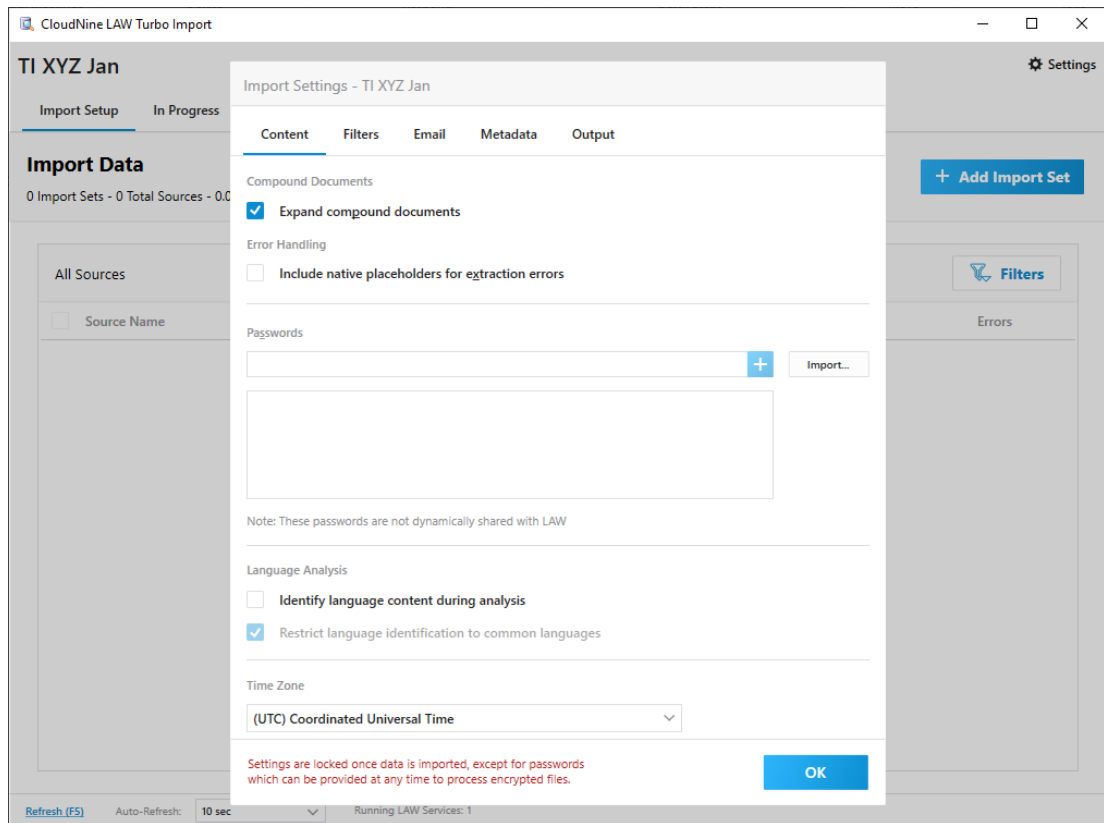
3. **Import Settings** opens in the window and will open first to the **Content** tab.

4. Select **Include native placeholders for extraction errors** to enable the feature.

💡 Disabling the check box prior to importing files or folders into the database is the only way to disable this feature.

Passwords

The Passwords section allows you to enter any known passwords for password-protected Adobe Acrobat PDFs, Pkzip, Zipx, 7zip archives, and all office files (ex. PPT, PPTX, DOC, DOCX, XLS and XLSX files). This enables LAW to analyze and extract both metadata and content from the protected documents. When the password for a password-protected file in the case is added to the Passwords section, the document's text and metadata will be extracted for use in LAW but the file will remain encrypted.
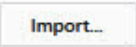
- Passwords can be manually added or imported from a line-delimited .txt file.

- Up to 500 passwords can be added to the Passwords section.

- All passwords in the passwords section are case-sensitive. If the password for a file is Abc123, then Abc123 would need to be entered; abc123 will not unlock the file.

- Passwords can be added or edited both before and after import.

1. In the text field next to the **Add** button [+], type the password paying attention to case sensitivity.

Passwords

[   ] [+] [Import...]

[   ]
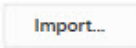
Note: These passwords are not dynamically shared with LAW

2. Click the **Add** button [+].

The password is added to the password list.
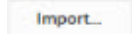
Passwords

[   ] [+] [Import...]

abc1234
ABC1234

Note: These passwords are not dynamically shared with LAW

1. Click the **Import** button, [Import...] , to open the **Select file containing passwords (Line Delimited)** dialog box.
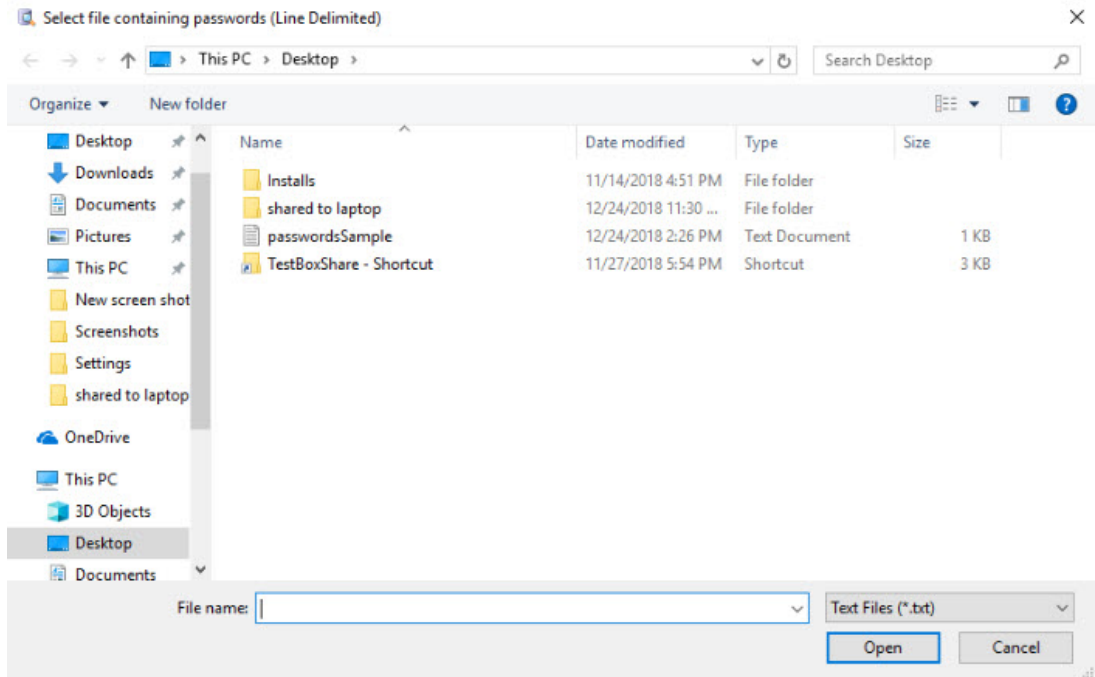
2. Browse to and select the password .txt file you want to import, and then click the **Open** button.

    The following message is displayed indicating the number of passwords successfully imported:
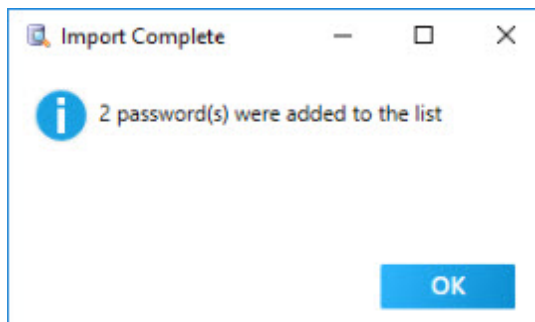
3. Click **OK** to close the message.

    The passwords are imported and added to the passwords list.

Passwords

[   ] [+]   [Import...]

abc1234
ABC1234

Note: These passwords are not dynamically shared with LAW

⊟ **To delete a password:**

- On the **Passwords** tab, click the password you want to delete, and then press the DELETE key on your keyboard.

⊟ **Language Analysis**

By default, the **Identify language content during analysis** and **Restrict language identification to common languages** check boxes are not selected.

- **Identify language content during analysis.** Language content is identified during the analysis phase of the file import process.
- **Restrict language identification to common languages.** Language identification is restricted to common languages, which can help improve accuracy of language identification.

Turbo Import automatically analyzes the first 200 MB of all documents to identify the language used. If a document is less than 200 MB, the entire document is analyzed.

The default setting is disabled, which doesn't detect the different languages in the text. Once this setting is enabled and the Turbo Import has been started then the settings are locked for all future imports in this database.

1. On the **File** menu, click **Import**, and then click **Turbo Import**.

2. The CloudNine™ LAW Turbo Import utility opens.
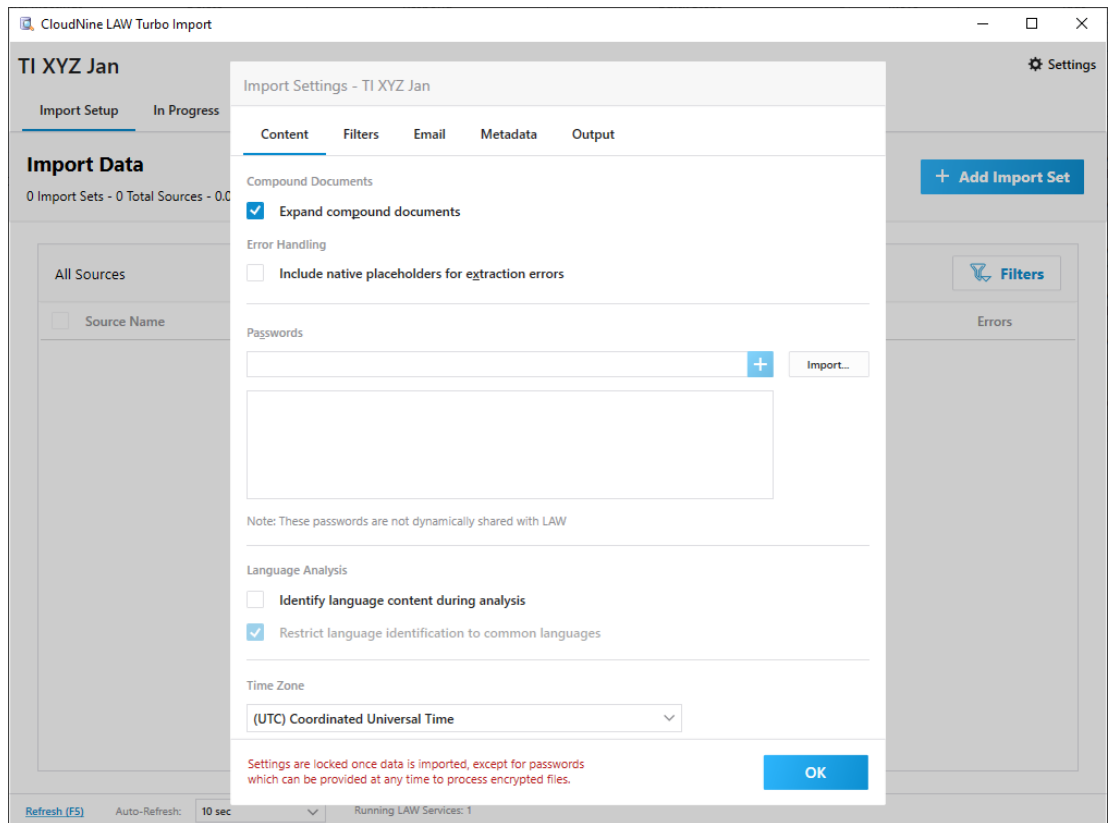
3. **Import Settings** opens in the window and will open first to the **Content** tab.

4. Select **Identify language content during analysis** to enable the feature.

5. By default the **Restrict language identification to common languages** is enabled when **Identify language content during analysis** is enabled. You can choose to disable this option if desired.

💡 Disabling the check box prior to importing files or folders into the database is the only way to disable this feature.

⊟ Time Zone

The Turbo Import settings enable configuration for time zone settings upon import.

Considerations for time zone settings:
- Default time zone is UTC (Coordinated Universal Time).
- Users can select a different time zone before importing data.
- Select only ONE entry from the drop down list.
- This setting is locked after the first source is committed so that all sources will use the same time zone.
- The setting shifts all date and time fields to the selected time zone.

- Note that this setting also automatically changes the time zone for the imported items when you e-print or convert documents to TIFF files. The date and time information in the print output of items match the imported metadata.

⚠ When you are doing single-document TIFF conversion, the time zones that are associated with image or PDF files do not automatically adjust to match the time zones of the native files. In such circumstances, if you need dates to match between the native files and image or PDF files, you can manually change the time zone on your system prior to printing to match the time zone of the native files. For more information about converting documents to TIFF or PDF, see Converting Documents to TIFF

⊟ **Configuring the Time Zone Setting**

1. On the **File** menu, click **Import**, and then click **Turbo Import**.

2. The CloudNine LAW Turbo Import utility opens.
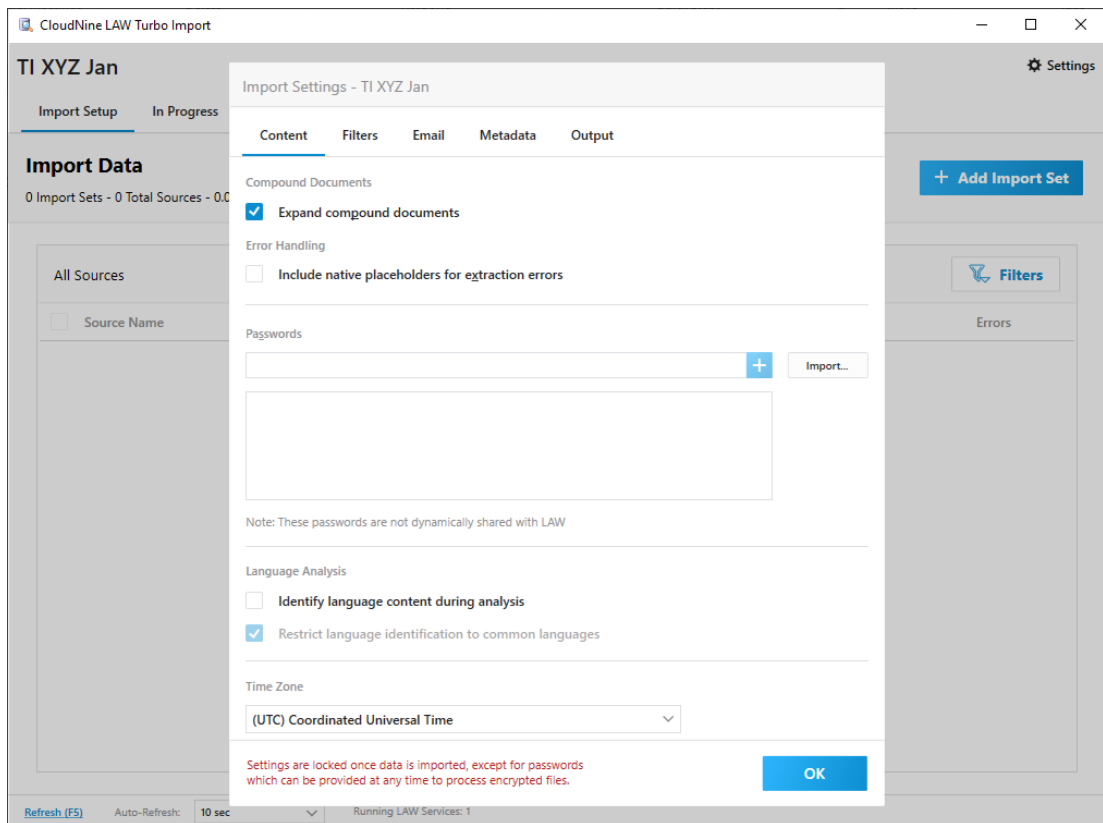
For a newly created database, the Import Settings will open first for configuring the database settings.
For databases that have already started a Turbo Import or configured the import settings, the Import tab will be displayed.

3. Select the dropdown next to the default time zone.

Time Zone

(UTC) Coordinated Universal Time   ⌄

4. Then select the desired time zone from the drop down list.

Import Settings - 7.0

Content   Filters   Email   Metadata   Output

Compound Documents

☐   **Expand compound documents**

Error Handling

☐   **Include native placeholders for extraction errors**

(UTC) Coordinated Universal Time	^
(UTC+00:00) Dublin, Edinburgh, Lisbon, London	
(UTC+00:00) Monrovia, Reykjavik	
(UTC+01:00) Casablanca	
(UTC+01:00) Amsterdam, Berlin, Bern, Rome, Stockholm, Vienna	
(UTC+01:00) Belgrade, Bratislava, Budapest, Ljubljana, Prague	
(UTC+01:00) Brussels, Copenhagen, Madrid, Paris	
(UTC+01:00) Sao Tome	
(UTC+01:00) Sarajevo, Skopje, Warsaw, Zagreb	
(UTC+01:00) West Central Africa	
(UTC+02:00) Amman	
(UTC+02:00) Athens, Bucharest	
(UTC+02:00) Beirut	
(UTC+02:00) Cairo	⌄

+   Import...

(UTC) Coordinated Universal Time   ⌄

OK

All files and folders in this database will be imported using that time zone.

If all of the desired import settings have been selected, then select **OK**. If not, then select the **Filters** tab at the top to configure your filters.

The **Filters** tab contains the settings that Turbo Import uses for filtering documents prior to importing into LAW. This includes **Deduplication, NIST,** and **File Type** filtering settings. All filters have one of two options once enabled: **Include** or **Exclude**.

⚠ Settings can be viewed, but not changed once a turbo import has been started for the case except for the Passwords and File Type Management database.

Configuring Turbo Import Filters settings.

1. On the **File** menu, click **Import**, and then select **Turbo Import**. The CloudNine LAW Turbo Import utility opens directly to the settings (**Content** tab) for new databases.

2. Select the **Filters** tab.

3. Then select the filters that you desire to enable for all imports in this database: Deduplication, NIST, and/or File Type Filtering.

⚠ You must select **OK** to proceed to the import section of Turbo Import. You can change the settings again prior to importing records by selecting the **Settings** button. If you select the **Settings** button to change the import settings then the option to cancel without making changes to the current setting changes is available.

💡 For a newly created database, the Import Settings will open first for configuring the database settings.
For databases that have already started a Turbo Import or configured the import settings, the Import tab will be displayed. Settings can be selected by choosing the **Settings** button from the Turbo Import.

⊟ Deduplication

Deduplication is a process that checks the records imported into a database for duplicates of the records either globally or within a custodian. Deduplication in LAW is based upon family relationships and individual records will not be deduped against components of a family.

☑ The _DupID field for Turbo Import records will use the EDA ID of the parent record not the LAW ID as in Electronic Discovery enabled cases.

⊟ **Enable duplicate document detection**

Configuring Turbo Import Deduplication settings.

1. On the **File** menu, click **Import**, and then select **Turbo Import**. The CloudNine LAW Turbo Import utility opens directly to the settings (**Content** tab) for new databases.

2. Select the **Filters** tab.

Import Settings - TI ABC Jan

| Content | **Filters** | Email | Metadata | Output |

Deduplication

☑ **Enable duplicate document detection**

Deduplication Mode   If a document is considered a duplicate, then:

| Md5 ⌄ | Include ⌄ |

NIST (NSRL)

☑ **Enable NIST (NSRL) detection**

If hashes match, then:

| Include ⌄ |

File Type   File Type Manager

☐ Enable file type filtering ⚠

Treat file types not specifically included or excluded as:

| Include ⌄ |

Date Range Filtering

From   To

| Any 📅15 | Any 📅15 | ➕ |

OK

3. Select **Enable duplicate document detection.**

If deduplication is not enabled during Turbo Import then you would need to dedupe through the Deduplication Utility of LAW if you need to dedupe later.

Deduplication Mode

In most cases, either the MD5 or SHA1 mode provide sufficient deduplication integrity. However, if there is a question about which to use, consult applicable policies for your organization.

The two modes with Custodian in the name indicate that deduplication will compare sources only within each custodian and not across custodians.

- **MD5**. Uses 128-bit string; used to deduplicate files across all sources.
- **SHA1**. Uses a 160-bit string; used to deduplicate files across sources.
- **MD5Custodian**. Uses a 128-bit string; used to deduplicate files within a source.
- **SHA1Custodian.** Uses a 160-bit string; used to deduplicate files within a source.

If record is considered a duplicate then (Action).

This setting determines the action to take once a duplicate is located. Two options are available:

· **Include.** Creates a record for the duplicate in the database and copies the native file into the case folder.

· **Exclude.** Does not create a record, no text is extracted, and the native file is not copied to the case folder.

NIST(NSRL)

The chief purpose of NIST filtering is to focus investigation on user-generated data by removing from consideration files that are of types that are unlikely to be responsive. Examples of such file types include system files and executable files. The National Institute of Standards and Technology (NIST) is an agency of the U.S. Department of Commerce that maintains and publishes a database of known computer file profiles. This database is referred to as a reference data set (RDS) and is compiled by NIST's National Software Reference Library (NSRL).

The NIST filter uses the RDS database to compare files against a known set of software applications. The NIST filter is typically employed in forensics cases to scan for and remove system files and application logic files from consideration as case documents.

Before case files can be filtered by the NIST Items filter, a NIST database must be downloaded and configured through the LAW Configuration Utility under environment settings. A NIST database within SQL is required for Turbo Import LAW cases for which you want to use the NIST Items filter.

Once a NIST database is downloaded and attached to SQL through the LAW configuration utilty, the Enable NIST (NSRL) detection is enabled by default.

If a NIST database has not been downloaded and configured in the LAW configuration utility - environment settings, the Warning icon, ⚠, is displayed in the NIST section of the Filters tab next to Enable NIST (NSRL) detection.

In order to configure the NIST database for use with LAW's Turbo Import please see Environment settings NIST configuration. Once a NIST database is downloaded and attached to SQL through the LAW configuration utility, the warning icon is not displayed.

NIST (NSRL)

Enable NIST(NSRL) detection - This option is enabled by default if the NIST database has been configured in the LAW Configuration Utility.

If hashes match, then*:* When you enable the NIST(NSRL) filter, you can select one of the following actions for the import to take when a NIST(NSRL) record is detected: include or exclude the NIST files.

- To allow NIST items to be included in the database, leave the **Include** selected for the drop down.

- To exclude NIST items from database, select **Exclude** from the drop down.

📝 If a NIST database is not configured in the LAW Configuration Utility and enabled in the settings, then the **NIST Items** filter will not function.

⊟ File Type

File type settings allow users to identify specific files for processing. CloudNine™ LAW supports import of all file types. Even if a file type is not supported for printing or conversion, metadata and text may still be extracted. After importing a file, if an application is installed on the computer that is capable of opening and printing it, then the file can be processed to TIFF, PDF, or paper.

Files that could not be converted to TIFF can still be exported and delivered in native file format. Provided the reviewer has the native file application, the file can be opened and reviewed. For this reason, loading all file types into LAW is recommended. However, it is understandable that users may not wish to import certain file types, such as common system files.

File type management database

In CloudNine™ LAW, the file type management database is used to populate the SourceApp field in LAW. The SourceApp field assigns a source application to native files based on the file type and source application mappings in the file type management
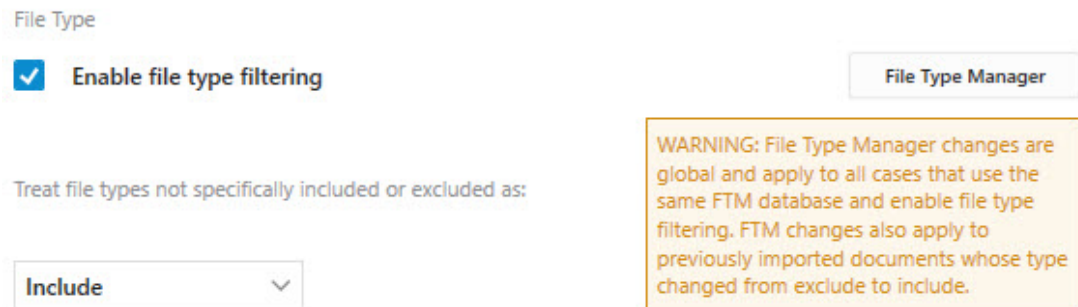
database. The source application assigned to a native file is used for e-printing and TIFF conversions in LAW.

The File Type Managment database is configured in the LAW Configuration Utility.

⚠   Filtering will only apply to family parent records. Child documents will respect the include/exclude value of their parent. If a Parent file type is excluded then the child record will be excluded. If a Parent file type is included then the child record will be included

Enable file type filtering - This allows filtering during import to include only selected types of documents for processing.

1. To enable select **Enable file type filtering**.

File Type Manager- Once the file type filtering has been enabled the **File Type Manager** will have a warning beside it. The warning states, "File Type Manager changes are global and apply to all cases that use the same FTM database and enable file type filtering. FTM changes also apply to previously imported documents whose type changed from exclude to include.".

⊟ **To Edit the File Type Manager**

1. Select **Enable file type filtering**.

2. Select **File Type Manager**.

Changes in the File Type Manager are global and will apply to new imports in other cases. Both Turbo Import and Electronic Discovery cases are affected.

3. The Manage File Types opens in a new window.
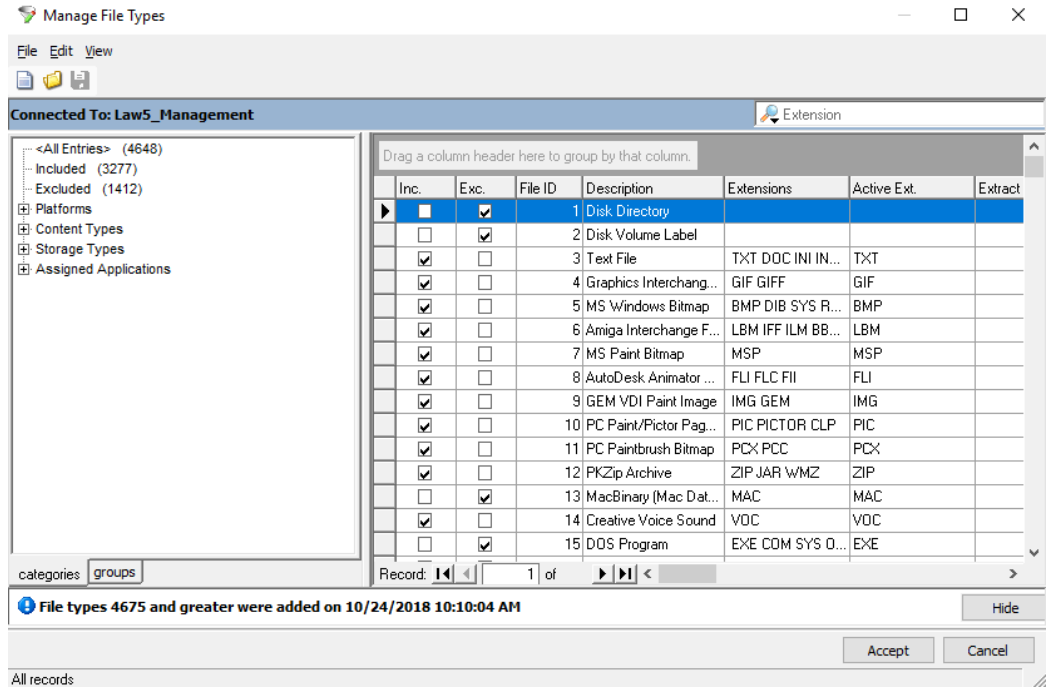
4. Configure file inclusion and exclusion lists, and other options:

   o **Inc**. selected - all documents and database records with Inc. will be written to the LAW database.

   o **Exc**. selected - the file, its metadata, and its associated text are not written to the LAW database.

   o Both **Inc.** and **Exc.** selected - exclude takes precedence over the include option and the file, its metadata, and its associated text are not written to the LAW database.

   o Neither **Inc.** nor **Exc.** are selected - the status is determined by the setting selected in **Treat file types not specifically included or excluded as**

   o Assign default source applications for each file type.

Treat file types not specifically included or excluded as: Choose how to process files in the File Type Manager that are unmarked for include and exclude.

This setting is enabled case by case and is not a universal change that affects other databases.

File Type

☑ **Enable file type filtering**

File Type Manager

WARNING: File Type Manager changes are global and apply to all cases that use the same FTM database and enable file type filtering. FTM changes also apply to previously imported documents whose type changed from exclude to include.

Treat file types not specifically included or excluded as:

Include ⌄

Include

Exclude

When **Enable file type filtering** is selected, then **Include** is the default setting.

- Include - any file type that does not have a specific include\exclude setting in the File Type Manager is included for processing.

- Exclude - any file type that does not have a specific include\exclude setting in the File Type Manager is not included for processing.

To change to the Exclude setting, select the drop down and then select **Exclude**.

⊞ **Date Range Filtering**

Date range filtering allows you to save time by not processing files that don't meet your case criteria. The date range you provide is inclusive, meaning that files within the date range you provide will be imported. You can provide multiple date ranges if you need to specify non-continuous date ranges.

Date range filtering is overly inclusive. If you have a family (parent document with attachments), and only one document within the family has a date within the range you specify, the entire family will be included.

Date Range Filtering

From   To

Any   🗓15   Any   🗓15   ➕

To specify a date range filter:

1. Click in the **From** date field. Use the date picker to select the lower inclusive bound for your date range.

2. Click in the **To** date field. Use the date picker to select the upper inclusive bound for your date range.

3. If you need an additional date range, click the plus button to see an additional **From** and **To** box.

4. If you need to remove a date range, click the minus button next to the range you want to delete.

The **Email** tab contains the settings that Turbo Import uses for naming the emails being imported into LAW. This includes **Message Format.**

⚠ Settings can be viewed, but not changed once a turbo import has been started for the case except for the Passwords and File Type Management database.

⊟ Configuring Turbo Import Email settings.

1. On the **File** menu, click **Import**, and then select **Turbo Import**. The CloudNine™ LAW Turbo Import utility opens directly to the settings (**Content** tab) for new cases.
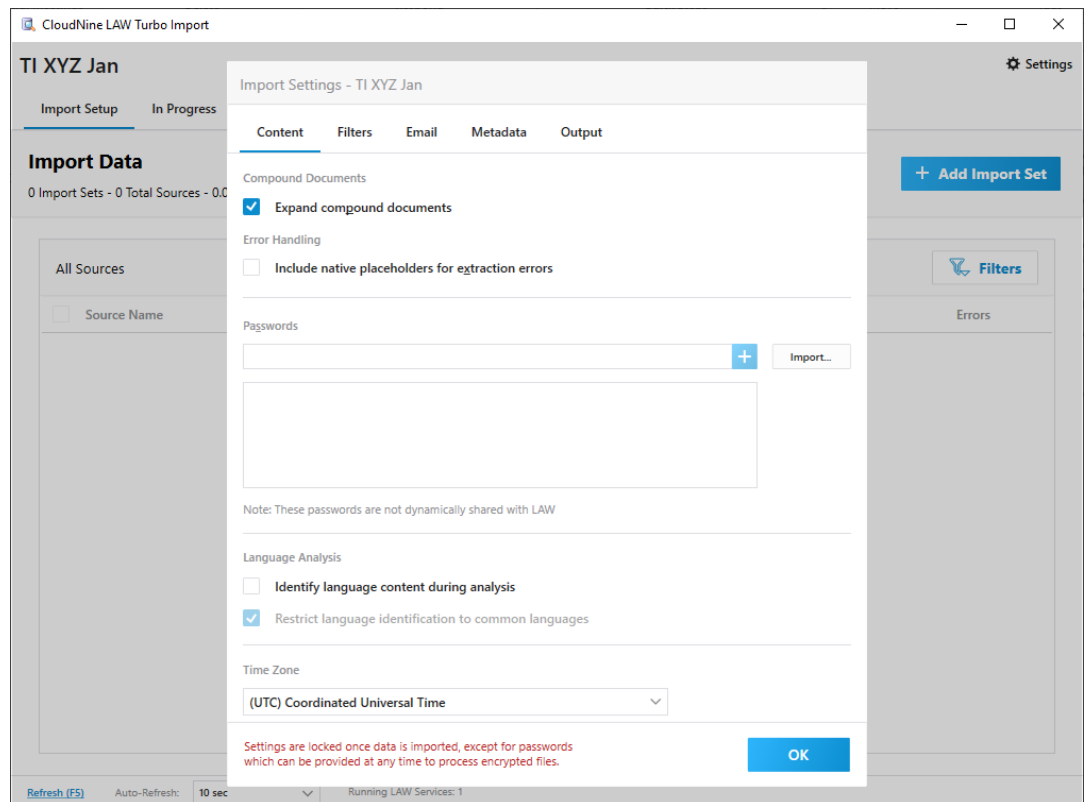
2. Select the **Email** tab.

⚠ You must select **OK** to proceed to the import section of Turbo Import. You can change the settings again prior to importing records by selecting the **Settings** button. If you select the **Settings** button to change the import settings then the option to cancel without making changes to the current setting changes is available.

💡 For a newly created database, the Import Settings will open first for configuring the database settings.
For databases that have already started a Turbo Import or configured the import settings, the Import tab will be displayed. Settings can be selected by choosing the **Settings** button from the Turbo Import.

⊟   **Message Format:**

Import Settings - TI XYZ Jan

Content   Filters   **Email**   Metadata   Output

Message Format

| Native | ⌄ |

OK

In **Message Format**, choose the e-mail format that Turbo Import uses for e-mail messages loaded into LAW.

💡 The Message Format selected affects all email settings. E-mail messages can be imported as .eml, .msg, .html, or .mhtml files.

The **Message Format** list defaults to **Native**.
- **Native -** All files are imported in the original format (.msg, .eml, or .html). If you select **Native** and a message contains a number of recipients that exceeds the

maximum number a .msg file can support, the message will be converted to an .html file or it will be converted to an .mhtml file if the message contains inline images.

- **HTML -** All files are imported in .html format.

- **HTML (MHTML when images are present) -** Any message that contains inline images will be converted to .mhtml format, otherwise it is converted to .html format.

- **MHTML -** All messages are exported to .mhtml format.

The **Metadata** tab contains the settings that Turbo Import uses for extracting metadata from the files being imported into LAW. This includes **Extract custom metadata properties for MS Office documents and Extract EXIF metadata properties for Image documents** settings.

⚠ Settings can be viewed, but not changed once a turbo import has been started for the case except for the Passwords and File Type Management database.

⊟ Configuring Turbo Import Metadata settings.

1. On the **File** menu, click **Import**, and then select **Turbo Import**. The CloudNine™ LAW Turbo Import utility opens directly to the settings (**Content** tab) for new cases.
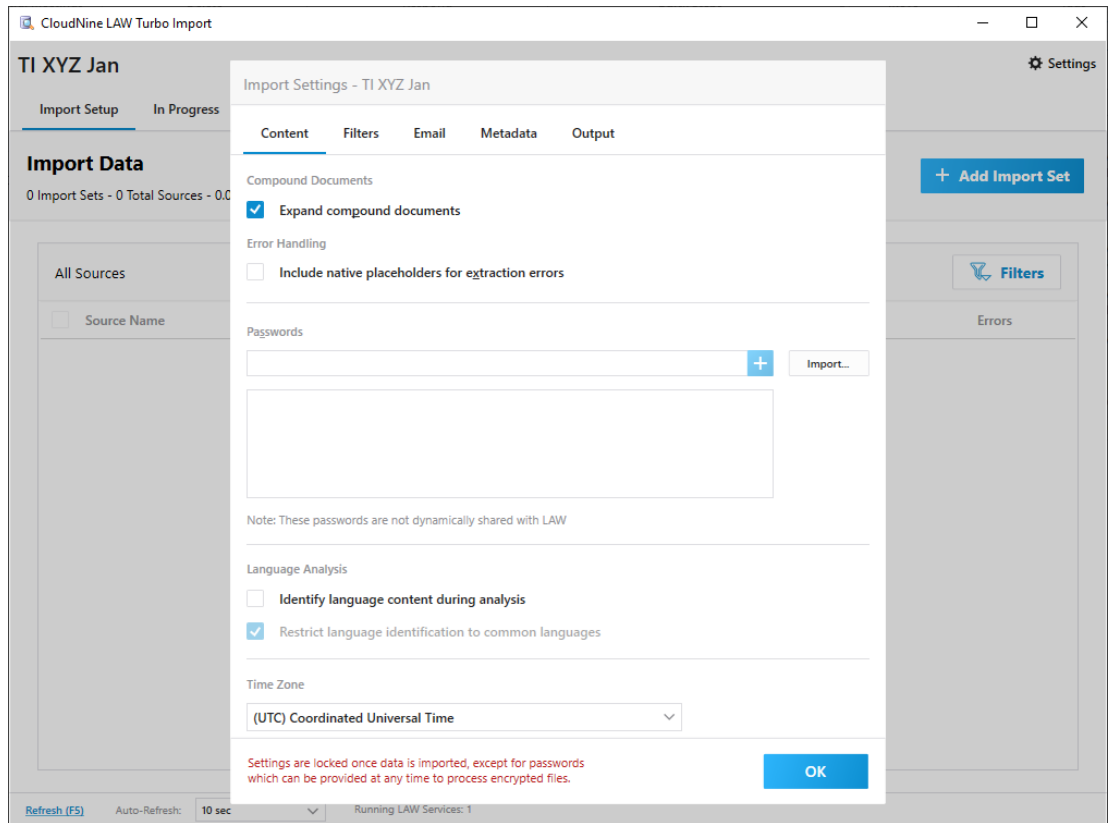
2. Select the **Metadata** tab.

3. The Metadata settings will be displayed.

Import Settings - TI XYZ Jan

| Content | Filters | Email | **Metadata** | Output |

Metadata Settings

☐ Extract custom metadata properties for MS Office documents

☐ Extract EXIF metadata properties for Image documents

Settings are locked once data is imported, except for passwords
which can be provided at any time to process encrypted files.

[OK]

⚠ You must select **OK** to proceed to the import section of Turbo Import. You can change the settings again prior to importing records by selecting the **Settings** button. If you select the **Settings** button to change the import settings then the option to cancel without making changes to the current setting changes is available.

💡 For a newly created database, the Import Settings will open first for configuring the database settings.
For databases that have already started a Turbo Import or configured the import settings, the Import tab will be displayed. Settings can be selected by choosing the **Settings** button from the Turbo Import.

⊟ Extract custom metadata properties for MS Office documents

When the **Extract custom metadata properties for MS Office documents** check box is selected, the following metadata, if detected, is extracted during import:

- Comments in Microsoft Word, Excel, and PowerPoint files
- Tracked changes in Word and Excel files
- Hidden rows and/or columns in Excel files
- Hidden worksheets in Excel files
- "Very hidden" worksheets in Excel files
- Hidden slides in PowerPoint files
- Speaker notes in PowerPoint files
- Publisher and Access files are not supported.

📝 The metadata extracted will be populated in Extended Property fields in LAW. The extended property field names will start with EP followed by the name of the field as it exists in the source document.
- Example: if a Word document is imported that contains a custom metadata field called Typist, LAW creates a metadata field during the import called EPTypist.

⊟ **Enabling Extract custom metadata properties for MS Office documents**

1. Go to the **Metadata** tab in Settings.

2. Select **Extract custom metadata properties for MS Office documents**.

When the **Extract custom metadata properties for MS Office documents** check box is not selected then the metadata is not extracted during import.

📝 The default option for new cases is not enabled.

⊟ Extract EXIF metadata properties for Image documents.

Extract EXIF metadata properties for Image documents. Extracts custom metadata properties from image files during import if the checkbox is engaged. The metadata is only extracted from image files that have EXIF properties.

📝 The metadata extracted will be populated in Extended Property fields. The extended property field names will start with EP followed by the name of the field as it exists in the source document.
- EX: if a PNG document is imported that contains a custom metadata field called Colors, LAW creates a metadata field during the import called EPColors.

⊟ **Enabling Extract EXIF metadata properties for Image documents**.

    1. Go to the **Metadata** tab in Settings.

    2. Select **Extract EXIF metadata properties for Image documents**.

When the **Extract EXIF metadata properties for Image documents** check box is not selected then the metadata is not extracted during import.

📝 The default option for new cases is not enabled.

The **Output** tab contains the settings that Turbo Import uses for naming the files being imported into LAW. This includes **Numbering Seed, Alpha-numeric** and **Number Attachments** settings. All documents imported into LAW are grouped by Custodian and then by source.

⚠ Settings can be viewed, but not changed once a turbo import has been started for the case except for the Passwords and File Type Management database.

⊟ **Configuring Turbo Import Output settings.**

    1. On the **File** menu, click **Import**, and then select **Turbo Import**. The CloudNine™ LAW Turbo Import utility opens directly to the settings (**Content** tab) for new cases.
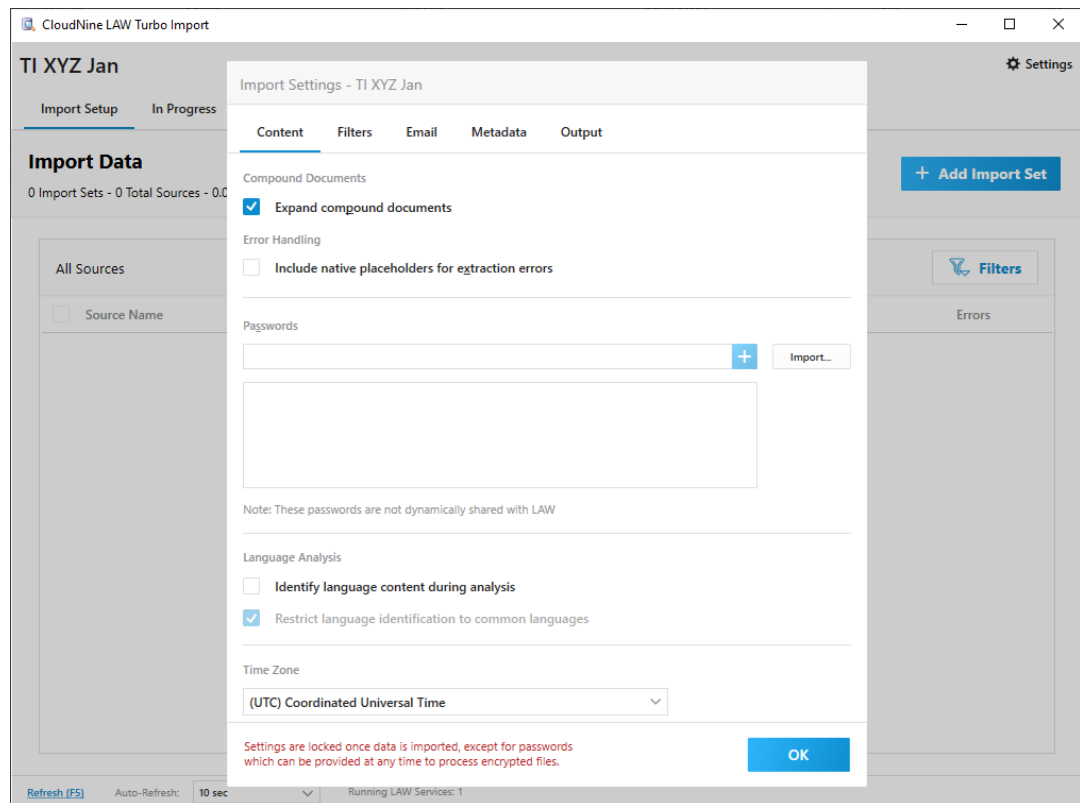
2. Select the **Output** tab.

⚠ You must select **OK** to proceed to the import section of Turbo Import. You can change the settings again prior to importing records by selecting the **Settings** button. If you select the **Settings** button to change the import settings then the option to cancel without making changes to the current setting changes is available.

💡 For a newly created database, the Import Settings will open first for configuring the database settings.
For databases that have already started a Turbo Import or configured the import settings, the Import tab will be displayed. Settings can be selected by choosing the **Settings** button icon from the Turbo Import.

⊟ To set a seed value for Numbering Seed

Note the following about choosing a seed value to use for the document identification (DocID) field:

- The DocID is a unique identifier assigned to each document.
- Turbo Import uses the Numbering Seed as the starting value for each document you import.

- Turbo Import increments the specified seed value for each record. For subsequent import sessions, the Numbering Seed box defaults to the next incremented value based off the last successfully exported item.
- The seed value can be a mix of numbers, letters, and symbols.
- The Numbering Seed field may contain up to 50 characters.
- The documents are grouped by custodian and then source for numbering.

Import Settings - TITest75

| Content | Filters | Email | Metadata | **Output** |

Numbering Seed

00000001

☐ **Alpha-numeric**

☐ **Number Attachments**

Preview

```
00000001
  - 00000002
  - 00000003
  - 00000004
00000005
  - 00000006
  - 00000007
00000008
```

LAW Folder Structure

Custodian ⌄

Source ⌄

(select a level) ⌄

Email Sort Order

Sent On: Oldest To Newest ⌄

Preview:
- 📁 Custodian Name
  - 📁 Source Name
    - 📄 Loose File
    - 📄 Container File
    - 📁 Mailstore Root Folder
      - 📁 Mailstore Subfolder(s)
        - 📄 Email

Settings are locked once data is imported, except for passwords which can be provided at any time to process encrypted files.

OK

Numbering Seed: - Defines the document id format for the imported documents.

- **Alpha-numeric** - Alphabetic or numeric increases incrementally. (For numbers ending with an alpha character, when the check box is selected, the resulting numbering reflects this format: ABC001a, ABC001b, ABC001c.)

- **Number Attachments** - Adds [Attachment Level # - Family Count #]

   Attachment Level - The first value within the bracket. Starts with 0 for the parent. Increases incrementally by 1 for each attachment.

   Family Count # - The total number of attachments in the family.

- **Email Sort Order** - Defines the sort order to use for emails based on the Sent date.

   Oldest To Newest - oldest sent date first.

   Newest To Oldest - newest sent date first.

Preview - The preview window displays a sample of the numbering seed entered with alpha-numeric and/or number attachments settings if enabled.

LAW Folder Structure Version 7.2+

The folder structure within LAW can be organized by Import Set, Custodian, and/ or Source. The organizational structure of all records imported into the selected case through Turbo Import is grouped according to the levels selected.

LAW Folder Structure Examples

In version 7.2+ the folder structure in LAW for all new Turbo Import cases is configurable. If you create custodians* and load the source(s) file(s)/folder(s) in one or more import set(s) then you can change the organizational structure in LAW using LAW Folder Structure settings. The following scenarios used 2 custodians with each custodian having one or more sources in each Import Set.
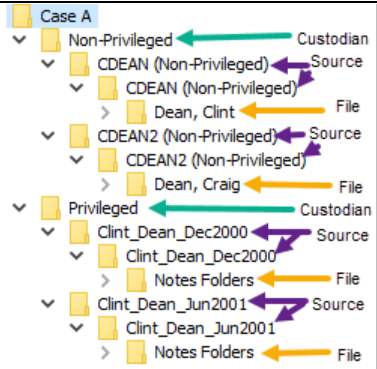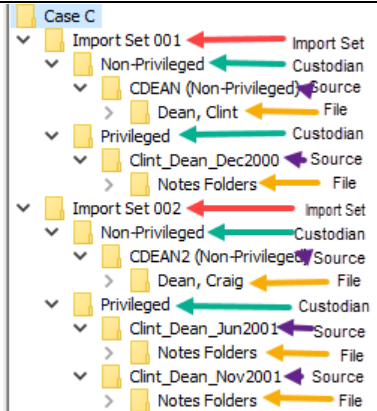
Data for the Examples:
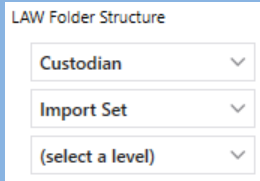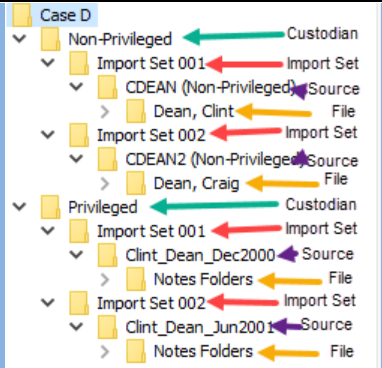
Import Set*	Custodian*	Source File/Folder
Import Set 001	Non-Privileged	CDEAN (Non-Privileged)
	Privileged	Clint_Dean_Dec2000
Import Set 002	Non-Privileged	CDEAN2 (Non-Privileged)
	Privileged	Clint_Dean_Jun2001
		Clint_Dean_Nov2001

*By clicking the links you can access additional information on Import Sets and Custodians.

 Example:

1. Depending on the LAW Folder Structure selected, importing the same data using the same process produces different organizations in LAW. The following table provides an expansion, of the preview window in settings, based on the Data for the Examples table.

Database	LAW Folder Structure	Example in LAW
Case A		
Case B		
Case C		

Database	LAW Folder Structure	Example in LAW
Case D		

How to change the LAW Folder Structure

1. After creating a new Turbo Import enabled case, go to File>Import> Turbo Import and select the Output tab in Settings. The following LAW Folder Structure is the default setting.
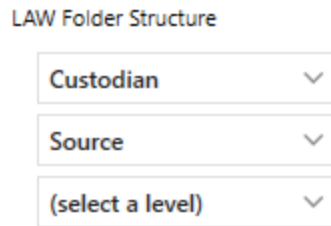
2. Click the LAW Folder Structure drop down list to change the levels.
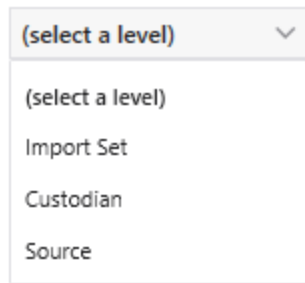
3. Click the desired level in the first drop down box or (select a level) to remove the level selection.

4. The preview window updates to display a sample of the resulting folder structure within LAW based on the selected LAW Folder Structure.

Preview:

```
▲ 📁 Custodian Name
    ▲ 📁 Source Name
          📄 Loose File
          📄 Container File
    ▲ 📁 Mailstore Root Folder
          ▲ 📁 Mailstore Subfolder(s)
                📄 Email
```
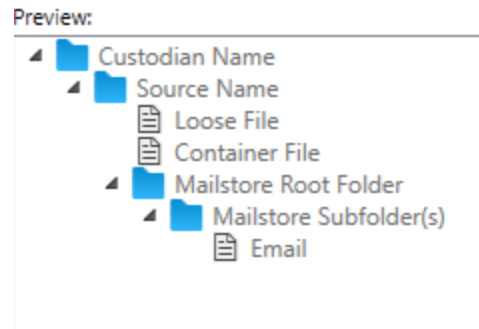
5. Select **OK** to save the settings.

Disabling the LAW folder structure will produce the Source Name as the top level folder with the file(s) contained within the source.

⚠ Each level utilized of the LAW Folder Structure adds to the length of the file path, so it is recommended to only add levels needed to help organize the data.

💡 The **Source** is always listed in LAW as the preceding folder level to the file(s). Selecting **Source** for any level will produce the source name twice in LAW.

⚠ The Output settings are locked once data is imported and cannot be changed.

Starting a Turbo Import Session

After you create a Turbo Import enabled case in CloudNine™ LAW, the next step is to import files into your case. Starting an import session involves the following tasks:

- Open CloudNine™ LAW Turbo Import
- Configure Settings
- Add an Import Set
- Select sources
- Start your Import

⊞About Import Sets

An Import Set is a grouping of one or more custodians containing one or more sources, with each source containing one or more files. Files that are defined in an Import Set are submitted for processing at the same time. This allows you to setup an Import Set and begin processing it while you then define another Import Set.

The import name automatically increments for each import set that is started. Import Set 001, Import Set 002, etc... The name of the import set will also populate in the EDSession field and Import Set field within LAW for all records populated to LAW.

Prior to clicking Begin Import, the import set name can be changed. The maximum length of the import set name is 100 characters and can include any character supported by SQL.

📝 The default name is based on the "Import Set" followed by the count of import sets for the case + 1. Bear in mind that the Import Set default naming does not consider whether the import sets that were created used the default naming convention or not, and therefore will continue using "Import Set + the sequential number of the Import Set" - ex: Import Set 001, Custom Name, Import Set 003.

⊟**About Custodians**

In Turbo Import, files within an Import Set are organized by custodian. A custodian can point to one or more individual files, folders, disk volumes, or network shares. For example, within a case you can create an Import Set with one custodian that points to a particular mail store, a second custodian that points to a particular folder, and a third custodian that points to a series of individual files and folders from various places in a file system.

You can work with custodians in the following ways:

- **Create Import Sets, add sources within one or more custodians, and start processing**.
  - You can create an individual custodian and then add sources to it.
  - You can simultaneously create a single custodian by using drag and drop.
  - Or you can simultaneously create many custodians at one time by using drag and drop.
- **Edit custodians**. By default, the custodian name is taken from the name of the item as it appears in the file system. You can Edit the custodian(s) prior to starting the import. If any of the custodian's sources have been imported then you are no longer able to edit the custodian name. There isn't an option to delete the custodian name once created.

📝 The custodian name cannot have any of these Windows path reserved characters:
   < (less than)
   > (greater than)
   : (colon)
   " (double quote)
   / (forward slash)
   \ (backslash)
   | (vertical bar or pipe)
   ? (question mark)
   * (asterisk)
The custodian name can be up to 50 characters long.

If you include a leading or trailing space in the custodian name, Turbo Import will automatically remove it.

Opening Turbo Import

1. A Turbo Import enabled case needs to be created in LAW 7.0+.

2. On the **File** menu, click **Import**, and then select **Turbo Import**. The CloudNine™ LAW Turbo Import utility opens.

💡 For a newly created database, the Turbo Import Settings dialog will open first for configuring the database settings.

Starting Turbo Import(committing sources)
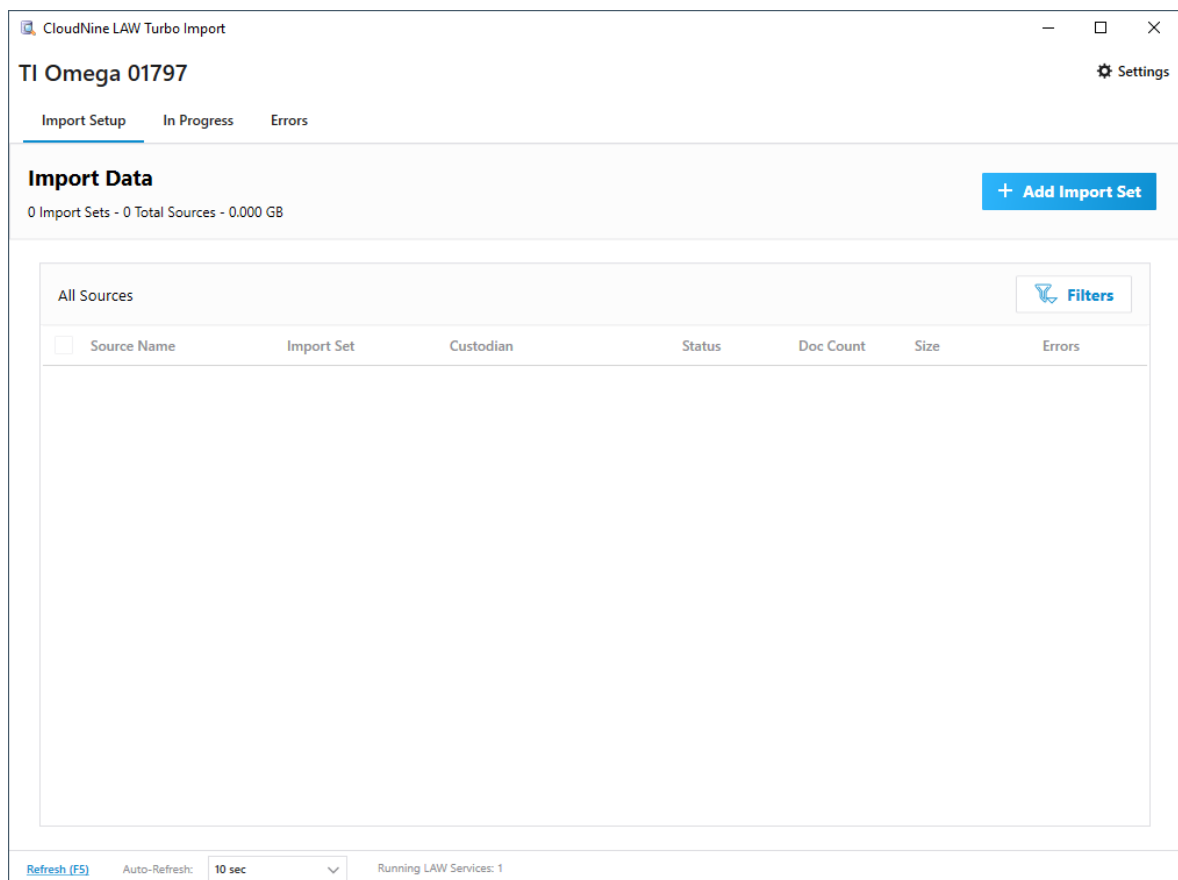
The CloudNine™ LAW Turbo Import utility initially displays on the **Import Setup** tab. This is where your Import Sets are added and defined. An Import Set is a group of one or more custodians containing one or more sources.

The import name automatically increments for each import set that is started. Import Set 001, Import Set 002, etc... The name of the import set will also populate in the EDSession field and Import Set field within LAW for all records imported during that import set.

1. Click **Add Import Set**. The dialog updates to allow you to add custodian(s) and source(s).
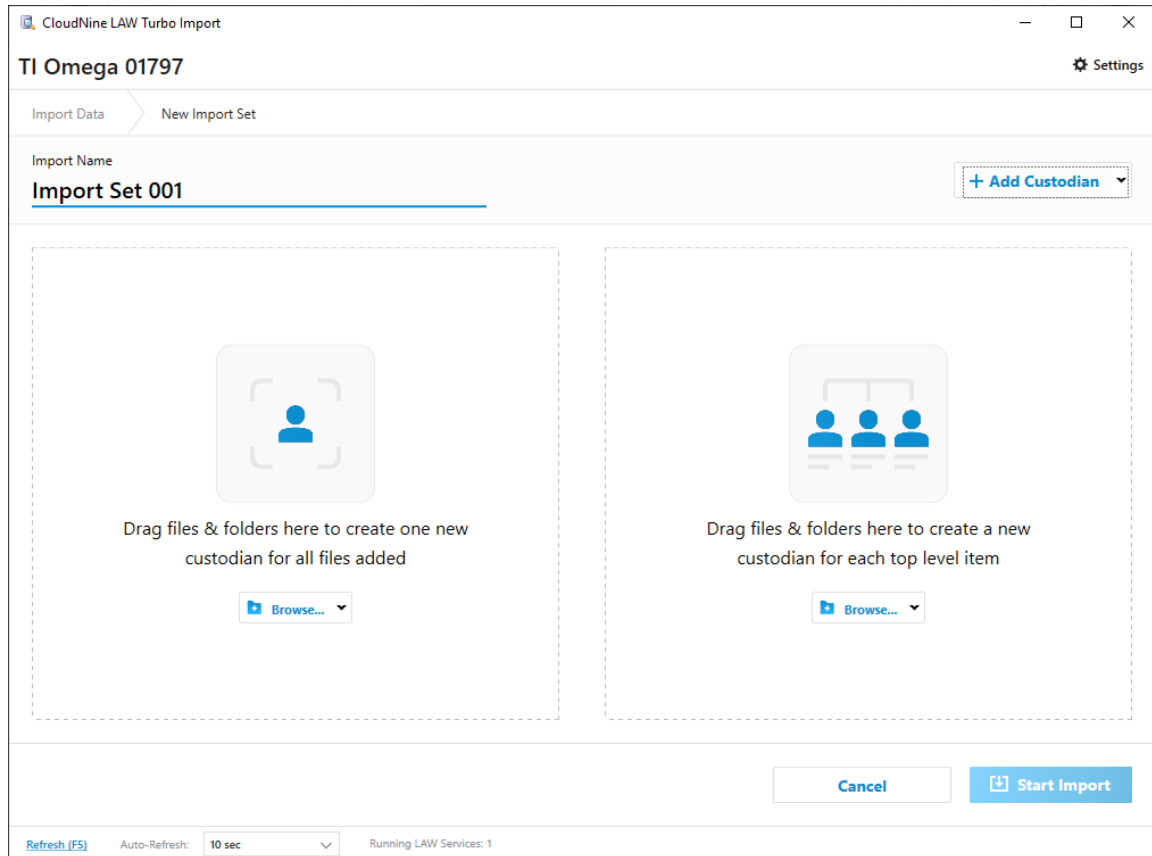
2. The first **Import Name** is automatically set to *Import Set 001*. You can modify the name to anything you want by clicking in the name and editing it. The import set name automatically increments for each import set created.

3. Add files and folders to a custodian in the Import Set. Files and folders can be selected using the Browse drop down, or by dragging and dropping files and/or folders from a standard windows File Explorer window.

   a. Use the left pane if you want to create a single custodian for a set of files and/or folders you choose.

   b. Use the right pane if you want to create a single custodian for each top level folder in the set of files and/or folders you choose.

4. The dialog updates to show you the custodian(s) and source(s) that have been added to the import set. You can add more sources to custodians in the list, or add sources into new custodians. The Source Name is not editable. It is always defined to be the folder source where the files originated.

5. You can edit a custodian name by clicking **Edit** to the right of the name, typing in an updated name, and clicking **Save**.

6. Once you have the custodians and sources specified for the current import set, click **Start Import**. The screen updates to show details for the custodians in this import set.

7. Initially the **Status** will display as *Pending*. Once work begins to process the sources, the **Status** of each custodian will update to *In Progress*. When work is done for a custodian the **Status** will display *Complete*.

📝 Before importing Lotus Notes mail stores, make sure the Lotus Notes application is closed on all workstations that have LAW Service enabled. If Lotus Notes is open on the LAW Service while attempting to import Lotus Notes mail stores, the email messages in the Lotus Notes mail stores are not extracted during the import.

📝 To quickly add the contents of an entire drive, browse to the drive and open it to display the top level folder structure. Select, drag, and drop all top level folders and files into the desired drag & drop area.

⊟**Import Data Statistics**

As import sets are processed, the statistics at the top of the Turbo Import window update to reflect the data in the case, including:

- Number of Import Sets

- Total number of sources contained in the Import Sets

- Total size of the source data, in GB.

⊟Import Data Filters

When reviewing the Import Sets and Sources in your case in Turbo Import, you can use the **Filters** button at the top right to refine the list that is displayed. You can filter the list by:

- Source Name

- Import Set

- Custodian

Deleting Sources from an Import Set

You can delete sources from from an Import Set, even after they have been processed.

1. From the **Import Data** tab in Turbo Import, select the check box to the left of the source or sources you want to delete.

2. Click **Remove Selected**. The **Remove Sources** confirmation dialog displays.

3. Click **Yes** to confirm deletion of the source(s). the sources are removed.

⚠ Deleting a source removes all associated data. It cannot be undone.

📝 When deleting Import Sets, Sources, and/or Custodians from Turbo Import, the process may be lengthy based on the number of records being removed, environment, and database speed. The delete process runs as a single agent, and removes data from the LAW case database (both TI and LAW), the Image Archive, Case Folder, and all native copies as well from the file system.

Deleting is best done after you're done importing data, as the delete process must complete before other pending Import Sets/Sources will be processed by Turbo Import. For example, if you start an Import Set, then queue a delete, the Import Set will finish importing. The Delete process will start, and any new imports committed by a user will remain in a "pending" state until the delete is completed.

Other LAW processes, including Batch Processing, QC Tasks, Searching, and Exports are all available during the delete process. You may also import data with Turbo Import in other LAW cases.

Screen Refresh:

The screen can be quickly refreshed by selecting **Refresh** at the bottom of the window or by selecting the **(F5)** key.

The page will Auto-Refresh at a set interval. The interval for the auto-refresh can be changed by selecting the drop down. The possible intervals are 5 seconds, 10 seconds, 30 seconds, 1 minute, or 5 minutes.

💡 The Auto-Refresh interval is only set for the time that you have the Turbo Import window open. Once you close the Turbo Import window, the interval reverts to 10 seconds.

The number of services running for the environment are displayed at the bottom of the Turbo Import window in **Running LAW Services**: 1.

Turbo Import Progress

After you start an import for a Turbo Import enabled case, you can view the status of the import in the **Progress** tab. The progress tab has 3 main sections: Status, Case Statistics, and Agent Activity.

Work Pending: The list of processing that is pending for the case (e.g., Import, Email Hashing, Language Identification, Filtering, Data Population).

None refers to no work currently pending or in process for that case. If there are sources committed for processing, then the list of activities to be completed before processing finishes will be listed under Work Pending. The list will decrease as the various activities complete during the import process.

Case Status: Blacklisted, Idle, In Progress, Pending Case Priority, Suspended, Work Pending

- **Blacklisting** - It is a mechanism in which a service instance stops processing a case after repeated attempts to work on the case fail. The service will try 5 times before a blacklisting is applied to a case. When a case is blacklisted, the service removes the case from consideration for further work. For example, the service will not start agents for inventory or perform analysis. After you resolve the issues causing the blacklisting, you can activate the case to resume processing.

- **Idle**- There is no work pending or in progress for this case currently.

- **Work Pending** - Work has been queued an is awaiting processing.

- **In Progress** - Case work is currently being processed.

- **Suspended** - Suspending a case stops active agents and prevents new agents from working on the case. Suspended cases can be activated to resume processing.

- **Pending Case Priority**- If there are multiple cases processing at the same time, the top priority case will process first and the other cases pending work have the Pending Case Priority status. Law Management Console (LMC) can change case priorities.

⚠ Suspending a Turbo Import case stops ALL work in the case - including any Turbo Imaging jobs.

To Suspend a case: Suspending a case prevents all agents from working on the case. After a case is suspended, the suspension can be lifted.

- To suspend the case from processing, click **Suspend Case**.

- The case status will change to suspended, and all agents will stop work on active case.

- Once each agent has successfully "stopped", the agent will be cleared from the Agent Activity grid.

- When the case is in a Suspended state, the **Suspend Case** button changes to **Activate Case**.

- In the main screen of the LAW Turbo Import case, Suspended will be displayed; so that if another user opens the case it will be obvious that it is in a suspended import status.

To resume processing:
- When the case is in a Suspended state, the **Suspend Case** button changes to **Activate Case**.

- Select **Activate Case**.

- The case status will change to **In Progress** and resume importing.

- In the main screen of the LAW Turbo Import case, **In Progress** will be displayed; so that if another user opens the case it will be obvious that work is in progress.

⊟ **Case Statistics**

Case statistics lists the statistics for the overall case. This information is not session specific and is cumulative.

Documents Inventoried: The total number of top-level documents discovered during the inventory process. This count includes containers.

Inventoried Size: The total size of documents inventoried.

Documents Processed: The total number of documents that were inventoried and expanded based on import settings. (Inventoried + Analysis Yield.)

Processed Size: The total size of documents processed. (Inventoried Size + Analysis Yield Size.)

Documents Populated in LAW: The total number of documents that have been written to the LAW database based on import settings. (Note: Archive, Mailstore, and Forensic Image containers are not populated in LAW)

Errors: The total number of errors that were encountered during processing and data population. To view the error details go to the Errors tab.

⊟ **Agent Activity**

Displays the current agents utilized for the case if there are any processes running in the case.

Agent Name: Name of the agent working on the current activity. The name is based on the computer name where the agent is running.

Activity: One of the processing activities (Preparing Work, Inventory, Analysis, Email Hashing, Language Identification, Filtering, Generate population set, Extract documents/natives, Populate LAW).

Start Time: Time the activity (or the current file) being processed started.

File Name: The current file being processed if the activity is file based.

File Size: Size of the current file being processed if the activity is file based.

Attempts: Number of times we tried to process the current activity/file due to failures/errors (edited).

📝 If there are no sessions processing in this case, then there are no agents in the list.

Screen Refresh:

The screen can be quickly refreshed by selecting **Refresh** at the bottom of the window or by selecting the **(F5)** key.

The page will Auto-Refresh at a set interval. The interval for the auto-refresh can be changed by selecting the drop down. The possible intervals are 5 seconds, 10 seconds, 30 seconds, 1 minute, or 5 minutes.

💡 The Auto-Refresh interval is only set for the time that you have the Turbo Import

window open. Once you close the Turbo Import window, the interval reverts to 10 seconds.

The number of services running for the environment are displayed at the bottom of the Turbo Import window in **Running LAW Services**: 1.

Turbo Import Errors

After you create a Turbo Import enabled case in CloudNine™ LAW and have imported files into your case, the next step is to review the errors if they exist.   When a Source cannot be processed (due to access/corruption or inaccessible blockers), a critical failure error may occur. Other Sources will continue to process, but you must resolve the source error by either reprocessing the Source via the Errors Tab, or by deleting the problematic Source and re-importing a "fixed" copy of that Source.

From the Turbo Import window, click the **Errors** tab.

  Display: Allows the sorting or displaying of the errors by filtering.

    Filter By: A drop down that allows filtering of the records with errors by **All**, **Custodian**, **File Type,** or in version 7.2+ **Import Set**.

      • **All** - Shows all files that have errors in this case.

- **Custodian** - Filters the errors by Custodian. The field **Having** will list the custodians of files that contain errors as possible values.

- **File Type** - Filters the errors by file Type. The field **Having** will list the records' that contain errors by file types as possible values.

- **Import Set** - Filters the errors by Import Set. The field **Having** will list any import sets for records that contain errors.

Having: Allows further filtering based on the selection of Custodian, File Type, or Import Set in version 7.2+ and displays only the values for records with errors.

Processing: Allows filtering based on the types of errors. For example: Content Extraction Errors, Hash Error, Data Population, Encryption

📝 If a file errors for encryption, then the passwords can be added to the Settings>Passwords. Then the records can be Re-Processed.

The middle section displays the filtered errors individually to gather information about the error through Error Details and Document Properties. **Save** as a csv for review or **Re-Process** the selected errors.

📝 Before selecting **Re-Process**, it is recommended to add the password for encrypted files, confirm the user has the correct rights for accessing the files, and the records aren't being accessed by another program.

Error Details: This provides a full text description of the error message for the selected record.

💡 Error Details and Document properties will only have values populated if a record that had an error during processing is selected.

⊟ **Document Properties:**

File Ref: The file's source location.
Custodian: The name of the custodian for the file.
Source: The name of the source in which the file is contained.
Container: The type of container if applicable.
File Name: The name of the file.
File Type: The type of file.
From: The sender of the file if applicable.
Sent: The date/time sent if applicable.

⊟ **Filtering Errors**

On the Turbo Import Errors tab, you can use the **Filter By** and **Having** drop downs in the upper left to narrow the list of displayed errors.

Select an option for **Filter By** first - **All**, **Custodian**, **File Type**, **Import Set**, or **Source**. The **Having** drop down will update to show you the options available based on your choice in **Filter By**. Select an item from the **Having** drop down to filter the displayed error list.

Reviewing Turbo Imports

Turbo Imports can be reviewed through various methods. The errors can be reviewed on the Errors tab. The Progress tab in the Turbo Import utility provides case statistics for review. Through the main LAW interface you can go to Tools>Session Browser to review import session information.

Session Browser:

1. Open a Turbo Import enabled case.

2. Through the main LAW user interface go to **Tools** and select **Session Browser**.

3. The **Session Browser** dialog lists existing sessions for the current case on the left. Select a session from the list.

4. Select a session.

5. The **Session Browser** is updated with details from the session you selected.
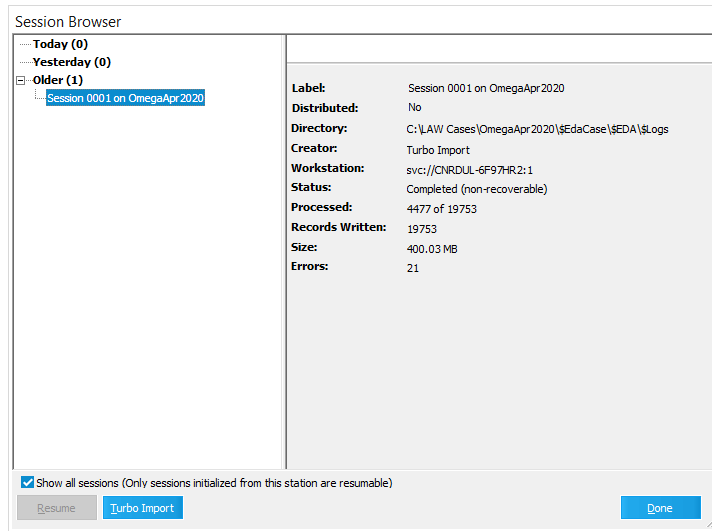
The following items are available for review:

· **Label**. The session label.

· **Distributed**. Whether the import was distributed or not. (For Turbo Imports this value will always be "No").

· **Directory**. The directory where the import log is located.

· **Creator**. The user name associated with the user who created the session. (For Turbo Imports this value will always be Turbo Import).

· **Workstation**. The workstation name where the session was created.

· **Status**. The status of the session; whether it completed or not.

· **Processed**. The total number of documents processed.

· **Records Written**. The number of records written to the case during that session.

· **Size**. The size of all native files that were written to LAW.

· **Errors**. The number of errors that occurred during the session.

To return to the Turbo Import utility:

1. Open a Turbo Import enabled case.

2. Through the main LAW user interface go to **Tools** and select **Session Browser**.

3. Select **Turbo Import** from the **Session Browser**.
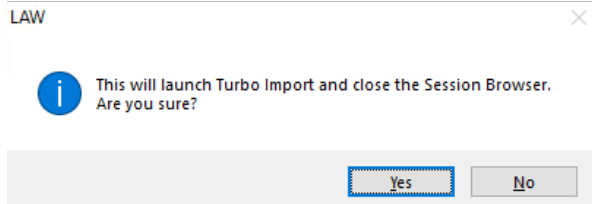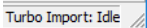
4. Select **Yes.**

5. The Turbo Import utility will open.

Or

1. Open a Turbo Import enabled case.

2. Through the main LAW user interface go to **File**

3. Then select **Import**

4. Finally select **Turbo Import** to open the Turbo Import Utility.

Or

1. Open a Turbo Import enabled case.

2. Through the main LAW user interface select **Turbo Import.**

3. From the lower right hand corner double click on `Turbo Import: Idle` .

Scanning Documents

Before you can use a scanner with CloudNine™ LAW, you must install the scanner on your computer according to instructions provided by the scanner manufacturer. Preparation to run a scanning job also should include the process of identifying the scanning requirements of the job.

Assuming a scanner is installed and your requirements are clearly drawn, the next step is to open LAW to *select* your particular scanner model. Selecting a scanner involves registering your scanner model within CloudNine™ LAW. After you select your scanner, you configure scanning options according to the requirements of the scanning job. If you are using barcode break sheets, you also can set options for scanning them as well. Then you are ready to scan.

You can access configuration options of a scanner. Before you can configure a scanner, you must add one by selecting a particular model. If you have not yet selected a scanner, the scan status area reads **<No Scanner Detected>**. For more information on selecting a scanner see [Selecting a Scanner](#).

To change particular settings, double-click items in the scan status area in the lower right corner of the main LAW window.

| | | <Default> | Scanner's Maximum | 300 dpi | Simplex | OCR(Y) | Rotation(0) | Drop Blanks(N) | Single-Page(N) |
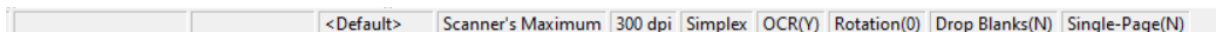
Selecting a Scanner

Before you can scan you must select and configure a scanner. After you add a scanner, whenever CloudNine™ LAW starts, it opens a connection to the scanner.

<u>**To select a scanner**</u>

1. Make sure your scanner is installed. You cannot select a scanner unless it is installed. Refer to the instructions provided by the scanner manufacturer.

2. On the **Scan** menu, click **Select Scanner**.

   The **Scanner Selection** dialog box appears. It lists all of the currently available scanner drivers.
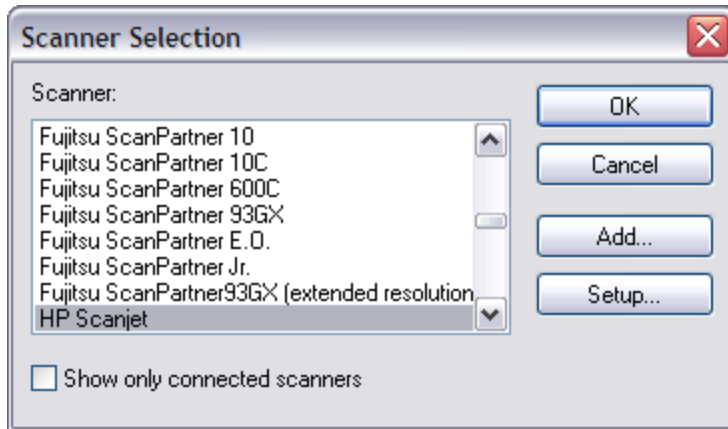
3. Select your scanner model from the **Scanner** list.

   - If you want to narrow the list so it shows only connected scanners, select **Show only connected scanners**.

   - If your scanner model is not listed but you have an installation CD, follow the scanner manufacturer's installation instructions to install the scanner driver.

   - If you have downloaded a driver without installation instructions, click **Add** and then browse to the driver for your scanner.

   Available scanner models are listed.

4. With your scanner model selected click **Setup**. If a dialog box appears that lists options for your scanner, then select the options that you want, and then click **OK**.

5. Click **OK**.

<u>**Driver support notes**</u>

The following guidance applies when selecting and configuring drivers for scanners:

- If the connected scanner is not in the list, contact CloudNine to determine if a driver is available for the scanner.

- LAW supports most scanners that use an ISIS driver. If you intend to use a scanner that is bundled with an ISIS driver, do not automatically run the installation for the scanner driver. First, check the LAW CD for that scanner model or contact us to determine if we have a driver for that scanner. Bundled driver installations typically contain additional system files that may overwrite critical image libraries and cause problems when running CloudNine™ LAW.

- If an error occurs when selecting a scanner, there are two possible explanations: either the wrong driver was selected or the scanner was not recognized by Windows. The scanner will not be recognized if it was not turned on prior to the operating system loading. Ensure that the scanner is on and then restart the computer. If Windows recognizes the scanner and you still cannot select it, contact CloudNine for assistance.

Preparing to Scan

As you make preparations to scan, consider the following items:

Item
Install your scanner according to manufacturer's instructions.
Make certain that Windows can detect the scanner and that all drivers and necessary software have been installed. Consult product documentation for the scanner or visit the manufacturer's website for instructions and to locate up-to-date drivers.
Evaluate the project / work order
Gather project specifications and any other instructions.
Evaluate materials to be scanned.
Are the documents single-sided or double-sided? What is the paper size? Color? How will tabs, post-it notes, folder covers, etc., be handled?
Consider page and document breaks
Will you use physical or logical (unitization) breaks?
Physical breaking identifies new documents and pages based on a physical boundary, such as rubber band, staple, paper clip, or binder clip.
Logical (unitization) examines the document itself to determine the start and end of each document.
Will you use document break sheets (slip sheets) or "prep" as you go? Slip sheets may be inserted at the start of each folder, document, and attachment. Once scanned, LAW will recognize the slip sheet and create the appropriate document boundary. By choosing the

Item
prep-as-you-go method, the document boundary is removed. The document is scanned using hotkeys or functions on the keyboard. The document is reassembled accordingly.

Consider attachments

Will attachments (parent/children groups) be created? If yes, how will they be created? Are they determined by the smallest physical break?

Determine coding scheme

What will the numbering scheme be?

Will fields be coded at scan time or after scan time? Typically, the fields coded at scan time will be those where the value is the same for multiple records such as a Box or Folder.

Configure scanning options in CloudNine™ LAW

Select a scanner.

Configure scanning options.

💡 Turbo Import databases have all scanning functionality disabled. When creating a database, choose ED Loader enabled databases for scanning.

Using Barcode Break Sheets

Documents may be prepared for scanning using barcode break sheets. Break sheets are also sometimes called slip sheets, are sheets of paper inserted into the set of documents to be scanned. They are scanned along with source documents. Each sheet contains a barcode that identifies the page that follows is a new document, folder, or attachment. With additional configuration, the barcode values may be stored in an index field or used to number the documents and pages.

LAW comes with four pre-defined barcode break sheets. The pre-defined break sheets are available in the LAW installation folder. By default, this is the C:\Program Files (x86) \LAW50 directory.

Pre-defined break sheet files in the installation folder:

- Attach1.tif (Attachment Break)
- Break_Doc1.tif (Document Break #1)
- Break_Doc2.tif (Document Break #2)
- Break_Folder.tif (Folder Break)

Barcode break sheets may also be used to indicate document breaks when importing raw images, or to code multiple index fields. See the Importing Raw Images section for additional information.

To configure barcode settings

1. On the **Tools** menu, click **Options**, and then click the **Imaging** tab.
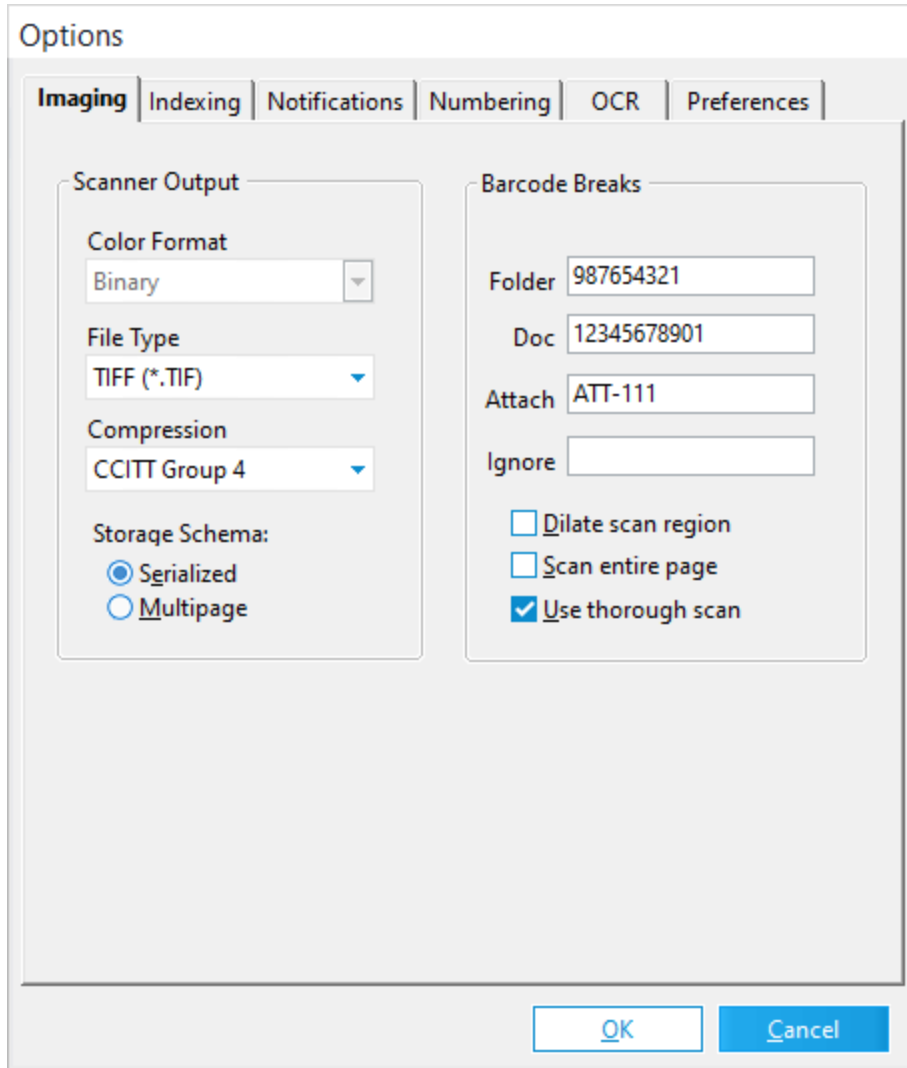
2. Configure the following imaging options as needed:

Option	Description
Folder	Determines the barcode value used to represent a folder break.
	If a barcode that matches this value is encountered while scanning, a new document is started in a new folder. LAW will increment the

Option	Description
	current folder name by one for the newly created folder's name. If the next logical folder does not exist, it is automatically created.
Doc	Determines the barcode value used to represent a document break.
	If a barcode that matches this value is encountered while scanning, a new document is started. To include multiple document break sheets, enter all possible values separated by semi-colons (;).
	Also see **Storing Barcode Break Sheet Values in a Field** below.
Attach	Determines the barcode value used to represent an attachment break. If a barcode that matches this value is encountered while scanning, a new attachment is created and attached to the previous document.
Ignore	Use this option to ignore and drop barcodes matching the specified value during scan time. Multiple values to ignore may be specified by separating each value with a semi-colon (;).
Dilate Scan Region	Dilates or widens the area tested for barcodes. This setting can help recognize poor barcodes with lines missing that may prevent recognition; however, its use may actually prevent recognition of otherwise recognizable barcodes. As such, it should be used with caution and only as a last resort when all other options have failed.
Scan Entire Page	Causes the entire page to be scanned for barcodes at scan time. This may slow scanner throughput due to the increased time required for barcode detection and should only be used if barcodes are located in various positions on the page.
	If this setting is disabled, only a portion of the page will be scanned for barcodes.
Use thorough scan	Increases the resolution of scanning for barcodes to improve recognition> Using this setting can help to recognize poor quality barcodes. This requires more time to scan but the extra time required can be offset because of the relatively small scan region.

Storing Barcode Break Sheet Values in a Field

You can use LAW to automatically store barcode break sheet values in a custom field for each document. To use this feature, barcode break sheets must be created for every document. In the Barcode Breaks section of the Imaging Options (see above), enter a **Doc** field with this syntax:

/p/f <prefix> <field>

where <prefix> is the prefix used within the barcode itself, and <field> is the name of a custom field in LAW where the rest of the barcode value should be stored. If spaces exist in the prefix or field, they must be enclosed in single quotes.

For example, if you specify "/p/f b BarcodeValue", then LAW will look for barcodes that start with "b" (the prefix you specified) and put the remainder of the barcode value in the LAW field named "BarcodeValue". For an actual barcode value containing "b23456789", LAW would put "23456789" in the "BarcodeValue" field corresponding to the document whose Barcode Break Sheet contained that value.

To extract barcodes

CloudNine™ LAW can scan all pages of the current document for any barcode values.

On the **Tools** menu, click **Barcodes**, and then click **Scan All Pages**.

All pages of the current image will be scanned, and any recognized barcodes will be saved to a delimited text file in the following structure:

- Value
- Page
- BarcodeNo

If no region is active, the entire page will be scanned. If a region has been created, only this area of every page will be scanned.

To view or modify the barcode scanning region

To view the barcode scanning region

1. Select an image.

2. On the **Tools** menu, click **Barcodes** and then click **Display Scan Region**.

    The region used for barcode detection is highlighted on the current image.

To modify the barcode scanning region

When you set the scanning region, you can modify the existing scan region or create a new one.

1. Select an image.

2. Modify the scan region as follows:

Option	Steps
To modify the current scan region.	• On the **Tools** menu, click **Barcodes** and then click **Set Scan Region**.
To create a new barcode scanning region.	• Hold the CTRL key down and draw a rectangle by dragging the mouse from one corner of the rectangle to the opposite with the left mouse button depressed.

⊟ **To quality control barcode breaks**

When preparing to use barcode breaks, checking the following items will help to make the scanning process go more smoothly:

Check paper, scanner settings, and barcode values

Item	Description
Paper	CloudNine recommends using a light colored paper, e.g., light yellow or light blue paper. Dark paper decreases the contrast between the bars in the barcode and the paper's background causing detection of the barcode to become more difficult. A Laser Jet printer should be used to create a sharper barcode font. Photocopies of barcodes may result in "fuzzy" barcodes, which can be difficult to read. Also, if the barcode sheets are too badly wrinkled, they may become unreadable as well.
Scanner contrast and brightness	Adjusting the contrast and/or brightness of the scanner may be required to produce a usable scan. If LAW appears to be detecting barcodes sporadically, this adjustment will likely resolve the problem. 1. On the **Scan** menu, click **Scanner Settings**. 2. Increase or decrease the contrast or brightness of the scanner. 3. Test the new settings. 4. Repeat as necessary to find the optimal setting for the scanner.
Scanner resolution (DPI)	The lower the DPI, the lower the quality of the scanned image. A scan resolution of less than 200 DPI can cause barcodes to be unreadable.
Expected barcode values	Verify that the value on the barcode matches the value registered in CloudNine™ LAW. On the **Tools** menu, click **Options** and then click the **Imaging** tab. • The value on the barcode must match the value in the **Doc** field to be considered an actual document break sheet.

Item	Description
	• If these values do not match, the barcode sheet will be imported as a normal page in a document.

Verify scan options

1. On the **Scan** menu, click **Scan Options**.

2. Verify the following options:

   - **Detect Barcode Breaks** should be checked.
   - **Single Page** should not be checked. If it is checked, each new page becomes its own document.
   - **Auto-Deskew** may need to be checked.
   - **Noise Removal** should not be checked. This feature may ruin the image of the barcode when enabled.

Verify scan region

1. Select an image.

2. On the **Tools** menu, click **Barcodes**, and then click **Display Scan Region**.

3. Compare the selected scan region to the actual position of barcodes on pages.

4. Modify the region as needed.

Check for conflicts in the scan region override settings

1. On the **Tools** menu, click **Options**, and then click the **Imaging** tab.

2. Check the following settings.

   - Consider using **Dilate scan region** if barcodes are not being recognized due to poor print quality.
   - Consider using **Scan entire page** if barcode location is inconsistent between pages.
   - Consider using **Use thorough scan** if barcodes are not being recognized due to poor print quality.

   Using all three of these settings will override the Scan Region configured in the previous step and cause the entire page to be scanned. Use only the settings that you need.

Verify that actual barcode readings match expected values

Run this test if a barcode image is already present. This test may also reveal an unexpected value of the barcode which could cause problems.

- On the **Tools** menu, click **Barcodes**, and then click **Detect Barcode**.

  The current document is scanned.

  The value of the barcode is displayed if it can be read and a value can be found.

Consider whether to split documents

If the scanner is able to scan all the barcodes but does not detect them then consider splitting the documents based on the barcode images.

- Right-click the image, select **Split Document** and then click **Barcode break sheets**.

Adjusting Scanner Settings

Scanner settings are those properties that control the operation of the scanner directly. Before you can configure scanner settings you must add a scanner. For more information on adding a scanner, see Selecting a Scanner.

To configure scanner settings

1. On the **Scan** menu, click **Scanner Settings**. The **Scanner Settings** dialog box appears. The availability of specific settings will vary, depending on the scanner model.
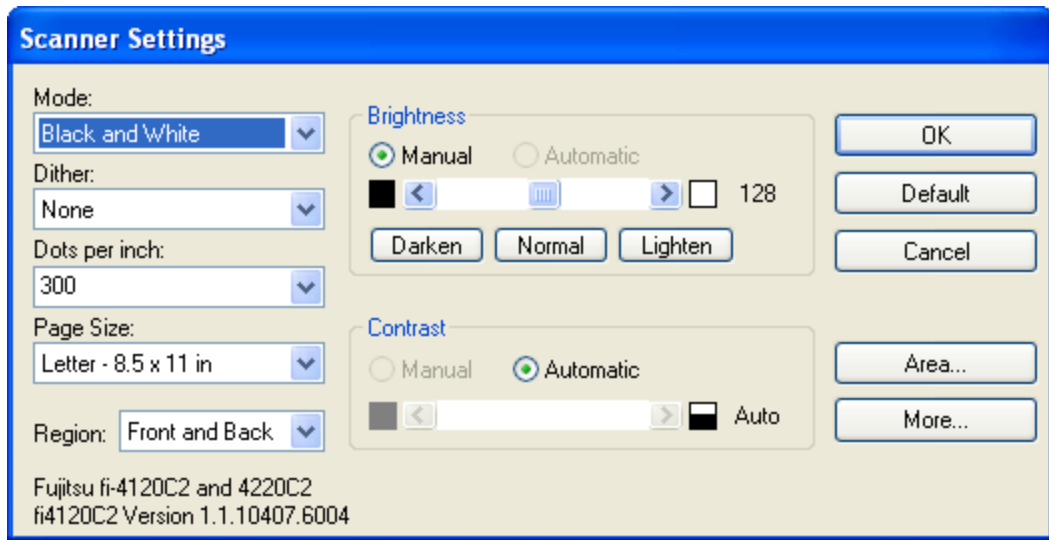
2. Configure scanning settings as needed. Some important settings are described as follows:

    - **Scan Area** - The scan area can be further adjusted by selecting the **Area** button. A **Scan Area** dialog will be displayed that allows users to fine-tune the scan area for the current page size. The scan area dialog allows users to set an X and Y offset for the page as well as a custom height and width. This custom area applies only to the current page size. The custom area for each page size is retained between sessions, so users will only have to customize a scan area once for each page size. Setting a custom scan area may be necessary with some scanner models that frequently exhibit a black border around scanned images. Because the black border is not even on all sides, it cannot be adequately removed with black-border removal and must be removed by adjusting the scan area.
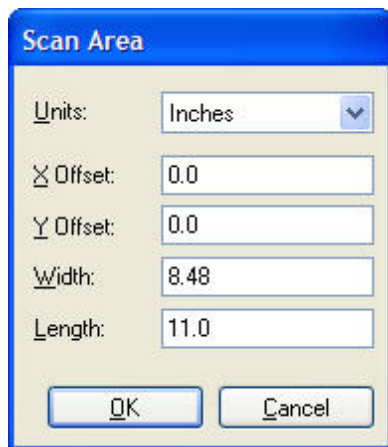
- **Scan brightness** - Scan brightness can be adjusted in the **Brightness** section of the Scanner **Settings** dialog box. Alternatively, the following shortcut keys may be used:

  - Press ALT+UP ARROW to increase brightness by 32 points.

  - Press ALT+DOWN ARROW to decrease brightness by 32 points.

  Pressing either of these hot keys will cause the scanner settings to pop up for visual inspection and fine-tuning of the new brightness. When the dialog appears, focus will be placed on the brightness setting so that it can be quickly adjusted by holding the CTRL key while pressing LEFT ARROW or RIGHT ARROW.

- **Scanner-specific settings** - To display any special settings for your particular scanner, select the **More** button from the **Scanner Settings** dialog. Available settings vary depending on the scanner.

Configuring Scan Options

In addition to the standard scanner settings, CloudNine™ LAW provides several scan options to help improve scanning efficiency.

The scan options can be toggled by selecting the desired option from the **Scan** > **Scan Options** menu. The scan options menu can also be displayed by right-clicking on any of the scanner settings displayed in the scanner status bar, located in the lower right-hand corner of main form.

| Scan Profile 1 | Letter Size - 8.5 x 11 in | 300 dpi | Simplex | OCR(Y) | Rotation(0) | Drop Blanks(N) | Single-Page(N) |
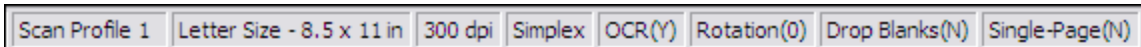
The scanner status bar

The scan settings displayed on the status bar are some of the most frequently used settings and can be toggled by double-clicking the desired setting.

```
  A4 - 210 x 297 mm
✓ Letter - 8.5 x 11 in          F7
  Legal - 8.5 x 14 in           F8
  Double Letter - 11 x 17 in    F9
✓ Simplex                       F10
  Duplex                        F11
  Flatbed                       F12
  Auto - Deskew
  Black - Border Removal
  Detect Barcode Breaks
  Drop Blank Pages
  Hole Removal
  Invert Pages                  ▶
  Noise Removal (Despeck)
✓ OCR All New Pages
  Scan Page Limit (None)...
  Single Pages
  Scan Rotation                 ▶
  Turnover Mode
  Configure Filters ...
```
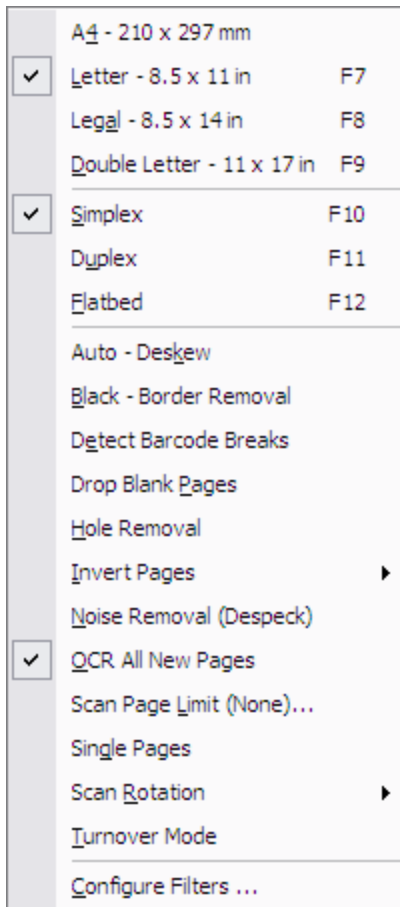
Scan menu options

The options available in the Scan menu are described as follows:

- **Page Size**

  The Page Size setting provides a quick alternative to selecting the page size from the Scanner Settings dialog. This option allows users to toggle between the four most popular page sizes: Letter (<F7>), Legal (<F8>), Double Letter (<F9>), and A4.

- **Scan Mode**

  The Scan Mode controls how the scanner will scan documents.

  Simplex is used to scan single-sided documents and Duplex is for double-sided documents.

  Flatbed is used to scan a page from the glass bed; although, if pages are in the document feeder, it defaults to Simplex and scans a single page from the feeder. If the scanner does not support duplex scanning, use the Turnover Mode option (see below) to scan double-sided documents.

- To select Simplex press F10.
- To select Duplex press F11.
- To select Flatbed press F12.

- **Auto-Deskew**

  The Auto-Deskew scan option will straighten documents as they are scanned. The deskew filter can also be applied to multiple documents during Batch Processing and to individual documents (see Page-level Cleanup).

- **Black-Border Removal**

  The Black-Border Removal scan option will remove black edges from all newly scanned images. This filter will only pick up even black edges. If the black edge is uneven or slanted down the page, it will not be dropped. These borders are a result of the scanner model being used and the scan area will have to be adjusted in order to remove them. The scan area can be adjusted from the Scanner Settings dialog. Black borders left on pages can prevent LAW from recognizing blank pages, so this filter should be selected if using the Drop Blank Pages scan option. The black-border removal filter can also be applied to multiple documents during Batch Processing.

- **Detect Barcode Breaks**

  The Detect Barcode Breaks setting allows users to scan multiple documents in a single batch. Barcode pages can be used to determine both document- and folder-level breaks while scanning. The settings for the break sheets can be specified from the Imaging tab of the Options form. Images with the default barcode settings can be found in the installation directory for CloudNine™ LAW. These images can be opened with any image viewer and printed if users need to prepare a scan job with break sheets. Light-colored paper is recommended when printing barcode sheets (e.g., white, light blue, light yellow, or light green). LAW relies on the contrast between the bars in the barcode and the background color of the paper for detecting the barcode value. Scanner brightness or contrast (Scan > Scanner Settings) may require adjustment if LAW is having a difficult time recognizing the barcodes. See Using Barcodes for more information about barcodes.

- **Drop Blank Pages**

  The Drop Blank Pages setting determines whether or not to disregard pages that have a very low percentage of text or graphics (possibly blank pages attached to a document). If this option is set, pages with very low pixel ratios will not be saved. If this option is not set, all pages scanned will be saved. This feature can be extremely useful as it allows users to combine both single- and double-sided documents in a single batch. Blank backsides of all single-sided documents will be dropped. The backsides of the double-sided documents containing text or images will be retained.

- **Hole Removal**

  The Hole Removal setting removes afterimages of standard size holes (1/4" - 5/16") left from scanning pages that were hole punched, and can be used to perform quality control on images batch processed for hole removal. Hole removal can be done for RAW Image and scanned documents, and documents imported in ED Loader and converted to TIFF before hole removal. The letters o and e and zeros, are ignored by the hole removal process.

You can also adjust the size of the image border size that will be scanned for hole removal.

There are two ways to configure the size of borders for hole removal on images:

- In the Scan Toolbar select the Hole Removal check box and then click Configure.

Or

- Open the Configure Scan Filters dialog box (Scan > Scan Options > Configure Filters.) Add Hole Removal to the Selected Filters list, select Hole Removal and then click Configure.

- **Invert Pages**

The Invert Pages setting allows users to invert (rotate 180 degrees) odd or even pages of a document. This feature is used for double-sided documents that are printed with opposite orientations on the front and back.

- **Noise Removal (Despeck)**

The Noise Removal setting allows users to apply a filter to reduce the amount of random dots and specks that appear on the scanned image. OCR results may improve if Noise Removal is performed on a document before converting it to text.

- **OCR All New Pages**

The OCR All New Pages setting determines whether or not all new pages being scanned will be flagged for OCR. LAW allows users to flag certain pages for OCR to help increase OCR speed and efficiency. Pages with graphs and tables or handwriting are not good OCR candidates and may negatively impact OCR performance. See the [Flagging Documents/Pages for OCR](#) section for information on flagging pages after they have been scanned.

- **Scan Rotation**

The Scan Rotation setting can be used to rotate pages as they are scanned. Images can be rotated 90, 180, or 270 degrees. Scanning documents in landscape mode may increase the scanner throughput and help prevent paper jams. If using this feature to scan landscape, the scanner must support double-letter page size in order to capture the full height of the document.

- **Single Pages**

The Single Pages setting instructs LAW to save all pages in a batch as one-page documents. This can be used to scan a large group of single-page documents in one batch, saving a great deal of time.

- **Turnover Mode**

The Turnover Mode setting can be used to scan double-sided documents without a duplex scanner. If this option is enabled, LAW will prompt to flip the document and continue scanning after the front side of a double-sided document has been scanned. LAW then rebuilds the document in the proper order.

📝 If this option is enabled, the "Detect Barcode Breaks" setting will be ignored

because the document must be flipped after the front side has been scanned.

- **Scan Page Limit**

  The Scan Page Limit feature can be used to specify a page limit for the number of pages scanned per document. This feature can be very useful for scanning checks or note cards, for example.

- **Configure Filters**

  This option allows advanced users to modify the default settings for the following filters:

  - Black Border Removal
  - Drop Blank Pages
  - Auto Deskew
  - Noise Removal
  - Hole Removal
  - Detect Barcode Breaks

These settings should only be modified if the default settings are not working or causing problems.

Configuring Imaging Options

Imaging options will control the format used to save images when scanning and the settings used for barcode break sheets. (See the Using Barcodes section for additional details.)
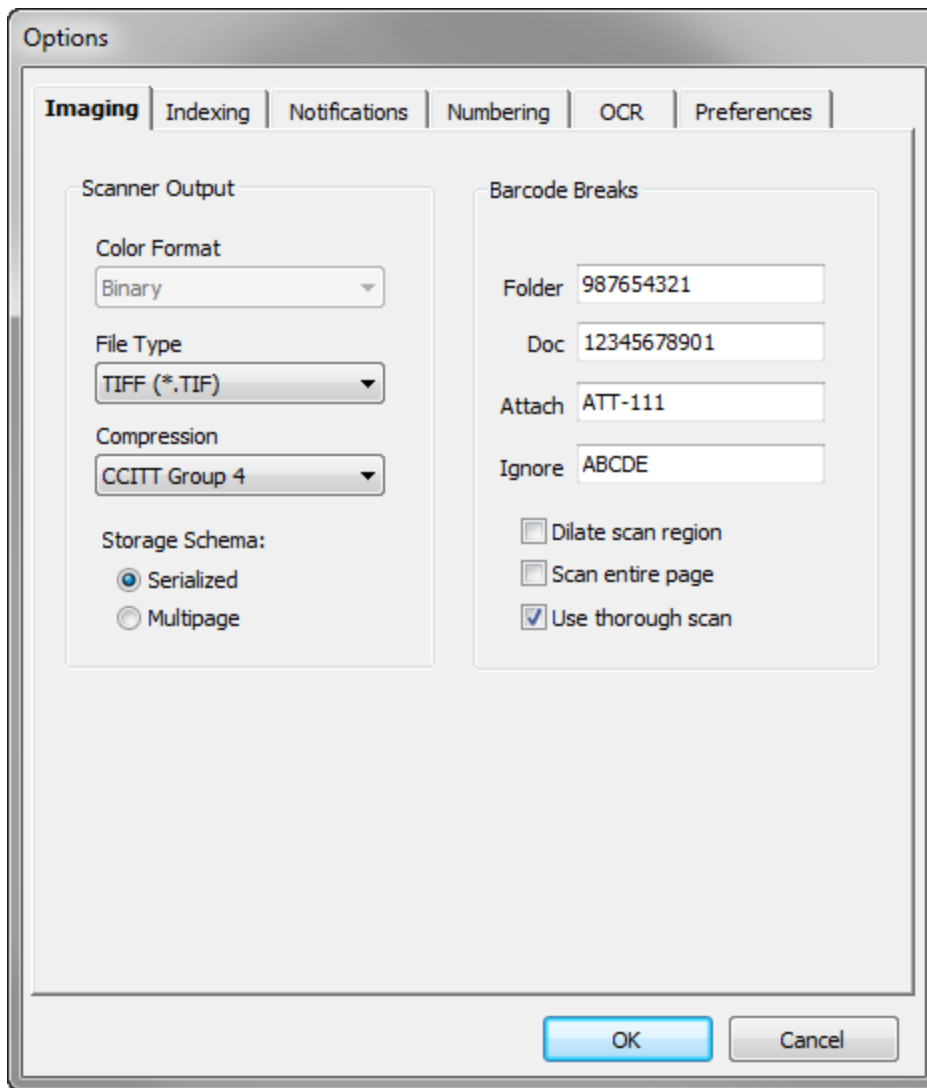
To configure imaging options

1. On the **Tools** menu, select **Options**, and then click **Imaging**.

2. Configure imaging options as needed:

    - **Scanner Output - Color Format**

    This setting is for display purposes only; it may not be modified from this form. This setting identifies the color format selected by the scanner and determines which file types are available. To change the color format displayed, users must change the color mode via Scanner Settings.

    - **File Type**

    The File Type setting determines what type of format, or packaging, is used to save newly scanned images. Common file types include Adobe (*.pdf), Bitmaps (*.bmp),

Calera (*.pda), Fax (*.dcx), JBIG (*.jbg), JPEG (*.jpg), PaintBrush (*.pcx), Portable Network Graphics (*.png), and TIFF (*.tif). The file types available are determined by the color format selected. For example, if Binary (Black & White) is the current color mode, JPEG is not available as a file type because it can only be used for True Color and 256-Level Grey images.

TIFF images (specifically CCITT Group 4) are accepted as the industry standard and are the recommended format for black & white images. Users can scan to PDF (a frequent request). However, certain features (e.g., endorsing images and OCR to a non-text format) will not be available to PDF images. If PDF images are required in the destination application, this conversion can be handled during the export process after the images have been endorsed and OCR'd by selecting the PDF Conversion export format or by choosing PDF as the Output Format (see Options tab).

- **Compression**

  The Compression setting determines the type of compression used for the specified file type and is specifically determined by the file type and color format. CCITT Group 4 is the common compression for a TIFF image, although this compression is not available for non-bitonal images. If scanning color or grayscale images, we recommend Sequential JPEG as the compression type (TIFF as the File Type). It offers excellent compression for both color and grayscale images and can be used with multi-page images.

- **Storage Schema**

  The Storage Schema setting determines how scanned documents are stored.

  The Serialized option stores images as single-page images. For example, using this option, scanning a 5 page document stores each page as a separate file. The files are stored in the $Image Archive folder located in the root case folder.

  The Multipage option stores images as multiple pages in one file. For example, using this option, scanning a 5-page document stores one file with 5 pages. Files are stored within the case folder structure displayed in the folder view.

  You can move pages in the thumbnails display.

- **Barcode Breaks**

  Barcodes are used in scanning to establish barcode break settings. These settings allow users to specify custom values for barcode sheets that determine both document and folder breaks and control other aspects of the recognition process.

  - To use these settings, the **Detect Barcode Breaks** scan option must be enabled.

  See Using Barcodes for more information.

Using the Scan Toolbar
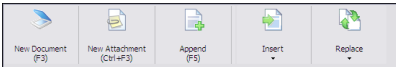
The Scan Toolbar provides quick access to all scan-related functions and settings. The Scan Toolbar also allows you to create scan profiles that can be used to quickly change between predefined settings for different document types, such as those for color photos, duplex documents, or single-sided black and white documents. All available scan settings can be saved with a scan profile.

Until the first scan profile is created, all scan settings will be saved to the "<Default>" scan profile. This profile will always exist and cannot be deleted. After one or more profiles are created, the designated scan profile will be stored at the case level, allowing you to retain case- or customer-specific scan settings. Changing cases will automatically restore the scan profile that was last used in the case.

Scan profiles are specific to a particular scanner model due to differences in the settings available for each scanner, for example, color modes, page size, and resolution. So although scan profiles can be shared between users if desired, they can only be shared by users on workstations with the same scanner model. A user or workstation with one scanner model will not be able to see shared profiles for a user or workstation with a different scanner model.
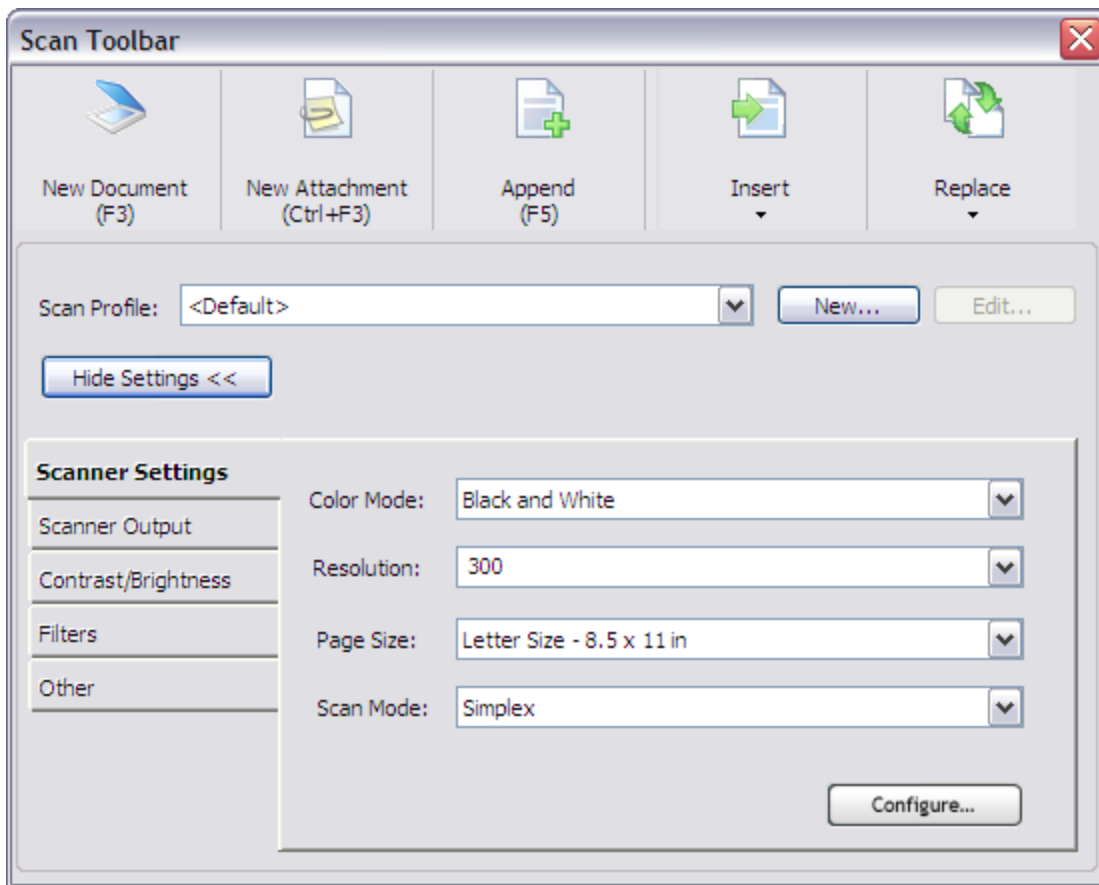
Scan Toolbar features

Feature	Description
Task Bar	• **New Document** - Opens the Scan New dialog box for scanning new documents. • **New Attachment** - Manually adds the new document as an attachment to the last document in the current folder. • **Append** - Adds the pages to the end of the currently selected document. • **Insert** - inserts pages or entire document • **Replace** - replaces pages or entire document For more information about scanning new documents, attachments or appending pages, see Scanning. For more information about inserting pages and documents, see Inserting Documents and Pages.

Feature	Description
Scan Profile	• **Scan Profile list** - The existing scan profiles for the case. The selected scan profile determines the current scan settings. • **New button** - Opens the New Profile dialog box. • **Edit button** - Opens the Edit Profile dialog box.
Show Settings button	Expands the Scan Toolbar dialog box to display the scan settings tabs.
Hide Settings button	Hides the scan settings tabs in the Scan Toolbar dialog box.
Scanner Settings tab 	• **Color Mode** - The Color Mode setting determines the color format to use when scanning documents. For example, Black and White or 24-bit color. • **Resolution** - The Resolution setting determines the dots per inch. • **Page Size** - The Page Size setting provides a quick alternative to selecting the page size from the Scanner Settings dialog. This option allows users to toggle between the four most popular page sizes: Letter (<F7>), Legal (<F8>), Double Letter (<F9>), and A4. • **Scan Mode** - The Scan Mode controls how the scanner will scan documents. Simplex is used to scan single-sided documents and Duplex is for double-sided documents. Flatbed is used to scan a page from the glass bed; although, if pages are in the document feeder, it defaults to Simplex and scans a single page from the feeder. If the scanner does not support duplex scanning, use the Turnover Mode option on the Other tab to scan double-sided documents. • **Advanced** - Opens the Scanner Settings dialog box. For more information about these settings, see Adjusting Scanner Settings and Configuring Scan Options.
Scanner Output tab	• **File Type** - The File Type setting determines what type of format, or packaging, is used to save newly scanned images. Common file types include Adobe (*.pdf), Bitmaps (*.bmp), Calera (*.pda), Fax (*.dcx), JBIG (*.jbg), JPEG (*.jpg), PaintBrush (*.pcx), Portable Network Graphics (*.png), and TIFF (*.tif). The file types available are determined

Feature	Description
	by the color format selected. For example, if Binary (Black & White) is the current color mode, JPEG is not available as a file type because it can only be used for True Color and 256-Level Grey images.

TIFF images (specifically CCITT Group 4) are accepted as the industry standard and are the recommended format for black & white images. Users can scan to PDF (a frequent request). However, certain features (e.g., endorsing images and OCR to a non-text format) will not be available to PDF images. If PDF images are required in the destination application, this conversion can be handled during the export process after the images have been endorsed and OCR'd by selecting the PDF Conversion export format or by choosing PDF as the Output Format (see Options tab).

- **Compression** - The Compression setting determines the type of compression used for the specified file type and is specifically determined by the file type and color format. CCITT Group 4 is the common compression for a TIFF image, although this compression is not available for non-bitonal images. If scanning color or grayscale images, we recommend Sequential JPEG as the compression type (TIFF as the File Type). It offers excellent compression for both color and grayscale images and can be used with multi-page images.

- **Storage Schema** - The Storage Schema setting determines how scanned documents are stored. The Serialized option stores images as single-page images. For example, scanning a 5 page document stores each page as a separate file. The files are stored in the $Image Archive folder located in the root case folder. The Multipage option stores images as multiple pages in one file. For example, scanning the same 5-page document stores one file with 5 pages. The files are stored within the case folder structure displayed in the folder view.

Note that records scanned using the Serialized Storage Schema can be moved in the thumbnails display.

- **Rotation** - The Rotation setting can be used to rotate pages as they are scanned. Images can be rotated 90, 180, or 270 degrees. Scanning documents in landscape mode may increase the scanner throughput and help prevent paper jams. If using this feature to scan landscape, the scanner

Feature	Description
	must support double-letter page size in order to capture the full height of the document. For more information about these settings, see Configuring Imaging Options.
Contrast/Brightness tab 	• **Brightness** - The Brightness setting determines the brightness value applied to the scanned documents. • **Contrast** - The Contrast setting determines the optical density value applied to the scanned documents. For more information about these settings, see Adjusting Scanner Settings.
Filters tab 	• **Auto Deskew** - The Auto-Deskew scan option will straighten documents as they are scanned. The deskew filter can also be applied to multiple documents during Batch Processing and to individual documents (see Page-level Cleanup). • **Black Border Removal** - The Black-Border Removal scan option will remove black edges from all newly scanned images. This filter will only pick up even black edges. If the black edge is uneven or slanted down the page, it will not be dropped. These borders are a result of the scanner model being used and the scan area will have to be adjusted in order to remove them. The scan area can be adjusted from the Scanner Settings dialog. Black borders left on pages can prevent LAW from recognizing blank pages, so this filter should be selected if using the Drop Blank Pages scan option. The black-border removal filter can also be applied to multiple documents during Batch Processing. • **Detect Barcode Breaks** - The Detect Barcode Breaks setting allows users to scan multiple documents in a single batch. Barcode pages can be used to determine both document- and folder-level breaks while scanning. The settings for the break sheets can be specified from the Imaging tab of the Options form. Images with the default barcode settings can be found in the installation directory

Feature	Description
	for CloudNine™ LAW. These images can be opened with any image viewer and printed if users need to prepare a scan job with break sheets. Light-colored paper is recommended when printing barcode sheets (e.g., white, light blue, light yellow, or light green). LAW relies on the contrast between the bars in the barcode and the background color of the paper for detecting the barcode value. Scanner brightness or contrast (Scan > Scanner Settings) may require adjustment if LAW is having a difficult time recognizing the barcodes. See Using Barcodes for more information about barcodes. • **Drop Blank Pages** - The Drop Blank Pages setting determines whether or not to disregard pages that have a very low percentage of text or graphics (possibly blank pages attached to a document). If this option is set, pages with very low pixel ratios will not be saved. If this option is not set, all pages scanned will be saved. This feature can be extremely useful as it allows users to combine both single- and double-sided documents in a single batch. Blank backsides of all single-sided documents will be dropped. The backsides of the double-sided documents containing text or images will be retained. • **Hole Removal** - The Hole Removal setting removes afterimages of standard size holes (1/4" - 5/16") left from scanning pages that were hole punched, and can be used to perform quality control on images batch processed for hole removal. Hole removal can be done for RAW Image and scanned documents, and documents imported in ED Loader and converted to TIFF before hole removal. The letters o and e and zeros, are ignored by the hole removal process. There are two ways to configure the size of borders for hole removal on images: • In the Scan Toolbar select the Hole Removal check box and then click Configure. Or • Open the Configure Scan Filters dialog box (Scan > Scan Options > Configure Filters.) Add Hole Removal to the Selected Filters list, select Hole Removal and then click Configure. • **Noise Removal** - The Noise Removal setting allows users to apply a filter to reduce the amount of

Feature	Description
	random dots and specks that appear on the scanned image. OCR results may improve if Noise Removal is performed on a document before converting it to text. • **Configure** - This option allows advanced users to modify the default settings for the filters. To modify the settings for a filter, on the Filters tab, click the filter name, and then click the Configure button. For more information about these settings see, [Configuring Scan Options](#).
Other tab 	• **Invert Pages** - The Invert Pages setting allows users to invert (rotate 180 degrees) odd or even pages of a document. This feature is used for double-sided documents that are printed with opposite orientations on the front and back. • **Scan Page Limit** - The Scan Page Limit feature can be used to specify a page limit for the number of pages scanned per document. This feature can be very useful for scanning checks or note cards, for example. • **OCR All New Pages** - The OCR All New Pages setting determines whether or not all new pages being scanned will be flagged for OCR. LAW allows users to flag certain pages for OCR to help increase OCR speed and efficiency. Pages with graphs and tables or handwriting are not good OCR candidates and may negatively impact OCR performance. See the [Flagging Documents/Pages for OCR](#) section for information on flagging pages after they have been scanned. • **Single Pages** - The Single Pages setting instructs LAW to save all pages in a batch as one-page documents. This can be used to scan a large group of single-page documents in one batch, saving a great deal of time. • **Turnover Mode** - The Turnover Mode setting can be used to scan double-sided documents without a duplex scanner. If this option is enabled, LAW will prompt to flip the document and continue scanning after the front side of a double-sided document has been scanned. LAW then rebuilds the document in the proper order.
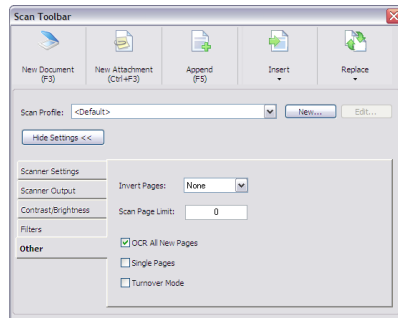
Feature	Description
	If this option is enabled, the "Detect Barcode Breaks" setting will be ignored because the document must be flipped after the front side has been scanned.
	For more information about these settings see, Configuring Scan Options.

To open the Scan Toolbar

There are two ways to open the Scan Toolbar dialog box:

- On the **Scan** menu, click **Scan Toolbar**.
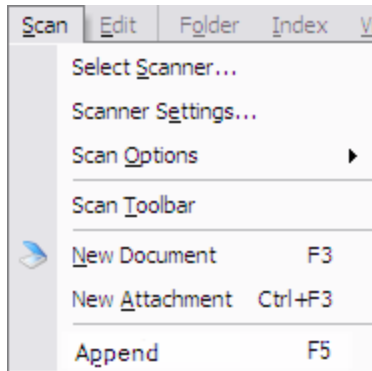
OR

- Double-click the scan profile name in the scanner status bar located at the bottom of the main LAW application window.

Note that if a scan profile has not been created the profile option is marked as <Default>. This is shown in the following graphic:
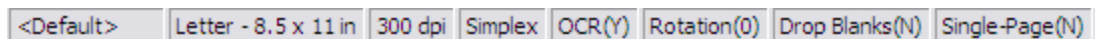
If a custom scan profile is loaded, it is shown in place of <Default>. In the following graphic a profile named Scan Profile 1 is loaded.
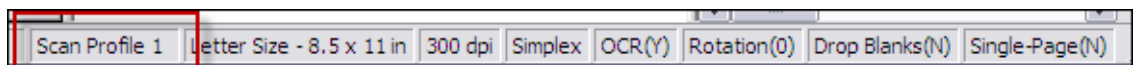
To create a scan profile

1. On the **Scan** menu, click **Scan Toolbar**.

   Clicking **Scan Toolbar** opens the **Scan Toolbar** dialog box.
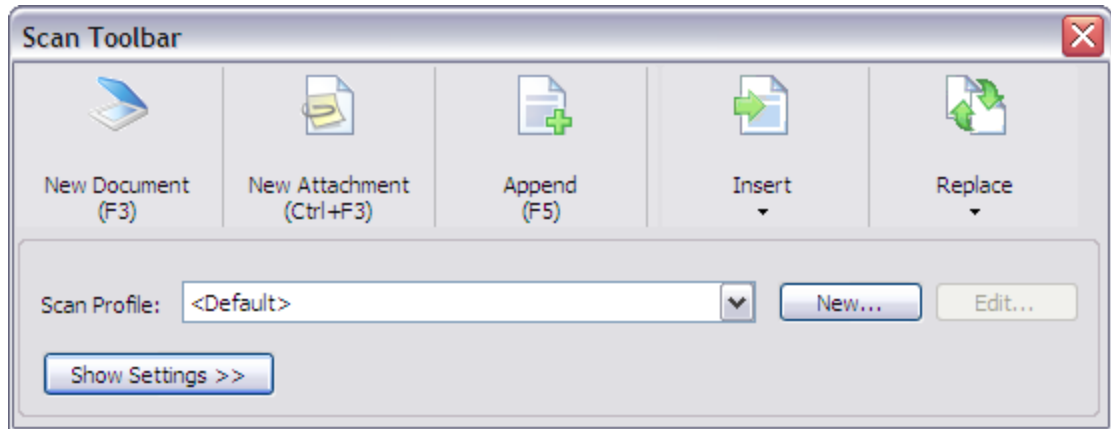
2. Click the **New** button.

   Clicking the **New** button opens the New Profile dialog box.
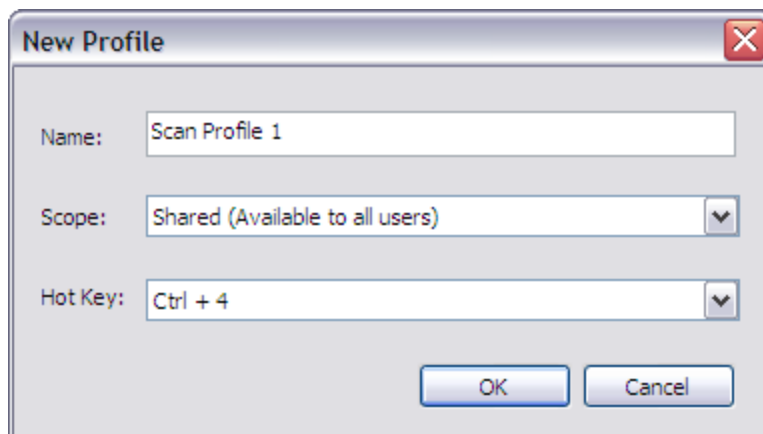
3. In the **Name** field, type the scan profile name.

4. In the **Scope** list, click one of the following:

   - **Shared (Available to all users)**
   - **Local (Available to only you)**

5. If you want to assign a keyboard shortcut to the scan profile, in the **Hot Key** list, click one of the available keyboard shortcuts.

   When a keyboard shortcut is added to a scan profile, the shortcut is no longer available for selection.

6. Click **OK**.

   Clicking **OK** creates the scan profile and closes the New Profile dialog box.

7. In the **Scan Toolbar** dialog box, click the **Show Settings** button.

   Clicking the **Show Settings** button expands the **Scan Toolbar** dialog box to display all the scan settings.
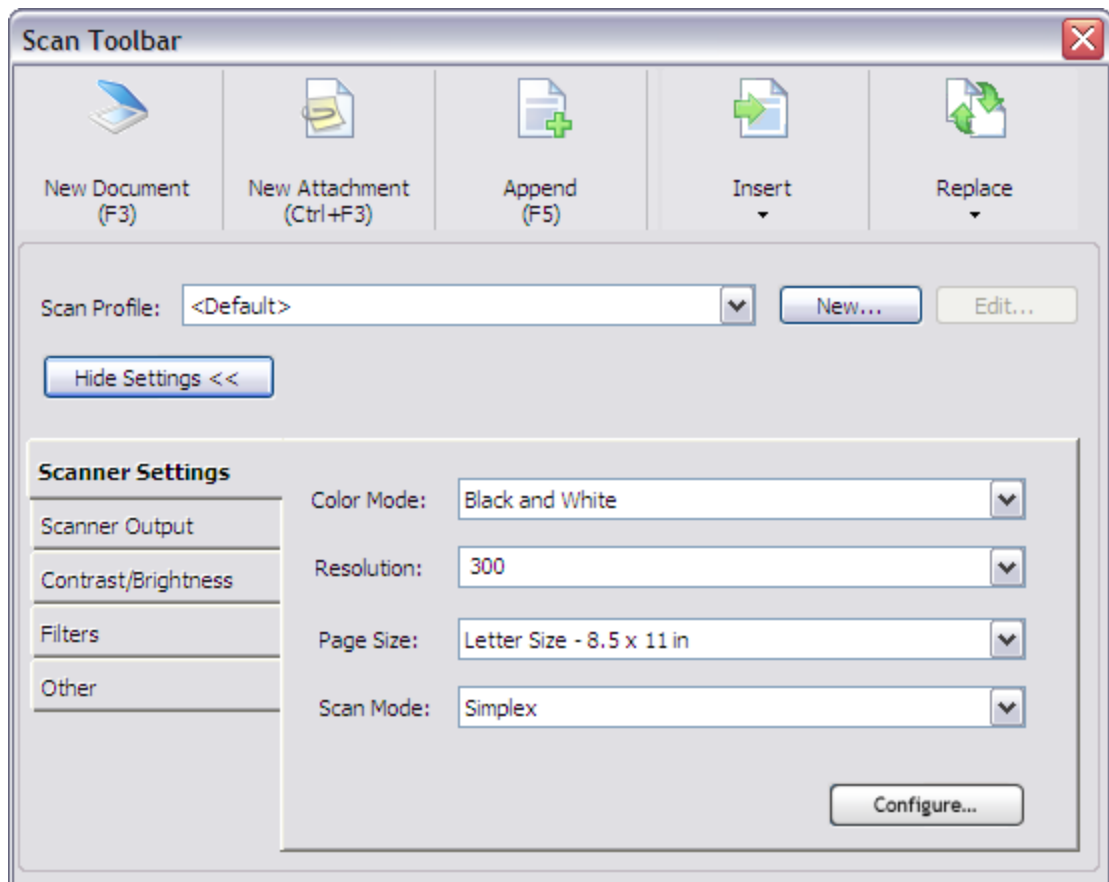
8. Define the scan profile settings.

   The scan profile settings are automatically saved when the **Scan Toolbar** is closed or another scan profile is selected in the **Scan Profile** list.

⊟ **To edit a scan profile**

The Default and custom profiles can be edited, but the Default profile name, scope, and shortcut key settings cannot be modified.
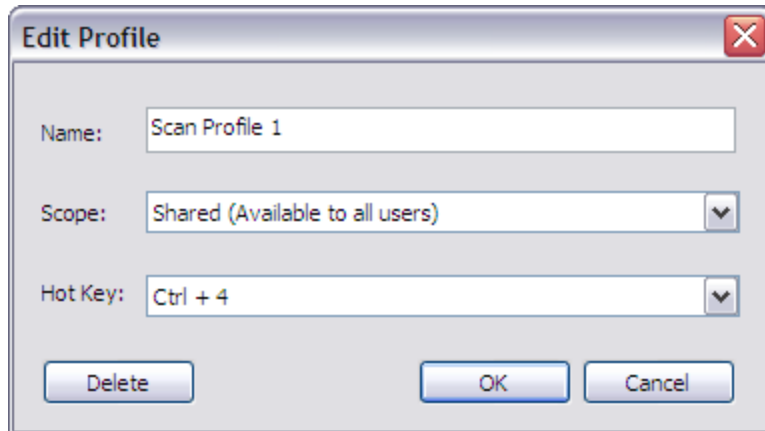
1. On the **Scan** menu, click **Scan Toolbar**.

   Clicking **Scan Toolbar** opens the **Scan Toolbar** dialog box.

2. In the **Scan Profile** list, click the profile you want to edit.

3. If you want to edit a profile's name, scope, or shortcut key, in the In the Scan Profile list, click the **Edit** button.

Clicking the **Edit** button opens the **Edit Profile** dialog box.

4. Make the applicable edits, and then click **OK**.

5. In the **Scan Toolbar** dialog box, modify the applicable scan settings.

The scan profile settings are automatically saved when the **Scan Toolbar** is closed or another scan profile is selected in the **Scan Profile** list.

⊟ **To delete a scan profile**

Note the following when deleting scan profiles:

*   A local profile can only be deleted by the user who created it.
*   A shared profile can be deleted by any user. Deleting a shared profile deletes it for all users.

1. On the **Scan** menu, click **Scan Toolbar**.

Clicking **Scan Toolbar** opens the **Scan Toolbar** dialog box.

2. In the **Scan Profile** list, click the profile you want to delete.

3. Click the **Edit** button.

Clicking the **Edit** button opens the **Edit Profile** dialog box.
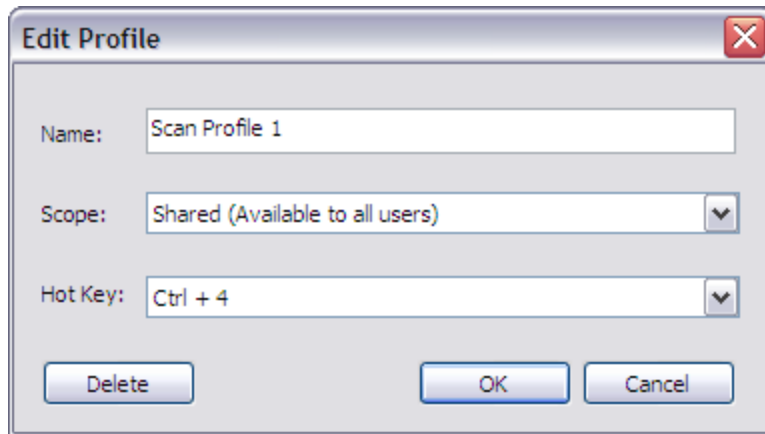
4. Click the **Delete** button, and then click **OK**.

    The **Delete Profile** dialog box opens.
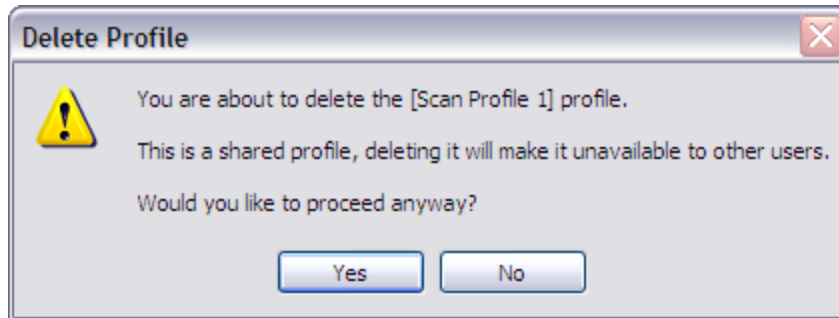
5. Click **Yes**.

    The profile is deleted.

Scanning

After you have selected and configured your scanner you are ready to begin scanning. All newly scanned documents are saved in the currently selected folder. Be sure to change the folder selection as needed.

⊟ **To add documents**

1. From the main window, open a folder.

2. On the **Scan** menu, click **New Document**.

    Or

- Press F3.

The **Scan New** dialog box opens. If this is the first page in the case then the **Starting Page ID** is blank, otherwise the next available Page ID is provided.
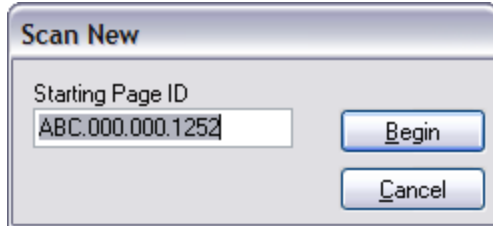
3. Add or edit the starting page ID and then click **Begin**.

    All newly scanned documents are added to the end of the folder.

⊟ **To resume scanning after scanner is empty**

To continue a scan batch using a delay-enabled scanner

If scanning from the document feeder, CloudNine™ LAW scans until the feeder is empty. Some scanner models have a delay option that allows users to insert more pages after the feeder is empty and then to continue scanning in the same batch. This is helpful if scanning large documents that exceed the capacity of the feeder or multiple documents separated by barcode document break sheets.

- Consult your scanner documentation for information on using its delay feature.

To continue a scan batch using a scanner without a delay feature

1. On the **Tools** menu, click **Options**.

2. Click the **Preferences** tab.

3. Select **Prompt to continue scanning when feeder is empty**.

    You will be prompted to insert more pages when the feeder is empty.

⊟ **To add attachments**

You can add attachments during or after scanning.

To add an attachment manually

- On the **Scan** menu, select **New Attachment**.

Or

- Press CTRL+F3.

  The new document is added as an attachment to the last document in the current folder.

Attachments cannot be added at scan time to intermediate documents in a folder. If documents have been scanned out of order, you must:

1. Scan the attachment as a normal document, where it will be place at the end of the folder.

2. Move it behind the appropriate parent document and then manually attach it.
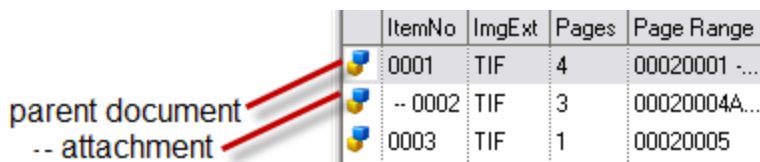
   For more information on attaching existing documents, see the [Working with Attachments](#) section.

To scan documents as attachments using break sheets

You use an *attachment barcode break sheet* during scanning to designate a document as an attachment. An attachment barcode break sheet is a special type of barcode break sheet that signifies that the document that follows is an attachment.

Note the following facts when using barcode break sheets:

- If using barcode break sheets to scan multiple documents, each attachments must be preceded by an attachment break sheet.
- The break sheet for attachments is named `attach1.tif` and can be found in the installation directory for CloudNine™ LAW.
- A shortcut to this file (Attachment Break #1) can be found in the Break Sheets subfolder in the LAW program group.
- Documents preceded by an attachment break sheet will always be attached to the previous parent document. Therefore, to scan a document with three attachments, a standard document break sheet must precede the parent, and an attachment break sheet must precede each of the three attachments.
- After you scan an attachment, you can check that the attachment was itemized as an attachment by looking at the item number of the document. Attached documents appear indented in the document list to indicate that they are attached to the previous document. For example, in the following figure, item number -- `0002` is an attachment of item number `0001`.

parent document
-- attachment

To insert documents after scan time

You can insert document that were missed at scan time. This feature is very important because, unless documents are specified by a query, the scan order determines the order of all processing functions, such as batch processing and exporting. The insert document function can be used to insert multiple documents if the "Detect Barcode Breaks" setting is enabled and the pages are separated by barcode break sheets.

1. On the **Edit** menu, click **Insert**.

2. Click one of the following:
   - **Scanned Document**
   - **New Page(s)**
   - **Existing Page(s)** and then follow the prompts to select one or more existing images to insert.

   The inserted document will be placed above the currently selected document in the current folder.

   If multiple documents are selected, they will be imported in alphabetical order by filename. Also, the Insert Pages function works the same as the Append Pages in that it disables checks for barcode break sheets because it is designed to insert pages into the current document.

To append pages

You can add one or more pages to the end of the currently selected document.

1. Select a document to which you want to add pages.

2. On the **Scan** menu click **Append**.

   Or

   - Press F5.

   The new page(s) are added to the end of the selected document.

   The **Append Pages** function is only intended to add pages to a single document and is not intended for batch scanning. Append Pages will not check for barcode break sheets, even if **Detect Barcode Breaks** is activated.

If using break sheets, use the **Prompt to continue scanning...** setting if you want to continue adding pages to the current batch until it is complete. Otherwise, users must manually ensure that document integrity is maintained every time that a batch is broken down so that it fits into the auto-feeder.

⊟ **To replace pages and documents**

You can replace pages within a document or replace an entire document.

To replace pages

1. Select a document.

2. On the **Edit** menu, click **Replace**, and then click **Page(s)**.

    Or

    • Press F6.

    The new pages will replace the current page forward for as many new pages are scanned.

To replace an entire document

1. Select a document.

2. On the **Edit** menu, click **Replace**, and then click **Document**.

    Or

    • Press CTRL+F6.

    If replacing pages, both replace pages and document work the same as the append and insert page functions, disabling the detection of barcode breaks.

⊟ **To replace documents with file images**

1. Select a document.

2. On the **Edit** menu, click **Replace**, and then click **Image from File(s)**.

    The entire document is replaced by the image file. Only one existing image may be selected when using this feature.

Importing from Other Sources

LAW supports options for importing into a case: existing case files, load files in a variety of formats, raw images, and replacement images.

Importing Cases and Load Files

You can import materials from existing CloudNine™ LAW cases and from load files generated by applications.

⚠ Turbo Import cases are not eligible for importing (dii or opt) load files.

⚠ Choose ED Loader enabled databases for case to case imports. Case to case importing is disabled for Turbo Import cases.

When the import completes the following conditions apply:

- All fields in the source case will be automatically created if they do not already exist.
- The path structure for the existing case will be re-created in the current case relative to the current folder.
- The image and native records, text, and index information from the source case will be copied into the current case. There is no danger of losing the data associated with the source case.
- If single-page images exist with no document breaks defined, then either a load file must be created in one of the supported formats or document boundaries must be created after they have been imported into the case.
- Imported images are stored in the same format as the original images: single-page will remain single-page and multi-page will remain multi-page.
- With the exception of Z-Print imports, all images imported via load file will be stored in the `<case root>\$Image Archive` folder.

⊟ **To import a CloudNine™ LAW case**

You can import an existing case created in LAW versions 4 or 5 into a new or existing case.

1. With a case open, on the **File** menu, click **Import**, and then click **LAW Case**.

2. Browse to the case file and then click **Open**.

📝 You can import a LAW case that is not in the case list by selecting <Browse> and browsing to the case. When selected, the case is temporarily added to the case list.

3. If you want to import documents within a case by tag, select **Filter By Tag** and then select the tag from the drop down menu. Select **Include Parent/attachments** if you want to include the parent document and attachments of tagged documents within the case.

4. Click **Import**.

   The **LAW Case Import** dialog appears.

   LAW Case Import

   Importing document 4 of 72

   Pages: 678

   Elapsed: 00:00:32   Est. Time Left: 00:12:16   Cancel
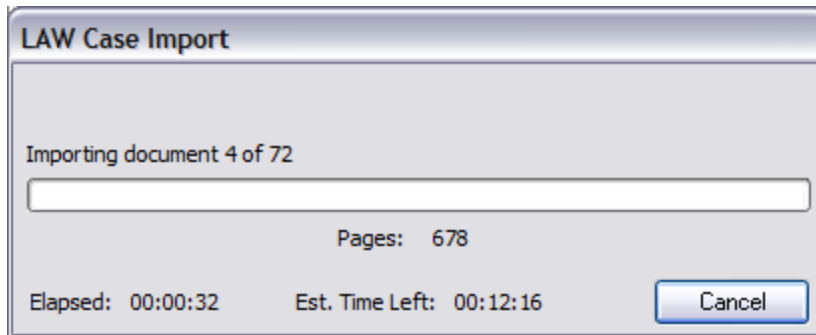
   If errors occur during import, the Import Status dialog appears with an error message. If this occurs, click **Yes** to open the Log Viewer and review the error log.

   Import Status

   Records Imported: 15

   The import process was completed with errors.
   See '\\7790A\Law50\Cases\DPB01\$Logs\Import\2010-10-08_09'47'31'AM_LNGSEAL147790A.csv' for details.

   Would you like to view the error log now?

   Yes   No
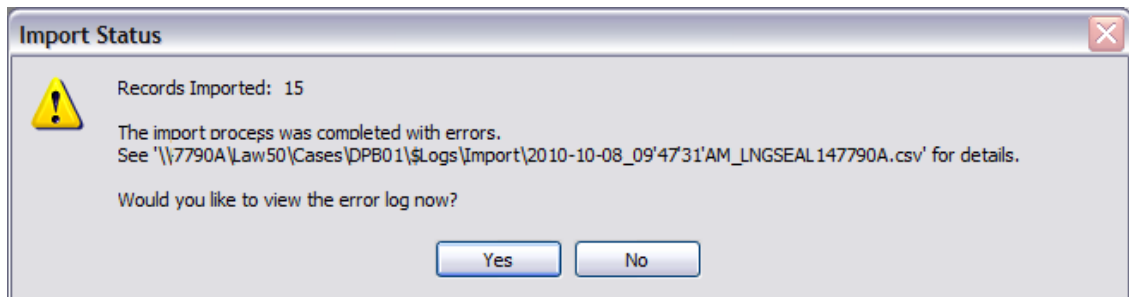
5. After import you can do one of the following:

   - If everything was imported successfully and the source case is no longer needed, you can continue working in the target case. The source case may be marked inactive or if necessary, deleted with the option to backup the case before deletion. For more information on deleting cases, see Working with Existing Cases.

   - If errors or warnings are generated during import you are recommended to open the Log Viewer. Under the Import tab, you can review issues with the import session. For more information on reviewing errors after import, see Reviewing Errors.

   Note the following considerations when importing LAW case files:

   - The DupStatus, _DupID, and _DupMethod fields are cleared for EDD records being imported into a new LAW case.

   - User-defined page-level fields existing in the source case are not imported into the target case.

- Session databases are not copied from the source case folder to the target case folder. If you try to view logs in the Session Viewer in the target case that were generated by the source case, a database not found message results. You may still browse to the location of the databases from within the target case using the Session Viewer. Also, the logs associated with the source case are still viewable if you open the source case.

⊟ **To import a Doculex Imagebase**

The Doculex import allows users to import images from a Doculex imagebase. A Doculex imagebase does not contain any index information so only page numbering will apply to the imported documents.

1. On the **File** menu, click **Import**, and then click **Load File**.

2. Browse to the load file (Doculex3.dbf or Doculex5.dbf)) and then click **Open**.

   The path structure for the images will be re-created relative to the current folder in CloudNine™ LAW. If importing multiple imagebases, creation of a separate folder for each volume is recommended as the folder structure will frequently be a sequential numeric format (e.g., \001, \002, etc.). If a separate folder for each volume is not created, images from different volumes in the same folder may occur. While this will not affect CloudNine™ LAW, it can be confusing and interfere with processing order.

   The Doculex import does not require the documents breaks to be defined in the database. Existing breaks can be overwritten with new ones defined by a range file. A range file is simply a delimited text file with two fields, BegDoc# and EndDoc#, which specify the ranges to use when rebuilding the documents. If no range file is specified, the document breaks defined in the Doculex imagebase are used.

⊟ **To import an Opticon load file**

1. On the **File** menu, click **Import**, and then click **Load File**.

2. Browse to the load file (*.opt or *.log)) and then click **Open**.

   Text files that match the image file names found in the source directory are imported as OCR text.

   If the Opticon load file has separate image and text folders, and the image and text folders are located at the same level as the load file or one level lower and the image files and text file names match except for the file extension, both folders will automatically be imported with the load file. The text file folder must be named "text". If the text folder is not named "text" or if the text files are not detected for images in the load file, the **Select Text Path** dialog opens.

3. Navigate to and click the text file folder, and then click the **Accept** button.

    Clicking the **Accept** button closes the **Select Text Path** dialog box and the import finishes processing.

4. If there is no text files associated with the images, click **Cancel**.

    Clicking **Cancel** closes the **Select Text Path** dialog box and the import finishes processing without capturing any text files.

⊟ To import a Summation load file

The Summation import allows users to import images with document breaks defined by a Summation load file.

1. On the **File** menu, click **Import**, and then click **Load File**.
2. Browse to the load file (*.dii)) and then click **Open**.
3. If prompted to include fields, to configure import of user-defined fields, click **Yes** and then specify fields to include and destination names to use, and then click **OK**.
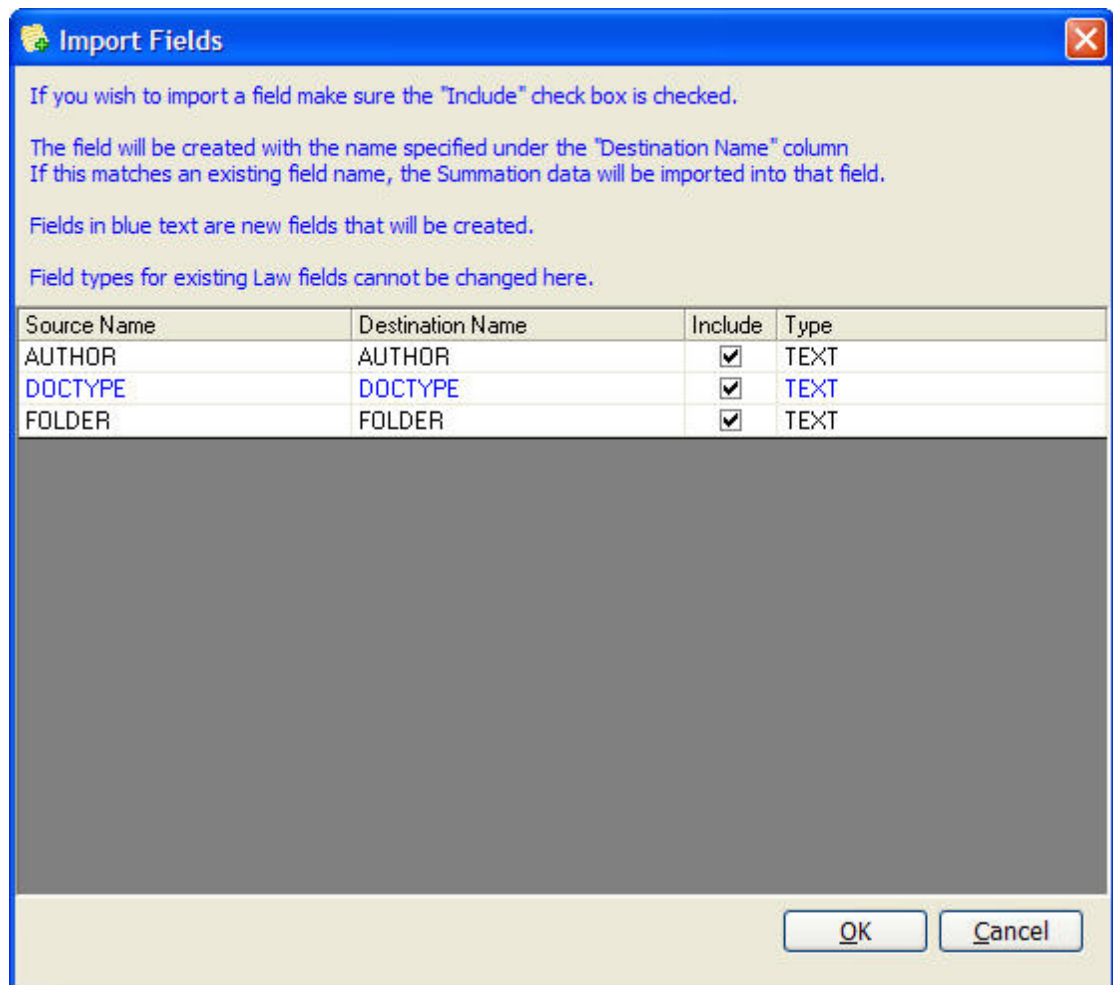
When configuring options in the **Import Fields** dialog box, note the following:

- The **Source Name** column will list the fields contained within the load file.
- Fields listed in blue are those that do not already exist in the case.
- The **Destination Name** column displays the name of the field that will be created or the existing field name in the case.
- Both new and existing field names may be changed by double-clicking in the cell and typing a new name.
- To exclude a field, clear the check box in the **Include** column in the proper row.
- The **Type** field displays the field type for each field. The type can be changed for new fields only.
- Any text and image files referenced in the load file will be copied to their respective folders in the case. If you are importing an XML load file, any native files referenced in the load file will also be copied to their respective folders in the case. Native files are only imported if the load file is an XML load file.

- If the **Link to source files in place when importing load files** check box is selected on the **Preferences** tab in the **Options** dialog box (**Tools** menu > **Options**), the native, image, and text files associated with the native and image files are not copied into the case. Instead, LAW generates a link to the native, image, and text files in their current location. The **TextFilePath** field is populated with the full path to the linked text file associated with the native and image files.

The only exception to this is if there are multiple text files associated with a document, such as page level text files. If there are multiple text files associated with a document, the text files will be merged and copied into the LAW case into one of the following locations:

- If the document contains an image, the text will be assumed to be OCR text, so the merged text file will be copied to the OCR location.

- If the document does not contain an image, the text will be assumed to be extracted text, do the merged text file will be copied to the extracted text location.

The file is imported.

Note the following facts about importing Summation load files:

- The folder structure will be re-created relative to the current folder. Depending on the path notation in the load file, users may have to select the image path for the images.

- If the load file uses CD volume notation (@V), LAW scans for the CD drive letter that contains the images. If the images have been copied to a local drive from a CD, or if image directory notation (@I) has been used, you must specify the directory for images to be stored.

- OCR is imported if it exists with the images. During import, page-level OCR, consisting of one text file for each single-page image, is merged into one text file for the entire document. Any existing word list files (*.ocr) with images are also imported.

- A Summation load file may contain index information for each document. This index information may or may not be imported, depending on the options set in the **Import Fields** dialog box.

- Summation load files do not contain page IDs or Bates numbers for every page. They do contain a beginning document number and an ending document number. During import, numbers are added to every page, based on the first page of the document, but this numbering scheme may not match the originals if gaps or changes exist in the numbering scheme within the document.

⊟ **To import an IPRO load file**

1. On the **File** menu, click **Import**, and then click **Load File**.

2. Browse to the load file (*.lfp) and then click **Open**.

    The file is imported as OCR text.

    If the IPRO load file has separate image and text folders, and the image and text folders are located at the same level as the load file or one level lower and the image files and text file names match except for the file extension, both folders will automatically be imported with the load file. The text file folder must be named "text". If the text folder is not named "text" or if the text files are not detected for images in the load file, the **Select Text Path** dialog opens.

3. Navigate to and click the text file folder, and then click the **Accept** button.

    Clicking the **Accept** button closes the **Select Text Path** dialog box and the import finishes processing.

4. If there is no text files associated with the images, click **Cancel**.

    Clicking **Cancel** closes the **Select Text Path** dialog box and the import finishes processing without capturing any text files.

To import an EDRM XML file

You can use EDRM XML 1.0 or EDRM XML 2.0 to import any combination of native, text, images, and metadata into an electronic discovery enabled LAW case.

1. On the **File** menu, click **Import**, and then click **Load File**.

2. Browse to the load file (*.xml) and then click **Open**.

📝 When you are importing an EDRM XML file, you do not need to select the EDRM XML version. LAW automatically imports the EDRM XML file using the EDRM XML version associated with the EDRM XML file being imported.

The **Import Fields** dialog box appears.
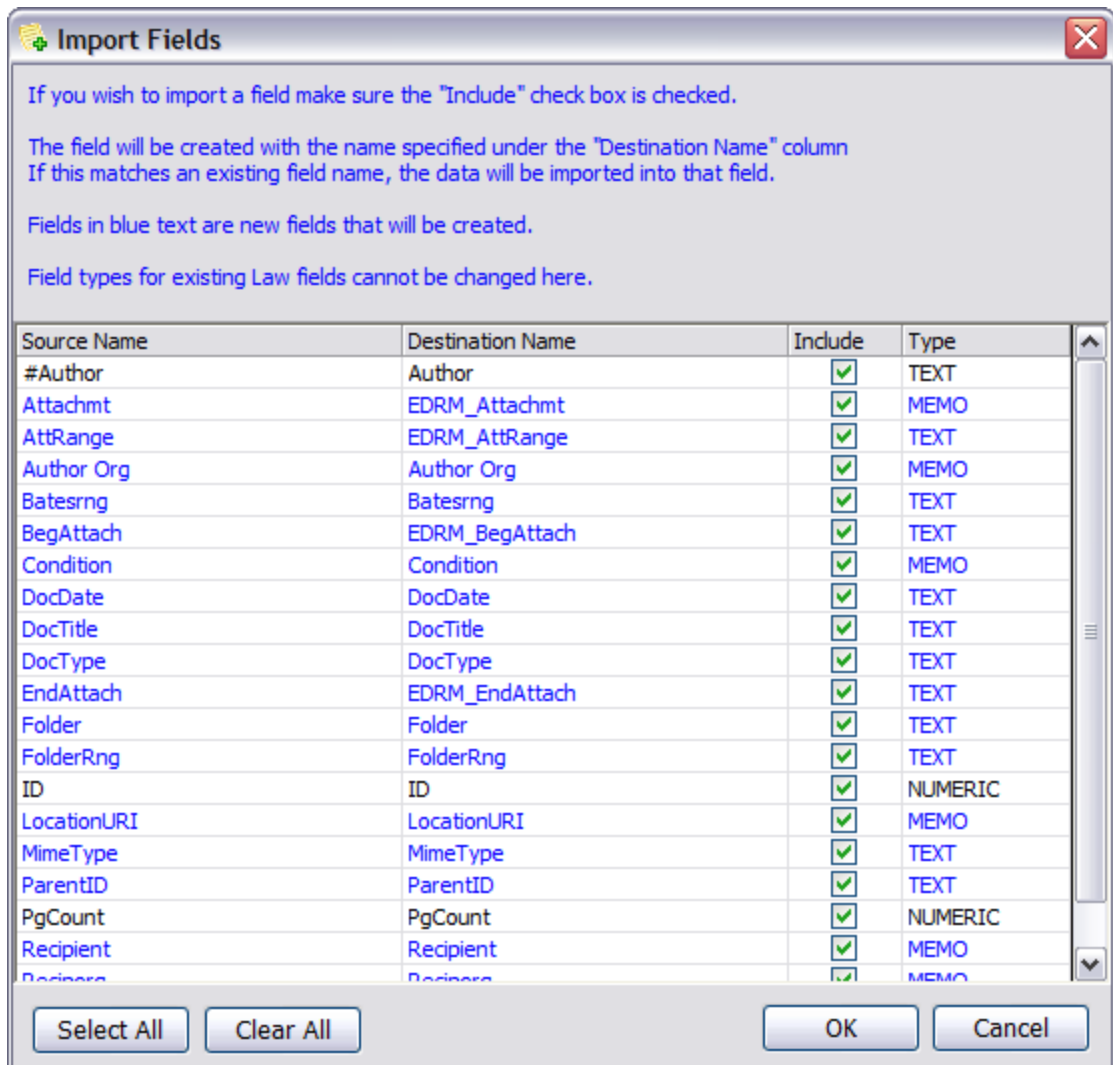
3. Configure options as needed:

- To change a field name, double click it and then type the new name.

- To exclude a field, clear its check box in the **Include** column.

- To clear all fields, click **Clear All**.

- To select all fields, click **Select All**.

- To change the type of a new field, click the type and then select a new one. The type can be changed for new fields only.

When configuring options, note the following:

- The **Source Name** column lists fields found in the load file.

- Fields listed in blue are those that do not already exist in the case.

- The **Destination Name** column lists either the name of the field that will be created or the name of the existing field.

- Any native, text, and image files referenced in the load file will be copied to their respective folders in the case.

- If the **Link to source files in place when importing load files** check box is selected on the **Preferences** tab in the **Options** dialog box (**Tools** menu > **Options**), the native, image, and text files associated with the native and image files are not copied into the case. Instead, LAW generates a link to the native, image, and text files in their current location. The **TextFilePath** field is populated with the full path to the linked text file associated with the native and image files.

  The only exception to this is if there are multiple text files associated with a document, such as page level text files. If there are multiple text files associated with a document, the text files will be merged and copied into the LAW case into one of the following locations:

  - If the document contains an image, the text will be assumed to be OCR text, so the merged text file will be copied to the OCR location.

  - If the document does not contain an image, the text will be assumed to be extracted text, do the merged text file will be copied to the extracted text location.

4. Click **OK**.

   - If an **Add New Fields** dialog box opens, click **OK** to add fields, or **No** to cancel the import.

   - If a message box appears that provides you with the option to view the error log, click **Yes** to view the error log or **No** to return to the main window.

⊟ **To link instead of copy files during import**

Rather than copying files into the LAW folder structure during import, you can choose to link to files in their current location. This option applies to Doculex, EDRM, IPRO, Opticon, and Summation load file imports.

1. On **Tools** menu, click **Options**, and then click **Preferences**.

2. Select the **Link to source files in place when importing load files** check box.

   Native files or images associated with the load files will not be copied to the case. Instead a link is created to their existing location.

Note the following details when considering options related to linking to originals versus importing:

- To simply import raw images without a load file or defined format, use the Import Raw Images function detailed in the [Importing Raw Images](#) section.
  - When the **Link to source files in place when importing load files** check box is selected on the **Preferences** tab in the **Options** dialog box (**Tools** menu > **Options**), the native, image, and text files associated with the native and image files are not copied into the case. Instead, LAW generates a link to the native, image, and text files in their current location. The **TextFilePath** field is populated with the full path to the linked text file associated with the native and image files.

    The only exception to this is if there are multiple text files associated with a document, such as page level text files. If there are multiple text files associated with a document, the text files will be merged and copied into the LAW case into one of the following locations:
    - If the document contains an image, the text will be assumed to be OCR text, so the merged text file will be copied to the OCR location.
    - If the document does not contain an image, the text will be assumed to be extracted text, do the merged text file will be copied to the extracted text location.
- Modifying the images in CloudNine™ LAW, for example, rotating or annotating the images, will result in the source file being modified. If the source image should not be altered, do not use the **Link to source files in place when importing load files** option.

Importing Raw Images

You can use the Import Raw Images utility to select image files individually or by the folder for import. When you import raw images, you can filter the file type for import, as for example, to select all image file types, or restrict import to TIFF files. When raw images are imported, the folder structure is created relative to the currently selected folder in the case. Ensure that the desired folder is selected prior to import.

⚠ Import Raw Images is not recommended for importing PDF files. Instead it is recommended that you use Turbo Import or ED Loader to import PDF files. PDF import using Raw Images Import is sometimes successful but not supported. If you do

choose to use RAW Images Import on PDF files, check your results after import. Should problems occur, try using Turbo Import or ED Loader instead.

⊟ **To import image files**

1. From the main window, in the case folder structure, select the folder that will receive the imported files or folders.
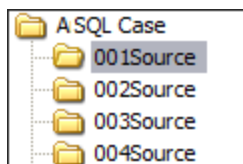
2. On the **File** menu, click **Import** and then click **Raw Images**. The **Import Raw Images** dialog box appears.
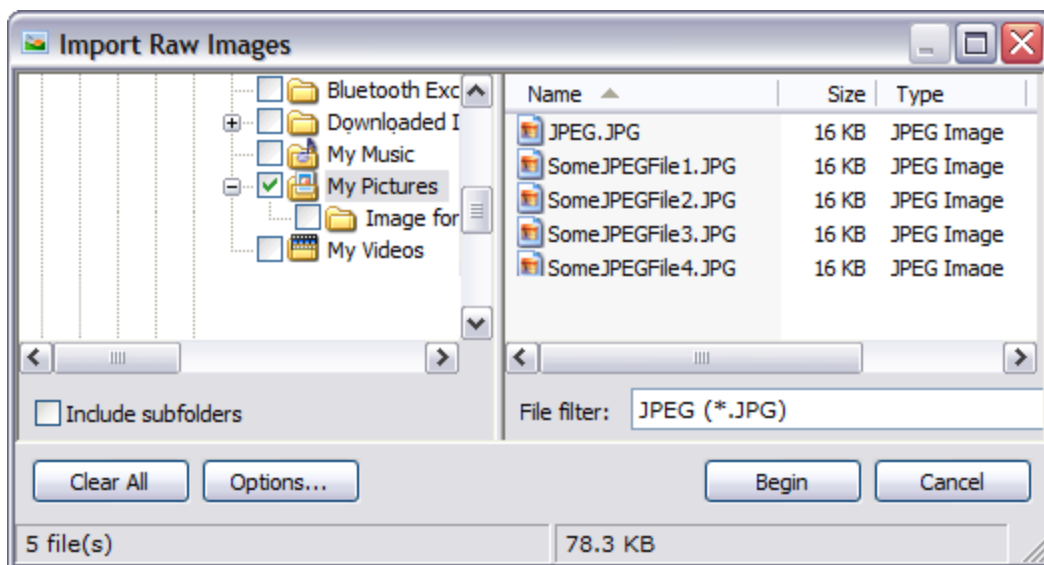
3. Browse to the folder containing images and then select:

    *   Individual files.

    Or

    *   Any folder and then, if necessary select **Include subfolders**. This option selects folders and any subfolders for import.

4. Select a file filter as necessary. For example, to import only JPEG files and no other file types, select **JPEG (*.JPG)**.

5. Click **Options** and then select import options as necessary. When finished selecting options click **OK**. For more information on import options, see the **Import Options** section in this topic.

6. Click **Begin**. The **Import Status** message box reports the number of items imported.

Import Status

The import process was successfully completed.

Total Docs: 5
Total Pages: 5
Elapsed time: 00:00:01

OK
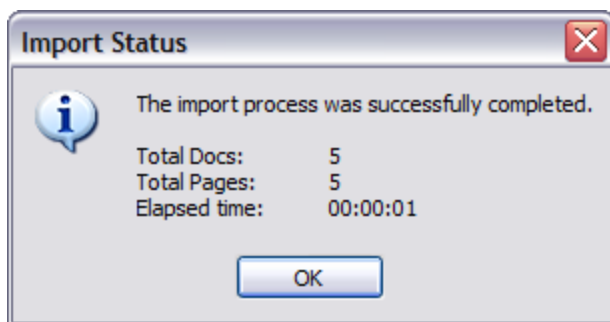
7. Click **OK**.

To import images with a supported database or load file, use the image import functions described in the Importing Cases and Load Files section.
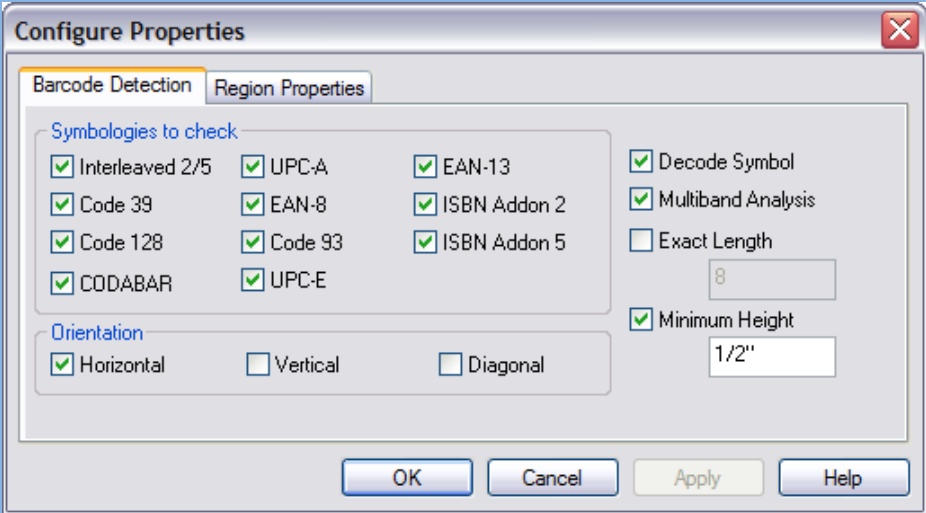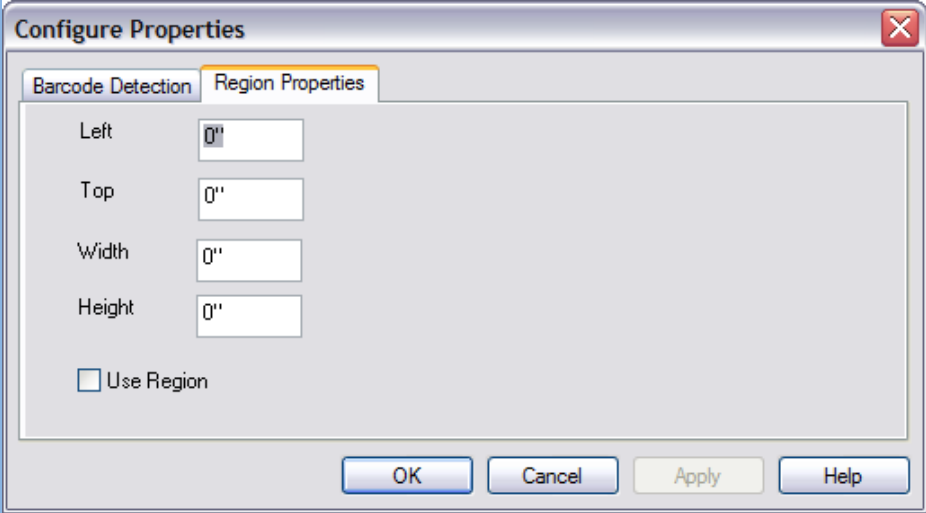
To configure import options

1. From the CloudNine™ LAW main window, on the **File** menu, click **Import** and then click **Raw Images**.

2. Click **Options**.

Import Options

General Settings

☑ Convert images to binary (B&W)
☐ Determine document breaks
   ○ On blank pages   More...
   ◉ On barcodes

☐ Include OCR (if available)
☑ Link to images in place
☐ Remove originals
☑ Use filename as BegDoc#
   ☐ Use numeric suffixes
   Format *.###

Folder Structure

◉ Mirror original structure
○ Auto-increment folder
   File limit 0

Data Options

☑ Store original filename
   OrigFilename

☑ Store original location
   OrigLocation

OK   Cancel
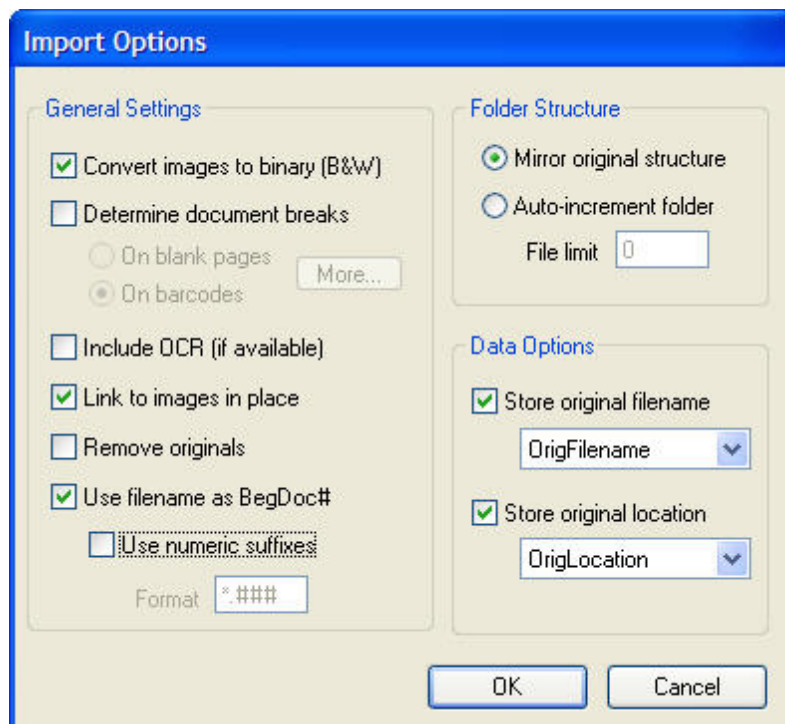
3. Configure import options as needed and then click **OK**. These are described as follows:

Option	Description
Convert images to binary (B&W)	Force all images to be converted to black and white during the import process.

Determine document breaks	Specify whether to use blank pages or barcode break sheets to split multi-page image files into separate documents during import.
	
	To specify blank pages or barcode breaks
	
	1. Click the **More**... button.
	
	2. Select one of the following sensitivity options for the blank page filter:
	
	  • **Pristine White**. Recommended for all white documents and for digitally converted documents.
	  • **Dirty White**. Recommended for scanned documents, especially those that contain a small amount of speckles, creases, or folds.
	
	  Or
	
	  • If barcode break sheets are selected, click **More** and then configure values breaks used in the source documents. Each time a barcode with the specified Barcode Value is detected, a new document will be created.
	
	  • To assign the incoming barcode value to a field value in CloudNine™ LAW, select **Capture barcode values** and then select the first field to receive values.
	
	  • If necessary you can configure LAW further to recognize barcode symbologies, barcode orientation, or the region on pages where existing barcodes are positioned, click **More** again and then

Option	Description
	configure the properties on the **Barcode Detection** and **Region Properties** tabs, as needed.

Configure Properties

Barcode Detection | Region Properties

Symbologies to check
- ☑ Interleaved 2/5 ☑ UPC-A ☑ EAN-13
- ☑ Code 39 ☑ EAN-8 ☑ ISBN Addon 2
- ☑ Code 128 ☑ Code 93 ☑ ISBN Addon 5
- ☑ CODABAR ☑ UPC-E

☑ Decode Symbol
☑ Multiband Analysis
☐ Exact Length
`8`
☑ Minimum Height
`1/2"`

Orientation
- ☑ Horizontal ☐ Vertical ☐ Diagonal

[OK] [Cancel] [Apply] [Help]

Configure Properties

Barcode Detection | Region Properties

Left `0"`
Top `0"`
Width `0"`
Height `0"`

☐ Use Region

[OK] [Cancel] [Apply] [Help]

Capture barcode values	Capture additional barcode values on the break sheet and place the values into index fields for the newly created document. For example, a barcode break sheet image contains three barcode values: DOCBREAK, MEMO, and ABC0001. If two index fields are created, the "MEMO" and "ABC0001" values can be stored with the newly created document. In this example, the DocType field has been selected to store the first "non-document break" barcode value ("MEMO"). Then, the next barcode value detected on this sheet will be placed in the next index field immediately following the DocType field as listed under the Index tab on the main LAW window.

Option	Description
	This feature does not currently support barcode breaks that indicate folders or attachments.
Include OCR	Import text files (*.txt, *.doc, *.wpd, *.htm) associated with images.
Link to images in place	Create links to selected images instead of creating copies of the files into the case. This feature can help to conserve storage space.
Remove originals	Remove original images after import. This feature is useful if the import process is canceled or interrupted. You can resume at a later time without re-importing any of the same images. This setting has no effect if the images are on a read-only source (e.g., CD-ROM).
Use filename as BegDoc#	Numbers incoming images according to their filenames. This feature can be useful when images have already been named according by document number. However, if the documents are multi-page images and have been named sequentially (e.g., AB0001.tif, AB0002.tif, etc.), numbering them in this manner will cause duplicate page IDs. **Use Numeric Suffixes** names the first page of each document according to the filename and names the remaining pages with a numeric suffix. The default setting (*.###) forces a suffix padded with three digits, separated by a period (e.g., AB0001, AB0001.002, AB0001.003, etc.). The separator character can be modified or omitted and the number of pad digits can be adjusted with the format string.
Mirror original structure	Rebuilds the original folder structure relative to the topmost selected folder(s). The selected images will then be imported into the currently selected folder in the folder list window.
Auto-increment folder	Stores incoming images in the current folder until a specified number of files specified in the **File Limit** setting has been reached. After the file limit is reached, LAW creates a new folder at the same level as the current folder and stores new images there. LAW does not auto-increment the root image folder. If this setting is selected, at least one folder must exist under the root folder.
Store original filename	Store the filenames of the imported images in an index field.

Option	Description
Store original location	Store the path of the imported images in an index field. If the same field is used for the filename and location, the full path of the images (path and filename) will be stored in the specified field.

⊟ **Import filter options**

The **Import Raw Images** utility provides the following file filter options:

- ADOBE (*.pdf) *Note: importing PDF files using the Raw Images Import function is not supported. Instead use ED Loader to import PDF files.*
- All Files (*.*)
- All Image Files
- CALS Files (*.cal)
- Compuserve (*.gif)
- FAX (*.dcx)
- JBIG Files (*.jbg)
- JPEG (*.jpg)
- JPEG 2000 (*.jp2)
- MO:DCA Files (*.mda)
- Paintbrush (*.pcx)
- Plexus TIFF (*.tif)
- Portable Network Graphics (*.png)
- TIFF (*.tif)
- Windows Bitmap (*.bmp)

Importing Replacement Images

You can use a load file to replace images already in a case with images that may have been redacted or altered in some other way by an external application.

Import considerations

Note the following considerations before you replace existing images using a load file:

Load file considerations

- The load file must contain a document number for each replacement image that corresponds with the BegDoc# field or the DocID field of the original document. Note that OCR text associated with the load file is not imported. If a file listed in the load

file cannot be found, the import operation skips the file and continues loading the next listed file.

- To avoid the extra overhead of merging or splitting images while performing the import into the case, it is recommended to produce the load file in the same storage format as the images contained in the case.

Folder structures

- The import process maintains the folder structure of the destination image. So if a serialized load file is imported into a case containing multi page images only, those images will remain as multi page images after the batch image replacement has completed.

Backup of originals

- You have the option to keep renamed copies of the originals or to delete the originals. If you keep the original files, they are renamed using the following scheme:

  <originalfilename>_v01<.image extension>

  For example, **SomeExampleImage.opt** is renamed as **SomeExampleImage_V01.opt**.

Switching the file type

- CloudNine™ LAW supports the replacement of images with a different image file type. So importing a single page JPG image will overwrite the single page TIFF image in the case.

⊟ <u>**To import replacement images**</u>

1. From the main window, on the **File** menu, click **Import** and then click **Image Replacement Load File**.

2. In the **Select Image Replacement Load File** dialog box, select a supported load file.

   The **Replace Existing Images** dialog box appears.

Replace Existing Images

Source File:

C:\Documents and Settings\Desktop...\VOL001.opt   [Browse...]

Import Mode
- ⦿ Retain copy of original image
- ◯ Replace existing images (permanent)

Import Options
- ☑ Reset OCR flags for replaced images
- ☐ Tag replaced images
  - <Create New Field...>

[OK]   [Cancel]
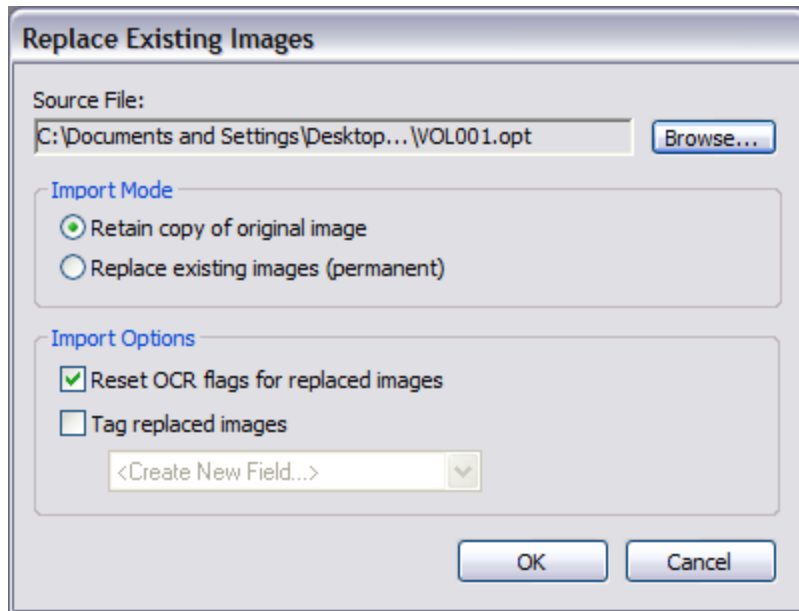
3. Configure options as needed. For more information, see the **Image replacement options** section in this topic.

4. Click **OK**.

    When import completes a summary report appears.

□ **Image replacement options**

You can select from among the following options when importing replacement images:

- **Source File**

  These types of load files are supported:

  - IPro .lfp
  - Opticon .log or .opt
- **Import Mode**

  The following import modes are provided:

  - **Retain copy of original image.** Default option. Copies of the original documents are kept.
  - **Replace existing images (permanent).** Original images are permanently deleted.
- **Import Options**
  - **Reset OCR flags for replaced images.** Sets the OCR flag of each page to **Y** and then refreshes the OCR status of the document. This option helps you to run OCR again on the replaced documents if necessary.

- **Tag replaced images.** This option allows you to set a selected Tag (Boolean) field to **checked** for each document that receives a replaced image. This option can help you to more easily create a query that returns all of the affected documents. You can also use this option to define a new tag before you apply it to the images. Select **<Create New Field...>** to add a Tag (Boolean) field to the case without having to open the **Modify Fields** dialog box.

Populating the _GUID Field

The _GUID field was added to LAW version 6.9.x. The _GUID field is automatically populated with the globally unique identifier (GUID) for each document being imported into LAW using the ED Loader, Turbo Import, LAW case, or load file import. If a document doesn't have an existing GUID in the _GUID field, LAW will generate one and add it to the _GUID field.

During ED Loader imports and Turbo Imports, each file is automatically assigned a unique GUID.

During load file and LAW case imports, if the load file or case contains the GUID field and it is populated for a file, the GUID field will be populated with the existing GUID value. If the GUID field does not exist or is not populated for a file, a unique GUID is automatically assigned to the file.

For documents imported into LAW before version 6.9.x, or imported into LAW using a different type of import, you can generate GUIDs for the documents using the Generate document GUIDs function on the Tools menu on the main form. When you run the Generate document GUIDs function, LAW generates a GUID for any document in the case that does not have a GUID assigned to it in the _GUID field.

GUID values in the _GUID field cannot be modified.

For more information about the _GUID field, see Field Descriptions - LAW.

To manually generate GUIDs

1. From the main form on the **Tools** menu, click **Generate document GUIDs**.

   Clicking **Generate document GUIDs** starts the GUID generation process.

   Once the GUIDs are created for the documents in the case and the _GUID field is populated with the new GUIDs, the **Document GUID Update Status** dialog box

opens. If the GUIDS were successfully created, the **Document GUID Update Status** dialog box indicates the number of documents updated and how long the process ran.
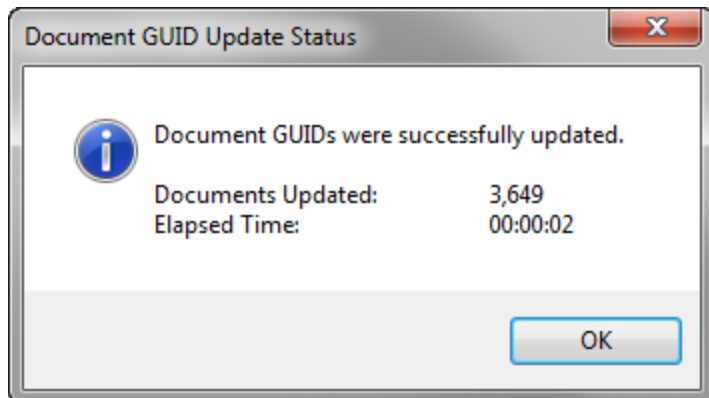
2. Click **OK** to close the dialog box.

File Counts and File Sizing in LAW vs Explore

The only fundamental difference in the way CloudNine™ LAW and CloudNine™ Explore calculate file counts and file sizes is in the way they handle archives (including mailstores).

Archives (such as ZIP, 7Z, RAR, and PST files) consist of a container and the files collected within the container.
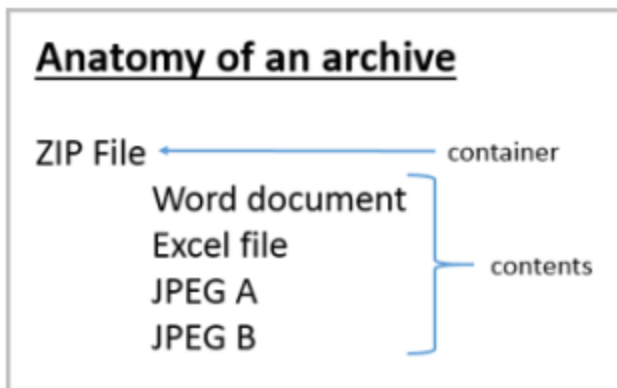
CloudNine™ Explore does not count the container when it counts files and file sizes.

EDA archive count and sizing

✖ ZIP File – (✖ 32 KB)
      ✓ Word file – 20 KB
      ✓ Excel file – 15 KB
      ✓ JPEG A – 30 KB
      ✓ JPEG B – 10 KB

Total Count = 4
Total size = 75 KB

CloudNine™ LAW calculates total counts and total file sizes in one of two ways depending on the selections you make for the Archives settings in Electronic Discovery Loader (ED Loader).

📝 The following methods assume that you have selected Enable Archive Extraction so that CloudNine™ LAW will extract the contents of supported archive file types.
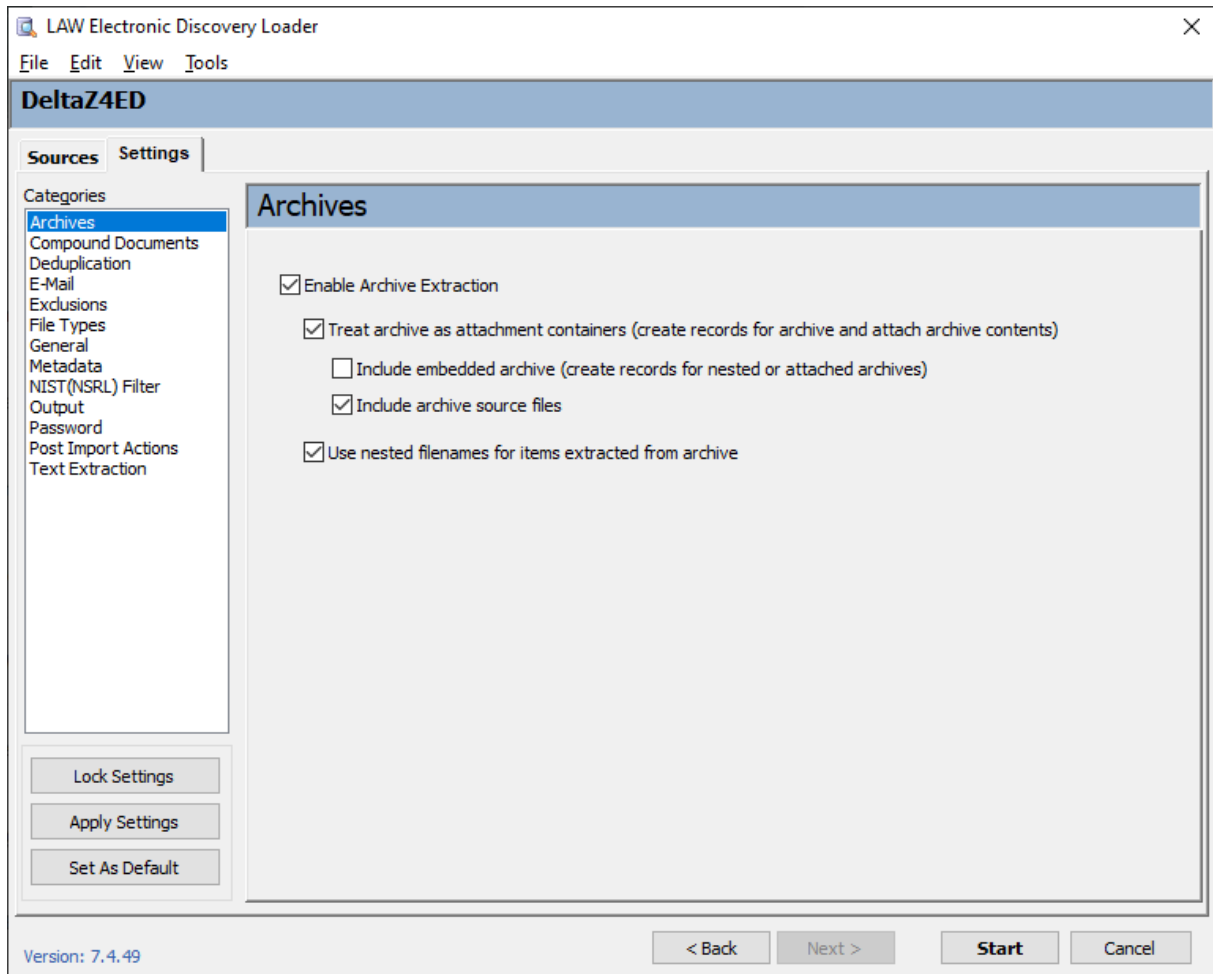
Do not count as containers

If you leave the Treat archive as attachment containers check box cleared, CloudNine™ LAW file counting behavior is the same as CloudNine™ Explore. It does not count the archive file when it calculates the total number of files.

However, it will still count the container when calculating total file size.

📝 CloudNine™ LAW will always take the container file size into account regardless of your selection for the Treat archive as attachment containers check box.

This means that while the total file count in CloudNine™ Explore should match the total file count in CloudNine™ LAW, there will be a difference in the total file size because CloudNine™ LAW is including the archive files in the calculations.

Count containers

If you select the **Treat archive as attachment containers** check box, CloudNine™ LAW counts the

archive file when it calculates the total number of files.

Supported File Types

A full list of supported file types can be found below or in this Supported Import File Types document. It contains the complete list of file types that both LAW and CloudNine™ CloudNine™ Explore can identify when you import the files. "Identify" means the file will be assigned a file ID and description in the metadata fields and the File Type Filter in CloudNine™ Explore. The type and quantity of metadata that can be extracted from a document is determined by its file identification.

If a file type is not included in this list of supported file types, a file can still be imported into and exported from LAW and CloudNine™ Explore, but the files will not be assigned a file ID or description, and metadata may not be extracted.

This document has been updated with a complete list of recognized files types along with what we do with the files – extract metadata and/or content, eligible for OCR, or treated as container files.

ID	Description	File Extensions	Extract Metadata	Extract Content	Can OCR?	Is a Container?
1	Disk Directory					
2	Disk Volume Label					
3	Text File	TXT, DOC, INI, INF, ASC, TEXT		Y		
4	Graphics Interchange Format	GIF, GIFF			Y	
5	MS Windows Bitmap	BMP, DIB, SYS, RLE, BIN, VGA, RLn			Y	
6	Amiga Interchange File Format Image	LBM, IFF, ILM, BBM, ILBM, BLK				
7	MS Paint Bitmap	MSP				
8	AutoDesk Animator Flic	FLI, FLC, FII				
9	GEM VDI Paint Image	IMG, GEM				
10	PC Paint/Pictor Page Image	PIC, PICTOR, CLP				

11	PC Paintbrush Bitmap	PCX, PCC			Y	
12	PKZip Archive	ZIP, JAR, WMZ				Y
13	MacBinary (Mac Data + Resource Fork)	MAC				
14	Creative Voice Sound	VOC				
15	DOS Program	EXE, COM, SYS, OVL				
16	Amiga SoundTracker Music	MOD, NST				
17	Macintosh Sound + Resource Fork (MacBinary)	SND, HCO				
18	MS Windows Prefetch Cache	PF				
19	Targa Bitmap Image	TGA, VDA, I?B, VST, TARGA, PIX, BPX, IVB			Y	
20	PK Pak Archive	ARC, PAK				
21	Arj Archive	ARJ, A??, DSK				
22	DOS Batch File	BAT, CMD		Y		
23	Ad-Lib Composer Music	ROL				
24	FerretSoft Cache Index					
25	Amiga IFF/8SVX Sound	SND, IFF, LBM, 8SV, SVX, 8SVX				

26	AutoCAD Drawing	DWG, DWT				
27	Program Overlay	OVL, OVR, DVR, DRV, OVn, RSR				
28	BASIC Script/Source Code	BAS, CSC, VBS		Y		
29	CMS Organ Music	ORG				
30	DOS Program (Tiny)	COM, BIN, SYS				Y
31	Arts & Letters Editor Document	GED				
32	Crayola Art Image	IMP				
33	Crayola Image	ART				
34	Novell Message File	MSG, DAT				
35	Larc Self Extracting Archive (COM)	COM				
36	LHarc Self Extracting Archive (COM)	COM, EXE				
37	Corel Draw Font/Symbols	WFN				
38	Corel Draw Raster (proprietary)	CDR				
39	Creative Music File	CMF				

40	Cricket Graph Data	CGD				
41	Cricket Graph Graphics	CGG				
42	Cricket Graph Slide	CGT				
43	Cross Talk for Windows PhoneBook	XWP				
44	Gzip Unix Archive	GZ, Z, ?Z, ??Z, TAR				Y
45	MS Money Data	MNY, MN?				
46	Arc Archive	ARC				
47	MS Compress Archive	??$, ??_, ?_, IBT				
48	Diet Archive					
49	Hyper Archive	HYP				
50	LHarc Compressed Archive	LHA, LZH, LHn, LZn, LHD, LZS				
51	LU Archive	LBR				
52	Larc Archive	LZS, LZH				
53	MS Windows Help Contents Table	CNT				
54	Stunt Island Film	FLM				
55	Squeeze Archive	?Q?				
56	Zoo Compressed Archive	ZOO				

57	Help File (General)	HLP, HSP, HLX				
58	dBase III/III+/IV/FoxBase+/FoxPro Database	DBF				
59	dBase III+ Screen Format	FMT				
60	dBase III+ Form	FRM				
61	dBase III+ Program File	PRG				
62	Micrografx Designer Drawing	DRW, GRF				
63	Micrografx Picture	PIC				
64	Dr. Halo Font	FON				
65	MS Query Database	DBF				
66	Dr. Halo Palette	PAL				
67	Dr. Halo Picture	PIC				
68	MS Query Database Index	MDX				
69	Lucas Arts Animation	NUT, SAN				
70	Lucas Arts Sound (SAD)	SAD				
71	Lucas Arts Sound (SOU)	SOU				

72	Lucas Arts Living Book					
73	AutoCAD Drawing Exchange (ASCII)	DXF				
74	AutoCAD Drawing Exchange (Binary)	DXF				
75	AutoCAD Drawing Exchange Binary	DXB, ACAD				
76	Arj Self Extracting Archive	EXE				
77	MS Windows Program (32 bit)	EXE, SCR, MOD, SYS, BIN, COM				
78	Larc Self Extracting Archive (EXE)	EXE				
79	LZexe Self Extracting Archive	EXE				
80	LHarc Self Extracting Archive (EXE)	EXE				
81	PK Arc Self Extracting Archive	EXE				
82	Arc 6.0 MKS Archive	EXE				
83	NetWare Installation Start	INS				

84	Hyperwriter! Document	HW3				
85	Fanta Vision Movie	MVE				
86	Novell Print Definition File	PDF				
87	GEM Metafile Image	GEM, GDI, VDI				
88	MS DOS Code Page Information/Font	CPI				
89	GEM Write Format	FMT				
90	PCR Graphic Image	PCR				
91	RLE Graphic Image	RLE				
92	Guide Document	GUI				
93	MS Windows 98 Password List	PWL				
94	Harvard Graphics Palette	PAL				
95	Compiler Library (COFF)	LIB, A, AR				
96	Lotus 123 Font	FNT, LRF				
97	Lotus 123 File	APC, APD, APF, ASD, RI				
98	MS Windows Fax Cover Page	CPE, CPD, COV				

99	MS Windows Cabinet Archive	CAB, PKG, ??Z, ??_, GDP, CDM, MSU				Y
100	MS Windows OLE Type Library	TLB, TWD, OLB				
101	MS Windows Registry Hive	DAT, DA0, SAV				
102	Lotus 123 File	XLT				
103	MS Internet Explorer Cache	DAT				
104	Lotus 123 Ver. 2 / Symphony 1.1 Worksheet	WK1, WKS		Y		
105	Lotus 123 Ver. 3 & 4 Worksheet	WK3, WK4, 123, 12M		Y		
106	Lotus 123 Ver. 1 & 1A Worksheet	WKS		Y		
107	Symphony 1.0 Worksheet	WKS, WRK				
108	Lyra MIDI Music	LYR				
109	MS Excel Chart	XLC				
110	MS Excel Macro	XLM	Y	Y		
111	MS Excel Worksheet/Template (OLE)	XLS, XLA, XLT, XLB, WWS, XLM	Y	Y		
112	TeleDisk Archive	TD0, TD1, TD2, TD3, TD?				
113	MS Windows Program Group	GRP, GRB				

114	MS Windows Icon	ICO				
115	MS Windows Help File	HLP, GID, LHP				
116	MS Windows Program Information	PIF				
117	MS Windows Card File (Win NT)	CRD				
118	MS Word for DOS Printer Definition	PRD				
119	MS Word for DOS Style Sheet	STY				
120	MS Word for DOS/WordPerfect Font	US?, R8?				
121	MS Word for DOS Font	DAT				
122	MultiMate Document	PAT, DOC, DOX				
123	Music Studio Sound	SND				
124	Music Studio Song	MSS, STY, SND, CHORUS, SNG				
125	Musician I File	NOT				
126	Compiler Object	OBJ				
127	MS Publisher Job Submission Publication	JSP				
128	PFS: 1st Publisher Macro	MAC				

129	PFS: 1st Publisher Art Image	ART				
130	PFS: 1st Publisher Document	PUB				
131	PageMaker 3.0 Document	PM3				
132	PageMaker 3.0 File	PT3				
133	Encapsulated PostScript Preview	EPS, EPSF				
134	MS Works for DOS Document	WPS, WWP				
135	Print Shop Art	SHP				
136	MS Windows Disk Map File	DMF				
137	Print Shop/Print Master Images	SDR, NAM				
138	Reflex Database	RXD				
139	Reflex Report	RXR				
140	MS Windows Internet Shortcut	URL, MIM, ULK				
141	Amiga ScreamTracker Music	STM, STX				
142	Senddisk File					
143	Data Interchange Format Spreadsheet	DIF				

144	SuperKey Macro	MAC				
145	Borland Graphics Printing Interface	BGI				
146	Tag Image File Format (Motorola)	TIFF, TIF, SEP, TIM			Y	
147	Time Line File	MAP, T#?				
148	MS Outlook Message	MSG	Y	Y		
149	File Investigator for DOS Data	DES, PAT				
150	File Investigator for DOS Scripts	JOB				
151	Jerusalem (B) VIRUS!	COM				
152	Ventura Publisher File	CAP, CHP, STY				
153	PCMCIA Configuration Library	CLB				
154	InstallShield Install Script	INS				
155	Quatro Pro Data	QPW, CLP		Y		
156	Voice Master Key Sound	V8, V3S				
157	WordPerfect Document	DOC, WP, WKB, WPD, WPT, WP#		Y		

158	WordPerfect Macro	WPM, WCM				
159	PIC Graphic Image	PIC				
160	WordPerfect Graphic Image	WPG				
161	Professional Write Document	PW				
162	BMP Graphic Image	BMP			Y	
163	WordPerfect File (General)	WP?, ?RS, ALL, LAB, MOR, CBD				
164	MS PowerPoint Slides (OLE)	PPT, PPA, POT, PPS	Y	Y		
165	MS Windows Calendar	CAL				
166	MS Windows Wave Sound (Intel)	WAV				
167	ComputerEyes Animation	SNP, M00, M01, M02, Mnn				
168	Wired For Sound	SND, SNW				
169	Macromedia Director Movie (Macintosh)	DXR, CXT, DIR				
170	Binary Image File	BIF				
171	Encapsulated PostScript Document	EPS, EPI, EPSF, AI, PS				

172	Macintosh QuickDraw/PICT Image	PCT, PIC, PICT, PICT2, QTS				
173	HSI JPEG Picture	JPEG, JPG			Y	
174	ColoRIX Image	RIX, SCI, SCX, SCZ, SC?				
175	Alpha Microsystems Bitmap	BMP				
176	Silicon Graphics RGB Bitmap Image	SGI, BW, RGB, RLE, IRIS, RGBA				
177	AutoLogic Picture	GM, GM2, GM4				
178	ADEX ChromaGraph Image	ADEX, IMG, RLE				
179	X11 BitMap	XBM, BM, BMP, BITMAP				
180	CALS Raster Image	CAL, RAS, CALS				
181	Erdas Image	LAN, GIS				
182	Vivid Ray-Tracer Image	IMG				
183	QuikLink 2 Fax Document	QFX				
184	Jovian Logic Video Capture Image	VI				
185	JPEG File Interchange	JPEG, JFIF, JPG, JFI, CMP, JIF,			Y	

	Format Image	THM, JPE				
186	Portable BitMap Image (Binary)	PBM, PNM				
187	Portable GreyMap Image (Binary)	PGM, PNM, PBM				
188	Portable PixMap Image (Binary)	PPM, PNM, PBM				
189	Sound Blaster Instrument	SBI				
190	Q0 Graphic Header	FAL				
191	PDS Picture	IBD				
192	HSI Palette	PAL				
193	HP Printer Control Language File	PCL, PRN, PJ, PJXL				
194	HSI Raw Picture	RAW				
195	MS Excel Workspace/Work book	XLW				
196	MS Windows Clipboard/Picture	CLP				
197	Sound Blaster Instrument Bank	IBK				
198	Simple Musical Score IFF MIDI	SMU, IFF, SMUS, MUS				

199	TextCraft Document	FTXT, FTX, IFF				
200	Harvard Graphics Chart	CHT				
201	HP Raster Transfer Language Image	RTL				
202	Gravis Ultrasound Patch	PAT				
203	NetWare Loadable Module	NLM, LAN				
204	InstallShield Uninstall Script	ISU				
205	ACT! 2.0 Document	LBR				
206	Sun Raster Image	RAS, RAST, SUN, SR, SCR, RS, SRS				
207	WordPerfect Office Notebook	NB				
208	ACT! 2.0 Report	RPN, RPC				
209	MS DOS Help	HLP				
210	Utah Raster Toolkit Image	RLE, URT				
211	Scodl Picture	SCD				
212	Resource Interchange File Format (Intel)	RIFF, RIF, AVI, WAV, BND				
213	Bitstream Printer Font	SF?				
214	System Driver	SYS, BIN, COM		Y		

215	MS Write Document	WRI		Y		
216	MS Word for Macintosh Document	MCW, DOC	Y	Y		
217	MS Word for DOS/Macintosh Document	DOC	Y	Y		
218	X Windows System Dump Image	XWD, X11				
219	Animation Studio Character	CFT				
220	MS Draw Palette	PAL				
221	MS Windows 3.1 True Type Font	TTF				
222	MS Windows 3.x Screen Grabber	2GR, 3GR				
223	Printer Escape Codes/Output	PRN				
224	Ad-Lib Instrument Bank	BNK				
225	MS Windows Compiled Resources	RES				
226	Turbo Pascal Unit	TPU, TP				
227	Lode Runner Puzzle Set	PZL				

228	ProWrite Document	WOR, IFF				
229	MS Word 97-2003 Document (OLE)	DOC, DOT, WIZ, WZS, WRI, WBK	Y	Y		
230	MS Windows Metafile (placeable)	WMF, APM				
231	Dual Module Player Music	AMF				
232	Autochop File Part	#00, #01, #02, #03, #nn				
233	Interchange File Format	IFF				
234	MS Audio/Visual Interleave (Intel)	AVI, VFW, DA2				
235	Digital Multi-Track Module/Song	S3M				
236	QuickTime Movie	MOV, QTM, QT, mp4				
237	MS Network Shortcut	MCC				
238	Interplay Sound	SND				
239	IBM OS/2 2.0 Help	HLP				
240	Standard Midi Sequencer Music	MID, MDI, RMI, SMF, MIDI				
241	Corel Draw Raster (Intel)	CDR, PAT, CDT				

242	Dark Forces Data	GOB				
243	Drafix Windows CAD File	CAD				
244	3D Environment	RUN				
245	MultiTracker Module Music	MTM				
246	MPEG Animation	MPG, MPEG, MPE, M1V, ENC, MPA, MPS, M2V				
247	Xing MPEG Animation	MPG, MPE, M1V, ENC				
248	DESQview Group	GRP				
249	Adobe Font Metrics (DESQview)	AFM				
250	Toolbook Database	TBK, SBK				
251	Envoy Document	EVY, ENV				
252	MS Windows 3.x Logo	LGO				
253	MS Windows Printer Driver	WPD				
254	MS Windows Sound Mix	MIX				
255	RenderWare Script	RWX				
256	ROM Chip Image	BIN, ROM				
257	MS Find Saved Search	FND				

258	Adobe Portable Document Format	PDF	Y	Y	Y	
259	BinHex Archive	HQX, HEX				
260	IBM OS/2 True Type Font	TTF				
261	Sea Archive	SEA				
262	StuffIt Mac Archive	SIT, BIN, SITX, DAT				
263	SoundTool Sound	SND, SNDT				
264	Audio Visual Research Sound	AVR				
265	NeXT/Sun/UNIX Sound	AU, SND, SUN, NXT				
266	Sticker Store Sticker	STK				
267	IBM Filing Assistant Database					
268	IBM Writing Assistant Document					
269	MS Rich Text Format Document	RTF, DOC, WRI, WBK	Y	Y		
270	NetFRAME MPEG 2 Animation	MPEG, MPG, MPE, ENC				
271	Macromedia Director Movie (Intel)	DXR, CXT, DIR				

272	Norton Utilities Directory Tree	NCD				
273	Portable BitMap Image (ASCII)	PBM, PNM				
274	MS Compound Document (OLE) (General)	OBD, PPT, DOC, XLS	Y	Y		
275	Portable GreyMap Image (ASCII)	PGM, PNM, PBM				
276	Sounder Sound	SND, SNDR				
277	Canon BJ Escape Codes/Output	PRN				
278	Bitstream Font	SPD, FNB				
279	CC:Mail Rule	RUL				
280	CC:Mail Smart Icon	SMI				
281	Portable PixMap Image (ASCII)	PPM, PNM, PBM				
282	Id Software Internal Data (Doom)	WAD, RTS				
283	PKZip Self Extracting Archive	EXE, ZIP				Y
284	MacPaint Bitmap (MacBinary)	MAC, MPNT, MACP, PNTG, PAINT, PNT				
285	Macromedia Director File (Macintosh)	DCR				

286	File Investigator for DOS Help File	FIH				
287	IBM OS/2 Bitmap	BMP, DIB, BGA			Y	
288	MS Windows Program (16 bit)	EXE, MOD, BIN				
289	MS Windows Program (WIN386)	EXE				
290	MS Windows Driver (16 bit)	EXE, VXD, SYS, DRV, 386				
291	MS Windows Library (16 bit)	DLL, DRV, VBX, EXE				
292	MS Windows Driver (16 bit)	DRV, DLL, VBX				
293	Mac PICT Image (MacBinary)	PCT, PIC				
294	MS Windows 3.x Screen Saver	SCR				
295	MS Windows Audio Converter	ACM				
296	MS Windows Control Panel Applet	CPL, DLL, EXE				
297	MS Windows 3.x System Font	FON, FOT				
298	Tag Image File Format (MacBinary)	TIFF, TIF, SEP			Y	
299	MS Windows Policy	POLICY, MAN, MANIFEST				

300	Slide Show Image	SNX, REF				
301	Adobe PostScript Document	PS, AI				
302	MS Windows Cursor	CUR				
303	Turbo C Project File	PRJ				
304	MS Windows 95 Password List File	PWL				
305	CC:Mail Archive	CCA				
306	Videoscape 3D Model with Colored Faces	GEO, SHP				
307	Software Toolworks Sound	SND				
308	MS Windows Animated Cursor (Intel)	ANI, CON				
309	Novell Archive	??_				
310	Mosaic Hot List	HOT				
311	MS Midi Musical Instrument Song (Intel)	RMI				
312	MS HyperTerminal Shortcut	HT				
313	MS Windows Registry Import File	REG, DAT, SUD				

314	MS Windows Shortcut/Link	LNK				
315	HyperText Markup Language	HTML, HTM, HT?, HTTP, ASP?, MHT, HH?		Y		
316	Empty File					
317	Modular Sound File	FTM				
318	OctaMED Tracker Module	MMD, MED				
319	Paintbrush Multi-Page Fax Bitmap	DCX, CMM, PCX, PCC			Y	
320	MS Windows Color Palette (Intel)	PAL				
321	Tag Image File Format (Intel)	TIFF, TIF, SEP			Y	
322	Id Software Patch (Doom)	WAD				
323	Audio IFF Sound	AIFF, AIFC, AIF, IFF, SND				
324	MS Multi-Media Movie	MMM				
325	MS Windows Library (32 bit)	DLL, TLB, OCX, CPL, HX?				
326	MS Office Binder Document/Template/Wizard	OBD, OBT, OBZ, BIN	Y	Y		
327	MS Access Database Wizard	MDZ				

	Template					
328	MS ClipArt Gallery	CAG				
329	MS Pictures	PCS				
330	MS Access Database/Template/Addition	MDB, MDT, MDA, MDE, DPM, WCD, MDW, SBC				
331	PSpice Capture Design/Library/Symbols	DSN, DBK, OLB, OBK				
332	OrCAD Capture Project	OPJ				
333	OrCAD Capture CIS Database Config.	DBC				
334	InstallShield 3.x Archive	Z, LIB, INS, 1, ??_				
335	MS Personal Address Book	PAB				
336	MS Outlook Personal Information Store (97 - 2002)	PST				Y
337	ICC Profile	ICM, ICC, CC, PF				
338	MS Windows Compiled HTML Help Module	CHM, CHI, CHQ, CHW, SLL				

339	MS Windows Office Toolbar Button	TBB				
340	Adobe PostScript Font (Binary)	PFB, PFA				
341	MS Windows Address Book	WAB, WA~, WAB~				
342	Extensible Markup Language	XML, CDF, OSD, AWE, HTML, HTM		Y		
343	Java Class (Compiled)	CLASS, CLA, CLS		Y		
344	Netscape News/Mail Messages	SNM				
345	MS Debug Information File	DBG				
346	Precompiled Setup Information	PNF				
347	InstallShield 5 Cabinet Archive	CAB, HDR				
348	MS Project	MPP, MPT		Y		
349	MPEG Music File (+ID3v1 Tags)	MP3, MP2, MPGA				
350	MS Windows Swap File	SWP				
351	Computer Graphics Metafile (Binary)	CGM				

352	Configuration File (Text)	CFG, CNF, INI				
353	Data File (Unknown Source)	DAT, DTA, DATA				
354	MS Language Character Set	NLS, NLP				
355	MS Visual C++ Definition File	DEF				
356	PaperPort Slide Show	FSS				
357	MS Windows True Type Font	TTF				
358	Adobe Printer Font Metrics	PFM, MMM				
359	InstallShield Archive	EX_, ??_				
360	MS Compatibility Database	CAT				
361	MS Windows Desktop Theme	THEME, THM				
362	Index File (Unknown Source)	IND, IDX, Index				
363	PhotoDeluxe Clipart Gallery	GAL				
364	Borland C++ Project	IDE				
365	MS Outlook Express Email	MBX				Y

	Mailbox					
366	MS Outlook Express Email Index	IDX				
367	Half-Life Saved Game	SAV				
368	MS Visual C++ DLL Exports File	EXP				
369	MS Linker Database	ILK				
370	MS Windows Help Text Search	TSC				
371	MS Visual C++ Precompiled Header	PCH				
372	MS Windows Help Full Text Search Cache	FTS, FTG				
373	MS Spelling Auto Correct List	ACL				
374	MS Windows Help Answer Wizard	AW				
375	Id Software Internal Data 3.0	WAD				
376	MS Visual C++ Debug File	SBR				
377	MS Windows Font Cache Index					

378	String Data Resource	MSG				
379	Temporary Data File (Unknown Source)	TMP				
380	Binary Data File (Unknown Source)	BIN, BI				
381	Sierra Game Data File	PRF, PKF				
382	Unreal Game Archive	UNR, UMX, UAX, UTX, UVX, UKX, USX, U??				
383	PaperPort Scanned Image	MAX				
384	MS Developer Studio Resource Script					
385	Id Software Game Map (Quake)	BSP, TMP				
386	Id Software Game Model	MDL				
387	Real Pool Image	RGB				
388	Bezerk Acrophobia Data File	SRF				
389	MS Chat Animated Character	AVB				
390	PhotoImpact Data	QCP				

391	MS Windows Welcome Bitmap	WBM				
392	PhotoImpact Color Map	MAP				
393	MS Outlook Express Email Tree	NCH				
394	MS Briefcase Database					
395	PhotoImpact Presets/Clipart Images	SMP, UOL, PST				
396	PhotoImpact Pencil Style	GAP				
397	USA 98: Streets & Destination Map File	GMF				
398	USA 98: Streets & Destination Tour	U98				
399	Calendar Creator Plus Calendar	CAL				
400	Adobe PhotoShop Image	PSD, PDD				
401	Java Script Source Code (ASCII)	JS, ASP, HTM, HTML, HTT, HTC, ASPX, ASCX		Y		
402	MS Visual C++ Compiled Resources	RES, APS, RCT				

403	Source Code Header/Include File	H, INC, H16, HXX, C, HPP				
404	MS Dependency File	DEP				
405	Source Code Make File	MAK, MK				
406	C/C++ Source Code File	C, CPP, H, CC, PCH++, RC		Y		
407	MS Visual C++ Object Description Lang.	ODL, IDL				
408	Printer Job Language Image	PJL, SPL, PRN				
409	Extended ISA Adapter File	ADF				
410	Adobe PostScript Document (PJL)	PS, PLT				
411	MS Developer Studio Project (ASCII)	DSP, DBP				
412	Virtual Reality World (ASCII)	WRL, WRZ, VRML, WRML				
413	Virtual Reality World (Binary)	WRL, IVR, BEH, LIT, WRZ				
414	MS Spell Checker Dictionary	DIC				
415	Cascading Style Sheet	CSS, HTM		Y		

416	MS Visual C++ Resource Script	RC				
417	PhotoSuite Album	CTF				
418	Java Source Code File	JAVA, HTM		Y		
419	MS Internet Explorer Connection Wizard	ICW, PBK				
420	MS Tip of the Day File	TIP				
421	Virtual Business Card File	VCF				
422	MS Visual C++ Registry Source	RGS				
423	MS Visual C++ Program Database	PDB, BSC, NCB, IDB				
424	MS Developer Studio Workspace	DSW				
425	MS Download File Index	SFC, SF0				
426	MS Visual C++ Interface Design Lang.	IDL				
427	AIN Archiver Archive	AIN				
428	Casio Camera Image	CAM				

429	Shockwave Flash Object	SWF, SPL				
430	Id Software Internal Data (Quake)	PAK				
431	Id Software Internal Data 3.0 Hpack	HPK				
432	MS Windows Cue Cards	CUE				
433	Adobe Language Database	RSD, SYD, DID, DDD, WLD, PDD				
434	PaperPort Thumbnail Images	PTN				
435	Macromedia Flash MX Shared Object Library	SOL				
436	Netscape Communicator Address Book	NA2				
437	WBEM Repository Database Support File	BTR, DATA				
438	IconAuthor Start File	IWM, IW				
439	Resource Texture Extension	RTX				
440	Java Serialized Object	SER				

441	Adobe Illustrator Drawing	AI, EPS				
442	Corel Supplemental Dictionary	SUP				
443	XnView Filter	HFP				
444	ANSI Text File	ANS				
445	Python Tkinter Library Icons	ICNS				
446	Video CD MPEG Movie	DAT				
447	Active Server Page	ASP				
448	BWC Archive	BC				
449	SeeMail Video (MacBinary)	SEE				
450	MainActor Project	MPF				
451	Comma Separated Values Text File	CAS, CSV, LOG, TXT		Y		
452	MS ScanDisk/CHKDSK Fragment File	CHK				
453	BTPC Compressed Image	BTPC				
454	Advanced Audio Coding ADIF Sound	AAC				

455	Setup Information	INF, INI, CDF, ISS, SWT				
456	Initialization File	INI, SYS, INF, ECF				
457	MS Outlook Express News Message	NWS				
458	WordStar Document	WS1, WS2, WS3, WS4, WS5, WS6, WS7, DOC		Y		
459	Printer Separator Page	SEP, HPC, GPD				
460	PeopleSoft Report	RPT				
461	Palm OS Address Book	DAT, BAK, ABA				
462	Palm OS Datebook	DAT, BAK				
463	Palm OS To Do List	DAT, BAK				
464	Palm OS Memo Pad	DAT, BAK				
465	WordStar for Windows	WSD, DOC		Y		
466	MS Windows Media Player Playlist (XML)	WPL				
467	Corel Texture Colorset	COL				
468	Adobe Linguistics File	HYP, ENV				

469	PCA Security Signatures Catalog	CAT, SIG				
470	Enhanced Compressor Archive	ENC				
471	LZX Archive	LZX				
472	NaShrink Archive	NSK				
473	Semone Archive	ONE				
474	Informed Filler Form (MacBinary)	IFM				
475	Informed Filler Template (MacBinary)	ITP				
476	Informed Interchange Document (MacBinary)	IIF				
477	Informed Package Document (MacBinary)	IPK				
478	Sqweez Archive	SQZ				
479	Stonecracker Archive	STC				
480	AMOS Music Bank	ABK				
481	Ace Archive	ACE				
482	MIME Base64 Archive	B64				

483	MS Access Database Project	ADP				
484	UHArc Compressed Archive	UHA				
485	Blair Witch Project	POD				
486	Unity3d Environment	UNITYWEB				
487	Ace Ventura Game Archive	BIN				
488	HTML + XML Namespace	XHTML, XHT, HTM, HTML		Y		
489	Act Of War Game Archive	DAT				
490	XML-binary Optimized Packaging	XOP				
491	Selectable Mode Vocoder Sound	SMV				
492	Enhanced Variable Rate Codec Sound-B	EVB				
493	Internet Low Bit Rate Codec Sound	LBC				
494	Mobile XMF Music	MXMF, XMF				
495	Mobile XMF Music (MacBinary)	MXMF				

496	Scalable Polyphony MIDI Music	MID				
497	MLP Audio Stream (Motorola)	MLP				
498	MLP Audio Stream (Intel)	MLP				
499	Compact Disc Digital Audio Track	CDA				
500	Phillips Compact Disk Interactive File	CDI, IFF				
501	DOS Pipe File (Unknown Source)	$$$				
502	EverAD PlayJ Sound	PLJ				
503	MS Visual Studio.NET Licenses	LICENSES				
504	MS Windows Visual FoxPro Application	APP				
505	Intuity AUDIX Multimedia Message	LVP				
506	Backup File (Unknown Source)	BAK, OLD				

507	Intuity AUDIX Multimedia Msg (MacBinary)	LVP				
508	Nortel Voice Block Sound (MacBinary)	VBK				
509	JPEG-2000 Bitmap Image (MacBinary)	JP2, JPG2, JPX, MJ2, MJP2, JPM			Y	
510	MS Visual Basic Class Module	CLS		Y		
511	DjVu Document Image (MacBinary)	DJVU, DJV				
512	FlashPix Bitmap (MacBinary)	FPX, CPX, FMP				
513	DocuFile / EDMICS 2000 Image	RLC				
514	Ad-Aware Signature	REF				
515	Harlequin RIP Image	PGB				
516	CACTVS Clear Text File	CTX				
517	Geometric Description Language Image	GDL, GSM, WIN, DOR, LMP, RSM, MSM, ISM				
518	WildTangent Compressed JPEG Image	WJP				

519	SQL Server Master Database	MDF, NDF				
520	ABC Music Language Song	ABC				
521	ExperVision TypeReader Dictionary	DCT				
522	MS Access Database/Wizard	ACC, ACCDU, ACCDE, ACCDA, ACCDB				
523	Nokia 9210 Communicator Video	NIM				
524	Absolute Terror Game Archive	PAK				
525	Wireless Bitmap	WBMP				
526	Macromedia Director Movie	DIR				
527	Descent Mission Builder Blocks	BLK				
528	Descent Font	FNT				
529	Descent High Scores	HI				
530	Descent Player	PLR				
531	Descent Robots	POF				
532	Delphi Compiled Package Code	DCP				
533	Font File (Unknown Source)	FNT, FON				

534	Abyss's Highest Experience Music	AHX				
535	MS Visual Interdev Cache	VIC, IMG				
536	Apple Email Message	EML, TXT, EMLX	Y	Y		
537	WinIMP Archive	IMP				
538	Evolution Email Message	EML, TXT	Y	Y		
539	Gmail Email Message	EML, TXT	Y	Y		
540	Global Message Exchange Email Message	EML, TXT	Y	Y		
541	Keyboard Script Layout	KBD				
542	Horde Internet Messaging Program (IMP) Email Message	EML, TXT	Y	Y		
543	The Nemesis Project Game Archive	CLT				
544	List File (Unknown Source)	LST				
545	Microsoft Mail Email Message	EML, TXT	Y	Y		
546	Mutt Email Message	EML, TXT	Y	Y		

547	Pro Evolution Soccer Game Archive	AFS				
548	[Deleted]MS Access Menu File					
549	dBase Index	NDX				
550	Open WebMail Email Message	EML, TXT	Y	Y		
551	EPANET Data File	NET				
552	MS Visual Studio.NET Project	CSPROJ, VBPROJ, USER, VBDPROJ, CSDPROJ,				
553	MS FoxPro Program File	PRG				
554	MS C#.NET Project	CSPROJ, USER, CSDPROJ		Y		
555	PageMaker 3.0 Document (MacBinary)	PM3				
556	Borland Paradox Primary Index	PX				
557	[Deleted]Borland Paradox Report Format					
558	[Deleted]Borland Paradox PAL Script Sou					
559	BITCOM Dial-Up Script File	SCP				

560	[Deleted]Borland Paradox Settings File					
561	Symbolic Link (SYLK) Spreadsheet	SLK				
562	[Deleted]Borland Paradox Sort Informati					
563	Symbolic Debugging Definitions	SYM				
564	Redolog Hard Disk Image					
565	[Deleted]Borland Paradox Validity Check					
566	VisiCalc Spreadsheet	VC				
567	MS Works Database (OLE)	WDB, DB				
568	Borland Paradox Index	Xnn, Ynn, Znn, XGn, YGn, ZGn				
569	Computer Graphics Metafile (ASCII)	CGM				
570	Extensible Style Language	XSL, XML, HTML, HTM, HTT, XSLT		Y		
571	MS Office Outlook 2003 Email	EML, TXT	Y	Y		

	Message					
572	C++ Dialogue Script	DLG, RC		Y		
573	American College of Radiology File	ACR				
574	Microsoft Outlook 2000 IMO Email Message	EML, TXT	Y	Y		
575	MS Outlook Express Email Message	EML, TXT	Y	Y		
576	Amateur Data Interchange Format (ADIF)	ADI, ADIF				
577	Pine Email Message	EML, TXT	Y	Y		
578	Hotmail Email Message	EML, TXT	Y	Y		
579	MS Virtual Server Hard Disk Image	VHD				
580	MSN Application Extension	NAV				
581	Velvet Studio Music Module Song	AMS				
582	Document Style Definition	STYLEDEF				

583	ActiveMime Object	MSO				
584	WinZip Self Extracting Archive	EXE, ZIP				Y
585	MS Visual Studio Keyboard Template	VSK				
586	ASD Archive	ASD				
587	3D Studio Max Model Export (ASCII)	ASE				
588	FIFA Football & Need for Speed Audio	ASF, AST				
589	Claris Impact Draw (MacBinary)	CID				
590	EVE Online Game Contents Archive	STUFF				
591	MS Office Macro Reference (OLE)	MSO				
592	Authorware Shocked File (Map)	AAM				
593	Authorware Windows File (Unpackaged)	A3W, A4W, A5W				

594	Authorware Course File (Packaged)	A4P, A4R				
595	Glyph Bitmap Distribution Format Font	BDF				
596	MS Office Macro Reference (RAW)	MSO				
597	Natural Language Processing Rule	RUL				
598	Norton Virus Definitions Update	BIN				
599	WinDVD Bookmark File	BMK				
600	Norton Virus Definitions Update Index	DAT				
601	MS Windows Network Service Performance Data	DAT				
602	Wireless LAN Encrypted Profile	ENC				
603	Nero Wave Editor Preset	PRE				
604	WildTangent Compressed PNG Image	WPG, WJP				

605	Logitech Desktop Messenger User Profile	DAT, BAK				
606	Norton AntiVirus Scan Data	DAT				
607	MS Visual Basic.NET Source Code	VB		Y		
608	Norton Virus Definitions Update Certificate	DAT, BAK				
609	CC:Mail Box	CCM				
610	Norton Virus Definitions Update Information	INF				
611	Shockwave 3D Model	W3D				
612	Corel Draw Template	CDT				
613	Corel Draw Colorset	COL				
614	KiSS Paper Doll File	CEL				
615	VeriSign Security Certificate	CER, CRT, DER, DAT, CRL				
616	Norton Internet Security Web Definitions	BIN				

617	Corel OCR Trace Configuration	CFG				
618	Common Gateway Interface Script	CGI				
619	MS PocketPC Device Emulator	BIN				
620	OpenSSL Encrypted Data	ENC				
621	Calculux Indoor Project	CIN				
622	MS Profiler Output	PRF				
623	MS Outlook Express Log	LOG				
624	SecureRemote Data	C				
625	Adobe Font List	LST				
626	MSN Messenger Data	DAT				
627	MS Windows Compatibility Solution Database	SDB				
628	MS Search Log	TMP				
629	Final Fantasy Game Archive	LGP				
630	Descent Movie Library	MVL				

631	Corel Metafile Exchange Image (Intel)	CMX, PAT, CDR				
632	Journey To The Center Of The Earth Archive	0				
633	Corel Duotone File	CIK				
634	Corel Presents Presentation	PQF, SHW, CPR				
635	Corel PhotoPaint Image	CPT				
636	Code Page Translation File	CPX				
637	Corel Presents Run-Time Presentation	CRP				
638	Corel Script	CSC				
639	Trickster Online Image	NRI				
640	Cheat Engine Cheat Table	CT				
641	[Deleted] FaxWorks Control Information					
642	[Deleted]MS CodeView Information Screen					

643	Claris Works Document (MacBinary)	CWK				
644	Claris Draw Image (MacBinary)	CDD				
645	[Deleted] Macromedia Director Locked Cas					
646	MS Virtual PC Language Dictionary	DICT				
647	HP Digital Imaging Product Assistant Database	DBF				
648	Content Guard Digital Rights Management Database	DB				
649	Delphi Compiled Unit File	DCU				
650	FrontPage Binary-Tree Index	BTR				
651	Intel Wireless Event Profile Importer	EPI				
652	Amiga Workbench Icon	INFO				

653	Norton Antivirus Log	LOG				
654	Stereo CAD-3D Objects Graphics Image	3D2				
655	QuickDraw 3D Metafile	3DMF				
656	MS Visual Studio Properties	VSPROPS				
657	[Deleted]Corel Custom Palette					
658	Wise Installer Log	LOG				
659	Andrew Toolkit Raster Image	ATK, CMU				
660	Log File (Unknown Source)	LOG				
661	MS Search System Index	0				
662	Reality AdLib Tracker 2-op FM Music	RAD				
663	Media Direct Configuration	KC				
664	Raster Document Object	RDO				
665	Commodore Power 64 Memory Image					

666	Norton Spam Filter Pattern	SPM				
667	Gaussian Cube Image	CUBE				
668	DataCAD Drawing File	DC5				
669	Desktop Color Separation	DCS, EPS				
670	Digital Document Interchange Format Image	DDIF				
671	Photo Lab File	EFIF				
672	Descent Demo	DEM				
673	[Deleted] SoundCap/SoundEdit Recorded In					
674	MicroStation CAD Drawing	DGN				
675	Sound Designer I Audio File	DIG				
676	DownLoadable MIDI Sounds	DLS				
677	X-Tracker Music Module	DMF				
678	Delphi Diagram Portfolio	DDP				
679	MS Visual Basic.NET Project	VBPROJ, USER		Y		

680	MS Visual Studio.NET Src Safe Code Cnt	VSPSCC				
681	Micrografx Designer Image	DS4, DSF				
682	Doom Saved Game	DSG, SAVE				
683	MS Developer Studio Macro	DSM				
684	eXtensible ARchiver Archive	XAR				
685	Orchida Tajima Home Embroidery Image	DST				
686	SGML Document Type Definition	DTD, ENT, XML				
687	Digital Terrain Elevation Data	DTED, DT0, DT1, DT2, AVG, MIN, MAX				
688	DigiTrakker module	DTM, MDL				
689	MS Dial-up Networking Export	DUN				
690	Digital Video Movie	DV				
691	DiamondWare Digitized Audio	DWD				
692	AutoDesk Web Graphics Image	DWF				

693	LuraDocument Format Image	LDF				
694	[Deleted]Ensoniq ASR Disk Image					
695	[Deleted] FrameMaker Element Definition					
696	Ensoniq EPS Instrument	EFE				
697	[Deleted]Ensoniq KT Disk Image					
698	[Deleted]Ensoniq SQ1/SQ2/KS32 Disk Imag					
699	[Deleted]Ensoniq SQ80 Disk Image					
700	[Deleted]Ensoniq VFX-SD Disk Image					
701	Electric Image File	EIDI, EI				
702	MS Windows Enhanced Metafile	EMF, TMP, WMF		Y		
703	Internet Message	EML, TXT	Y	Y		
704	[Deleted] Enhanced Perl-Parsed HTML					

705	Adobe PostScript Font (MacBinary)	PFB				
706	Extension-Sort Packer Archive	ESP				
707	MS Encarta Document	EWL				
708	MS Word Exclusion Dictionary	EXC				
709	[Deleted] Farandoyle Linear Module					
710	[Deleted] Farandoyle Blocked Linear Modu					
711	Jupiter Ace Snapshot	ACE				
712	Farandoyle Composer Music Module	FAR				
713	MS Outlook Navigation Bar	FAV				
714	Facsimile Group 3 Image	FAX, G3				
715	Slim! Compressed Archive	FB				
716	Virtual CDROM File	FCD				

717	Fiasco Database	FDB, FDAT, FPR, FREC				
718	MS PowerPoint Slides (XML)	PPT, PPS, XML, HTM, MHT	Y	Y		
719	[Deleted]CADRE Finite Element Mesh File					
720	MS Fast Find Index	FFA, FFL, FFO, FFX				
721	Gravis UltraSound PnP InterWave Patch	FFF				
722	Virtual World Interchange File	FFIVW				
723	IBM DCA Final Form Text	FFT				
724	Freehand 5 Drawing (MacBinary)	FH5				
725	Fractal Image	FIF				
726	Flexible Image Transport System Bitmap	FITS, FIT, FTS, LST				
727	Flash Movie	FLA				
728	Figlet Font	FLF				
729	Openflight Scene Description 3D Model	FLT				
730	FrameMaker Document	FM, FRM				

731	Oracle Binary Form Source Code	FMB				
732	GetRight File Mirror List	FML				
733	Oracle Executable Form	FMX				
734	[Deleted]Font Navigator Font Group File					
735	FunkTracker Module	FNK				
736	Fontographer Font (MacBinary)	FOG				
737	[Deleted]Freedom of the Press Bitmap					
738	FileMaker Pro Database	FP, FP3, FPT, FMP, FP5				
739	[Deleted]Flying Pigs for Windows Data					
740	FlashPix Bitmap	FPX, CPX, FMP				
741	MS FoxPro Report File	FRT, FRX, PJT, MNT, LBT				
742	[Deleted]fPrint Audit Tool File					
743	Paradox Form	FSL				
744	Farandoyle Sample File	FSM				

745	Lotus Notes Full Text Index	FT				
746	Framework II Database	FW2, FWK				
747	Framework III Database	FW3				
748	Framework IV Database	FW4				
749	3D Frogger Game Data	MWD				
750	[Deleted]Casio FZ-1 Bank Dump					
751	[Deleted]Casio FZ-1 Full Dump					
752	[Deleted]Casio FZ-1 Voice Dump					
753	NeXT/Sun/UNIX Sound CCITT G.721 Raw 4 bit ADPCM	G721				
754	NeXT/Sun/UNIX Sound CCITT G.723 Raw 3 bit ADPCM	G723				
755	GenePix Array List	GAL, GPR				
756	Generic CADD Drawing	GCD				
757	[Deleted]Ground Control Point File					

758	GVA2000 Author Lecture	GDB				
759	GEDCOM Genealogical Data File	GED				
760	Ventura Generated Text File	GEN				
761	GetRight Unfinished Download	GETRIGHT				
762	[Deleted] Patton&Patton Flowcharting 4 C					
763	Linksys Router Configuration Backup	BIN				
764	[Deleted]Gravis GripKey Document					
765	Micro Focus Generated Code	GNT				
766	[Deleted]GraphOn Bitmap					
767	[Deleted]Gould Scanner Bitmap					
768	MS Excel Graph	GRA				
769	MS ActiveMovie Graph	GRF				

770	Gridded Binary Image	GRIB, GRB				
771	Raw GSM 6.10 Audio Stream	GSM				
772	Graoumftracker New Music Module	GT2				
773	[Deleted] Graoumftracker Old Music Modul					
774	Sound Tools File	HCOM				
775	Hierarchical Data Format File (v4)	HDF				
776	[Deleted]HighEdit Document					
777	[Deleted]MS Hellbender Saved Game					
778	HP Graphics Language Drawing	HGL, HPGL, PLT, HPG				
779	[Deleted]Hitachi Raster File					
780	Descent Mission	HOG				
781	MS Visual Studio Help Project	HPJ				
782	[Deleted]C++ Program Header					
783	History file (Unknown	HST				

	Source)					
784	Extended HTML Template	HTX				
785	Descent Property Resource Data	HXM, HAM				
786	[Deleted]Image Access eXecutive Bitmap					
787	Citrix Independent Computer Architecture File	ICA				
788	Kodak YCC Printer Image	ICC, YCC				
789	Icon Library File	ICL				
790	Sun Icon/Cursor Image	ICON, CURSOR, PR, ICO				
791	NCSA Interactive Color Raster Image	ICR				
792	MS MIDI Instrument Definition (Intel)	IDD, IDF				
793	[Deleted]Internet Data Query File					
794	Sun TAAC Image File	TAAC, VFF, SUNIFF, IFF				
795	Initial Graphics Exchange Specification	IGES, IGS				

796	[Deleted]Inset Systems Metafile					
797	Intuit Interchange Format Data	IIF				
798	WinImage file	IMA, WIL, DAT				
799	Oracle Form 3.0 Source Code	INP				
800	PUT Compressed Archive	PUT, INS				
801	Findit Document	IOF				
802	MS Internet Inquiry File	IQY, IGY				
803	ISO 9660 CD-ROM Image (Data Mode 1)	ISO				
804	ImageStyler	IST				
805	Impulse Tracker Music Module	IT				
806	Internet Document Set	ITS				
807	Open Inventor 3d Scene (ASCII)	IV, IRIS, INVENTOR				
808	Open Inventor 3d Scene (Binary)	IV, IRIS, INVENTOR				
809	YAODL 3D Scene	YAODL, YDL				
810	Paint Shop Pro Image Browser Cache	JBF				

811	[Deleted]SAS JMP Discovery Statistics F					
812	[Deleted]Jill of the Jungle Data File					
813	Java Server Page	JSP, JS		Y		
814	Kurzweil 2500 Sample	K25				
815	Karaoke MIDI File	KAR, MID, MF				
816	Kodak Photo Enhancer Image	KDC				
817	Kaspersky Anti-virus Toolkit Key	KEY				
818	KoFax Group 4 Facsimile Image	KFX				
819	[Deleted]Kodak Digital Postcard File					
820	RoboHELP K-keywords Project Index	KKW				
821	Korg Trinity/Triton Multisample	KMP				
822	Konica Quality Picture Native Camera Image	KQP				
823	Kurzweil 2000 Sample	KR1, KRZ				

824	Korg Trinity/Triton Sound Sample	KSF				
825	Kye Game Data	KYE				
826	SAdT Music Composer Module/Song	SAT				
827	TV Paint Image					
829	MS Access Lock File	LDB				
830	[Deleted]Corel Paradox Delivered Librar					
831	Legacy Document	LEG				
832	[Deleted]Logitech Entertainment System					
833	BGBlitz Position Database	PDB				
834	[Deleted]DataCAD Line Type File					
835	List Machine Image	LISPM, LISP				
836	HP Printer Control Language Image (PJL)	PCL, PRN, PJ, PJXL				
837	[Deleted]Laplink Exchange Agent					

838	Helix Nuts and Bolts Stronghold Encrypted Archive	SAF, LPD				
839	[Deleted]Intel Video Phone Language Res					
840	[Deleted]Corel Paradox Saved Library					
841	HP Graphics Language Drawing (PJL)	HPGL, HGL, PLT				
842	[Deleted] ThoughtWing Library Unit File					
843	[Deleted]Miner Descent/D2 Level Extensi					
844	Dymo DLS Label File	LWL				
845	LightWave 3D Object	LWOB, LWO				
846	Lotus Word Pro 96/97 Document	LWP, MWP				
847	LightWave 3D Scene	LWSC, LWS				
848	DataCAD Layer File	LYR				

849	[Deleted] Skyroads Data File					
850	Corel Motion 3D Animation	M3D				
851	MS Access Module	MAD				
852	MS Access Form	MAF				
853	Applixware Document	AG				
854	MS Access Macro	MAM				
855	Manual Page Output	MAN, n				
856	MS Access Query	MAQ				
857	Mozilla Archive	MAR				
858	Lotus Freelance Graphics Smartmaster Look	MAS				
859	PS2 Powersave File	MAX				
860	[Deleted]MS Hover Maze Data					
861	[Deleted]Monster Bash Data File					
862	Berkeley UNIX Mailbox Format	MBOX, MBX				Y
863	Eudora Mailbox	MBX				Y
864	[Deleted]DataCAD Keyboard Macro					

865	MS Access Database	MDE				
866	[Deleted]MS Access Blank Database Templ					
867	QuickLink Mobile Phonebook	PBOOK				
868	Fractal Forge Fractal Parameters	MND				
869	OS/2 Presentation Manager Metafile	MET				
870	Monarch Graphic Image	MGF				
871	[Deleted]MS Image Composer File					
872	FrameMaker Interchange File	MIF		Y		
873	Machine Independent File Format Image	MIFF, MIF				
874	Earthlink Email Message Index	MIF				
875	Mitsubishi Color Sublimation Printer Image	MITSU				
876	MS Visual Studio.NET Perform. Session	PSESS				

877	Synthetic Music Mobile Application Sound	MMF				
878	Mindmaper MindManager Map	MMP				
879	Descent 2 Mission File	MN2				
880	[Deleted]MNI Mandelbrot Image					
881	Multi-Image Network Graphics Animation	MNG				
882	MS FoxPro menus	MNT, MNX				
883	[Deleted]MS FoxPro menus (compiled)					
884	Atari MSA Disk Image	MSA				
885	Manchester Scene Description Language	MSDL				
886	[Deleted] Microsoft Network Document					
887	MTV Video	MTV				
888	[Deleted] Microsoft					

	Multimedia Viewer Fi					
889	Lotus Word Pro 97 Smartmaster	MWP				
890	[Deleted] Nanoscope File					
891	Lotus Notes Internal Clipboard	NCF				
892	[Deleted]Nendo 3D Low-Polygon Modeler					
893	NeoChrome Bitmap Image	NEO				
894	NeWS Bitmap Font	NEWS				
895	WildTangent Compressed Wave Sound	WWV				
896	SPHERE Speech Recognition Waveform	NIST, SPH				
897	National Imagery Transmission Format Image v1.0	NITF, NTF, NSIF				
898	Oracle 7 Data	NLB				
899	WildTangent Game Data	CDAS, CDANFO, CDAET, WTCFG, CDAED, CDAES				

900	Lotus Notes Database Storage Facility	NS2, NSF, NTF, NDL, NS#, NSG, NSH				Y
901	MS Foundation Classes (MFC) Wizard	CLW				
902	AVHRR Satellite Image	NOAA, GOES, SST				
903	Nonlinear Uniform Rational BSpl	NURBS, TXT				
904	Noteworthy Composer Song	NWC				
905	Typhoon Voice File	O01				
906	Object Oriented Graphics Library: Quadrilaterals (ASCII)	QUAD				
907	CD Catalog Localization Dictionary	CAT				
908	PowerBASIC Debugger Symbols	PDB, PBD				
909	MS Outlook Form Template	OFT	Y	Y		
910	Oktalyzer Tracker Music Module	OKT				
911	MS OLE Object Library	OLB				

912	Psion Series 3 Word Document	WRD				
913	Symbian Organiser Executable	OPO				
914	MS Developer Studio Workspace Options	OPT				
915	OrgPlus Organization Chart	OPX				
916	Lotus Organizer File	ORG, OR2, OR3				
917	Oracle 7 Configuration	ORA, SIZ, VRF, PIN				
918	Oracle 7 Script	ORC				
919	MS Office Saved Search	OSS				
920	MS Exchange/Outlook Offline Storage (97-2002)	OST				Y
921	Fookes Super NoteTab Template	OTL				
922	Tektronix Plot 10 Drawing	P10				
923	PageMaker 6.5 Publication (MacBinary)	P65				

924	PKCS Certificate / Digital ID	P7C, P10, P12, P7B				
925	Sound Blaster Studio II Package Song	PAC				
926	Corel Draw Vector Pattern	PAT				
927	PowerBuilder Dynamic Library	PBD, DLL				
928	TurboTax Form (1)	1PE, 1PH				
929	MS Phonebook	PBK				
930	PowerBuilder Library	PBL				
931	PowerBASIC Resource	PBR				
932	Kodak Photo CD Image	PCD				
933	Eudora Email Message	EML, TXT	Y	Y		
934	OKI MSM6376 Synthesizer Chip PCM File	PCM				
935	Norton Virus Definitions (compressed)					
936	PICS Animation	PCS				
937	MS Package Definition File	PDF				

938	NASA Planetary Data Systems Image	PDS, IMG				
939	Aladdin Systems Private File	PF				
940	Aladdin Systems File Component	PFC				
941	HP Plotter Language Drawing	PGL, HPGL				
942	Pretty Good Privacy Key/Signature/Data	PGP				
943	MS Help Compiler Phrase Table	PH				
944	Perl-Parsed HTML	PHTML				
945	Pixar Picture	PICIO, PIXAR, PIC, PXR				
946	piAccess Mail / Link	PIL				
947	PINs encrypted data	PINS				
948	MPEG-4 Audio Lossless Coding Standard	ALS				
949	PABX Background Bitmap	PIX				

950	PixelPaint Professional Image	PIXELPAINT				
951	Macintosh Desktop Database					
952	MS Visual Foxpro Project	PJT, PJX				
953	MS Setup Package	PKG				
954	Lotus Organiser Paper Layout Definition	PLT				
955	Perl Application	PL				
956	Oracle 7 Data Description	PLI				
957	DisorderTracker 2 Module	PLM				
958	UNIX Plot(5) File	PLOT				
959	WinAmp MPEG Play List	PLS				
960	AutoCAD Plot Drawing	PLT				
961	Polygon Model Format	PLY				
962	PageMaker 4.0 Document	PM4				
963	PageMaker 5.0 Document (MacBinary)	PM5				

964	PageMaker 6.0 Document (MacBinary)	PM6				
965	Portable Network Graphics Bitmap	PNG			Y	
966	MacPaint Bitmap	PNT, MAC, MPNT, MACP, PNTG, PAINT				
967	Descent Alternative Texture Set	POG				
968	Persistence of Vision Ray-Tracer	POV, INC				
969	Picture Publisher Bitmap	PP4, PP5				
970	PlayStation Patch File	PPF				
971	Picture Pump Project	PPP				
972	Palm OS Resource File	PRC				
973	Lotus Freelance Presentation	PRE				
974	Harvard Graphics Presentation	PRS, SH3				
975	PsiMail Internet Provider Template	PRV				
976	Lotus Freelance Graphics 97 File	PRZ, DGM, SMC, MAS, SYM, PRE,				

		BW, PAL				
977	Pinnacle Sound Bank	PSB				
978	Symbian/Psion A-Law Voice Note Audio	PSI				
979	Protracker Studio Module	PSM				
980	PolyTracker Music Module	PTM				
981	Printronix Graphics File	PTX				
982	Across Crossword Puzzle	PUZZ, PUZ				
983	MS Pocket Word Document	PWD				
984	Smith Corona Word Processor Document	PWP				
985	MS PowerPoint Wizard	PWZ				
986	MS Pocket Excel Spreadsheet	PXL				
987	Python Tkinter / UNIX Shell Script	PY, PYC, TCL, SH, PL				
988	QuickArt Document	QAD, PF				
989	QuickBooks for Windows Data	QBW				

990	Quick Ray Trace	QRT				
991	Family Lawyer Document	QFL				
992	MS Quarter-Inch Cartridge Backup Set	QIC				
993	Quicken Interchange Format	QIF				
994	Google Earth Language Definition	QM				
995	MS Query	QRY				
996	Zelda Classic Quest Data	QST				
997	QuickTime Image	QTI, QTIF, QTS, QTX, QIF				
998	QuickTime Preferences File	QTP				
999	Q&A Write Document	QW				
1000	Quark XPress Document/Template (English,Intel)	QXD, QXT, QWD, QWT, QXL, QXB				
1001	REBOL Script / Data	R				
1002	RealMedia Audio Sound	RA, RAM				
1003	Psion Series 3 Bitmap	PIC				

1004	RealPlayer Selected Track	STE				
1005	Rayshade 3D Scene	RAY, SHADE				
1006	RoboHELP Project Information	RBH				
1007	XML Resource Description Framework	RDF				
1008	Descent Registered Level	RDL, RL2				
1009	MS Recorder Macro	REC				
1010	IBM DCA Revisable Form Text	RFT				
1011	RenderMan Interface Bytestream	RIB				
1012	Letraset Image	RIFF				
1013	Descent 2 Registered Level	RL2				
1014	Alias Wavefront Raster Image	RLA, RLB				
1015	RealMedia Audio/Video Stream	RM, RMJ, RAM, RA, RT, RP, RPA				
1016	MS RegMaid Document	RMD				

1017	Rich Map File	RMF				
1018	Rescue Rover Data	ROV				
1019	Red Hat Package Manager Archive	RPM				
1020	Crystal Report	RPT				
1021	Road Rash Saved Game	RRS				
1022	Paradox 7 Report	RSL				
1023	Real Tracker Music Module	RTM				
1024	InstallShield Log	ILG				
1025	MS Scan Configuration	RVP				
1026	Scream Tracker v3 Instrument/Sample	S3I, SMP, SND				
1027	AMI Professional Document / Styles	SAM, AMI, STY		Y		
1028	SFzip SoundFont Archive	SFZ				
1029	Macintosh Bitmap Display Font (MacBinary)					

1030	Shockwave Movie Object	MOO				
1031	MS Schedule+ Schedule	SC2, SCD				
1032	Thunderscan Image	SCAN				
1033	MS Visual Source Safe Code Control	SCC				
1034	Sculpt3D Scene Model	SCENE				
1035	MS Windows Explorer Command File	SCF, ISK				
1036	PSpice Schematic	SCH				
1037	ScanVec Inspire Native File	SCI				
1038	Pinnacle Studio Scene	SCN				
1039	3D Ultra Pinball Game Archive	TBV				
1040	Orbiter Scenario	SCN				
1041	MS FoxPro Form	SCX, VCX				
1042	Sound Designer 1 Audio File	SD				
1043	Sound Designer 2 Flattened File	SD2				

1044	Standard-Delay-Format	SDF				
1045	Roland S-series Floppy Image	SDK				
1046	SmartDraw Library	SDL				
1047	Spatial Data Modelling Language	SDML				
1048	SmartDraw Drawing	SDR				
1049	Midi Sample Dump Standard (raw)	SDS				
1050	SmartDraw Template	SDT				
1051	Semicolon Divided Values File	SDV				
1052	StarWriter Document / Template	SDW, VOR				
1053	Midi Sample Dump Standard (comp)	SDX				
1054	Cool Edit Session File	SES				
1055	E-mu SoundFont 2.0 MIDI Bank	SF2, SBK				
1056	SoundStage Sound File Data	SFD				

105 7	SoundStage Sound File Information	SFI				
105 8	Sonic Foundry MIDI Sysex Sample Resource	SFR				
105 9	Seattle Film Works JPEG Image	SFW				
106 0	Standard Generalized Markup Language	SGML, XML, HTM, HTML				
106 1	Silicon Graphics Object	SGO				
106 2	Corel Show Slide Presentation	SHB, SHW				
106 3	ArcView GIS Shape	SHP, SHX				
106 4	Prosa State Transition Diagram Model	STM				
106 5	DEC LN03+ Sixel Graphic Image	SIX, SIXEL, LN03				
106 6	Pretty Good Privacy (PGP) Private Keyring	SKA, SKR				
106 7	Macromedia Director Resources (MacBinary)	SKL				

1068	AutoCAD Slide Library	SLB				
1069	AutoCAD Slide	SLD				
1070	DataCAD Symbol File	SM3				
1071	3D Ultra Mini Golf Game Archive	RBX				
1073	Spectrum 512 Smooshed Image	SPC, SPU, SPS				
1074	Splint Archive	SPL				
1075	SPOT Satellite Image	SPOT				
1076	Sound Shop Sound					
1077	MS Visual Studio.NET DB Discovery	VSDISCO, DISCO				
1078	Structured Query Language Code	SQC				
1079	Structured Query Language Query	SQL				
1080	Structured Query Language Report / Program	SQR				

1081	Enable Spreadsheet	SSF				
1082	Atari ST Minix Disk Image	ST				
1083	Simple Vector Format Image	SVF				
1084	Shockwave Audio	SWA				
1085	Yamaha SY-Series Wave Sound	SYW				
1086	Sonata CAD Modelling File	T2T				
1087	Tape Archive File	TAR				Y
1088	UNIX Compress Archive	Z, TAZ, TGZ, GZ, GTAR				Y
1089	Thumbs Plus Database	DB, TDB				
1090	PureVoice Audio	QCP				
1091	PlayStation2 TIM2 Bitmap	TM2				
1092	Tiger Map File	TIG				
1093	Eudora Mailbox Table of Contents (MacBinary)	TOC				
1094	Kodak Color Management System Profile	TOL, ICC				

1095	Cakewalk Overture Score	OVE				
1096	Teleport Pro Project	TPP				
1097	GeneRally Track	TRK				
1098	MS Terminal File	TRM				
1099	MKS Source Integrity Project Use	TRN				
1100	TabWorks File	TWF				
1101	Tagwrite Template	TWW				
1102	Descent Property Resource Interchange	HMEL				
1103	Yamaha TX16W Wave Sound	TXW				
1104	X-ray Diffraction Data	UDF				
1105	Motif Icon File	UIL				
1106	US Telephony Audio File	ULAW				
1107	Ultra Tracker Module Music	ULT				
1108	MKS Source Integrity File	USE				

1109	UU-Encoded File	UU, UUE, DAT				
1110	UltraTracker Wave Audio	UWF				
1111	FreeFlow Variable Information (VI) Project	VI				
1112	MS Visual Basic Project	VBP		Y		
1113	MS Visual Basic Workspace	VBW		Y		
1114	MS Visual Basic Custom Control	VBX				
1115	Visual CertExam Suite Exam	VCE				
1116	MS FoxPro Class Library	VCT, VCX, SCT				
1117	LABView Virtual Instrument	VI				
1118	SymbOS VID Video	VID				
1119	Khoros Visualization Image	VIFF, XV, VIF				
1120	Norton AntiVirus Quarantined File					
1121	VivoActive Streaming Video	VIV, VIVO				
1122	Corel Ventura Library	VLB				

1123	FaxWorks Audio File	VMF				
1124	VORT Raster Image	VORT				
1125	VoxWare MetaVoice Encoded Audio	VOX				
1126	Ventura Publisher Publication	VP				
1127	Yamaha Sound-VQ Locator	VQE, VQL				
1128	Yamaha TwinVQF Music	VQF				
1129	MusicMatch Theme File	MMZ				
1130	MS Visio 3/4 Document/Drawing/Shapes/Template	VSD, VSS, VST, VT		Y		
1131	GetRight Download List	VSL				
1132	MS Visio 2 Document/Drawing/Shapes/Template	VSS, VSD, VST		Y		
1133	MS Visio Workspace	VSW		Y		
1134	Id Software Sprite (Quake 2)	WAL				

113 5	QuattroPro Spreadsheet	WB1, WB2, WB3		Y		
113 6	MS Write / Word Backup	WRI, WBK, TMP, DOC		Y		
113 7	Argo WebLoad II Upload	WBL				
113 8	Crick Software WordBar File	WBR				
113 9	Crick Software WordBar Template	WBT				
114 0	MS Works Portfolio	WSB				
114 1	Xara Web Document	WEB				
114 2	Turtle Beach WaveFront Bank	WFB				
114 3	Turtle Beach WaveFront Drum Set	WFD				
114 4	Turtle Beach WaveFront Program	WFP				
114 5	Audition Play Data	ARP				
114 6	Logitech RSA Crypto Key	TXT				
114 7	MS Word/Publisher Wizard	WIZ				

1148	Argo WebLoad I Upload	WLF				
1149	MS Word Add-In	WLL, WWL				
1150	Future Composer Music Module	WOW				
1151	Enable Wordprocessor Document	WPF				
1152	Novel PerfectWorks Document	WPW				
1153	QuattroPro for DOS Spreadsheet	WQ1, WQ2		Y		
1154	Lotus Symphony Spreadsheet	WR1, WRK, WKS, SYM		Y		
1155	Cakewalk Music Audio Project	WRK				
1156	Wavelet Scalar Quantization Image	WVL				
1157	Macromedia Extra Program Extension	X16, X32				
1158	Advanced Visualizer 3D Object (ASCII)	OBJ				
1159	Xara X Vector Drawing	XAR				

1160	FastTracker 2 Instrument Sample	XI				
1161	Wang Imaging File	XIF				
1162	X11 Xim Toolkit File	XIM				
1163	FastTracker 2 Extended Music Module	XM				
1164	MS Exchange Shortcut/Link	XNK				
1165	Xaos Tools Bitmap Image	XOS				
1166	X11 Pixmap Image	XPM, PM				
1167	Xargon Game Data	XR1				
1168	XTree Data	XTP				
1169	Yamaha XG Works MIDI File	XWF				
1170	Subsampled Raw YUV Bitmap	Y, U, V				
1171	Arts & Letters Clipart Library	YAL				
1172	YBS Archive	YBS				
1173	Hacha Split File	0, n, nn				

1174	MS Visual Studio.NET Web Information	WEBINFO				
1175	Zinc Interface Library Icon	ZINC				
1176	MS IIS RSA Crypto Machine Key					
1177	MS Windows Recycled Files					
1178	MS Outlook Address Book	OAB				
1179	MS Application Profile Settings	PIP				
1180	BlackBerry Data	ITB				
1181	MS Datamap Index	ID				
1182	MS Language Web Cache	ENG, DEU, ENU, ESN, FRA, ITA, NLD				
1183	BlackBerry Data	ISH, BK0				
1184	MS Proofing/Language Dictionary	LEX, DAT, SVE, NLD, FRA, DEU, THS				
1185	MS Windows Event Log	EVT				
1186	MS Exchange Settings	RWZ				

1187	MS Windows CB Data	CBD				
1188	Flash Video	FLV				
1189	MS Software Policies	POL				
1190	Unicode Extensions	UCE				
1191	MS Outlook Remote Email	RHC				
1192	MS Office Clip Art	MMC				
1193	MS NT Operating System Loader					
1194	BlackBerry Data	IL				
1195	MS Exchange/Security Configuration Database (ESE)	EDB, SDB				
1196	MapInfo Map	MAP				
1197	InstallShield Definition File	DAT, CDF, DEF, FDF, INI				
1198	MS Windows COM+ Library	CLB, DAT, APL				
1199	MS Internet Database Connector Documen	IDC				

1200	MS Visual C Dependency File	DEP				
1201	Norton Virus Definitions	DAT, KC, nnn				
1202	MS Forms Cache	DAT				
1203	MS Outlook Express Email Database	DBX				Y
1204	MS Windows NT System Driver	SYS				
1205	MS Datamap Index	IND				
1206	MS Visual C Build Log	PLG				
1207	MS Agent/Assistant Character	ACS, ACG, ACF				
1208	MS Office/Publisher Border	BDR				
1209	Sierra Game Data File	GRD				
1210	eFax Electronic Fax Document	EFX, JSD				
1211	MS Windows Installer Package / Wizard	MSI, MST, DAT, MSM, WID, WIM, CUB, PCP				

121 2	DVD MPEG2 Video Object File	VOB				
121 3	DOS Master Boot Record (MBR)	DOS, SYS				
121 4	MS Visual BASIC Source Code	BAS, VB, VBS, ASPX, ASCX		Y		
121 5	WinPharoah Filter	FTR				
121 6	Keyboard System Driver	SYS				
121 7	Sierra User Profile	LOG				
121 8	Raima Arcserve Database	00?, DAT				
121 9	DVD Video Manager Data	BUP, IFO				
122 0	MS DirectMusic Support File	TPJ, TPL, PER, CDM				
122 1	Adobe Acrobat Capture Index	NDX				
122 2	Canon Digital Camera Picture Catalog	CTG				
122 3	MS Visual BASIC Form	FRM, CTL		Y		
122 4	MS Visual BASIC Form Index	FRX				
122 5	MS Visual BASIC Script/Header	ASP, ASA, INC, BAS, ASPX, ASMX, ASAX, AS		Y		

1226	MS Datamap Data	DAT				
1227	Active Template Library Template	CPP, H, IDL				
1228	Active Template Library Control	CTL				
1229	DELL Program Diskette Image	IMG				
1230	UUNET Dial-in Script	SCR				
1231	MS Temporary Disk File	TDF, TD2				
1232	MS Windows Profile System File	DAT, LOG, ADR				
1233	MS Windows Security Catalog	CAT				
1234	WBEM Managed Object Format	MOF, MFL				
1235	Character Set View	CSV				
1236	MS Windows System Event Log	LOG, ALT, LO_				
1237	MS Windows Registry Log	LOG				
1238	Link Notebook Chart	LNB, ANB				
1239	MPEG Music File (+ID3v2 Tags)	MP3, MP2, MPGA				

1240	Configuration File (Binary)	CFG, CNF				
1241	Palm OS Expenses	DAT, BAK, DB				
1242	Text File: Unicode/DoubleByte/UTF-16LE	TXT, DOC, INI, INF, TEXT		Y		
1243	Direct3D Object (Binary)	X, D3D, XIE				
1244	Vista Digital Elevation Model Data	DEM				
1245	Macintosh Disk Image	DMF, DMG				
1246	Free Lossless Audio Codec	FLAC, FLA				
1247	MS Office Document (XML)	XML, HTM, DOC, PPT, XLS, MHT	Y	Y		
1248	MS Excel Spreadsheet (XML)	XLS, XML, HTM, MHT	Y	Y		
1249	MS Word Document (XML)	DOC, XML, HTM, HTML, MHT	Y	Y		
1250	UNIX Program/Program Library (64-bit)	ELF				
1251	UNIX Program Library (64-bit)	SO				
1252	RAR Compressed Archive	RAR, Rnn, Snn				Y

1253	MS Project (ANSI)	MPX		Y		
1254	Text File (UTF-8)	TXT, INI, TEXT,		Y		
1255	Workshare DeltaView File	WDF				
1256	Source Code (General)	PAS, C, CPP, JS, H, VB, VBS				
1257	InterActual Installer Disk Identifier	ID				
1258	Tab Separated Values Text File	TSV, TXT, TEXT, LOG		Y		
1259	MS Windows Media Active Stream	WMV, WMA, ASF, ASR, DVR-MS				
1260	Pro/ENGINEER Geographic Image	PRT, PTR				
1261	Zinio Electronic Magazine	ZNO				
1262	Internet Message (MIME)	EML, TXT, MHT, MIM, MME, MIME, MSG	Y	Y		
1263	Internet Message (UU-Encoded)	EML, TXT	Y	Y		
1264	Scalable Vector Graphics Image	SVG				
1265	Sonic Foundry ACID 3 Music	ACD				

1266	QuickTime Xtra Plug-in	X16, X32, 68K, PPC, APP				
1267	CD-ROM Autoplay Menu	APM				
1268	MS Album Media Database	ABM				
1269	America Online Address Book Index	ABI				
1270	America Online Address Book	ABY				
1271	America Online Buddies List	BAG				
1272	PKZip Archive Split File	CA1, CA2, CA3, CA4, CA5, CA6, CA7, CAn				
1273	MS Speech Recognition Engine Data	AM, DLM, LXA, NGR, SMP				
1274	Borland Text Language Dictionary	BTL				
1275	MS Step by Step Interactive Training	CBZ, LDZ				
1276	WordPerfect Office Color Correction	CC, PF, ICM				
1277	Borland Graphics Interface Stroke	CHR				

	Font					
1278	MS HTML Help Index	CHS				
1279	Easy CD Creator Project Layout	CL5				
1280	Adobe Acrobat Linguistics Index	CLX				
1281	BroadJump Character Set Conversion	CNV, DAT				
1282	MS Office FAX Cover Page	CVP				
1283	PC Stomper Data File	DB1, DSX, DWR, LGS, SY0, DST, DSN, AP0				
1284	MS Dr. Watson Memory Dump	DMP, HDMP, MDMP				
1285	Turbo Compiler Context File	DSK				
1286	MS Windows Application Log	DTC				
1287	MyDVD Style Template	DVD				
1288	Ensoniq Waveset	ECW				
1289	MS Windows Desktop Theme Elements	ELM				

1290	America Online Data	GLF, PPK				
1291	Gravis Xperience Joystick Gameset	GRX				
1292	WebDesigner Template	HMP				
1293	InstallShield Index	INX				
1294	JPEG-2000 Bitmap Image	JP2, JPG2, JPX, MJ2, MJP2, JPM, J2K			Y	
1295	MaxBlast Language Translation	LNG				
1296	MS Office Imaging Language File	LNG, SHP, LC				
1297	QuickTime Data	MAPPING, QDAT, QTR, BITMAP				
1298	Xtra Cache	MCH				
1299	McAfee VirusScan Quarantined File	MCQ				
1300	MS Outlook AutoComplete File	NK2				
1301	Network Exchange Map	NTXMAP				
1302	SCO Unix Driver	O				

1303	OpenType Compact Font Format	OTF				
1304	MS Publisher Wizard Template	POC				
1305	Paint Shop Pro Image	PSPIMAGE, PSPBRUSH, PSPFRAME, PSPSELECTI				
1306	Paint Shop Pro Deformation Map	PSPDEFORMATION, PSP				
1307	Paint Shop Pro Gradient	PSPGRADIENT, GRD, PSP				
1308	Quicken Data	QDF, QSD, ABD, CFG, DIR				
1309	Quicken Electronic Library	QEL, QFI, DAT, DES				
1310	WBEM Repository	REP				
1311	Addict Spell Check Dictionary	DCT				
1312	MS Visual Studio Compiled Resource	RSC, RSR				
1313	InstallShield Skin File	SKIN, SKN				
1314	MS Setup File	STF				
1315	TaxACT Form	TA0, TA1, TA2, TA3, TA4, TA8,				

		TA9, TAn				
1316	RealMedia Metadata Backup	TMD				
1317	AddWeb Update	UPDATE, ADB				
1318	Kretz JPEG Picture	V00				
1319	MS Windows Media Database	WMDB, BIN, SDF				
1320	XPCOM Type Library	XPT				
1321	ZoomBrowser Database	ZBD				
1322	Setup Information File Index	1				
1323	Kolbe Test Results	ART				
1324	WordPerfect Assistant Template	AST				
1325	XBase/dBase Compount Index	CDX, DCX				
1326	Norton Internet Security Definition	DAT				
1327	PhotoSuite Picture Catalog	CTG				
1328	Netscape Certificate/Securi	DB, HST				

	ty Database					
1329	MS Windows Icon Cache Database	DB				
1330	MS ISAM Database	DB, MNY				
1331	Adobe Portable Document (MacBinary)	PDF	Y	Y	Y	
1332	JPEG File Interchange Format + MAC Resource Fork	JPG			Y	
1333	America Online Internet Mail	IDX, LST				
1334	America Online Index	IND				
1335	America Online Personal File Cabinet	ORG, PFC, ARL, AUT, MAIL				
1336	MS Visual C++ Precompiled Header Cache	PCC				
1337	Palm OS Database/Document	PDB				
1338	Adobe Acrobat Spelling Lexicon Dictionary	LEX				

1339	Photo Express Pattern/Gallery	PST, SMP, PE4				
1340	Java 2 MIDI Sound Bank / Rich Music Format Audio	GM, RMF				
1341	Inno Setup Uninstall Log	DAT				
1342	Interplay Movie	MVE				
1343	Microsoft Network (MSN) Archive	MAR, MARC				
1344	Microsoft Network (MSN) Data	DAT				
1345	Graphics Workshop / GIF Cons Thumbnail	THN				
1346	GTCoach Training Lesson	TRN				
1347	MS 3D Pinball Data	DAT				
1348	InstallShield Data	BIN, CFG				
1349	FoxPro/RealMedia CD Tracks Database	DBF				
1350	Iomega Loadable Driver Module	ILM				

1351	MS Album Media Scene	SCN				
1352	Adobe Acrobat Resource CMap					
1353	BeOS Compiler Project	PROJ				
1354	Musicmatch Visual Slide Show	MVS				
1355	Paint Shop Pro Script	PSPSCRIPT, PSP				
1356	MS Publisher Document	PUB	Y	Y		
1357	MS Visual Basic Active Document	VBD		Y		
1358	MS Picture It! Multilayer Picture	MIX				
1359	Family Tree Database	FTW, FBK				
1360	WordPerfect Document Template	WPX				
1361	MS Windows Installer/Upgrade Patch	MSP, DAT				
1362	CrossePAC Compressed Archive	PAC				
1363	Lossless Predictive Audio	PAC, LPAC				

	Compression					
136 4	STAD Graphic Image	PAC				
136 5	Adobe PhotoShop Pattern	PAT				
136 6	Descent Texture Set	PIG				
136 7	Generic Sound Sample	SND, SOU				
136 8	Legal Hash Database(s) Match (Good)					
136 9	Legal Hash Database(s) Match (Bad)					
137 0	Corel Draw Workspace	CW_				
137 1	Internet Database Search Agent					
137 2	MS Outlook Email Account Settings	IAF				
137 3	WorldToolKit 3D Neutral File Format	NFF				
137 4	MS Windows Application Usage Log	LGC, LGD, LGG				
137 5	File Investigator 2.x Database	FIV, FIB, FID, FIP				

1376	File Investigator Hash Code Database	FIH				
1377	NIST NSRL Hash Database	TXT, CSV				
1378	Paint Shop Pro Line Style	PSPSTYLEDLINE, PSP				
1379	Concept Draw Drawing/Diagram	CDD				
1380	Corel PhotoPaint Tone Curve	CRV				
1381	MS Money Support File	CSM				
1382	McAfee Firewall Log/Database	EDB, XDB, ELOG				
1383	Corel Saved Search	FIN				
1384	IconAuthor Font Style Template	FTT				
1385	EnCase Hash Database	HASH				
1386	JAWS for Windows Script	JSB				
1387	MS .NET Framework Library Design Object	LDO				
1388	America Online License	LIC				

1389	McAfee Firewall Neotrace Locations	LOCA, LOC				
1390	PhotoStudio Image	PSF, LOG				
1391	Playstation Sound Format	PSF				
1392	PhotoDeluxe Support File	PSP				
1393	Paint Shop Pro Support Data	PSPCACHE, PSP				
1394	Kodak Precision Color Management System	PT				
1395	MS PC Health Help Center Query	QUERY				
1396	Corel Dream 3D Shader	SHA				
1397	Corel PhotoPaint Shear Map	SHR				
1398	IconAuthor SmartObject	SMT				
1399	SoundBlaster Studio Song	SON				
1400	Adobe Acrobat Plug-In	STC				
1401	Corel Draw Texture	TEX				

1402	Corel Thesaurus	THS				
1403	BitTorrent Metainfo	TORRENT				
1404	Corel Draw Script Texture	UDI				
1405	Corel PhotoPaint User Defined Filter	USR				
1406	Corel Compressed Image	WI				
1407	Corel Support File	TPA, SCK				
1408	MS Office Profile Settings	OPS				
1409	America Online Connect Service Data					
1410	PhotoDeluxe Lighting Style Plug-in					
1411	Borland Database Engine Character Set	CVB				
1412	InfoSoft Localization Database	ENU, ESN, ITA, ENG				
1413	Windows NT Media Services Database					

1414	Creative SoundFont Manager Data	SFM				
1415	OmniPage Character Recognition Tree	BCT				
1416	Zinio Electronic Magazine Annotations	ZNA				
1417	BitTorrent Download Configuration	CONFIG				
1418	Java Runtime Environment Time Zone Inf					
1419	Java Runtime Environment Time Zone Map					
1420	Corel Draw Mask	MSK				
1421	Java Runtime Environment Certification					
1422	NVidia MIDI Instrument Bank	BNK				
1423	Harvard Graphics Draw Image	HDW				
1424	Corel Color Match Profile	CCM				

1425	WordPerfect Spelling Lexicon Dictionary	LEX, MOR, ADV				
1426	Bzip Archive V2	BZ, BZ2, TBV2				Y
1427	CPIO Archive	CPIO				
1428	CRUSH Compressed Archive	CRU, CRUSH				
1429	HAP Archive	HAP				
1430	JAR Compressed Archive	JAR				Y
1431	JARCS Compressed Archive	JAR, J				Y
1432	Java Archive	JAR, ZIP, BASE, MZP				Y
1433	Lotus 123 Ver. 3 Format File	FM3				
1434	Lotus 123 Ver. 4 Format File	FMT				
1435	Lotus Approach Index	ADX				
1436	Dreamcast Audio	ADX				
1437	Nintendo Entertainment System Sound	NSF, NSA				

1438	UFA Compressed Archive	UFA				
1439	Quark XPress Document/Template (English,Motorola)	QXD, QXT, QWD, QWT, QXL, QXB				
1440	EnCase Evidence Segment	EVF, Enn, E01, EWF, Lnn, L01, Snn, S01				Y
1441	Novell LANalyzer Capture	TR1				
1442	TCPDump / Libpcap Capture					
1443	Quicken Price History	QPH				
1444	WinPharoah Capture	ETH				
1445	Chaser Saved Game	SAV				
1446	SPSS Data	SAV				
1447	Quicken QuickFinder Information	IDX				
1448	QEMU Qcow Disk Image	IMG				
1449	MS Windows Netmon Capture	CAP				

1450	NetXRay/SnifferPro Capture	CAP				
1451	EnCase Case Data	CAS, CBK				
1452	Pretty Good Privacy Public Keyring	PKR				
1453	Forensic Toolkit (FTK) Evidence	DAT				
1454	PestPatrol Scan Strings	DAT				
1455	Atmos Snapshot	DAT, TAP				
1456	Allegro Generic Data	DAT				
1457	WinDump / Winpcap Capture	ACP, PCAP				
1458	Set Bitmap	IMG				
1459	GEM Raster Image	IMG				
1460	Corel Dream 3D Model	D3D				
1461	Corel Dream 3D Metafile	3DMF				
1462	Pronto Remote Control Codes File	CCF				
1463	MS SQL Server Database Tape	BAK				

	Backup					
1464	MS PipeLine Component File	PCF				
1465	MS Visual J++ Project	VJP				
1466	MS Visual Basic Group Project	VBG		Y		
1467	MS Visual Studio Solution	SLN		Y		
1468	MS Visual Studio Package Project	PKP				
1469	License Package	LPK				
1470	TrueSpace 3D Object (Binary)	COB, SCN				
1471	MS DirectMusic Style	STY				
1472	MS Network Driver Protocol Support	SX, SY, P				
1473	Floppy Disk Image / MBR (FAT12)	IMG, DD				Y
1474	HashKeeper Hash Database	TXT, HSH				
1475	HashKeeper Hash Database Index	TXT, HKE				
1476	XGS Apple IIGS Emulator 2IMG	2MG, 2IMG				

	Disk Image					
1477	Amapi 3D Model	A3D				
1478	Opera Bookmark	ADR				
1479	BIZ dVS Model/Object 2.0	B2Z, BMZ				
1480	Virtual MC-10 Tape Image	C10				
1481	Diablo II Game Character/Equipment	D2S				
1482	MS Reader Ebook (EBO)	EBO				
1483	Electric Image 3D Image	FACT				
1484	Vectrex Game	GAM				
1485	Games Factory Game	GAM				
1486	Text Adventure Development System Game Data	GAM				
1487	Hex Workshop Hex Editor Bookmark	HBK				

1488	HP Palmtop 100/200LX Icon	ICN				
1489	Jacksum Meta-Info Hash Code List	JACKSUM				
1490	Keynote Data	KNT				
1491	Cinema 4D Layout	L4D				
1492	Cinema 4D V5 Preferences					
1493	Cinema 4D V5 Document					
1494	Cinema 4D V5 Catalog					
1495	Cinema 4D V5 Function Curve					
1496	Cinema 4D Image	B3D				
1497	Winamp MP3 Playlist	M3U				
1498	CoverDesigner CD Cover Image/Template	NCD, NCT				
1499	OpenDocument Office Document	ODT, O?I, O?G, O?F, O?C, O?T, OD?, OT?	Y	Y		
1500	MindRender VREK Object	ODT				

1501	Massive Development Package Archive	PAK				
1502	Quick3D Model Object	Q3O				
1503	Quick3D Model Scene	Q3S				
1504	Yamaha Music Production Studio Seq.	R2A				
1505	Yamaha Music Production Studio Pattern	R2P				
1506	Yamaha Music Production Studio Song	R2S				
1507	Yamaha Music Production Studio Sample	R3A, R3P				
1508	Text Adventure Development System Img.	T3				
1509	WinUAE Game Configuration	UAE				
1510	Warcraft III Recorded Game	W3G, W3Z				
1511	Warcraft III Game Map	W3M, W3X				
1512	AutoDesk Inventor Export Journal	XLO				

1513	yEnc Encoded File	YNC				
1514	Atari ST YM2149 Module/Song	YM				
1515	AbiWord Compressed Document	ZABW, GZ				
1516	AbiWord Document	ABW				
1517	NeoChrome Animation	ANI				
1518	Deluxe Paint Animation	ANM				
1519	7-Zip Archive	7Z, LZMA				Y
1520	Ai32 Archiver Archive	AI				
1521	MS Access Report / Snapshot	RPT, SNP	Y	Y		
1522	Amiga IFF/16SVX Sound	SND, IFF, LBM, SVX				
1523	Sims Game Data, The	IFF				
1524	PlayStation ADPCM Sound	VAG				
1525	Sonarc Compressed VOC Audio	VC				

1526	VOCPACK Lossless Compressed Audio	VP				
1527	Sonic Foundry VideoEditor Wave64 Audio	W64				
1528	WavPack Lossless Compressed Audio	WV				
1529	Symbian 3a/3c/3mx Waveform Sound	WVE				
1530	Apple MPEG-4 ALE Audio	M4A, MP4, MPG4				
1531	WaveZIP Lossless Compressed Audio	MCP				
1532	MIO Compressed Audio	MIO				
1533	ACT Lossless Compressed Audio	MKW				
1534	AAC MPEG-4 Audio	MP4, MPG4				
1535	Musepack Audio	MPC				
1536	AUPEC Audio	MV3				
1537	OGG Vorbis Compressed	OGG, OGA				

	Audio					
1538	Sims Extensive Audio, The	XA				
1539	Texas Instruments Calculator Data	92I, 89I, 86I, 85I, 83I, 82I, 73I, 80I				
1540	Advanced Image Coding Image	AIC				
1541	America Online Image	ART				
1542	OS/2 Bitmap Graphic Array	BGA				
1543	ComputerEyes Raw Image	CE1, CE2				
1544	Continuous Edge Graphic Image	CEG				
1545	CH Compressor for Picture! Image	CHP				
1546	Block DCT Compressor Image	KIF				
1547	Cineon Bitmap	CIN				
1548	Cinematic Video (Quake 2)	CIN				
1549	MS Windows CMU Manager Bitmap	CMU				
1550	DICOM Image	DICM, DCM				

1551	Freehand 8 Document	FH8				
1552	MS Repository Information Model	RDM				
1553	MS Operating System Localization DB	nnn				
1554	PFS: 1st Publisher Directory Summary	DIR				
1555	Pro/ENGINEER Geographic Image Form	FRM				
1556	SQL Server Database Changes Log	LDF				
1557	SNMP MIB Definition	MIB				
1558	Super Nintendo Music/Audio	SPC				
1559	SpchComp Encoded Speech/Audio	SPC				
1560	MS Access Report Snapshot (Compressed)	SNP				
1561	AlbumWrap Music Archive	MP3				

1562	ALZip Compressed Archive	ALZ				
1563	AIX Small Indexed Archive (32bit)	AR				
1564	AIX Small Indexed Archive (32/64-bit)	AR				
1565	ARX Compressed Archive	ARX				
1566	Bag Compressed Archive	BAG				
1567	Railroad Tycoon Building Category	BCA				
1568	Railroad Tycoon Building Type	BTY				
1569	Railroad Tycoon Locomotive Properties	LCO				
1570	Railroad Tycoon Car/Cargo Properties	CAR, CTY				
1571	Railroad Tycoon Packaged Graphics	PK4				
1572	Jetico Encrypted Archive	BCA				
1573	Bee Compressed Archive	BEE				

1574	BlackHole Compressed Archive	BH				
1575	BioArc Compressed Archive	BIO				
1576	BIX Compressed Archive	BIX				
1577	BLINK Compressed Archive	BLI				
1578	CAR Compressed Archive	CAR				
1579	Cellsprings/Web or DT Rule File	CAR				
1580	BOA Constrictor Compressed Archive	BOA, B58, B??				
1581	BSA Packing Program Compressed Archive	BSN				
1582	BZA Compressed Archive	BZA				
1583	ChArc Compressed Archive	CHZ				
1584	AUKTOOLS 2000 Compressed Archive	CMP				

1585	CTXf Compressed Archive	CXF				
1586	Dynamic Adaptive Compression Tool Archive					
1587	DCA Compressed Archive	DCA				
1588	Digital G Codec Archive	DGC				
1589	Commodore 64 Emulator Disk Image	X64				
1590	WRAptor Compressed Archive (C64)	WRA				
1591	Commodore 64 Raw Cassette Tape Image	TAP				
1592	Commodore 64s Emulator Tape Image	T64				
1593	PlaySID Music	SID, PSID				
1594	RealSID Music	SID				
1595	LHarc Self Extracting Archive (C64)					
1596	Arc Self-Disolving Compressed Archive (C64)	SDA				

1597	PC Link Image	C64				
1598	PC64 Saved-Session Image	FRZ, C64				
1599	PC64 Native File	Pnn, Snn, Unn, Rnn				
1600	DIGILINEAR Compressed Archive	DLC				
1601	Disk Masher Compressed Disk Image	DMS				
1602	Amiga SoundTracker Music	EMD				
1603	Sims Archive, The	FAR				
1604	G Compressed Archive	GCA				
1605	WinXComp Grouped Compressed Archive	GCF				
1606	QLFC Compressed Archive	GQ				
1607	GRZip Compressed Archive	GRZ				
1608	GRZip II Compressed	GRZ				

	Archive				
1609	GZA Compressed Archive	GZA			
1610	WinHki Compressed Archive	HKI			
1611	ICEOWS Compressed Archive	ICE			
1612	Jrchive Compressed Archive	JRC			
1613	KBOOM Compressed Archive				
1614	Limit Compressed Archive	LIM			
1615	lzop Compressed Archive	LZO			
1616	Micrognosis Compressed Archive	MCA			
1617	MDCD Compressed Archive	MD			
1618	Broderbund Mohawk Archive	MHK			
1619	MediaZip Compressed Archive	MZF			

1620	OOP Compressed Archive	OOP					
1621	PAQ1 Compressed Archive						
1622	PAQ2 Compressed Archive						
1623	PAQ3 Compressed Archive						
1624	PAQ4 Compressed Archive						
1625	PAQ5 Compressed Archive						
1626	PAQ6 Compressed Archive						
1627	PAKLEO Compressed Archive	PLL					
1628	QuickFileCollection Archive	QFC					
1629	QuArk Compressed Archive	ARK					
1630	Streamline Compressed Archive	SAR					
1631	SBC Compressed Audio	SBC					
1632	SpinnerBaker eXtractor	SB					

	Compressed Archive					
1633	Software Game Archive	SGA				
1634	Home World 2 Game Archive	BIG				
1635	SKY Compressed Archive	SKY				
1636	ReSOF Compressed Archive	SOF				
1637	Squish Compressed Archive					
1638	SQX Archiver Compressed Archive	SQX				
1639	Squeeze Compressed Archive	SQZ				
1640	SZip Compressed File	SZ, SZIP				
1641	Transform Compressed File	TFM				
1642	Telvox Compressed CODEC					
1643	UltraCompressor II compressed archive	UC2				

1644	WINDEV Compressed Archive	WDZ				
1645	Warlords Battlecry Archive	XCR				
1646	YAC Compressed Archive	YC				
1647	BMF Bitmap Image	BMF				
1648	PictureMaker Red Channel Image Data	R8				
1649	PictureMaker Green Channel Image Data	G8				
1650	PictureMaker Blue Channel Image Data	B8				
1651	Hemera Photo-Object Image	HPI				
1652	Total Annihilation Saved Game	HPI				
1653	Hitachi Raster Format Image	HRF				
1654	McIDAS System Satellite Image	GOE, GOES				
1655	HRU Bitmap	HRU				
1656	WaveL Wavelet Compressed	IWC				

	Bitmap					
1657	JBIG Raster Bitmap	JBG				
1658	Jeff's Image Format Bitmap	JIF				
1659	JPEG Network Graphic Bitmap	JNG			Y	
1660	JPEG-2000 Code Stream Bitmap	JPC			Y	
1661	LuraWave Format Image	LWF				
1662	Symbian Multi BitMap Image	MBM				
1663	MicroDesign Area Image	MDA				
1664	MicroDesign Page Image	MDP				
1665	Nokia LogoManager Bitmap	NLM				
1666	Nokia Operator (Manager) Logo Image	NOL				
1667	XV Visual Schnauzer Thumbnail Image	P7				
1668	PGC Portfolio Graphics	PGF				

	Compressed Bitmap					
1669	Progressive Graphics Image	PGF				
1670	AliceSoft PMS Bitmap Image	PMS				
1671	Digital Moving Picture Exchange Bitmap (Intel)	DPX				
1672	DrazLace IFLI Bitmap (C64)	DRL				
1673	Enhanced Compressed Wavelet	ECW				
1674	OpenEXR High Dynamic-Range Bitmap	EXR				
1675	Fuzzy Bitmap Image	FBM				
1676	HP-48/48sx/49 Graphic Object Bitmap	GRO				
1677	SoftImage 3D Image	PIC				
1678	IBM Storyboard Image	PIC				
1679	Structured Fax Format Image	SFF				
1680	Segmented Hypergraphics	SHG				

	Bitmap					
1681	SuperView Graphic Bitmap	SVG				
1682	VITec Bitmap	VIT, ICC				
1683	OS/2 Icon	ICO				
1684	Vista Graphic Image	VST				
1685	J Wavelet Image Codec Bitmap	WIC				
1686	CompW Bitmap	WLM				
1687	RPG Maker Graphic Image	XYZ				
1688	CloneCD Control File	CCD				
1689	CloneCD Sub Channel Data	SUB				
1690	PlayStation Executable	EXE				
1691	Atari Disk Image	ATR				
1692	Advanced Digital Audio Compressed	ADA				
1693	Audio IFF Compressed Sound	AIFC, AIFF, AIF, IFF, SND				

1694	Adaptive Multi-Rate Audio	AMR				
1695	a-Pac Compressed Audio	APC				
1696	Cryo Interactive APC Audio	APC				
1697	Monkey's Lossless Compressed Audio	APE				
1698	Compressed Voice File	DVF				
1699	Free Lossless Audio Codec Instrument					
1700	Ensoniq PARIS Audio Format	PAF				
1701	LA Lossless Compressed Audio	LA				
1702	ZyXEL Voice Audio	ZYX, ZVD				
1703	Sound Blaster Studio II Sound Sample	SOU				
1704	Designer I Embroidery Machine Image	HUS				
1705	Husqvarna Home Embroidery	VIP				

		Image					
170 6	3D Stitch Editor Embroidery Image	VP3					
170 7	Audacity Audio Block	AU, AUF					
170 8	Audacity Project File	AUP					
170 9	Astrid/Quartex Advanced Audio Coding	AAC					
171 0	DAKX Compressed Audio	DAX					
171 1	MS Management Console Snap-in Control	MSC					
171 2	Longest Journey, The Sound	ISS, XARC					
171 3	Kexis Lossless Compressed Audio	KXS					
171 4	Low Bitrate Packer Compressed Audio	LB					
171 5	Liquid Audio File	LQT					
171 6	Need for Speed: Underground	ABK					

	Audio					
1717	Computerized Speech Lab Audio	NSP				
1718	Nomad II Voice	NVF				
1719	OptimFROG Encoded Audio	OFR				
1720	ReBirth Song	RBS				
1721	ReCycled Audio Loop Export File	REX				
1722	Reason Sound Bank	RFL				
1723	Shorten Compressed Audio	SHN				
1724	Reason Song	RPS				
1725	Sonarc Compressed RAW PCM Audio	SNC				
1726	Walkman NW-S23 MP3 Archive	DAT				
1727	Speex Encoded Audio	SPX				
1728	SPHERE Speech Recog Lexical Transcript	LTT, NDX, SRT				

1729	TAC Compressed Audio	TST				
1730	Pretty Good Privacy Virtual Disk Image	PGD				
1731	Macintosh Program (MacBinary)					
1732	Encapsulated PostScript Document (MacBinary)	EPS, EPI, EPSF, AI				
1733	JPEG File Interchange Format Image (MacBinary)	JPEG, JFIF, JPG, JFI, CMP, JIF, J, JPE			Y	
1734	Text File (MacBinary)	TXT, DOC, TEXT		Y		
1735	PKZip Archive (MacBinary)	ZIP				Y
1736	SciTex ContinuousTone Image(MacBinary)	CT, SCT, SCITEX				
1737	MS Windows Wave Sound (MacBinary)	WAV				
1738	WordPerfect Document (MacBinary)	DOC, WP, WKB, WPD, WPT, WP#		Y		

1739	Adobe PhotoShop Image (MacBinary)	PSD, PDD			
1740	MS Works Database (MacBinary)	WDB			
1741	MS Works Spreadsheet (MacBinary)	WKS		Y	
1742	MS Works Document (MacBinary)	WPS			
1743	MS Spell Checker Dictionary (MacBinary)	DIC			
1744	AutoCAD Drawing (MacBinary)	DWG			
1745	Freehand 3 Drawing (MacBinary)	FH3			
1746	FileMaker Pro File (MacBinary)	FP, FP3, FPT, FMP			
1747	Graphics Interchange Format (MacBinary)	GIF, GIFF			Y
1748	QuickTime Movie (MacBinary)	MOV, QTM, QT			
1749	MPEG Music File (MacBinary)	MP3, MP2, MPGA			

1750	MPEG Animation (MacBinary)	MPG, MPEG, MPE, M1V, ENC, MPA				
1751	MacWrite Pro Document (MacBinary)					
1752	Macromedia Director Movie (MacBinary)	DIR				
1753	MacWrite II Document (MacBinary)					
1754	MacWrite II Model (MacBinary)					
1755	Write Now Document (MacBinary)					
1756	MS Rich Text Format Document (MacBinary)	RTF, DOC, WRI, WBK	Y	Y		
1757	StuffIt Mac Archive (MacBinary)	SIT, BIN				
1758	MS PowerPoint Slides (MacBinary)	PPT, PPA, POT, PPS	Y	Y		
1759	Shockwave Flash Object (MacBinary)	SWF				
1760	MS Word Template	DOT				

	(MacBinary)					
176 1	MS Word for Mac Document (MacBinary)	MCW, DOC	Y	Y		
176 2	MacWrite Document (MacBinary)					
176 3	MS Word Printer Definition (MacBinary)	PRD				
176 4	Quark XPress Document (MacBinary)	QXD				
176 5	Quark XPress Template (MacBinary)	QXT				
176 6	MS Excel Spreadsheet (MacBinary)	XLS	Y	Y		
176 7	Binary Data (Unknown Source) (MacBinary)	BIN				
176 8	Mac Draw Image (MacBinary)					
176 9	Mac Draw Pro Image (MacBinary)	MDP				
177 0	Flash Movie (MacBinary)	FLA				

1771	HyperText Markup Language (MacBinary)	HTML, HTM, HTT, HTTP, ASP, MHT, HTA, HT?		Y		
1772	Extensible Markup Language (MacBinary)	XML, CDF, OSD, AWE, HTML, HTM		Y		
1773	SimpleText Document (MacBinary)	TXT, TEXT				
1774	Disk Doubler Archive (MacBinary)					
1775	MS Internet Connect Wizard (MacBinary)	ICW				
1776	MS Internet Explorer Shortcut (MacBinary)	URL				
1777	Adobe Illustrator Drawing (MacBinary)	AI, EPS				
1778	MS Windows Bitmap (MacBinary)	BMP, DIB, SYS, RLE, BIN, VGA, RLn			Y	
1779	Claris Impact Template (MacBinary)	CIT				
1780	Macintosh System File (MacBinary)					

178 1	Macintosh Control Panel (MacBinary)				
178 2	Macintosh Extension (MacBinary)				
178 3	Macintosh Finder (MacBinary)				
178 4	Macintosh Font Suitcase (MacBinary)				
178 5	Macintosh System Suitcase (MacBinary)				
178 6	Macintosh Alias (MacBinary)				
178 7	Macintosh Shared Library (MacBinary)				
178 8	Macintosh Resource File (MacBinary)	RSR			
178 9	Macintosh Desk Accessory (MacBinary)				
179 0	Macintosh True Type Font (MacBinary)	TTF			
179 1	Macintosh Keyboard Layout				

	(MacBinary)				
1792	Macintosh Sound (MacBinary)				
1793	Disk Copy Disk Image (MacBinary)				
1794	Midi Sequencer Music (MacBinary)	MID			
1795	StuffIt Self-Extrc Archive (MacBinary)				
1796	Compact Pro Self-Ext Arch (MacBinary)				
1797	BinHex Archive (MacBinary)	HQX, HEX			
1798	Palm OS Database (MacBinary)	PDB			
1799	Palm OS Application Data (MacBinary)	PDB			
1800	Compactor Pro Archive (MacBinary)				
1801	Macintosh Disk Image (MacBinary)	DMF, DMG			

1802	RealLegal Binder Document	PEX				
1803	Assembly Source Code File	ASM, INC				
1804	MS Visual Studio.NET Compiled Resource	RESOURCES				
1805	MS Visual Studio.NET Strong Name Key	SNK, DAT, KEY				
1806	MS Visual Studio.NET C# Incr. Build	INCR				
1807	MS Visual Studio.NET C# Project Data	PROJDATA				
1808	MS C# Source Code	CS		Y		
1809	PageMaker 4.0 Document (MacBinary)	PM4				
1810	PKCS #7 Secure MIME Message	P7M, EML, TXT	Y	Y		
1811	MS Outlook Rich Text Formatted Message	EML, TNEF, DAT	Y		Y	
1812	EICAR Anti-Virus Test File	COM				

181 3	Six-2-Four (624) Packed DOS Executable	COM				
181 4	ICE Compressed DOS Program	COM				
181 5	LGLZ Compressed DOS Program	COM				
181 6	Shrink Compressed DOS Program	COM				
181 7	DIET Compressed DOS Program	COM				
181 8	PK Lite Compressed DOS Program	COM				
181 9	Amiga Metafile Format	AMF, AMFF				
182 0	Borland Graphics Video Interface	BGI				
182 1	ICE Book Reader Book					
182 2	Brava Reader Content Sealed Format	CSF, SCSF				
182 3	Claris Works Document	CWK				
182 4	Canon Digital Camera RAW Image (CCDR)	CRW				

1825	CryptoMite Encrypted Archive					
1826	DjVu Document Image	DJVU, DJV				
1827	Digitals/Delta Map File	DMF				
1828	Standard CPCEMU Style Disk Image	DSK				
1829	MSX DOS Disk Image	DSK				
1830	TeX Device Independent Document	DVI				
1831	Dependency Walker Image	DWI				
1832	DirectInput Force Feedback Effect	FFE				
1833	DirectMusic Producer Segments Type	SGT				
1834	DirectMusic Style	STY				
1835	EPOC16 Dynamic Link Library	DYL				
1836	Euphoria Database System Database	EDB				

1837	Egrid32 Form Properties Template	EGP				
1838	Egrid32 Form	EGR				
1839	EIOffice Document Binder	EIO				
1840	Elite Plus Commander Saved Game	CDR				
1841	CPC Plus Cartridge Image	CPR				
1842	Extended CPCEMU Style Disk Image	DSK				
1843	DCMO6 Emulator Tape Image	K7				
1844	Unified Emulator Format	UEF				
1845	EndNote Connection File	ENZ				
1846	Morrowind: The Elder Scrolls Plug-in					
1847	Electronics Workbench Circuit	EWB				
1848	Explorations RPG System MapGroup Object	EGRP, EOBJ, ECHR				

1849	Farandole Composer Pattern	FPT				
1850	AutoCAD Fast-load Auto LISP	FAS				
1851	FileSync Profile	FSY				
1852	FairUse Wizard Project	FUP				
1853	Nadeo Games File Format	GBX				
1854	GFA-BASIC MS-DOS Tokenized Source	GFA				
1855	GFA-BASIC ATARI Tokenized Source	GFA				
1856	GIMP Brush Data	GBR				
1857	GIMP Pattern Data	PAT				
1858	PCStitch Pattern	PAT				
1859	GIMP Image	XCF, GZ				
1860	GlueMon Song/Module	GLUE				
1861	DexDrive Playstation Memory Card Save	GME				

186 2	Guitar Pro Tablature	GTP				
186 3	TreePad Hypertext Database	HJT		Y		
186 4	FAR Manager Help File	HLF				
186 5	Frontier: First Encounters Music	HMP				
186 6	Home World 2 ROT Graphic Image	ROT				
186 7	Java Applet Cache Index	IDX				
186 8	Infinity Game Engine Area Description	ARE				
186 9	Infinity Game Engine Character Info	CHR				
187 0	Infinity Game Engine GUI Elements	CHU				
187 1	Infinity Game Engine Creature Description	CRE				
187 2	Infinity Game Engine Spell	SPL				
187 3	Infinity Game Engine Tileset	TIS				

1874	Infinity Game Engine Spell Casting FX	VVC				
1875	Infinity Game Engine Display Info	WED				
1876	Infinity Game Engine World Map	WMP				
1877	VMware Virtual Disk Descriptor	VMDK				
1878	VMware Virtual Disk Image	VMDK				
1879	iMelody Ringtone Sound	IMY, IMELODY				
1880	ZoomBrowser Database Index	INFO				
1881	Imagine Staging Stage Editor File	ISTG				
1882	Japan Crossword Dmitry Torshin Format	JCC				
1883	Jigsaw Game	JIG				
1884	Trackjoy GUS Tracker Module	JOY				
1885	Trackjoy GUS Tracker Song	TJS				
1886	Trackjoy Block File	BLK				

1887	KazaA Playlist	KPL				
1888	64LAN Image	L64				
1889	Modern ListGeo Output Image	LGO				
1890	Compiler Library (MS Basic)	LIB				
1891	Liquid Tracker Song/Module	LIQ				
1892	MS Reader Ebook (LIT)	LIT				
1893	LegglessMusicEditor Sound/Module	LME				
1894	Atari Lynx ROM Image	LNX				
1895	EasyGPS TerraByte Location	LOC				
1896	Hex Workshop Hex Editor Character Map	MAP				
1897	Bleem! Memory Card Save	MCD				
1898	MathCaD Document	MCD				
1899	Matroska WebM Video Stream	MKV, MKA, MKAV, WEBM				
1900	Media Container Format File	MCF				

190 1	TMPGEnc Conversion Template	MCF				
190 2	Quake 2 Player Model	MD2				
190 3	Quake 3 Arena Model	MD3				
190 4	Office Document Imaging File	MDI				
190 5	Mighty Draw DOS Library	MDL				
190 6	Moray Wireframe Model	MDL				
190 7	Media Descriptor CD Image Index	MDS				
190 8	Multimedia Email Message	ME3				
190 9	Java Manifest	MF				
191 0	MIME HTML Web Page Archive	MHT, EML, HTM, MAFF, MHTML		Y		
191 1	AutoCAD Material-Library	MLI				
191 2	NS/Elite Display Macro Object Path	MOP				
191 3	MapSource GPS Mapping Interface	MPS				

191 4	Max Payne Saved Game	MPS, MP2S				
191 5	Pocket Streets Map	MPS				
191 6	Minolta Dimage Raw Image	MRW				
191 7	MedlySound Sound Module	MSO				
191 8	Digital Sheet Music (Motorola)	MTD				
191 9	Finale Music Score	MUS				
192 0	MusicTime/Doom Sound	MUS				
192 1	Material Exchange Format File	MXF				
192 2	MOZART Music Document	MZ				
192 3	Unidata NetCDF Graphic Image	CDF				
192 4	GameBryo Format File	NIF				
192 5	NetImmerse Format File	NIF				
192 6	Notation Interchange File Format (Motorola)	NIF, RMI				
192 7	Lightwave Normal Map	NMF				

1928	Corel Graphics Draw Media Lines	NPM				
1929	NetStumbler NS1 Log	NS1				
1930	Apollo Database Engine Index	NSX				
1931	National Transfer Format Map	NTF				
1932	NeroVision Express Project	NVC				
1933	Nyquist Plug-in	NY				
1934	OGG Vorbis Compressed Video	OGM, OGV				
1935	Skype Conversation	DAT				
1936	MS Windows Security Credential History					
1937	Earthlink Email Messages	MSF	Y	Y		
1938	MS TWAIN Device Temporary File	MTX				
1939	eFax Electronic Fax Phonebook	ADG				
1940	MS Cryptographic URL Metadata					

194 1	Viewpoint iPix File	MTS				
194 2	RealJukebox Upgrade	RUP				
194 3	Adobe Acrobat Installer Support File	ITW				
194 4	MS Help 2 Merged Keyword Index	HXW, HXH, HXD, ITS, HXQ, HXR, EIT, H1?				
194 5	MS Compiled Toolbar Menu	CTM				
194 6	MS Print Spooler Shadow	SHD				
194 7	Dell Certification File	DCF				
194 8	Java Shared Archive	JSA				
194 9	MS Visual Studio Toolbox Data	TBD				
195 0	Final Draft Document	FDD, FDR				
195 1	MaxBlast Localized Menu	BIN				
195 2	XnView Cache Database	DB				
195 3	PowerRegister Data	DAT				
195 4	MS Media Connect Persistent Data	TXT				

1955	AddWeb Temporary Data	TMP				
1956	Python Tkinter Library	PYC				
1957	Family Tree CD Catalog	CTL				
1958	QuickBooks & Family Tree Spelling Lexicon Dictionary	CLX				
1959	eFax Localization Data	DAT				
1960	Earthlink Email Filter Rules	DAT				
1961	America Online Instant Messenger URL Cache	DAT				
1962	MS Windows Client Download Data	DAT				
1963	PhotoStudio Macro	MCR				
1964	Adobe Color Profile List	LST				
1965	PhotoStudio Album	ABM, ALB				
1966	Corel Software Identifier/Security	ID, BIN				

1967	Corel PhotoPaint Palette	CPL				
1968	eFax Phone Book	ADR				
1969	PhotoBase Catalog	CAT				
1970	Family Tree System File	BIN				
1971	Absolute Packager Self Extracting Archive	EXE, ZIP				Y
1972	MS XBox 360 Program	XEX				
1973	MS XBox Program	XBE				
1974	MySQL Database Index	MYI				
1975	Max Payne Data	MPS, MP2S				
1976	Obsidium Project	OPF				
1977	Symbian Oval Application	APP				
1978	Pocket CE Application	APP				
1979	Adaptive Prediction Tree Encoded Image	APT				

1980	Parity Archive Volume Set Specification 2	PAR2				
1981	Phoenix Visual Designer Project	PBP				
1982	PowerBASIC Compiled Unit	PBU				
1983	pcAnywhere Host File	BHF				
1984	XProfan Compiled Unit	PCU				
1985	Paint.NET Image	PDN				
1986	Red Faction II Game Data	PEG				
1987	RS7000 OS Image	PGM				
1988	Portable Game Notation	PGN				
1989	OziExplorer Plot Track	PLT				
1990	Power Music Song/Module	PM				
1991	3D Polygon Models Format	POL				
1992	Polynomial Texture Map	PTM				
1993	WinHex Position Data	POS				

1994	Atari ST TOS Program	PRG, GEM, TTP				
1995	FireFly SDK Designer Project	PRJ				
1996	Protracker Studio 16 Format	PS16				
1997	Psion Series 3 Database	DBF				
1998	Turbo Pascal Symbol Table	PSM				
1999	PSYCLE Tune/Song	PSY				
2000	MS Private Key	PVK				
2001	InkWriter/Note Taker/Pocket Word Document	PWI, PSW				
2002	REALbasic Project	RB				
2003	RocketEdition eBook	RB				
2004	RAD Developer Color Scheme	RCS				
2005	Remote Desktop Protocol Connection	RDP				
2006	Ray Dream Studio Native Data Format	RDS, 3DS, D3D				

2007	Lotus Organiser Report	REP				
2008	RepliGo Virtual Print File	RGO				
2009	Regcleaner Language File	RLG				
2010	Nintendo Entertainment System ROM Image	NES				
2011	Drakan: Order Of The Flame Saved Game	RSG				
2012	Warhammer 40,000 Texture	RSH				
2013	Fugawi Global Navigator Route	RTE				
2014	ZX Spectrum Replay File	RZX				
2015	NitPicker Backup Ipflow	S				
2016	American McGee's Alice Saved Game File	SPV, SAV				
2017	Zoo Tycoon Game File	ZOO				
2018	Savings Bonds Wizard Data	SBW				
2019	ShowBiz Project	SBZ				

2020	Designer Schematic Capture Binary File	SCH				
2021	Janome NH10000 Sewing Machine Stitch F	JEF				
2022	Pfaff Home Embroidery Image	PCS				
2023	Brother/Babylock/Bernina Embroidery	PES				
2024	Viking Designer 1 Embroidery Image	SHV				
2025	sfArk Compressed SoundFont	SFARK				
2026	Sound Forge Peak Data File	SFK				
2027	AutoCAD Shape Entities	SHX				
2028	SpyBot-Search-and-Destroy Signature	SIG				
2029	Symbian Installer	SIS				
2030	Sketch Drawing	SK				

2031	AutoSketch Drawing Database	SKD				
2032	Sonique Document with Graphics	SGF				
2033	Photono-Software Stealther Skin	SKN				
2034	Virtual TI Skin	SKN				
2035	MS Expression 3 Skeletal Strokes	SKS				
2036	Scribus Document	SLA, SCD, SLAZ				
2037	SampleVision Sound	SMP				
2038	Egrid32 Form Snippet	SNL				
2039	Adventure SOS Compiled Adventure Game	SOS				
2040	Source Edit Language Definition	LNG				
2041	Jose SciEditor Project	SPF				
2042	Pro Motion Sprites Sequence/Animation	SPR				

2043	Sprint Document	SPR				
2044	SPSS Chart Look	CLO				
2045	SPSS User Table Lookup	TLO				
2046	StockChartX Data	STX				
2047	Simple User Interface Toolkit Library	SUI				
2048	SUNTronic Song/Module	SUN				
2049	Swag Reader Packet	SWG				
2050	PlayStation 2 Icon	SYS				
2051	MapInfo Spatial Table	TAB				
2052	Jupiter Ace Tape	TAP				
2053	ZX Spectrum Tape File	TAP				
2054	Chess Tablebase	TBS				
2055	The Bat! Address Book	ABD				
2056	The Bat! Email Hives	TBB				

2057	The Bat! Hive Index	ABD				
2058	TK3 eBook	TK3				
2059	TextMaker Document	TMD				
2060	World Machine Data File	TMD				
2061	Telemate Script	TMS				
2062	Turbo Pascal Help	TPH				
2063	Symbian TomeRaider Compressed eBook Document	TR				
2064	Fugawi Global Navigator Tracklog	TRK				
2065	Track Record Viewer TRV/TRVX Definition	TRV				
2066	Track Record Viewer TRV/TRVX Index	TRX				
2067	MakeTZX ZX Spectrum Tape Image	TZX				
2068	OllyDbg Module Information	UDD				

2069	Cool 3D Image	UEZ				
2070	Universal Hint System File	UHS				
2071	WinUAE Saved State	USS				
2072	Virtual Calendar File	VCS, ICS		Y		
2073	PwrDev Visual Designer Project	VD				
2074	Dr. Web Anti-Virus Database	VDB				
2075	VistaDB Database	VDB				
2076	Sonic Foundry Vegas Video Project	VEG, VF				
2077	RealJukebox Data File	DAT				
2078	MS Windows Event Cache	BIN				
2079	Skype Voice Mail	DAT				
2080	McAfee Firewall Settings	idx, ini				
2081	McAfee Personal Firewall Data	MPF				
2082	WBEM Repository Database Map	MAP				

2083	Adobe Acrobat Cache Index	IDX				
2084	Yahoo! Anti-Spy Quarantine Index	DAT				
2085	McAfee VirusScan Olympus Database	DAT				
2086	MS Outlook Add-In Extensions Database	DAT				
2087	MS Windows Security Credentials					
2088	Yahoo! Online Protection Region File	RGN				
2089	Addict Spell Check Dictionary (Compile	ADM				
2090	Xerox Scanner Template	XST				
2091	Adobe Remote Patch Update	RTP				
2092	McAfee VirusScan Update	UPM, GEM				
2093	TurboTax Tax Return	TAX				
2094	MM Video Email	WEM, VEM				

2095	Virtual Game Station Memory Card Save	VGS				
2096	3GPP Multimedia File	3GP, 3GG, 3G2, 3GPP, 3GPP2, MP4, MPG				
2097	3GPP Multimedia File (MacBinary)	3GP, 3GPP, 3GPP2				
2098	4X Movie Format	4XM				
2099	Brian's Compression Shell Animation	BCS				
2100	Bink Game Video	BIK, BINK				
2101	Sega FILM/CPK File Format	CPK, SND				
2102	DVM Movie	DVM				
2103	LZA Animation/Video	LZA				Y
2104	ProgDVBR MPEG2 Video	MPEG, MPG				
2105	Wing Commander III MVE Movie	MVE				
2106	Nancy Codec Video	NOA				
2107	Nullsoft Streaming Video	NSV				

2108	Id Software RoQ Movie	ROQ				
2109	ScreenCam Movie	SCM				
2110	SDL Motion JPEG Video	MJPG, MJPEG, SMJPEG				
2111	Smacker Compressed Movie	SMK				
2112	VMware Configuration	VMX				
2113	VZ200/300 Image File	VZ				
2114	Psion Series 3/3a Printer Driver	WDR				
2115	BlackWidow Website Description	WEB				
2116	WebShots Image	WB1				
2117	WINDEV Hyper File Database	FIC				
2118	WINDEV Controls' Styles Description	GAB				
2119	WINDEV Report	WDE				
2120	WINDEV Procedures' Set	WDG				

2121	WINDEV Component Description	WDI				
2122	WINDEV Project	WDP				
2123	WINDEV Window	WDW				
2124	WINDEV Run-Time Template	WDY				
2125	MS Works Spreadsheet for DOS	WKS				
2126	Amiga Wanton Packer Song/Module	WN				
2127	MapInfo Workspace	WOR				
2128	Waypoint GPS Locations Map	WPT				
2129	X-Protector Project	XPF				
2130	XaoS Position File	XPF				
2131	MS Expression 3 Graphic Image	XPR				
2132	XML Schema	XSD, XML				
2133	Softimage XSI 3D Model	XSI				

2134	Oren Scientific Wordprocessor Document	ZGT				
2135	Draw Native Drawing	ZMF				
2136	Zoot Database	ZOT				
2137	Draw Native Drawing (Compress+Preview)	ZMF				
2138	Digital Video Interface Video	AVS, DVI				
2139	Digital Video Interface Image	C16, I16, I8, CMY, CMI, CMQ, IM?				
2140	Animatic Film	FLM				
2141	Cyber Paint Sequence Image	SEQ				
2142	Imagic Film/Picture Image	IC1, IC2, IC3				
2143	Lotus Picture	PIC				
2144	RxWord Capture Form	PRI				
2145	Crystal Decisions Chart Template	3TF				

2146	SSCE Spelling Lexicon Dictionary	CLX, TLX				
2147	MS Plotter Control Definition	PCD				
2148	XML Paper Specification Document (Open XML)	XPS			Y	
2149	Viewpoint Scene Attributes (compressed)	MTZ				
2150	Viewpoint Library (compressed)	MTJ				
2151	Viewpoint Executable (compressed)	MTJ				
2152	Viewpoint Java Script (compressed)	MTJ				
2153	Foobar2000 Columns UI Settings	FCS				
2154	Data Module Language Dictionary	DMD				
2155	NView Graphic Card Update Profile	TVP				

2156	MS Windows Performance Monitor Chart	PMC				
2157	MS Pocket Access Database	CDB				
2158	Pscript Binary PostScript Printer Desc	BPD				
2159	TrueType Font Collection	TTC				
2160	Glyph Translation Table	GTT				
2161	Unicode Font Metrics	UFM				
2162	MS Windows Fax Cover Page (compiled)	CVR, SQM				
2163	VisioModeler (Infomodeler)	IMD				
2164	BlackBerry Backup File	IPD				
2165	Scenarist Closed Caption File	SCC				
2166	Windows Product Activation Database	DBL				
2167	Zinio Media Database	ZMC				
2168	ACCEL / Protel Printed Circuit	PCB				

	Board					
216 9	VTeX Multiple Master Font Metrics	MFM				
217 0	MS Help 2 Keyword Index (XML)	HXK, H1K				
217 1	MS Help 2 Attributes (XML)	HXA				
217 2	MS Help 2 Collection (XML)	HXC, H1C				
217 3	MS Help 2 Table of Contents (XML)	HXT, H1T				
217 4	HYSYS Simulation	HSC				
217 5	MS Visual Studio Help Context ID Map	HM				
217 6	MS Foundation Classes (MFC) Hierarchy	HIE				
217 7	MS Windows Visual Stylesheet (XML)	MANIFEST, MAN, MUM				
217 8	MS Visual Studio.NET DB Discovery Map	MAP, DISCOMAP				

2179	OziExplorer Map (ASCII)	MAP				
2180	MS .NET Resource Schema/Template (XML)	RESX				
2181	Terragen Surface Map	SRF				
2182	Unicode Type Font	UTF				
2183	MS Visual C++.NET Project	VCPROJ, USER		Y		
2184	MS Visual Studio.NET Deployment Project	VDPROJ				
2185	MS Visual Studio Application Wizard	VSDIR				
2186	Web Service Description Language	WSDL				
2187	MS Visual Studio Wizard Configuration	VSZ				
2188	Crystal Decisions Chart Gradient	3WS				
2189	MS Windows .NET Application Configuration	CONFIG, CFG, DEFAULT, CCH, MANIFEST, PS1		Y		

2190	Crystal Decisions 3D View Angles	3DA				
2191	MS Visual C++.NET Style Sheet	VCSTYLE				
2192	MS Windows Script File	WSF				
2193	MS Visual C++ Server Repsonse File	SRF				
2194	MS Data Transformation Services	DTS				
2195	MS Visual Studio Solution User Options	SUO				
2196	PageMaker 6.5 Document	P65				
2197	MS Visual Studio Macro	VSMACRO, VSMACROS				
2198	MS Speech Recognition Engine Articles	ART				
2199	MS Management Console	MSC				
2200	MS Windows Movie Maker Project	MSWMM				
2201	Polychrome Recursive Format Bitmap	PRF				

2202	MS Windows Color Scheme	SCM				
2203	Corel ClipArt ScrapBook	SRB, SRI				
2204	MS Outlook Send/Receive Settings	SRS				
2205	PhotoImpact Graphic Image	UFO				
2206	Windows Binary Performance Log (Win2K)	BLG				
2207	MS Office Data (Open XML) (General)	XLSX, DOCX, PPTX, XLSM, DOCM, PPTM, ???X	Y	Y		
2208	MS Word 2007-2010 Document (Open XML)	DOCX	Y	Y		
2209	MS Excel 2007-2010 Spreadsheet (Open XML)	XLSX, XLAM	Y	Y		
2210	MS PowerPoint 2007-2010 Presentation (Open XML)	PPTX	Y	Y		
2211	X-Windows Portable Compiled Font	PCF				

221 2	FileMaker Pro Font	FMF				
221 3	Kettley Publishing Report Template	KPF				
221 4	Kettley Publishing Application Template	MLH				
221 5	MS Expedia Streets 98 Push-Pins	GPD				
221 6	Norton AntiVirus Live Advisor Preferences	VCPREF				
221 7	Norton AntiVirus Update Session	LIVEREG, USERPROFILE				
221 8	Norton AntiVirus Live Update Profile	USERPROFILE				
221 9	ExamView Question Bank	BNK				
222 0	ExamView Performance File	PRF				
222 1	ExamView Test File	TST				
222 2	Bitstream FaceLift for Word Perfect Da	PDB				
222 3	TimeSink AdGateway	IDX, CDB				

2224	PostScript Printer Description	PPD				
2225	RealPlayer Live Channel	CHL, GD				
2226	Label Factory Deluxe Job	JOB, PMJ				
2227	3D Home Architect Delux Floor Plans	PL0, PL1, PL2, PLn, PBn, PAn				
2228	Label Factory Deluxe Template	TPL, ORG				
2229	Label Factory Deluxe Install File	INS				
2230	Label Factory Deluxe Style	STY				
2231	MS Windows Error Mini Dump (32-bit)	DMP				
2232	MS Dr. Watson User Dump	DMP				
2233	PaperPort Database Map File	SBC, BIN				
2234	MS Schedule+ Event	SCH				
2235	HP Digital Imaging Cover Page Template	CVR				

2236	HP Scanner Profile	SPF				
2237	ExperVision TypeReader Database	DB				
2238	CD-Image Description File	CUE				
2239	Synchronized Multimedia Integrated Language	SMI, SMIL				
2240	HP Digital Imaging Project	CREATIVEPROJ				
2241	HP Digital Imaging Template	CREATIVETEMPL				
2242	HP Digital Imaging Logical Page Info.	LOGPAGE				
2243	HP Digital Imaging Layout	SIZE				
2244	HP Digital Imaging Theme	THEME				
2245	Portrait Innovations Image	PI2				
2246	Adobe Master Font Metrics	AFM				
2247	WordPerfect Help					

2248	WordPerfect Keyboard Definition					
2249	WordPerfect Thesaurus					
2250	WordPerfect Printer Resource	PRS				
2251	WordPerfect Hyphenation Code/Data					
2252	WordPerfect Block					
2253	WordPerfect Video Driver					
2254	WordPerfect Setup/Installation Data	SET, INS				
2255	WordPerfect Display Resource	DRS				
2256	WordPerfect Overlay	FIL				
2257	WordPerfect Equation Resource	QRS				
2258	WordPerfect Dictionary Rules					
2259	WordPerfect Document (Macintosh)	DOC, TXT				

2260	WordPerfect Document (VAX)	DOC				
2261	WordPerfect External Spelling Dictionary					
2262	MS Windows Animated Cursor (Motorola)	ANI, CON				
2263	MS Windows Color Palette (Motorola)	PAL				
2264	UNIX Program/Program Library (32-bit)	ELF				
2265	UNIX Program Library (32-bit)	SO				
2266	Atari ST MiNT Program	PRG, GEM, TTP				
2267	MS MIDI Instrument Definition (Motorola)	IDD, IDF				
2268	Madtracker Music Module	MTI, MT2				
2269	SIDPlayer Music Module	SID				
2270	MS Midi Musical Musical Instrument Song (Motorola)	RMI				

2271	Notation Interchange File Format (Intel)	NIF, RMI				
2272	MS Windows Wave Sound (Motorola)	WAV				
2273	Maya 3D Image (32bit; binary)	mb				
2274	AutoDesk Animator Cel Image	CEL, PIC				
2275	LightWave 3D FPBM Image	FPBM				
2276	Portable Arbitrary Map Image (Binary)	PAM				
2277	Fractal Image and Sequence Codec Image	WFA				
2278	Provector 2D Image	DR2D				
2279	Corel Metafile Exchange Image (Motorola)	CMX, PAT, CDR				
2280	GEM Metafile Image (Motorola)	GEM, GDI, VDI				
2281	GEM Metafile Image (Intel)	GEM, GDI, VDI				
2282	Rhino 3D Model	3DMF, 3DM				

2283	Ac3d 3D Model	AC				
2284	Tachyon Parallel Raytracer 3D Model	DAT				
2285	Videoscape 3D Model with Colored Verti	GEO				
2286	Videoscape 3D Model with Light Source	GEO				
2287	Videoscape 3D Model with Gouraud Curve	GEO				
2288	4D Creative Model (ASCII)	HRC				
2289	Maya 3D model (ascii)	ma				
2290	Cinema 4D V4 Data	MC4D, CINEMA4D				
2291	Object Oriented Graphics Library: Mesh (ASCII)	MESH				
2292	MilkShape 3D Model	MS3D				
2293	Imagine 3D Object	TDDD, TDD				
2294	XGL 3D Model	XGL				

2295	AXX Archive	AAX				
2296	ABComp Archive	ABP				
2297	AKT Archive	AKT				
2298	AR7 Archive	AR7				
2299	Squash Archive	ARH				
2300	Btoa Encoded File	BOO				
2301	BTSpk Archive	BTS				
2302	Bzip Archive V1	BZ				Y
2303	Dpae Archive	DPA				
2304	Disintegrator Archive	DST				
2305	PPMZ2 Archive	PMZ				
2306	Powerpacker Archive	PP				
2307	Pretty Simple Archive	PSA				
2308	Romanian archiver eXpert Achive	RAX				

2309	Reduq Archive	RDQ				
2310	Rzip Archive	RZ				
2311	UNIX Shell Archive	SHAR				
2312	Shrinkit/Nulib/Nu File Archive	SHK				
2313	GNU TAR Archive	TAR				Y
2314	Opengroup/POSIX TAR Archive	TAR				Y
2315	Pagestream Document	DOC				
2316	AmigaGuide Hypertext Document	GUIDE				
2317	Atari ST Guide Hypertext Document	HYP				
2318	GNU Info Hypertext Document	INFO				
2319	Turbo C Help	TCH				
2320	Turbo Vision Help	TVH				
2321	MS Windows Card File (Win 3.x)	CRD				

2322	Deluxe Paint Multi-Colour Font	C					
2323	Intellifont Scalable Typeface	LIB					
2324	Deluxe Paint Mono-Colour Font	M					
2325	Aegis Animation						
2326	Open Financial Exchange Data	QFX					
2327	Extensible Markup Language (UTF-32BE)	XML			Y		
2328	Extensible Markup Language (UTF-32LE)	XML		Y			
2329	Extensible Markup Language (UTF-16BE)	XML			Y		
2330	Extensible Markup Language (UTF-16LE)	XML		Y			
2331	Extensible Markup Language (UTF-8)	XML			Y		
2332	Free Pascal Unit	PPU, PPL, PPO, PPW, PPA, PPT					
2333	Javacard API Export File	EXP					

2334	Simple ROM File System Image (ROMFS)	IMG				
2335	MS Virtual PC Hard Disk Image	VHD				
2336	eCos ROM File System Image (ROMFS)	ROM, FS				
2337	Portable Application Description (XML)	XML				
2338	Extensible Metadata Platform Sidecar (XML)	XML, XMP		Y		
2339	Timezone Information DB (compiled)					
2340	Telix Phone Book	FON				
2341	Yahoo! Widget	WIDGET				
2342	3D Mark Database	3DB				
2343	Cadent 3D Model	3DM				
2344	4th Dimension Database Structure	4DB				

234 5	Text File (UTF-16BE)					
234 6	ABIF Applied Biosystems Inc. Format	AB1, FSA				
234 7	Audition On-line Dance Battle Music	ABM				
234 8	ACUCOBOL-GT License	ALC, VLC				
234 9	ACUCOBOL-GT Intermediate Object File	ACU				
235 0	CaseMaker AcuBench Workspace Info.	WIF				
235 1	CaseMaker AcuBench Layout Structure	DLT				
235 2	CaseMaker AcuBench Program Structure	PSF				
235 3	CaseMaker AcuBench Project	PJT				
235 4	Chuzzle Saved Game	DAT				
235 5	EasyRecovery Saved Recovery State	DAT				

2356	Runtime Software Disk Image	DAT				
2357	Shareaza Thumbnail	DAT				
2358	Corel CENTRAL Address Book	ADB				
2359	ArcExplorer Project	AEP				
2360	Grace Project	AGR				
2361	Design Your Own Home Architect Drawing	AIG				
2362	Anfy Applet Generator Saved File	AJP				
2363	AMX Mod X Plug-in	AMXX				
2364	Adobe Download Manager Online Shortcut	AOM				
2365	Gmini Firmware Update	AOS				
2366	Monkey's Audio Image Link	APL				
2367	ApiViewer API Database	APV				
2368	ShrinkIt Apple][Compressed Archive	BXY, BLU				

2369	ZipGenius Compressed Archive	CZIP				
2370	H2O Compressed Archive	H2O				
2371	1944: Battle of the Bulge Game Archive	FX				
2372	KGB Archiver Compressed Archive	KGB				
2373	PAQ8x Compressed Archive	PAQ8J?, PAQ8?				
2374	WinRK Archive	RK				
2375	RKive AUdio Compressed Audio	RK, RKA, RKAU				
2376	OneNote Note	ONE		Y		
2377	Adaptive Multi-Rate Wideband Audio	AWB				
2378	Compressed Square Wave Audio	CSW				
2379	SPPACK Audio	D				

2380	GBG DraftMaker Drawing File	D				
2381	Digital Speech Standard Compressed Audio	DSS				
2382	Sprint Music Store Phone Music	KOZ, MP3				
2383	Sony OpenMG Music Format	OMA				
2384	TAK Lossless Compressed Audio	TAK				
2385	Vicar Picture	VIC, IMG				
2386	Nero ISO CD-ROM Compilation	NRI, NR3				
2387	MySQL Generic Database Dictionary	FRM				
2388	Phoenix Visual Designer Form	FRM				
2389	Sonic Skin	SKN				
2390	TurboTax DHTML Help Index	LIF				
2391	ACUCOBOL-GT Index	VIX				
2392	MS Works Database Wizard	WWD, WDB				

2393	MS Visio Report Definition	VRD				
2394	MS J# Source Code	JSL				
2395	RSA Crypto Key	PUB, PPK, DAT				
2396	MS Access Database Template (Open XML)	ACCDT				
2397	OS/2 Library (32 bit)	DLL, EXE				
2398	TurboTax Form (2)	HEFS				
2399	Nero Media Player Skin	NPS				
2400	Norton Spam Definitions	MBK				
2401	Norton AntiVirus Scheduled Tasks	SCA, RUL, DAT				
2402	WildTangent Compressed Game Data	WSAD, WSMO, WSGO, WSBM				
2403	Personal Home Page Script	PHP, PHP3, PHP4, PH3, PH4				
2404	Diablo 630 Escape Codes/Output	PRN				
2405	TTA (True Audio) Free Lossless Audio	TTA				

2406	Parity Archive Volume Set Specification 1	PAR				
2407	Debian Linux Package	DEB				
2408	Nawk Programming Languaget	NAWK, GAWK, AWK				
2409	FrameMaker Dictionary					
2410	FrameMaker Screen Font					
2411	Hierarchical Data Format File (v5)	HDF, HE5				
2412	DesignWorks Link	DWL				
2413	DesignWorks Schematic	CCT				
2414	Pretty Good Privacy Key/Signature Text	TXT				
2415	Navy Interchange File Format Image	NIFF				
2416	Free Graphics Format Image	FGF				
2417	GNUnet Directory	GND				

2418	AC-3 / Dolby Digital Audio	AC3, EAC3				
2419	Advanced Audio Coding ADTS Sound	AAC				
2420	BONK Lossless/Lossy Compressed Audio	BONK				
2421	Dolby Theatre System Audio	DTS				
2422	DEC Sound	SND				
2423	MPEG 4 Animation	MP4, MPEG, MPG4				
2424	MPEG 2 Transport Stream	MP2T, MPEG				
2425	Sealed GIF Image	SGI, SGIF, S1G				
2426	GNU Database Manager File	GDBM				
2427	DataEase Database	DBM				
2428	KDE Desktop Entry					
2429	KDE Configuration					
2430	Xmcd CD Information	XMCD				

243 1	SysV R4 PKG Datastreams	PKG				
243 2	Pretty Good Privacy Public Key Block					
243 3	Pretty Good Privacy Signed Message					
243 4	Pretty Good Privacy Signature					
243 5	Pretty Good Privacy Encrypted Data					
243 6	Ichitaro Document	JTD		Y*		
243 7	Eet Archive	EET				
243 8	AppleSingle MIME Format					
243 9	AppleDouble MIME Format	DAT, AD				
244 0	Atom Format	ATOM				
244 1	Common Name Resolution Protocol	CNRP				
244 2	Call Processing Language	CPL				
244 3	DICOM Image (MacBinary)	DICM, DCM				

2444	Internet X.509 Public Key DVCS Protocol	DVCS				
2445	Extensible Provisioning Protocol	EPP				
2446	Fast Infoset (XML)	FINF				
2447	HyperStudio Stack (MacBinary)	STK				
2448	MacWrite II (MacBinary)					
2449	MPEG 4 Animation (MacBinary)	MP4, MPEG, MPG4				
2450	Material Exchange Format File (MacBinary)	MXF				
2451	OGG Vorbis Compressed Audio (MacBinary)	OGG				
2452	Presence Information Data Format	PIDF				
2453	Plucker Document	PDB				
2454	Relax NG Compact Syntax File	RNC				

2455	XML Based Filtering Format	CL, XML				
2456	Post-it-Notes (MacBinary)	PWN				
2457	AceText Collection	ATC				
2458	Acrobat XML Data Package	XDP, XDC				
2459	Mac OS X Installer (MacBinary)	DIST, DISTZ, PKG, MPKG				
2460	AudioGraph Video (MacBinary)	DIST, DISTZ, PKG, MPKG				
2461	Cinderella (MacBinary)	CDY				
2462	CASLwin Program	CSP				
2463	CommonSpace Document/Template (MacBinary)	CSP, CST				
2464	Phone Doubler	QCALL, QCA				
2465	Frogans Document	FNC				
2466	DocuFile / EDMICS 2000	DDD				
2467	FuzzySheet Document	FZS				
2468	Emu48 Emulator Keyboard Configuration	KML				

2469	Google Earth Keyhole Markup Language	KML				
2470	Google Earth Keyhole Markup Language (MacBinary)	KML				
2471	GrafEq Document (MacBinary)	GQF, GQS				
2472	Job Layout Language Image	JLYT				
2473	Visionary Image	VIS				
2474	Java Midlet	RMS				
2475	Karbon Document	KARBON				
2476	KChart Document	CHRT				
2477	KFormula Document	KFO				
2478	Kivio Document	FLW				
2479	Kontour Document	KON				
2480	KPresenter Slide Show (XML)	KPR, KPT				
2481	KSpread Document	KSP				

248 2	KWord Document / Template	KWD, KWT				
248 3	Lotus 123 Worksheet (MacBinary)	123, WK1, WK3, WK4		Y		
248 4	Medical Waveform Description	MWF				
248 5	Medical Waveform Description (MacBinary)	MWF				
248 6	NetMail/3000 / DeskLink / MS92 File					
248 7	MS Windows Cabinet Archive (MacBinary)	CAB, PKG, ??Z, ??_, GDP				Y
248 8	OpenDocument Chart	ODC	Y	Y		
248 9	OpenDocument Chart Template	OTC	Y	Y		
249 0	OpenDocument Formula	ODF	Y	Y		
249 1	OpenDocument Formula Template	OTF	Y	Y		
249 2	OpenDocument Graphics	ODG	Y	Y		

2493	OpenDocument Graphics Template	OTG	Y	Y		
2494	OpenDocument Image	ODI	Y	Y		
2495	OpenDocument Image Template	OTI	Y	Y		
2496	OpenDocument Presentation	ODP	Y	Y		
2497	OpenDocument Presentation Template	OTP	Y	Y		
2498	OpenDocument Spreadsheet	ODS	Y	Y		
2499	OpenDocument Spreadsheet Template	OTS	Y	Y		
2500	OpenDocument Text	ODT	Y	Y		
2501	OpenDocument Text Master	OTM	Y	Y		
2502	OpenDocument Text Template	OTT	Y	Y		
2503	OpenDocument Text Web	OTH	Y	Y		
2504	PowerBuilder Dynamic Library (MacBinary)	PBD, DLL				
2505	Preminet File	PREMINET				

2506	Web Application Description Language	WADL				
2507	XML Encryption	XML				
2508	Enhanced Variable Rate Codec Sound	EVC				
2509	Composite Attachment File	CAF, DAF, EM, PM				
2510	JungUm Office Document	GUL, BKG				
2511	Mozilla Browser Extension Package	XPI				
2512	Lotus Approach Document	APR, MPR				
2513	DesignCAD Drawing	DCD				
2514	Capture Classic Filler Template	JDT				
2515	OmniForm Form	OFM				
2516	WINDEV Index	NDX				
2517	MapSource GPS Waypoint Database	GDB				
2518	Trend Micro Pattern File	000, nnn				

2519	3D Movie Maker Movie	3MM				
2520	T602 Document	602				
2521	Unicode Translated Fonts	NTF				
2522	MS Visual Studio.NET Cache	CACHE, MAP				
2523	Sybase Localization File	LCU				
2524	MS Spell Checker Dictionary (Win95)	DIC				
2525	3D Studio 3.0 Image	3DS				
2526	3D Studio Image (ASCII)	ASC				
2527	Alchemy Molecule	ALC				
2528	Alchemy 2000 Molecule	AL2				
2529	Direct3D Object (Text)	X, D3D, XIE				
2530	Direct3D Object (Text) Compressed	X, D3D, XIE				
2531	Direct3D Object (Binary) Compressed	X, D3D, XIE				

2532	AVS Field Data	FLD				
2533	Geom Image	GEOM				
2534	GLF 3D Font	GLF				
2535	HyperChem Molecule Image	HIV				
2536	International Laser Display Association 3D Image	ILD				
2537	International Laser Display Association 2D Image	ILD				
2538	International Laser Display Association Colour Palette	ILD				
2539	Infini-D 3D Image	INFINI				
2540	Impress Presentation / Template	SDD, VOR				
2541	StarMath Formula	SMF				
2542	IRIT 3D Interchange Image	IRIT				

2543	MDL 3d Image (Binary)	MDL				
2544	MDL 3d Image (Text)	MDL				
2545	Tripos MOL2 3D Molecule Image	MOL2				
2546	Alias/Wavefront Material Library	MTL				
2547	Object Oriented Graphics Library: Quadrilaterals (Binary)	QUAD				
2548	Object Oriented Graphics Library: Mesh (Binary)	MESH				
2549	Object Oriented Graphics Library: Bezier (ASCII)	BBP, BEZ				
2550	Object Oriented Graphics Library: Bezier (Binary)	BBP, BEZ				
2551	Object Oriented Graphics Library: Objects (ASCII)	OFF				
2552	Object Oriented Graphics Library: Objects (Binary)	OFF				
2553	Object Oriented Graphics Library: Vectors (ASCII)	VECT				

2554	Object Oriented Graphics Library: Vectors (Binary)	VECT				
2555	Object Oriented Graphics Library: Skeleton	SKEL				
2556	Object Oriented Graphics Library: Sphere	SPH				
2557	Object Oriented Graphics Library: 4x4 Transformation	INST				
2558	Object Oriented Graphics Library: Multiple 4x4 Transformations	GRP, PRJ				
2559	Object Oriented Graphics Library: 4x4 Transformations (Binary)	GRP, PRJ				
2560	PolyHedral Database	PHD				
2561	Polygon 3D Objects	POLY				
2562	Radiance 3D Scene Description	RAD				

2563	ACIS 3D Model	SAT				
2564	3D-XplorMath Image	SURF				
2565	Triangular Irregular Network	TIN				
2566	VMD 3D Image	VMD				
2567	WorldBuilder Scene	WLD				
2568	Radiance High Dynamic Range Image	HDR				
2569	AmigaOS Disk Image	ADF				
2570	Virtual Pascal Unit	VPI				
2571	DigiTrakker Instrument	IST				
2572	AMusic AdLib Tracker Music	AMD				
2573	Digibooster Music	DIGI				
2574	DOS Sound Interface Kit Module Music	DSM				
2575	Edlib FM tracker Module Music	EDL				

2576	Bells Whistles and Sound Boards Module Music	GDM				
2577	Imago Morpheus Module Music	IMF				
2578	Jamcracker Tracker Module Music	JAM				
2579	Musicline Module Music	ML				
2580	Protracker 3 Module Music	MOD				
2581	Madtracker Pattern	MTP				
2582	iNEW Emulator Audio	SND				
2583	The Final Musicsystem eXtended Module Music	TFX				
2584	APlayer Module Music	UNI				
2585	Mikmod Module Music	UNI				
2586	MAUD Audio Sample	MAUD				
2587	IRCAM Audio Sample (Intel)	SF				
2588	IRCAM Audio Sample	SF				

	(Motorola)					
2589	Speex Lossy Audio Codec Raw Audio	SPEEX				
2590	Vorbis Lossy Audio Codec Raw Audio	VORBIS				
2591	Anivga Toolkit Sprite Image	COD				
2592	Portable Monochrome Recursive Format Image	MRF				
2593	Turbo Silver 24bit RGB Image	RGB8				
2594	Turbo Silver 12bit RGB Image	RGBN				
2595	Solitaire Image Recorder Image	SIR				
2596	Facility for Interactive Generation File	FIG				
2597	Corel Draw Raster (Motorola)	CDR, PAT				
2598	Adobe Composite Font Metrics	AFM				
2599	MS Audio/Visual Interleave (Motorola)	AVI, VFW				
2600	Alias Wavefront Movie	MV				

2601	Fanta Vision Movie (IFF)	FANT				
2602	MS Windows Media Player Play List	ASX				
2603	Perfect Office Document	DOC				
2604	The Bat! Email Message	EML, TXT	Y	Y		
2605	Thunderbird Email Message	EML, TXT	Y		Y	
2606	Yahoo! Mail Email Message	EML, TXT	Y	Y		
2607	StarCalc Spreadsheet / Template	SDC, VOR				
2608	StarDraw Image / Template	SDA, VOR				
2609	Aportis Document	PDB				
2610	OpenOffice Drawing / Template	SXD, STD	Y	Y		
2611	OpenOffice Math Formula	SXM	Y		Y	
2612	OpenOffice Impress Presentation / Template	SXI, STI	Y	Y		

2613	OpenOffice Spreadsheet / Template	SXC, STC	Y	Y		
2614	OpenOffice Text Document / Template	SXW, STW	Y	Y		
2615	OpenOffice Database	ODB	Y	Y		
2616	MS Windows Journal	JNT, JTP				
2617	MS Windows Vista Icon Cache Database	DB				
2618	MS Channel Definition Format	CDF-MS, CDF				
2619	Westmead EEG	EEG				
2620	3DX Image	3DX				
2621	Photoshop Color Book	ACB, 8BCB				
2622	Psion Agenda File	AGN				
2623	Akai S5000/S6000 MIDI Keyboard Sample	AKP				
2624	MS Works for Windows 3 Document (OLE)	WPS, WWP				

2625	MS Works Spreadsheet (OLE)	WWS, WLR				
2626	MS Excel Spreadsheet (Open XML,Binary)	XLSB	Y	Y		
2627	Pretty Good Privacy Signature (ASCII)	ASC				
2628	Atlantis Facsimile Image	FAXX				
2629	Amiga Contiguous Bitmap	ACBM				
2630	Framer Animation					
2631	Common Musical Score	CMUS				
2632	Flow Document					
2633	MathVision Matrix					
2634	IFF 3D Object					
2635	Program Traceback	PGTB				
2636	Image Professional Compressed Bitmap	PMBC				

2637	Deluxe Paint Perspective Move	PRSP				
2638	IFF Sound Sample	SAMP				
2639	ASDG Split File	SPLT				
2640	ToolMaker User Interface Design	TMUI				
2641	QED Symbolic Math Data Structure	TREE				
2642	IFF Tracker Song	TRKR				
2643	IFF YUV Image	YUVN				
2644	LOB Compressed Archive	LOB				
2645	AFX/XPFX Archive	AFX				
2646	Atomik Cruncher Archive					
2647	Automation Compacter Archive					
2648	Automation Packer Archive					
2649	Crunch Archive					
2650	Resident Compressor					

	Archive					
265 1	Crunch Mania Archive					
265 2	IFF Retargetable Graphic Image	RGFX, RGX				
265 3	Audio Manager Module (RIFF)	AMM				
265 4	Audio Manager Module	AMM				
265 5	Electronic Arts Game Audio 1	ASF, AS4				
265 6	Electronic Arts Game Audio 2	KSF				
265 7	STOS Animation Bank	MBK				
265 8	AXS Realtime Analog Synthesizer Module	AXS				
265 9	AWS Virtual Tape Image	AWS				
266 0	DreamWorks Resource Archive	BLB				
266 1	Core Audio Format Sound	CAF				
266 2	Revolution Resource Archive	CLU				
266 3	FutureVision Resource Archive	CMP				

2664	FutureVision Movie Soundtrack	FST				
2665	TrueSpace 3D Object (ASCII)	COB, SCN				
2666	MS Compress 6.22 Archive	??$, ??_, ?_, IBT				
2667	MS Compress 5.0 Archive	??$, ??_, ?_, IBT, CEB, EX_				
2668	Calamus Vector Graphic Image	CVG				
2669	DCM Music Module	DCM				
2670	Dynamic File Format	DFF				
2671	Dore Raster Image	DORE				
2672	Dynamic Process Format Design	DPF				
2673	Medical Biosignals Data	EBS				
2674	Exchange Card	ECARD				
2675	Floppy Disk Image / MBR (FAT16)	IMG, DD				Y
2676	Hard Disk Image/MBR (FAT12)	IMG, DD				Y
2677	Hard Disk Image/MBR (FAT16)	IMG, DD				Y

2678	Hard Disk Image/MBR (FAT32)	IMG, DD				Y
2679	Hard Disk Image/MBR (NTFS)	IMG, DD, BAK				Y
2680	Hard Disk Image/MBR (Linux)	IMG, DD				Y
2681	MS Windows Program (64 bit)	EXE, SCR, MOD, SYS, BIN, COM				
2682	MS Windows .NET Program (32 bit)	EXE, SCR, MOD, SYS, BIN, COM				
2683	MS Windows .NET Program (64 bit)	EXE, SCR, MOD, SYS, BIN, COM				
2684	MS Windows Library (64 bit)	DLL, TLB, OCX, CPL, HX?				
2685	MS Windows .NET Library (64 bit)	DLL, TLB, OCX, CPL, HX?				
2686	MS Windows .NET Library (32 bit)	DLL, TLB, OCX, CPL, HX?				
2687	Atari 7800 ROM Image	A78				
2688	Absolute Database	ABS				
2689	DB/TextWorks Database Access Control File	ACF				

2690	Antenna Data File	ADF				
2691	openEHR Archetype Definition Language	ADL				
2692	Advantage Database Server Database	ADT				
2693	Casio Travel Phrase Database	ADT				
2694	Visual Objects Application Export File	AEF				
2695	Advanced Forensic Format Disk Image	AFF				
2696	Applixware Graphic Image	AG				
2697	BlackBerry Application Loader	ALX				
2698	ArtMoney Table	AMT				
2699	MTV Movie	AMV				
2700	ArmPack Archive	AP				
2701	Timex Data Link Watch	APP				

	Application					
2702	AptiQuiz Test	AQ1				
2703	FreeArc Compressed Archive	ARC				
2704	Active Tutor Data	ARF				
2705	CD Autorun Creator Package	ARN				
2706	Pro/ENGINEER Assembly	ASM				
2707	Aegisub Advanced SubStation Alpha Subtitle	ASS, SSA				
2708	Athena Document	ATH				
2709	Terragen Light and Atmosphere	ATM, ATMSPHR				
2710	AutoREALM Map	AUR				
2711	AutoREALM Symbols	AUS				
2712	Avid Bin File	AVB				
2713	Winamp Advanced Visualization Studio	AVS				

2714	Artweaver Painting	AWD				
2715	Alternative Web Language	AWL				
2716	snAPPshot ASCII Application Object Template	AXT				
2717	AxCrypt Encrypted Data					
2718	Z80 Music Code With AY Music	AYM, AY				
2719	QazaR Compressed Archive	AZA				
2720	AnswerWorks Search Glue File	MOR				
2721	SSCE Spelling Lexicon Database	SDF				
2722	MS Windows Media Compressed Database	WMDB				
2723	MS Windows Media Catalog Database	WMDB				
2724	MS Outlook Personal Information Store (2003 - 2007)	PST				Y

2725	Delphi Form	DFM				
2726	Delphi Source Code	PAS				
2727	MS Windows Backup Utility Tape Image	BAK, BKF				
2728	Seagate Backup Tape Image	BKF				
2729	Extended Binary Coded Decimal Interchange Code (EBCDIC)					
2730	Wireless Markup Language	WML				
2731	Unix Fast File System V2 Disk Image (Motorola)					
2732	Fat Binary	68K, PPC				
2733	Text File (UTF-32LE)					
2734	Text File (UTF-32BE)					
2735	Harvard Graphics Symbol Image	SYW				
2736	Milestones Project	MLS				
2737	Skype Localization Data	MLS				
2738	MS Word 6.0/95 Document (preOLE)	DOC, DOT, WIZ, WZS, WRI, WBK	Y	Y		

2739	Brother Daisy Wheel Word Processor Document					
2740	Brother Ink Jet Word Processor Document					
2741	Brother Notebook Word Processor Document					
2742	Brother SPN/France Word Processor Document					
2743	Brother SPN/UK Word Processor Document					
2744	DisplayWrite Document					
2745	Lotus Manuscript Document					
2746	MASS-11 Export Document					
2747	MASS-11 Native Document					
2748	WordStar 2000 Document	WS2		Y			
2749	XyWrite / Signature / Nota Bene Document					

2750	Harvard Graphics Presentation for DOS	SHW			
2751	CPI XRD Document	CPI			
2752	MS Visual C++ Workbench Information	VCW			
2753	Skype Profile and Contacts	DBB			
2754	Blitz3D/Max/Plus Texture or Mesh File	B3D			
2755	BlindWrite 5 Table of Contents/Tracks	B5T			
2756	Hangul Word Processor Document	HWP			
2757	MS Works for Mac 4 Database/Doc/Sheet (OLE)	DB4, WP4, SS4			
2758	MS Works for Mac 3 Document	WP			
2759	MS Works for Mac 2 Document	WP2			
2760	GPS Pathfinder Office Almanac and Base Data	SSF			

2761	Lotus Works Document	DOC				
2762	MS Visual FoxPro Database	DBF, PJX, DBC				
2763	MS Word for OS/2 Document	DOC	Y	Y		
2764	OfficeWriter Document					
2765	PeachText 5000 Document					
2766	Samna Word Document					
2767	Applixware Spreadsheet	AS				
2768	Simulink Simulation Model	MDL				
2769	Matrix Spreadsheet	MTX				
2770	Moxcel Spreadsheet	MXL				
2771	Polyphonic Phone Ringtone	PMD				
2772	Dreamcast Texture	SPR				
2773	PC File Index	NDX, NDS				
2774	PC File Letter / Report	LTR, REP				
2775	DeskMate Document	DOC				

277 6	Pathetic Writer Document	PW				
277 7	SuperCalc Worksheet	CAL				
277 8	CADS Planner Drawing	DRW				
277 9	Adobe Photoshop Plug-in	8BI, AXT				
278 0	WHAP Compressed Amiga Archive	AP				
278 1	EA Game MOD	BIG, BIGF, VIV				
278 2	MS QuickBASIC Source Code	BAS				
278 3	Blizzard Texture	BLP				
278 4	Blender 3D Project File Format	BLEND				
278 5	Bryce 6 Scene	BR6				
278 6	CISO Compressed ISO CD Image	CSO				
278 7	Cinema 4D Model	C4D				
278 8	Collage Maker Graphic	CLG				
278 9	Canon Digital Camera RAW	CR2				

	Image (CR)					
2790	ClipArt Gallery Download Package	CIL				
2791	PowerISO Direct Access Archive	DAA				
2792	DNL Page Turning e-Book	DNL				
2793	DirectDraw Surface	DDS				
2794	Ovation Pro Document	DPD				
2795	DriveCam Event Video	DCE				
2796	Darwin Pond Project	DWP				
2797	Media Safe Encrypted Data	ENC				
2798	SolidWorks eDrawings Assembly	EASM, EPRT				
2799	Encore Musical Notation	ENC				
2800	Eyemail Video Recording	EYE				
2801	MS Font File	FNT				
2802	Adobe Flash Project	FLP				

2803	Autodesk 3D Data Exchange Image (Binary)	FBX				
2804	Final Cut Pro Project	FCP				
2805	Adobe Acrobat Forms Data Format	FDF				
2806	Graphing Calculator File	GCF				
2807	Graphtec Vector Graphics Image	GSD				
2808	Google Video Playlist	GVP				
2809	Adobe InDesign Document	INDD				
2810	Inspiration Concept Map (Flowchart) Document	ISF				
2811	iTunes Music Database	ITL				
2812	Indeo Video Format	IVF				
2813	Java Application Descriptor	JAD				
2814	LDAP Data Interchange Format	LDIF				

2815	LZMA Compressed Archive	LZMA				
2816	Thunderbird Mail Summary File	MSF				
2817	Mozilla Address Book	MAB				
2818	Media Player Classic (MPC) Playlist	MPCPL				
2819	Movie Collector Catalog	MVC				
2820	Sony Movie	MQV				
2821	Nero CD/DVD Image	NRG				
2822	PIM Compressed Archive	PIM				
2823	CER Internet Security Certificate	CER				
2824	Google Sketchup Models	SKP				
2825	Apple QuickTime Cache	QTCH				
2826	Binary Property List	NIB, QTZ				
2827	HyperText Markup Language (UTF-32BE)	HTML, HTM, HT?, HTTP, ASP?, MHT, HH?, XM		Y		

2828	HyperText Markup Language (UTF-32LE)	HTML, HTM, HT?, HTTP, ASP?, MHT, HH?, XM		Y		
2829	HyperText Markup Language (UTF-16BE)	HTML, HTM, HT? , HTTP, ASP?, MHT, HH?, XM		Y		
2830	HyperText Markup Language (UTF-16LE)	HTML, HTM, HT?, HTTP, ASP?, MHT, HH?, XM		Y		
2831	HyperText Markup Language (UTF-8)	HTML, HTM, HT? , HTTP, ASP?, MHT, HH?, XM		Y		
2832	Round-Robin Database	RRD				
2833	RealMedia Metafile	RAM				
2834	Super Nintendo System ROM Image	SMC				
2835	Acronis TrueImage Disk Image	TIB				
2836	GroupWise User Word List	UWL				
2837	Video CD	VCD				
2838	Working Model Motion Simulation	WM				
2839	Nokia Saved SMS Message	VMG				

2840	WebEx Recording	WRF				
2841	MS Windows Media Player Playlist	WPL				
2842	MS InfoPath Dynamic Form/Template	XSN				
2843	MS InfoPath Document (XML)	XML, MHT		Y		
2844	Sigma Camera RAW Picture Image	X3F				
2845	WinZix Compressed Archive	ZIX				
2846	Zzip Compressed Archive	ZZ				
2847	Ghost Disk Backup (DOS)	001, nnn, GHO				Y
2848	Authorware Course File (Without Runtime)	A4P				
2849	Archos Encrypted / Signed Data	AAS, AOS				
2850	Altair Binary Format	ABF				

285 1	ArCon Project File	ACP				
285 2	Windows Policy Template	ADM				
285 3	Windows Policy Template (Unicode)	ADM				
285 4	iPer Advanced Embedded Hypertext	AEH				
285 5	Affix File	AFF				
285 6	AGEMA File	AFF				
285 7	TracerCAD Drawing	AK				
285 8	RealFlight Radio Control Flying File	AIRPORTS				
285 9	Aksharamala Binary Keymap	AKM				
286 0	Aley's Module	ALM				
286 1	XSL Formatting Objects Form	FO, XML				
286 2	A.M.Composer Music	AMC				
286 3	Project Dogwaffle Animated Brush	ANB				

2864	MightyFax File	APF				
2865	Sony RAW Image	ARW				
2866	freeCAD assembly	ASM				
2867	Aegisub Advanced SubStation Alpha Subtitle (Unicode)	ASS, SSA				
2868	Empire Earth 1 Data	SSA				
2869	Avast! Antivirus Skin	ASWCS				
2870	Antenna Project	ATA				
2871	iPhoto Image Attributes	ATTR				
2872	Kaspersky Anti-virus Toolkit Database	AVC				
2873	BaDonGo File Information	BADONGO				
2874	HBasic Source Code	BAS				
2875	HEC-HMS Basin Model Settings	BASIN				
2876	ScriptBasic Binary File (32 bit)	BBF				

2877	ScriptBasic Binary File (64 bit)	BBF				
2878	BrainBox Neural Net	BBX				
2879	Low Level Virtual Machine Bytecode	BC				
2880	Low Level Virtual Machine Bytecode (Compressed)	BC				
2881	Brother BES-100E Embroidery	BDF				
2882	Cryo Interactive Game Data	BF				
2883	Blowfish Encrypted Data	BFA				
2884	Big Flexible Line Interpretation (C64) Bitmap	BFLI				
2885	Brother Embroidery Software Font	BFN				
2886	BitFax Document	BFX				
2887	DESI-III drawing	BIN				
2888	BIZ dVS Model/Object 1.0	BIZ				

2889	IBM BookManager Bookshelf Index	BKI				
2890	IBM BookManager Bookshelf	BKS				
2891	Cosmic Blobs Model	BLOB				
2892	America Online Instant Messenger Buddy List	BLT				
2893	EVE Online Data	BLUE				
2894	BMA Archiver Compressed Archive	BMA				
2895	GameCube 3D Model (Texture + Skeleton)	BMD				
2896	ByteMap Font	BMF				
2897	Award AWBM BIOS Bitmap	BMP				
2898	FrameMaker Book	FM, FRM				
2899	Soldat Bot Information	BOT				
2900	Buero Plus NexT FlashFiler Database	BPD				
2901	Business Plan Pro Data	BPD				

2902	BrioQuery File	BQY				
2903	BinSCII Compressed Archive	BSC, BSQ, BNS				
2904	Valve Game Map	BSP				
2905	Getic 3D Scene/Model	BSP				
2906	Quake 2 Map	BSP				
2907	VTBuilder Binary Terrain	BT				
2908	FlightGear Scenery	BTG				
2909	DB/TextWorks Database Term and Word Indexes	BTX				
2910	BvD Fileset	BVD				
2911	BrainWave Generator Binaural Beat	BWG				
2912	Enot External Photo Viewer Settings	BWS				
2913	PictureGear Studio File	BXU				

2914	Zone Identifier Stream (NTFS ADS)	IDENTIFIER				
2915	Summary Information Stream (NTFS ADS)					
2916	Generic Forensic Zip Disk Image (Intel)	gfz, gfzip				
2917	Generic Forensic Zip Disk Image (Motorola)	gfz, gfzip				
2918	IXimager Disk Image	ASB, IDIF, IRBF, IEIF				
2919	Windows Media (HD) Photo	WDP, HDP, WMP				
2920	MrSID Image	SID				
2921	Still Picture Interchange File Format (SPIFF)	SPIFF, SPF, JPG, JPEG			Y	
2922	OGG FLAC Compressed Audio	OGG				
2923	Digital Moving Picture Exchange Bitmap (Motorola)	DPX				

2924	Open eBook Forum Publication	OPF				
2925	Mujahideen Secrets 2	ENC				
2926	DesignTools 2D Design	DTD				
2927	DeskMate Worksheet	WKS				
2928	Palm OS Zire Photo Database	DB				
2929	Big Tag Image File Format	TIFF, TIF			Y	
2930	National Imagery Transmission Format Image v2.x	NTF, NITF				
2931	Norton Disk Doctor Undo	DAT				
2932	CadStd Drawing	CAD				
2933	EXTRACAD Drawing	CAD				
2934	Capella Gallery Music	CAG				
2935	QV Map Geographic Coordinates	CAL				
2936	Capella Music Sheet	CAP				

2937	Network Monitor Capture	CAP				
2938	Snoop Capture	CAP				
2939	SAPCAR Archive	CAR				
2940	CATIA Drawing	CATDRAWING				
2941	Computer Associates Archive	CAZ				
2942	MapBrowser/Map Writer Vector Map	CBD				
2943	Calendar Builder Saved Calendar	CBF				
2944	CoffeeCup Button Factory Button	CBF				
2945	Calendar Builder Style Sheet	CBS				
2946	Code Breaker Save	CBS				
2947	Multimedia Fusion File	CCA				
2948	Mactive AdBase Data	CDB				
2949	Midtown Madness 3 Data	CDDS				
2950	NetCDF CDL Metadata	CDL, NC, CDF				

2951	NTI CD&DVD-Maker Image	CDM				
2952	Apabi eBook	CEB, XEB				
2953	Context Free Design Grammar	CFDG				
2954	Flight Simulator Aircraft Configuration	CFG				
2955	Calamus Font	CFN				
2956	Egrid32 Compilable Grid Ready to be Compiled	CGF				
2957	Egrid32 Compilable Grid Ready to be Modified	CGF				
2958	GOLD Parsing System Table	CGT				
2959	ChiWriter Document 3.x	CHI				
2960	ChiWriter Document 4.x	CHI				
2961	Chile Compressed Archive	CHL				
2962	SPSS Template	CHT, SCT				

2963	CircuitMaker Schematic	CKT				
2964	ListPro Database	CLF, WLT				
2965	ClickFORMS Data	CLK				
2966	WatchGuard Cloaked File	CLK				
2967	DeskMate Clip Art	CLP				
2968	Blu-ray Clip AV Stream	CLPI				
2969	Flash Color Table	CLR				
2970	Logger Pro Data	CMBL				
2971	CrystalMaker Data v5	CMD5				
2972	CrystalMaker Data v2-4	CMDF				
2973	Linux Compressed ROM File System (CRAMFS) (Motorola)	CMG				
2974	Chemical Markup Language Document	CML				
2975	Andrew Toolkit CMU File	CMU				

297 6	Compressed Channel Data File	CNDF				
297 7	Cult3D ActiveX Player Application	CO				
297 8	Blackberry Compiled Java Code	COD				
297 9	MS HTML Help Collection	COL				
298 0	Windows Vista Contact	CONTACT				
298 1	Hydrologic Modeling System Control Specifications Data	CONTROL				
298 2	Cartesian Products Compressed Internet Document	CPC				
298 3	AVCHD Clip Information	CPI				
298 4	x509 Security Certificate	CRT				
298 5	x509v3 Security Certificate	CRT				
298 6	Cryptx Encrypted Data	CRYPT, CRYPTX				

2987	Csound Unified File Format for Orchestras and Scores	CSD				
2988	MSN Messenger Saved Contact List	CTT				
2989	AutoCAD Color-dependent Plot Style Table	CTB				
2990	Clam AntiVirus Database	CVD				
2991	Jet-VoiceMail Audio	CVF				
2992	Combustion Workspace Project	CWS				
2993	Crocodile Physics Simulation	CYP				
2994	DGIndex Project	D2V				
2995	OpenDark Compressed Archive					
2996	Allegro Compressed Packfile	DAT				
2997	Allegro Uncompressed Packfile	DAT				

2998	AVG 6 Integrity Database	DAT				
2999	LabVIEW Binary Datalog	DAT				
3000	TomTom Traffic Data	DAT				
3001	UFOCaptureV2 Map	DAT				
3002	Borland Paradox Database	DB				
3003	PFS: First Choice Document / PFS:Write	DOC, PFS, PFB				
3004	PFS: First Choice Database / PFS:File	FOL, PFS				
3005	MS Works Database 2 for Windows/DOS	WDB				
3006	MS Works Database 3 for Windows	WDB				
3007	MS Works Spreadsheet 2 for Windows/DOS	WKS				
3008	MS Works Database 3 for Mac	DB, DB3				
3009	MS Works Database 2 for	DB, DB2				

	Mac					
3010	MS Works Spreadsheet 2 for Mac	SS2, SS				
3011	MS Works Spreadsheet 3 for Mac	SS3, SS				
3012	Symphony Dictionary	DIC				
3013	Symphony Registry Database	RDB				
3014	Symphony Dialog Graphic Image	SDG, RDG				
3015	Symbian Font					
3016	Amiga Program					
3017	MS Digital Rights Management License Store	HDS				
3018	Paradox Memo Holder	MB				
3019	MS Groove System Store	XSS, XSSR				
3020	MS Windows Live Contacts	WIN, ADDRESSBOOK, MECONTACT				
3021	MS Groove System Store Log	XSSLOG				

3022	Device Emulator System Store	DESS				
3023	AppleScript Script	SCPT				
3024	WildTangent World Data	WDAT				
3025	WebEx Universal Communications Data	UCF				
3026	Symbian File (General)					
3027	Symbian Printer Driver					
3028	Symbian Clipboard					
3029	Symbian Sketch Image					
3030	Symbian Word Document					
3031	Symbian Spreadsheet					
3032	Symbian EasyFax Initialization					
3033	Symbian Database					
3034	Symbian Initialization File	INI				
3035	Symbian Library	DLL, OPX				

3036	Symbian Device Driver					
3037	Symbian Printer Definition					
3038	Digital Asset Exchange File	DAE				
3039	FaceSave Image	FACE				
3040	RTrace 3D Image	SFF, SCN				
3041	Standard Archive Format	SAF, POD				
3042	Textual 3D Data Description	TTDDD, TTD				
3043	Zebra Metafile	ZBR				
3044	NeWS Font Family					
3045	OpenFont Scalable Binary					
3046	OpenFont Encrypted Scalable Binary					
3047	X11/NeWS Bitmap Font					
3048	X11/NeWS Font Family					
3049	Emacs RMAIL News Message					

3050	MBX Mail Folder	MBX				Y
3051	Cyrus Skiplist Database					
3052	Fidonet Message Area Database	JAM, JHR				
3053	Kodak Photo CD overview pack	OPA, PCD				
3054	BSD System V AR Archive	AR				
3055	VAX 3.0 Archive					
3056	BSArc/BS2 Archive	BSA, BS2				
3057	MAR Archive	MAR				
3058	Quantum Archive	Q				
3059	X1 Archive	X1				
3061	Freeze Archive					
3062	ZPack Archive	ZPK				
3063	Dry Archive	DRY				
3064	FoxSQZ Archive					

3065	PPMZ Archive	PMZ				
3066	ARQ Archive	ARQ				
3067	PUCrunch Archive					
3068	Gather Archive	GTH				
3069	LZS221 Archive	LZS				
3070	EXP1 Archive	EXP1				
3071	NRV Archive	NRV				
3072	TOP4 Archive	TOP, TO4, T4				
3073	ChiefLZA Archive					
3074	ARS Archive	ARS				
3075	NPack Archive					
3076	PFT Archive	PFT				
3077	PPMD Archive	PPMD				
3078	DC Archive	DC				
3079	TPac Archive					

308 0	Ai Archiver Archive	AI				
308 1	EPC Archive	EPC				
308 2	Compressia Archive					
308 3	XPack Archive	XPA				
308 4	Pretty Good Privacy Signed Message (ASCII)					
308 5	Pretty Good Privacy Public Key Block (ASCII)					
308 6	Pretty Good Privacy Message (ASCII)					
308 7	Linux Unified Key Setup Encrypted Data					
308 8	T602 Document (Kamenicky Encoding)	602				
308 9	T602 Document (CP 852 Encoding)	602				
309 0	T602 Document (KOI8-CS Encoding)	602				

3091	Vi IMproved Encrypted Data	VIM				
3092	Vi IMproved Swap File					
3093	GNU Message Catalog (Intel)					
3094	GNU Message Catalog (Motorola)					
3095	Nazgul Compiled Message Catalog					
3096	GnuPG Key Trust Database	GPG				
3097	GnuPG Encrypted Data					
3098	Gnumeric Spreadsheet					
3099	MCrypt 2.5 Encrypted Data					
3100	MCrypt 2.2 Encrypted Data					
3101	Linux Swap File (Intel)					
3102	Linux Kernel Boot Image					
3103	SYSLINUX Boot Logo Image					
3104	WordPerfect Calendar					

310 5	PlanPerfect Worksheet				
310 6	PlanPerfect Data				
310 7	Perfect Office Email Database				
310 8	GroupWise Message		Y	Y	
310 9	GroupWise Admin Database				
311 0	CosmicBook Hypertext Document				
311 1	AmigaWriter Document				
311 2	Quark XPress Document/Template (Korean,Intel)	QXD, QXT, QWD, QWT, QXL, QXB			
311 3	Quark XPress Document/Template (Korean,Motorola)	QXD, QXT, QWD, QWT, QXL, QXB			
311 4	JAM Archive	JAM			
311 5	PMarc Archive	PMA			
311 6	GTKtalog Catalog Archive	GTK			

3117	MoPaQ Archive	MPQ				
3118	Sun Compacted Archive					
3119	Ultrix Compacted Archive					
3120	SCO Compressed Archive	LZH				
3121	Quasijarus Strong Compressed Archive	Z				
3122	Amiga XPKF Compressed Archive					
3123	Formatted Disk Image/Data Block					
3124	Smart BootManager Backup Disk Image					
3125	DOS Emulator Disk Image					
3126	Hard Disk Image/MBR (SysLinux)	IMG, DD				Y
3127	NetBoot Disk Image					
3128	Unix Fast File System V1 Disk					

	Image (Intel)				
3129	Unix Fast File System V2 Disk Image (Intel)				
3130	Unix Fast File System V1 Disk Image (Motorola)				
3131	Apple UFS Disk Image				
3132	Linux ext2/ext3/ext4 File System Disk Image				
3133	SGI File System Disk Image				
3134	SGI XFS File System Disk Image				
3135	High Sierra CD-ROM Filesystem				
3136	Linux Compressed ROM File System (CRAMFS) (Intel)				
3137	RabbitGraph Chart				
3138	Reiser File System Disk Image (ReiserFS)				

3139	Linux Journalled Flash File System Image (JFFS,Intel)				
3140	Linux Journalled Flash File System Image (JFFS,Motorola)				
3141	u-boot/PPCBoot Disk Image (JFFS,Motorola)				
3142	Linux Journalled Flash File System 2 Image (JFFS2)				
3143	Squash File System Disk Image (Squashfs,Intel)				
3144	Squash File System Disk Image (Squashfs,Motorola)				
3145	Oracle Clustered File System Disk Image (OracleCFS)				
3146	Oracle ASM Tagged Volume Image				
3147	Compaq/HP RILOE Disk Image				
3148	GFS2 File System Disk Image				

3149	FrameMaker MML File	MML				
3150	dBase III+/FoxBase+ Database (with memo)	DBF				
3151	FoxBase Database	DBF				
3152	dBase IV Database	DBF				
3153	dBase V Database	DBF				
3154	dBase IV Database (with memo)	DBF, BF				
3155	dBase IV Database (with SQL table)	DBF				
3156	FlagShip Database (with memo)	DBF				
3157	dBase II Database	DBF				
3158	UPX Compressed Executable	EXE				
3159	PECompact2 Compressed Executable	EXE				
3160	Petite Compressed Executable	EXE				

3161	Wise Installer Self Extracting Archive	EXE				
3162	Dzip Self Extracting Archive	EXE				
3163	Microsoft Installer Self Extracting Archive	EXE				
3164	RAR Self Extracting Archive	EXE				Y
3165	Info-Zip Self Extracting Archive	EXE				Y
3166	Zzip Self Extracting Archive	EXE				
3167	WinHki Self Extracting Archive	EXE				
3168	InstallShield Self Extracting Archive	EXE				
3169	Nullsoft Self Extracting Archive	EXE				
3170	MS Windows Cabinet Installer	EXE				

	Self Extracting Archive					
3171	Ace Self Extracting Archive	EXE				
3172	3D Systems Stereolithography CAD Image (ASCII)	STL				
3173	3D Systems Stereolithography CAD Image (Binary)	STL				
3174	Encrypted Data (Headerless)	FLK				
3175	TrueCrypt Dynamic Volume	TC				
3176	PKZip Archive (Encrypted)	ZIP, JAR, WMZ				Y
3177	WinZip Archive (Encrypted)	ZIP				Y
3178	EncryptOnClick (Encrypted)	EOC				
3179	ZoneAlarm Firewall Debug Log	LOG				
3180	Text Adventure Development System Game Resources	GAM				

3181	Text Adventure Development System Saved Game	GAM				
3182	Digital UNIX Core Dump					
3183	AMANDA Backup Tape Changer Data					
3184	Amiga Shared Library					
3185	Amiga Library Data					
3186	Art Of Noise Module					
3187	Amiga Rigid Disk Block					
3188	Amiga DOS Disk					
3189	Amiga FFS Disk					
3190	Amiga Inter DOS Disk					
3191	Amiga Inter FFS Disk					
3192	Amiga Fastdir DOS Disk					
3193	Amiga Fastdir FFS Disk					

3194	Amiga Kickstart Disk					
3195	Extensible 3D Model	X3D				
3196	Nintendo Game Cube Movie					
3197	MythTV NuppelVideo	NUV				
3198	Mac OS X Detached Code Signature					
3199	Apple Emulator 2IMG Disk Image (General)	2MG, 2IMG				
3200	Catakig Apple Emulator 2IMG Disk Image	2MG, 2IMG				
3201	Sheppy's ImageMaker Apple Emulator 2IMG Disk Image	2MG, 2IMG				
3202	Sweet 16 Apple Emulator 2IMG Disk Image	2MG, 2IMG				
3203	Bernie][the Rescue Apple Emulator 2IMG Disk Image	2MG, 2IMG				
3204	ASIMOV2 Apple Emulator 2IMG	2MG, 2IMG				

	Disk Image					
3205	Newton PDA Package Archive					
3206	Mac OS X Keychain Database	DB				
3207	VirtualBox Disk Image	VDI				
3208	Mac OS X Code Signing Requirement					
3209	Applixware Words Document	AW				
3210	Applixware Bitmap Image	AB				
3211	Applixware Macro	AM				
3212	Applixware Builder Object					
3213	MIPS Archive					
3214	ArcFS RISC OS Archive					
3215	Aster*x v1 Words Document					
3216	Aster*x v1 Graphic Image					
3217	Aster*x v1 Spreadsheet					

3218	Aster*x v1 Macro					
3219	Aster*x v2 Words Document					
3220	Aster*x v2 Graphic Image					
3221	Aster*x v2 Spreadsheet					
3222	Aster*x v2 Macro					
3223	VBOX Voice Message Audio					
3224	Blender 3D Python Script					
3225	CGNS Advanced Data Format Database					
3226	Symbian TextEd Document					
3227	Symbian Clipart Images					
3228	Symbian World Data File	DBW				
3229	Flow Cytometry Standard Data					
3230	Freehand 9 Document	FH9				
3231	Spline Font Database					

3232	FreeBSD Screen Shot				
3233	AVG Antivirus Vault	FIL			
3234	MAME Compressed Hard Disk Image	CHD			
3235	GameBryo Animation	KFM			
3236	GNU Compiler Collection Precompiled Header	GCH			
3237	GIMP Gradient Data				
3238	GIMP Curves Data				
3239	GNOME Keyring	PKR			
3240	ACE/gr Parameter Data (ASCII)				
3241	ACE/gr Fit Description Data				
3242	Gringotts Encrypted Data	GRG			
3243	HP Bitmap Image				
3244	LightWave 3D Layered Object	LWLO			

324 5	Real 3D Rendering					
324 6	YAFA animation					
324 7	Super Smooth Animation	SSA				
324 8	IFF Raster Font					
324 9	IFF Vector Font					
325 0	Macintosh IFF Picture					
325 1	Deluxe Video Construction Set Video					
325 2	Uhuru Sound Software Voice					
325 3	Uhuru Sound Software Musical Score					
325 4	IslandWrite Document					
325 5	IslandDraw Image					
325 6	Wingz Spreadsheet	WKZ				
325 7	Wingz Compiled Script					
325 8	Wingz Help					

3259	MS Windows CE Cabinet Archive	CAB				
3260	QEMU Suspend Disk Image	IMG				
3261	Dell BIOS Image	HDR				
3262	MS Visual C v1 Precompiled Header	PCH				
3263	Netscape v3 & v4 Address Book	NAB				
3264	Netscape Folder Cache	SNM				
3265	Objective Caml Executable					
3266	Objective Caml Interface	CMI				
3267	Objective Caml Object	CMO				
3268	Objective Caml Library	CMA				
3269	Objective Caml Native Object	CMX				
3270	Objective Caml Native Library	CMXA				
3271	Objective Caml Abstract Syntax Tree Implementation					

3272	Objective Caml Abstract Syntax Tree Interface					
3273	Octave Data (Intel)					
3274	Octave Data (Motorola)					
3275	MicroStation v8 CAD Drawing (OLE)	DGN				
3276	OpenBSD Linkable Format					
3277	IBM OS/2 2.0 Setup Information	INF				
3278	Palm OS Application					
3279	HackMaster Hack					
3280	BDicty Dictionary					
3281	FireViewer/Image Viewer Image					
3282	HanDBase Database					
3283	iSilo Document					
3284	JFile Database					

3285	JFile Pro Database				
3286	MobileDB Database				
3287	PeanutPress eBook				
3288	QuickSheet Spreadsheet				
3289	SuperMemo Database				
3290	TealDoc Document				
3291	TealInfo Database				
3292	TealMeal Database				
3293	TealPaint Image				
3294	ThinkDB Database				
3295	Palm OS Dynamic Library	PRC			
3296	Palm OS Patch	PRC			
3297	Mobipocket eBook				
3298	Pulsar POP3 Daemon Mailbox Cache				

3299	MS Rich Text Format Document (Mac)	RTF	Y	Y		
3300	Netscape Browser Cookie					
3301	Galeon Browser Cookie					
3302	KDE Konqueror Browser Cookie					
3303	Venturi Client Key	ENC				
3304	QuickBooks for Windows Data (Encrypted)	QBW, TLG, ADR				
3305	Sybase Translation Table	UCT, UST				
3306	QuickBooks for Windows Application Data	DAT				
3307	QuickBooks for Windows Copy File	QCF				
3308	QuickBooks for Windows Accountant's Backup	QBX, QBM				
3309	QuickBooks for Windows Configuration	ND				

3310	MS Visual Studio Project Template	VSTEMPLATE				
3311	ASP.NET Master Page	MASTER				
3312	ASP.NET Web Handler	ASHX				
3313	Lego Image	LIF				
3314	MS Virtual Earth 3D Image	DAT				
3315	Wyko Vision Dataset (ASCII)	ASC				
3316	Google Earth Keyhole Markup Langage (Compressed)	KMZ				
3317	MS FrontPage Document (XML)	HTML, XML, MHT		Y		
3318	Netscape Browser Bookmarks					
3319	Web Script Source Code	JS, ASP, HTM, HTML, HT?, INC, AS?X, BAS				
3320	eGram Telegram Message					
3321	X Windows Compiled X Keymap (Intel)	MKX				
3322	X Windows Compiled X	MKX				

	Keymap (Motorola)				
3323	X Windows FS Dump Archive				
3324	X11 Mouse Cursor				
3325	xo65 Program				
3326	xo65 Library				
3327	o65 Program				
3328	CRDA Wireless Regulatory Database				
3329	MS Outlook Express Folder Database				
3330	MS Outlook Express Account Information				
3331	MS Outlook Express Offline Database				
3332	MS Windows Error Mini Dump (64-bit)	DMP				
3333	MS Windows Vista Event Log	EVTX				

3334	MS Windows 3.1 Registry Hive	DAT, DA0, SAV				
3335	Warc Archive					
3336	VXL Computer Vision Data	VXL				
3337	OGG Theora Video					
3338	VMware NVRAM					
3339	Virtutech CRAFF					
3340	EBCDIC Text File (UTF-8)	TXT, TEXT		Y		
3341	Text File (UTF-7)	TXT, TEXT		Y		
3342	Text File (Unicode SCSU)	TXT, TEXT		Y		
3343	Xerox InterPress Typesetting Data					
3344	Texas Instruments Calculator Flash Upgrade	92I				
3345	Texas Instruments Calculator Emulator Skin					
3346	Tgif Drawing	TGIF				
3347	RISC OS Chunk File Format Data					

3348	RISC OS Object	AOF				
3349	RISC OS Library	ALF				
3350	RISC OS Executable	AIF				
3351	RISC OS Font					
3352	RISC OS Music					
3353	RISC OS Digital Symphony Sound Sample					
3354	RISC OS Digital Symphony Song					
3355	RISC OS Digital Symphony Sequence					
3356	Glulx Game Data	ULX				
3357	Glulx Game Data (MacBinary)	ULX				
3358	Mugician Module Music					
3359	Sidmon 2.0 Module Music					
3360	Synthesis Module Music					
3361	Holy Noise Module Music					

3362	Hippel-COSO Module Music					
3363	ECX Module Music					
3364	CMP Archive	CMP				
3365	ELI 5750 Compressed Archive	ELI				
3366	PRO-PACK Archive					
3367	HPA Archive	HPA				
3368	FIZ Archive	FIZ				
3369	DitPack Archive					
3370	VSARC Archive					
3371	PDZ Archive					
3372	UHBC Archive					
3373	WWPack Archive	WWP				
3374	PAQ Archive	PAQ				
3375	RISC OS Squish Archive					

3376	OpenDocument Database				
3377	PMarc SFX Archive	PMA			
3378	PopCom SFX Archive				
3379	Parity Archive Reconstruction File	PAR			
3380	Pack Magic Archive				
3381	ZET Compressed Archive	ZET			
3382	XPack Single Archive				
3383	AT&T 3B2 Computer Core				
3384	SGI SoundTrack Project				
3385	Impulse Tracker Sample				
3386	Impulse Tracker Instrument	ITI			
3387	OctaMED Compressed Tracker Module	MED, MMD			
3388	Symphonie SymMOD Tracker Module				

338 9	Digibooster Pro Tracker Module					
339 0	Dynamic Studio Module					
339 1	XMS Adlib Module	XMS				
339 2	Open Cubic Player Module Inforation	MDZ				
339 3	Sharp Cell Phone Ringing Melody					
339 4	Synthesizer Generator / Kimwitu Music					
339 5	Kimwitu++ Music					
339 6	RdosPlay Raw Audio					
339 7	EdLib Module	JCH				
339 8	MPU-401 Trakker Module					
339 9	eXotic Adlib Module					
340 0	eXtra Simple Music Module					
340 1	Winamp Equilizer Library	EQF				
340 2	Atari ST SNDH Music					

3403	Atari ST sc68 Music					
3404	Apple Filing Protocol Data Fork					
3405	Apple Serialized Typed Stream Data (Motorola)					
3406	Apple Serialized Typed Stream Data (Intel)					
3407	Interface Builder User Interface Resource (binary)	NIB				
3408	Interface Builder User Interface Resource (XML)	XIB, NIB				
3409	Interface Builder Help Index (binary)	HELPINDEX				
3410	Apple Property List	PLIST				
3411	MS Windows Language Resource	DAT				
3412	MS Windows Resource Cache	DIR, CMF, MNI, TOC, HIT				
3413	Pretty Good Privacy Private					

	Key Block (ASCII)					
3414	BBx Index					
3415	BBx Serial File					
3416	BBx Keyed File					
3417	BBx Program					
3418	Intergraph Scanned Image	CIT				
3419	Java Pack200 Archive	JAR				Y
3420	Claris Works Pallete	PLT				
3421	Claris Works Dictionary	MSP				
3422	Lzip Compressed Archive	LZ				
3423	Diamond Multimedia Document					
3424	FATX File System Image					
3425	GEOS Program					
3426	Hercules CKD DASD Image					

3427	Hercules Compressed CKD DASD Image					
3428	Hercules CKD DASD shadow Image					
3429	Adobe PhotoShop Custom Shape	CSH				
3430	PathAway Map	PRC				
3431	VIZ dVS Model/Object	VIZ				
3432	VTX dVS Texture	VTX				
3433	DAX Compressed CD Image	DAX				
3434	Isearch Database Information	DBI				
3435	DB/TextWorks Database	DBR				
3436	DB/TextWorks Database Directory	DBO				
3437	DB/TextWorks Database Textbase Structure	DBS				
3438	D-Lib Generic Bytecode	DCF				

3439	Draft Choice for Windows Drawing	DCW				
3440	AccWare Data Dictionary	DD				
3441	Design Conditions Design Day Data	DDY				
3442	iGO Digital Elevation Map	DEM				
3443	GRAFIT Layout	DES				
3444	KDE/GNOME Desktop Entry	DESKTOP				
3445	Dalvik Dex Exacutable/Class	DEX				
3446	DERIVE Math Package for Windows	DFW				
3447	PhoneTools Internal Graphic Image	DGR				
3448	Macromedia Director Video Java Resource	DJR				
3449	DMesh 3D Model	DMZ				
3450	NeatImage Profile	DNP				
3451	Stardock Archive	DOCZIP				

3452	Nintendo DS nDs-mPeG Video	DPG				
3453	DreamScene Dream Animated Wallpaper	DREAM				
3454	MacDraw Drawing	DRW				
3455	Pro/ENGINEER Drawing	DRW				
3456	WhatsUp Gold Virtual Device	DSE				
3457	ISIS Schematic Capture Schematic	DSN				
3458	MS OLE Database Provider for ODBC	DSN				
3459	Daisy Container	DSY				
3460	Mac OS X Folder Information	DS_STORE				
3461	GraphicWorks Vector Drawing	DVG				
3462	DVR-Studio Stream	DVR				
3463	Project Dogwaffle Animation	DWA				
3464	CIRCAD Drawing	DWG				

3465	Dzip Compressed Archive	DZ				
3466	ArcInfo Coverage Export	E00				
3467	Electronic Book Exchange eBook	EBX				
3468	eDonkey Download Link	ED2K				
3469	EstImage Database	EDB				
3470	Digital Trainer Encrypted Score	EDF				
3471	eMemoPad Data	EDF				
3472	EDGE Diagrammer Diagram	EDG				
3473	EDIF Netlist	EDN				
3474	eGatherer Collected System Configuration Information	EG2				
3475	egis Encrypted Data	EGISENC				
3476	Egon Animator Animation	EGON				
3477	Easy Grade Pro Data	EGP				
3478	EasyLanguage Document	ELD				

3479	Pocket Tanks Emitter	EMI				
3480	eMachineShop CAD Design Drawing	EMS				
3481	eMelody Ringtone	EMY				
3482	Evernote Database	ENB				
3483	TopStudio Encrypted Data	ENCRYPTED				
3484	EndNote Style	ENS				
3485	ExamView On-line Test	EOT				
3486	EasyPlot Saved Data	EP, EPW, EZP				
3487	Entrust Entelligence Profile	EPF				
3488	Earth Resource Mapping Satellite Image Header	ERS				
3489	Ekahau Site Survey Binary Container	ESS				
3490	EmEditor Syntax	ESY				
3491	Google Earth Keyhole Overlay	ETA				

3492	Google Earth Keyhole Placemark	ETA				
3493	EasyWorship Bible Text	EWB				
3494	Electronics Workbench Group Project	EWPRJ				
3495	Caxa CAD Drawing	EXB				
3496	MS Encarta Encyclopedia Yearbook and Web Links Update	EYB				
3497	EZGUI Designer Control Definition	EZC				
3498	HEC-RAS Flow Data	F01, Fnn				
3499	MotoRacer 3 Bike Model	F3D				
3500	Facet Data	FACET				
3501	FictionBook eBook 2.0	FB2				
3502	iGO Map	FBL				
3503	Autodesk 3D Data Exchange Image	FBX				

	(Text)					
3504	FastCAD Version 7 Drawing	FC7, FCW				
3505	Omnis Web Client Form Cache	FCA				
3506	FidoCAD Drawing	FCD				
3507	FidoCAD Library	FCL				
3508	FidoCAD Macro	FCM				
3509	FlexiDATA Database	FDD				
3510	Disk2FDI Floppy Disk Image	FDI				
3511	Floppy Disk Manager Disk Image	FDM				
3512	Nintendo Famicom (NES) Disk System	FDS				
3513	FORMIK Form Data	FED				
3514	MS Outlook Express Custom Property Stream (NTFS ADS)					
3515	Adobe PostScript Compact Font (MacBinary)	OTF, TTF				

3516	Adobe PostScript Compact Font Collection (MacBinary)	TTC				
3517	QuickDraw Font Resource (MacBinary)					
3518	QuickDraw Associated Font Resource (MacBinary)					
3519	Apple Property List (MacBinary)	PLIST				
3520	Mac OS Icon (MacBinary)					
3521	Mac OS Menu (MacBinary)					
3522	Mac OS Dialog Layout (MacBinary)					
3523	VISX image (ASCII)					
3524	VMS VAX Executable					
3525	Windows CD-ROM Autorun	INF				
3526	Google Earth Compressed Keyhole Markup Language	KMZ				
3527	VxWorks EST Flat Binary Image					

352 8	AFS Volume Dump Image					
352 9	B-tree File System Image					
353 0	Dvdisaster Error Correction Data	ECC				
353 1	SE Linux Policy Database					
353 2	Linux Logical Volume Manager 1	LVM1				
353 3	Linux Logical Volume Manager 2	LVM2				
353 4	Linux Logical Volume Manager Snapshot					
353 5	Xen Saved Domain					
353 6	Lisp/Scheme Program Code					
353 7	Emacs/XEmacs Byte-Compiled Lisp	ELC				
353 8	TeXmacs Document					
353 9	Samba Trivial Database	TDB				
354 0	PostgreSQL Custom Database					

	Dump					
354 1	XZ Compressed Archive	XZ				
354 2	MS Chat Background	BGB				
354 3	HP LaserJet Font	HPF				
354 4	ZoneAlarm Mailsafe Log	LDB, RDB				
354 5	Commodore Compressed Archive	CKIT				
354 6	MPEG Audio Datafile	M3D				
354 7	ObjectScript	OBS				
354 8	MyLittleBase Database	MLB				
354 9	ABC Flowcharter	ABC				
355 0	Clarion Application	APP				
355 1	TValue Data	TV4				
355 2	Brooktrout Fax Image	BRK				
355 3	ArcInfo Binary Image	HDR				

3554	Ricoh Digital Camera Image	J6I				
3555	MosASCII Graphics Library	MGL				
3556	MosASCII Project Workspace	MPF, MPW				
3557	NCR G4 Image	NCR				
3558	Nokia Group Graphics Image	NGG				
3559	Pick Ax Secure Graphic Image	PAX				
3560	Seamless Image Graphic	SID				
3561	Storm 3D Object Definition	SOD				
3562	MS Internet Explorer Cache Index	DAT				
3563	Netscape Email Message	EML	Y	Y		
3564	Ghost Disk Image	GHO				
3565	Commodore 64 Emulator Cartridge Image	CRT				
3566	Adobe Filmstrip	FILMSTRIP				
3567	MS Windows Task Scheduler Task	JOB				

3568	Origin Project	OPJ				
3569	Multisim Design	MS8, MS9, MS10				
3570	TuneUp Style Boot Screen	TBS				
3571	YanCEyWare Reader eBook	YBK				
3572	LyX Document	LYX				
3573	Open Publication Structure eBook	EPUB				
3574	MathRevolt Plot	MRP				
3575	sPlan Circuit Diagram					
3576	Audible Audio Book	AA				
3577	Mobipocket eBook Auxiliary Data	MBP				
3578	Windows Migration Backup	MIG				
3579	LimeWire Theme	LWTP				
3580	Valve Texture	VTF				
3581	Visual Pinball Table	VPT				

3582	OpenSceneGraph Native Binary Image					
3583	Rave Reports Project	RAV				
3584	Android OS Boot Image	IMG				
3585	Visual Thought Diagram	VTHOUGHT				
3586	WinFax Received Document	FXR				
3587	OverDrive Media Console Media Control	ODM				
3588	Lexmark Enhanced MetaFile	LEMF				
3589	Error Code Modeler PreProcessed CD Image	ECM				
3590	IMA4 Encoded Audio	IMA4				
3591	Corel Flow Image	BMF				
3592	Navitel Navigator Map	NM2, NTM				
3593	OGG Vorbis Compressed	OGM, OGV				

	Video (MacBinary)					
3594	GameCube 3D Model	BDL				
3595	GameCube THP Video	THP				
3596	RARC Compressed Archive	ARC				
3597	PhotoLine Browse Index	PLB				
3598	SpacEyes 3D Viewer Project	SPV				
3599	ImageDisk Disk Image	IMD				
3600	ZPAQ Compressed Archive	ZPAQ				
3601	MyPhoneExplorer Backup	MPB				
3602	EXP: The Scientific Word Processor Document	WXP				
3603	HiJaak PCL Soft Font	TPF				
3604	Scratch Finished Product	SB				
3605	SNNS Pattern Definition	PAT				
3606	Project Dogwaffle Layered Bitmap	LYR				

3607	CATIA ISO-10303 STEP Product Data	STEP, STP				
3608	ClickyMouse Macro	4CM				
3609	Perfect Keyboard Macro	4PK				
3610	Photosmart Photo Printing Album	ALBM				
3611	Solid Edge Assembly Document	ASM				
3612	Microsoft At Work Fax Document	AWD				
3613	Ability Office Spreadsheet (OLE)	AWS				
3614	AutoRoute Export	AXE				
3615	Print Master Document	BIZ				
3616	Ventura Publisher Chapter	CHP				
3617	CADKEY Workshop Design	CKD				
3618	KeyCreator Design	CKD				
3619	Corel Photo House Image	CPS				

3620	Gravity News Database	G				
3621	Pro/DESKTOP Design	DES				
3622	Solid Edge Draft Document	DFT				
3623	Street Atlas Transfer File	DMT				
3624	AutoCAD VBA Macro	DVB				
3625	Ulead DVD MovieFactory Project	DWZ				
3626	thinkdesign CAD Drawing	E3				
3627	Orchida Embroidery System Pattern	EMB				
3628	MS Streets and Trips / MapPoint Map	EST, PTM				
3629	FormFlow Form	FRL, FRP, FRZ				
3630	Greeting Card Factory Card	FSN				
3631	Greeting Card Creator Project	GCF				
3632	GroupWise File Link	GWI				

3633	Hallmark Card Studio Card	HMK				
3634	HP Document	HPD				
3635	I3 Fax Image	I3F				
3636	Imaging for Windows Image Bookmark	IBK				
3637	AutoDesk Inventor Drawing/Part	IDW, IPT				
3638	Intergraph SmartSketch Drawing	IGR				
3639	Impromptu Report	IMR				
3640	Information Magic Data	IMR				
3641	InPage Document	INP				
3642	MS Encrypted Structured Storage Object		Y	Y		
3643	SigmaPlot Notebook	JNB				
3644	Ichitaro Document (OLE)	JTD		Y*		
3645	3D Studio Max Material Library	MAT				

3646	Creative Writer Document	MAX				
3647	3D Studio Max Scene	MAX				
3648	Minitab Project	MPJ				
3649	muvee autoProducer Project	MVE				
3650	ArcMap GIS Project	MXD				
3651	Art Explosion Publisher Pro Document	NPP				
3652	OmniPage Document	OPD				
3653	Solid Edge 3D CAD Model	PAR				
3654	PCB Document	PCBDOC				
3655	Solid Edge Packaged Collaboration	PCF				
3656	Harvard Graphics Presentation (OLE)	PR4				
3657	Unigraphics Part	PRT				
3658	PowerSoft Report	PSR				

3659	PowerSoft Report (OLE)	PSR				
3660	Quexal Source Code	QX				
3661	Business Objects Report	REP				
3662	AlbumPlus Album	SAP				
3663	SAP Music	SAP				
3664	SAP Thomson Disk Image	SAP				
3665	Artista Design	ART				
3666	StormFront Skin	SKN				
3667	SnagIt Capture Image	SNAG				
3668	SolidWorks 2001 Assembly	SLDASM				
3669	SolidWorks 2001 Part	SLDPRT				
3670	PROMT Document	STD				
3671	Ventura Publisher Style Sheet (OLE)	STY				
3672	Photo Express Template	TPX				
3673	Kingsoft Workbook	WLS				

3674	Kingsoft Document	WPS				
3675	Kingsoft Document (OLE)	WPS				
3676	ZipForm Data	ZFX				
3677	SQLite Database					
3678	Safari Web Bookmark	WEBBOOKMARK				
3679	MS Windows Crash Dump	KDMP				
3680	MS Windows Mobile Settings	PROVXML				
3681	Apple Workflow	WFLOW				
3682	Grapher Image	GCX				
3683	GarageBand Audio Filter Presets	PST				
3684	EXS-24 Instrument	EXS				
3685	GarageBand Custom Style Track Settings	CST				
3686	Mac OS X Program (32bit Intel)	KEXT				
3687	Mac OS X Package Bill of Materials	BOM				

3688	Ruby Script	RB				
3689	AutoDesk Animator Pro Tween Data	TWE				
3690	Master Tracker Module Music	MTS				
3691	Norton Guides	NG				
3692	AutoDesk Animator Pro Cel Image	PIC, MSK				
3693	SGI XFS File System Metadump Image					
3694	Sun xVM VirtualBox Disk Image	VDI				
3695	Cytovision Metaphases Data					
3696	Cytovision Karyotype Data					
3697	Cytovision FISH Probe Data					
3698	Cytovision FLEX Data					
3699	Cytovision RATS Data					
3700	Freehand 7 Document	FH7				

3701	Red Hat Package Manager Archive Delta	RPM				
3702	DVD Video Title Set	BUP, IFO				
3703	QuickBooks for Windows Import Map	FIM				
3704	QuickBooks for Windows Form Part	FP6				
3705	QuickBooks for Windows Company Profile	MPR				
3706	QuickBooks for Windows Object Information (XML)	QBOT				
3707	QuickBooks for Windows Object Information (Binary)	QBOT				
3708	QuickBooks for Windows Message Database	QMD				
3709	MS ODBC Driver Configuration	RSP				
3710	MS FoxPro Database Container	DCT				

3711	MS FoxPro Table Memo	FPT, DCT				
3712	Text File With Formatting Codes	TXT, TEXT		Y		
3713	Flight Recorder Data	TEXT				
3714	Radiance 3D Scene Octree					
3715	Mac Draw Image	ZZZ				
3716	ArcView DOQ Image	DOQ, MET				
3717	NOAA-PMEL BBIS Data	TXT, TEXT				
3718	PrimeOCR Output	PRO				
3719	Linux Patch					
3720	NASA Imaging Radar Data					
3721	Adobe Acrobat Distiller Log	LOG				
3722	SigmaPlot Exchange File	JXF				
3723	Erdas Image (HFA)	HFA				
3724	MetaMap Technology Transfer					

3725	National Weather Service Forecast	TXT, TEXT				
3726	Princeton Transport Run Log	LOG				
3727	Geological Survey Metadata	TXT, TEXT				
3728	FIFA World Cup Art	FFN				
3729	Guild Wars Data	FFNA				
3730	FFR Archive	FFR				
3731	Freehand 10 Document	FH10				
3732	Freehand 3 Drawing	FH3				
3733	Free Hide Folder	FHF				
3734	DeskMate Draw Image	FIG				
3735	DeskMate Filer Database	FIL				
3736	Figlet Font Control	FLC				
3737	Cumulate Draw Image	FMD				
3738	Fractal Mapper Map					

3739	Famtasia Movie Capture	FMV				
3740	Vue Function Definition	FNC				
3741	M.U.G.E.N Font	FNT				
3742	Yountel Unicode Font	FNT				
3743	Fallout 3 Saved Game	FOS				
3744	FloorPlan 3D	FP3				
3745	IKEA Kitchen Planner Document	FPF				
3746	PerFORM Database	FRF, FRP				
3747	PerFORM Communicator File Packet	FPK				
3748	PerFORM PRO Form	FRL				
3749	Sound Forge Project	FRG				
3750	EA Sports Game Graphic Editor Image	FSH				
3751	GURU Data	FUS				

3752	Kodak Camera Firmware	FW				
3753	HALion Sound Sample	FXB				
3754	Fuxoft AY Music Chip Language	FXM				
3755	Peachtree Accounting Form	AFM				
3756	Peachtree Accounting Data	DAT, DDF				
3757	Sybase Compressed Data					
3758	Macromedia Director Cast	CST				
3759	MS Forms Command Button	TCS				
3760	HEC-RAS Data	G01, Gnn				
3761	Klik'n'Play Game Data	GAM				
3762	GenBank Sequence Record	GB				
3763	Nintendo Gameboy Music	GBS				
3764	Cyberboard Gamebox Data	GBX				
3765	Genbox Family History	GCO				
3766	MS Math Worksheet	GCW				

3767	Genbox Family History Dictionary	GDT				
3768	Arts & Letters Graphic Image	GED				
3769	GGFileSPlit File Fragment	GFS				
3770	Playstation Theme	GIM, P3T				
3771	Game Maker 6 Project	GM6				
3772	GPS Tuner Map Calibration Data	GMI				
3773	GUEmap Document	GMP				
3774	Cyberboard Move	GMV				
3775	General Mesh Viewer Image	GMV				
3776	Garmin Point of Interest Database	GPI				
3777	GPS eXchange Data	GPX				
3778	Genbox Family History Report Options	GRO				
3779	Golden Software Boundary Data	GSB				

3780	GPS Tuner Map Slices Calibration Data	GSI				
3781	Cyberboard Scenario	GSN				
3782	Geometer's Sketchpad Document	GSP				
3783	Geometer's Sketchpad Script	GSS				
3784	ShapeShifter Theme	GUIKIT				
3785	GoodWay Flight Planner Flight Plan	GWP				
3786	H.264/MPEG-4 AVC Video	H264				
3787	HDF5 Archive	H5				
3788	HydroCAD Stormwater Modeling System Storage Chamber Definition	HCC				
3789	HCLab Chart	HCG				
3790	HydroCAD Stormwater Modeling System Project	HCP				

3791	Hudson Entertainment Sound	HES				
3792	Pinnacle Studio HollywoodFX Plug-In Video Editing Data	HFZ				
3793	HiP Compressed Archive	HIP				
3794	Help Magician Help Text	HLX				
3795	Help Magician Project	HMP				
3796	DeskMate Homeword Document	HMW				
3797	Hallo Northern Sky Deep Sky Database	HND				
3798	Ventura Graphic Image	VGR				
3799	Corel Chart	CCT				
3800	Adobe Installation Archive	??_				
3801	NoteCenter Encrypted Notes	HNE				
3802	Ascendancy/Flight Unlimited Sound Driver	DIG				

3803	Flight Unlimited Compiled Resource	RES				
3804	HelpScribble Project	HSC				
3805	People Putty Haptek Character	HTR, HAPTAR				
3806	HydroCAD Stormwater Modeling System Unit Hydrograph	HUH				
3807	The Hive Level Data	L95				
3808	Art Icons Pro Icon Collection	ICC				
3809	Direct3D Audio Driver	CSP				
3810	Neosat Fixes	HZF				
3811	IsoBuster CD/DVD Image	IBP				
3812	Direct3D Image Template	TLE				
3813	MS Developer Studio Project (Binary)	MDP, VCP				
3814	Art Icons Pro Icon Project	ICPR				

3815	MS Windows Performance Monitor Workspace	PMW				
3816	HP Printer Font Metrics	PFM				
3817	Idle Scripting Language Object Library Bytecode	IDOL				
3818	VobSub Filter Index	IDX				
3819	IESNA Photometric Data	IES				
3820	MS Golf Map Object	LMP				
3821	FrameMaker Graphic Image	FMV				
3822	Word Pro Graphic / AMI Draw Vector Image	SDW				
3823	AutoShade Rendering / Slide	RND				
3824	dBXL Database	DBXL				
3825	DEC WPS Plus Document	DX, DX3, WPL				
3826	IBM Graphics Data Format Image	GDF				
3827	IBM Picture Interchange	GDF				

	Format Image					
3828	JustWrite Document	JW				
3829	Lotus Snapshot	SNP				
3830	Mosaic Twin Spreadsheet	WKU, WKT				
3831	PFS: First Choice Spreadsheet / PFS:Professional Plan	FCS, SS				
3832	R:Base Database	RBF				
3833	Total Word Document	TW				
3834	Volkswriter Document	VWL, VW3, VW4				
3835	Wang PC Document	IWP				
3836	WordMARC Plus Document	WMC, DOC				
3837	Ziff Davis Bench Zip Archive	ZIP				
3838	particleIllusion 3 Emitter Library	IL3				
3839	Opus Creator Multimedia File	ILM				
3840	Interlex Vocabulary	ILX				

384 1	IncrediMail Address Book and Temporary Contacts	IMB				
384 2	Img3 Encrypted/Signed Container	IMG3				
384 3	iMovie Project (Binary)	IMOVIEPROJ				
384 4	Softbook eBook Import File	IMP				
384 5	CFAST Input File	IN				
384 6	WinAHX THX Tracker Instrument					
384 7	DS Packed Images	IPK				
384 8	MySQL ISAM Table Handler Data	ISM				
384 9	SimulationX Encrypted Model	ISM				
385 0	UltraISO Disc Image	ISZ				
385 1	iTunes Cover Flow Data	ITC				
385 2	Icy Tower Replay	ITR				
385 3	Information Workshop Data	IW2, IWS				

3854	DB/TextWorks Database Index	IXL				
3855	JobEditor32 Job Data (ASCII)	JBI				
3856	JWPce Document	JCE				
3857	Embedded JCL Debug Information	JDBG				
3858	BigJig Jigsaw Puzzle	JG6				
3859	16 Bit Adaptive RLE Compressed Bitmap	JMG				
3860	FlowJo MAC workspace	JO				
3861	Tripod Data Systems Job	JOB				
3862	FishSim Add-on	JR2				
3863	JavaScript Bean	JSB				
3864	Binary ExtendScript Script	JSXBIN				
3865	Jw_cad Data	JWC				
3866	LegaSuite GUI J Walk Runtime	JWR				

386 7	Hondata K-Manager Calibration data	KAL				
386 8	Katorzer Music Composition	KAT				
386 9	KChess Notation	KCH				
387 0	KeePass Password Database	KDB				
387 1	Chinese Academic Journal Document	KDH				
387 2	Google Earth Import Definition	KDX				
387 3	Avira Product Key	KEY				
387 4	KaraFun Karaoke Song	KFN				
387 5	Kidspiration Document	KID				
387 6	Knowledge Interchange File Format Image	KIF				
387 7	Microsoft Baseline Security Analyzer Report	MBSA				
387 8	BRSTM Audio Stream	KRAW				
387 9	Korg Trinity/Triton	KSC				

	Script					
3880	Karaoke Song List Creator Song List	KSL				
3881	KeyWallet Object					
3882	Lineage II Replay	L2R				
3883	Lingoes Dictionary	LD2				
3884	Liquid Executable Bytecode	LDX				
3885	LucasFilm Data Archive	LFD				
3886	The Movies Editor Text String Database	LHTS				
3887	CIRCAD Source Library	LIB				
3888	OrCAD Library Model	LIB				
3889	ESET NOD32 Antivirus License	LIC				
3890	Lextek Language Identification Module	LID				
3891	Quake Colored Light Data	LIT				
3892	Pioneer OEL Screensaver	LKD				

3893	Linden Lab Structured Data	LLSD				
3894	RPG Maker 2000/2003 Map	LMU				
3895	HijackThis Log	LOG				
3896	LaTeX Drawing	LP				
3897	Lecturnity Multimedia Audio/Video/Clips Presentation Document	LPD				
3898	LRC Lyric	LRC				
3899	BroadBand eBook	LRF				
3900	Lexar Encrypted Data	LRS				
3901	LOGO!Soft Comfort Circuit	LSC				
3902	ABBYY Lingvo Non-changaeble System Dictionary	LSD				
3903	Kaspersky Lab Black List File	LST				
3904	Frogans Short-cut	LTF				

3905	LabVIEW Measurement	LVM				
3906	Livewire Document	LVW				
3907	Printed Circuit Board Layout	LYT				
3908	Need For Speed Game Data	LZC				
3909	MicroStation CAD Modification Resource	M01				
3910	thinEdge Model	M15				
3911	Mobile 3D Graphic	M3G				
3912	Mupen64 Movie Capture	M64				
3913	Maya ASCII Scene	MA				
3914	Winamp3 Compiled Script	MAKI				
3915	NAVIGON Map	MAP				
3916	Nascar SimRacing Data	MAS				
3917	MATLAB Variables Binary Data	MAT				
3918	Multimedia Builder Data	MBD				

3919	MBasic Source Code	MBI				
3920	Apple][Document					
3921	Apple][Music	SNG, TUNE, SONG				
3922	Apple Filing Protocol Resource Fork					
3923	Apple IIgs HyperCard Stack					
3924	Apple Sound	SND, HCO				
3925	NoiseTracker Music	MOD, SONG				
3926	StuffIt Apple][Archive	SIT				
3927	Brooks 3200 Slide Show	3200, SML				
3928	Apple][Program Overlay	OVL, RUN				
3929	Apple][Floppy Disk Image	IMAGE				
3930	Apple Picture Format Image	APF				
3931	Apple][Program					
3932	SynthLAB Instrument	WAV				

3933	HyperStudio Sound Sample					
3934	PolySons Wave Sound	PSOD, PSO				
3935	SynthLAB MIDI Sequence	SEQ, SL, BK1				
3936	SynthLAB Instrument Bank	BNK				
3937	Apple IIgs System Configuration	SYSTEM				
3938	Apple IIgs Wave Bank	WBNK				
3939	Arc 3D Shape	3D				
3940	Sound Smith Sound					
3941	Music Construction Set Instrument					
3942	Music Construction Set Song					
3943	EnCase Packed EnScript	ENPACK				
3944	Adobe Acrobat Forms Data Format (XML)	XFDF				
3945	Magic eXtensible Markup Language	MXML				

3946	DeskMate Song	SNG				
3947	DeskMate Paint Image	PNT				
3948	DeskMate Sound	SND				
3949	IBM BookManager Bookshelf Book	BOO				
3950	3D Studio Loft Image	LFT				
3951	Agenda Database	AGB				
3952	Cricket Graph Font	FNT				
3953	Drum Blaster Title/Song	DTL				
3954	CMS Music Rudiments Image	PIC				
3955	CMS Music Rudiments Music	CMS				
3956	CMS Music Rudiments Lesson					
3957	Animation Studio Sound Effects	SEC				
3958	Borland Graphics Font	CHR				
3959	Mac OS X Program (64bit Intel)					
3960	Mac OS X Dynamic Library (32bit	DYLIB, KEXT				

	Intel)					
3961	Mac OS X Dynamic Library (64bit Intel)	DYLIB, KEXT				
3962	Mac OS X Program (PowerPC 32bit)					
3963	Mac OS X Dynamic Library (PowerPC 32-bit)	DYLIB, KEXT				
3964	MS Visio Shape Stream	VSH				
3965	WordPerfect Document (OLE)	DOC				
3966	Concatenate (CAT) Interchange File Format	IFF, FTXT, FTX, RBS				
3967	LIST Interchange File Format	IFF, FTXT, FTX				
3968	PROP Interchange File Format					
3969	Resource Interchange File Format (Motorola)	RIFX, RIF, AVI, WAV, BND, RIFF				
3970	Macromedia Director File (Intel)	DCR				
3971	Deluxe Paint Image	LBM, IFF, ILM, BBM, ILBM, BLK				

3972	Graficraft Image	LBM, IFF, ILM, BBM, ILBM, BLK				
3973	Mastercam Geometry	MC9				
3974	MMS Composer Song	MCF				
3975	Mastercook Cookbook File	MCF				
3976	CodeWarrior Project	MCP				
3977	MacDraft Drawing	MDD				
3978	MagicDraw UML Project	MDR				
3979	MultiEdit Configuration	ME, MEW				
3980	Open eBook	MEB				
3981	MAIET Encrypted File System	MEF				
3982	Macro Express Macro	MEX				
3983	Netscape XUL FastLoad Script	MFL				
3984	MalieGF Bitmap	MGF				
3985	MusicIndiaOnline Trident Player Music	MIA				

3986	Mighty Draw Drawing	MIG				
3987	Mio Technology Generic Communications Format	MIO				
3988	PhotoDraw Multilayer Picture	MIX				
3989	MJP Video	MJP				
3990	FreeMind Mind Map	MM				
3991	Hyper File Memo	MMO				
3992	Monarch Model	MOD				
3993	LEGO CAD Model	MODEL				
3994	PlantWALK Model	MODEL				
3995	WinMount Archive	MOU				
3996	MapDraw Chemical Sequence Map	MPD				
3997	Video Edit Magic Project	MPJ				
3998	AVCHD Playlist	MPL				

3999	Blu-ray Movie Playlist	MPLS				
4000	Moove Resource Description	MPZ				
4001	CSI Markup Drawing	MRK				
4002	Canon BJ Driver Database Table	TBL				
4003	PowerShell Script	PS1				
4004	ASP.NET Browser Definition	BROWSER				
4005	MS Build Targets	TARGETS				
4006	MS Help 2 VTopic Set (XML)	H1V				
4007	MS Windows Group Policy Settings	ADMX				
4008	Windows Update Package	MUM				
4009	Windows ELS Transliteration Index	NLT				
4010	Windows Update Status	GRL				
4011	Windows Word Dictionary	WWD				
4012	Windows Driver Public	VP				

	Verification Key(s)					
4013	Global Input Method Editor Dictionary	IMD				
4014	MS Office 2007-2012 Theme Effects (Open XML)	THMX, EFTX				
4015	Random or Encrypted Data (Headerless)					
4016	Compressed Data (Headerless)					
4017	SolidWorks eDrawings Assembly (Compressed)	EASM				
4018	Ability 1.0 Word Processing Document					
4019	Ability 1.0 Spreadsheet					
4020	Ability 1.0 Graphics Image					
4021	Ability 1.0 Database					
4022	Ability 1.0 Database Master Form					

4023	Ability 1.0 Communications Data					
4024	IBM Plans+ Spreadsheet Model Definition	~MD				
4025	Super Project Plus					
4026	Jazz Worksheet					
4027	Jazz Worksheet (MacBinary)					
4028	Jazz Database (MacBinary)					
4029	Jazz Form (MacBinary)					
4030	Jazz Wordprocessor Document (MacBinary)					
4031	Jazz Graphics Image (MacBinary)					
4032	Jazz Communications Terminal Data (MacBinary)					
4033	Windows DVD Maker	MSDVD				
4034	Digital Sheet Music (Intel)	MTD				

4035	TargetExpress Target	MTE				
4036	Mediatek Font	MTF				
4037	Minitab Portable Worksheet	MTP				
4038	Power Translator Document	MTP				
4039	Viewpoint Media Player iPix Image	MTX				
4040	Harmony Assistant Melody	MYR				
4041	Mighty Draw Windows Library	MWL				
4042	Neko Bytecode	N				
4043	Novell Groupwise Address Book	NAB				
4044	NVIDIA Scene Graphic Image	NBF				
4045	Nokia PC Suite Content Copier Image	NCC				
4046	ESET Smart Security Quarantined File	NDF				
4047	SeeYou Waypoint	NDB				
4048	Stuttgart Neural Network	NET				

	Simulator Definition					
4049	Gambit Control Information	NEU				
4050	Folio Infobase Document	NFO				
4051	NMEA GPS Log	NMEA, NMA				
4052	MikroTik RouterOS Upgrade Package	NPK				
4053	Xilinx Integrated Software Environment Project					
4054	Nero CD Audio Compilation	NRA				
4055	Lode Data Network File	NTW				
4056	NUnit Test Project	NUNIT				
4057	NUT Open Container	NUT				
4058	NVIDIA Scene	NVB				
4059	Navisworks Document	NWD				
4060	Mybase Database	NYF				
4061	NanoZip Compressed Archive	NZ				

4062	Adobe Portable Document Format (PDF/A-1a)	PDF	Y	Y	Y	
4063	Adobe Portable Document Format (PDF/A-1b)	PDF	Y	Y	Y	
4064	Adobe Portable Document Format (PDF/X)	PDF	Y	Y	Y	
4065	Adobe Portable Document Format (PDF/A)	PDF	Y	Y	Y	
4066	ORTIM Zeit Data	OB3				
4067	DB/TextWorks Database Terms and Words	OCC				
4068	openCanvas Image	OCI				
4069	Open Financial Connectivity File	OFC				
4070	Openlab Raw Format	OLRW, OLR				
4071	OMAX Make Tool Path Data	OMX				
4072	OtsAV Media Library Information	OMX				
4073	MS Office Upgarde Control	OPC				

	Data					
4074	Durango Interferometry Document	OPD				
4075	OmniPass Exported User	OPI				
4076	Origin Analysis Pack	OPK				
4077	PhotoScore Document	OPT				
4078	OpenStreetMap GPS Data	OSB				
4079	OptionScope Worksheet	OSC				
4080	Autopano Project	OTO				
4081	OnlineTvRecorder Encoded Video	OTRKEY				
4082	OziExplorer Map (Binary)	OZF2				
4083	PowerArchiver Encrypted Archive	PAE				
4084	Personal Ancestral Family Database	PAF				
4085	Paint Shop Pro Palette	PAL				
4086	Pando Package	PANDO				

4087	PowerBASIC Configuration	PB				
4088	Sprite Backup Mobile Device Image	PBF				
4089	Apple Project Builder Xcode Project	PBXPROJ				
4090	CADSTAR Printed Circuit Board Design	PCB				
4091	P-CAD Database	PCB				
4092	PipeDream Document	PD				
4093	Merriam-Webster's Pocket Dictionary	PDB				
4094	Pepakura Designer Paper Craft Pattern	PDO				
4095	Print Shop Graphic Image	PDS				
4096	Adobe Premiere Graphic Peak Waveform	PEK				
4097	Formatta Filler Portable Form	PFF				
4098	Opentech Digital STB Software	PGM				

4099	Brother Home Embroidery Image	PHC				
4100	iGO Phoneme GPS Data	PHR				
4101	Viking Embroidery Disk	PHV				
4102	PackJPG Compressed JPEG Image	PJG				
4103	Wiped Data (zeroes)					
4104	Hard Disk Image/MBR	IMG, DD				Y
4105	iWork Keynote Presentation	KEY		Y*		
4106	iWork Pages Document	PAGES		Y*		
4107	iWork Numbers Spreadsheet	NUMBERS		Y*		
4108	MS Windows Vista Event Message	MTA				
4109 5	HyperText Markup Language	HTML, HTM, HT?, HTTP, ASP?, MHT, HH?, XM		Y		
4110	Chief Architect Plan	PLAN				
4111	MS Messenger Plus! Backup Configuration	PLD				

4112	MS Messenger Plus! Encrypted Chat Log	PLE				
4113	PhotoLine Image Document	PLD				
4114	Panasonic SD Voice Editor File	PLM				
4115	MS Messenger Plus! Sound Pack	PLP				
4116	Crouzet Logic Software M3 project	PM3				
4117	Pixela Digital Picture	PME				
4118	Sony Playstation Portable Movie	PMF				
4119	Photomerge Composition	PMG				
4120	MS Windows Performance Monitor Log	PML				
4121	MikuMikuDance PolygonMovieMaker File	PMM				
4122	PhotoModeler Project	PMR				
4123	SPSS Portable Data (ASCII)	POR				
4124	Yahoo! Messenger Voice Mail	POST				

4125	PuTTY Private Key	PPK				
4126	Magical Security Encrypted File	PPENC				
4127	PowerProducer Project	PPP				
4128	ProShow Workspace / Slide Show	PPR, PSH				
4129	PingPlotter Script	PPX				
4130	Atheros Profile	PRF				
4131	Nord Modular G2 Performance Data	PRF2				
4132	SmartAssembly Project	{SA}PROJ				
4133	HSQLDB Configuration	PROPERTIES				
4134	Password Safe Database	PSAFE3				
4135	MS Windows Backup Password (XP/Vista)	PSW				
4136	PageWunder Document	PWF				
4137	PSU Designer 2 Project	PSU				

4138	PassMark PerformanceTest Data	PT				
4139	LiveNote Portable Transcript	PTF				
4140	ArtRage Project	PTG				
4141	Adobe Premiere Pro Title	PTL				
4142	PTgui Project	PTS				
4143	GoBe Productive Document	PVE				
4144	Design & Print Business Edition Document	PVN				
4145	Password Boss Database	PWB				
4146	Password Tracker Deluxe Tracking List	PWT				
4147	Pixie Paint Drawing	PXI				
4148	Pixelmatro Graphic Image	PXM				
4149	Python Bytecode	PYC				
4150	PlayReady Video	PYV				

4151	Poser Scene Document	PZ3				
4152	GraphPad Prism Project	PZF				
4153	MS Office Quick Access Toolbar Information	QAT				
4154	QuickBooks for Windows Backup	QBB				
4155	MS QuickBASIC Coordinates	QCF				
4156	Miliki Super Compressor Pro Archive	QCF				
4157	Statler Stitcher Design	QLI				
4158	Qpress Compressed Archive	QP03				
4159	Avira AntiVir Quarantined File	QUA				
4160	QlikView Document	QVW				
4161	Create A Quiz Exam	QZ				
4162	QuizPro Quiz	QZD, QZS, QZE				
4163	Fuji CCD-RAW Graphic Image	RAF				

4164	Resume Builder 4 Resume	RB4				
4165	Molfile Reaction Data	RD				
4166	R Saved Workspace	RDATA				
4167	Yaesu Radio Memory Image	RDF				
4168	Real-DRAW Image	RDW				
4169	Atari ST Guide Reference Links	REF				
4170	IDRISI Raster Image Reference	REF				
4171	REKO Cardset	REKO, RKP				
4172	Revolution MetaCard Stack (Text)	REV				
4173	Revolution MetaCard Stack (Binary)	REV				
4174	RoboForm SafeNote/Passcard Database	RFN, RFP, RFX				
4175	RoboForm Cache	RFO				
4176	MikroTik RouterOS Debug Dump	RIF				

4177	RemoteKeys Profile					
4178	RealMedia Secure Clip	RMX				
4179	SpaceCAD Rocket Design	ROC				
4180	RAR Password Cracker Project	RPC				
4181	ARMovie Video	RPL				
4182	MicroStation CAD Symbology Resources	RSC				
4183	Symbian Application Resource	RSC				
4184	FLEXIT Multishot Survey Raw Data	RSY				
4185	RandyTab Guitar Tablature	RTAB				
4186	RagTime Document	RTD				
4187	RTE Encoded File	RTE				
4188	Rune Map	RUN				
4189	Navitel Navigator Map	RUS				
4190	RWSD Audio Stream	RWSD				

4191	Mindstorms Robotics Invention System Executable	RXE				
4192	Resco Encrypted File	RXF				
4193	MDL Chemical reaction format	RXN				
4194	File Crypt Encrypted File	RZX				
4195	Java Script Source Code (Unicode)	JS, ASP, HTM, HTML, HTT, HTC, ASPX, ASCX		Y		
4196	Encrypting File System Stream (NTFS ADS)	???$EFS, DAT				
4197	Squeak Package	SAR				
4198	SAS Database	SAS7BDAT				
4199	SatHawk Data	SAT				
4200	Daemon Tools Pro Disk Image	SAV				
4201	Free Download Manager Data	SAV				
4202	SerialBox Serial Numbers Package	SB2				

4203	Small Business Publisher Document	SBPF				
4204	NOMAD MP3 Manager Voice Audio	SC4				
4205	ChemWindow Standard Chemistry Data	SCF				
4206	Tina Pro for Windows V6.0+ Package Schematics	SCH, TSC				
4207	Sinclair Disk Image	SCL				
4208	Movie Magic Screenwiter Document	SCW				
4209	SuperMap World GIS Database	SDB				
4210	ArcGIS Geospatial Data	SDC				
4211	System Deployment Image	SDI				
4212	DB/TextWorks Database Deferred Update Directory	SDO				

4213	CaptiveWorks Satellite Channel Database	SDX				
4214	Hitec Aurora 9 Model	SET				
4215	Playstation 3 Game Disc Description	SFB				
4216	MS Word 2007-2010 Document+Macros (Open XML)	DOCM	Y	Y		
4217	MS Word 2007-2010 Template (Open XML)	DOTX	Y		Y	
4218	MS Word 2007-2010 Template+Macros (Open XML)	DOTM	Y	Y		
4219	MS Excel 2007-2010 Spreadsheet+Macro (Open XML)	XLSM	Y		Y	
4220	MS Excel 2007-2010 Template (Open XML)	XLTX	Y	Y		
4221	MS Excel 2007-2010 Template+Macros (Open XML)	XLTM	Y		Y	

4222	MS PowerPoint 2007-2010 Presentation+Macros (Open XML)	PPTM	Y	Y		
4223	MS PowerPoint 2007-2010 Template (Open XML)	POTX	Y	Y		
4224	MS PowerPoint 2007-2010 Slides (Open XML)	PPSX	Y	Y		
4225	MS PowerPoint 2007-2010 Slides+Macros (Open XML)	PPSM	Y	Y		
4226	OneNote Note (XML)	ONE, XML, HTM, MHT		Y		
4227	7-Zip Self Extracting Archive	EXE				Y
4228	MagicQ Lighting & Video Show	SHW				
4229	Motorola RAZR Flash Image	SHX				
4230	ShipInBottle Compressed Archive	SIB, SHINBO				
4231	Sibelius Music Score	SIB				

4232	a-squared Anti-Malware Signatures	SIG				
4233	Panda Signatures	SIG				
4234	Symbian Series 3 Installer	SISX				
4235	SkinCrafter Skin	SKF				
4236	Motorola RAZR Phone Skin	SKI				
4237	Show.kit Template	SKS				
4238	Smart Install Maker Project	SMM				
4239	Spartan Molecule Model	SMOL				
4240	Sc2gears Mouse Print Data	SMPD				
4241	Super Nintendo Movie	SMV				
4242	Drive SnapShot Partial Disk Image	SN1, SNn				
4243	Drive SnapShot Disk Image	SNA				
4244	M.U.G.E.N. Sound	SND				
4245	Sniffer Capture	SNF				

4246	Korg Song	SNG				
4247	Snoop Capture	SNOOP				
4248	Quartus II SRAM Object	SOF				
4249	SignPlot Traffic Sign	SP				
4250	Spectral Data	SPA				
4251	Skype Extra Plug-in	SPARC				
4252	WinView CCD Camera Image	SPE				
4253	StruCAD 3D Model	SPF				
4254	Spider Solitaire Saved Game	SPIDERSOLITAIR				
4255	Spartan Spinput Job	SPINPUT				
4256	Site Publisher Project	SPJ				
4257	DiskStation DSM package	SPK				
4258	id Software Sprite	SPR				
4259	Live for Speed Single Player Replay	SPR				

4260	Sangduck Sprite	SPR				
4261	SharkPort Saved PS2 Games	SPS				
4262	Winamp Signal Processing Studio DSP-Effect	SPS				
4263	Squeeze Project	SQZ				
4264	FreeMotion Flash Movie	SQF				
4265	SR2 Compressed Archive	SR2				
4266	SuperREP Compressed Archive	SREP				
4267	Garmin Vechicle Images	SRF				
4268	ScreenSwift Screen Saver Project	SSP				
4269	SmartSniff Saved Packets	SSP				
4270	Sonic Scenarist SubTitles	SST				
4271	Fanuc Parameters	ST1H				
4272	Star 3 MIDI Karaoke Song	ST3				

4273	2D Fighter Maker Second Stage	STAGE				
4274	WI-Scan Log	STD				
4275	3D World Studio Material	STF				
4276	Infinity Game Engine Store	STO				
4277	PRO100 3D Interior Design Project	STO				
4278	SuperTux Saved Game	STSG				
4279	FTK Imager Image	AD1				
4280	Symantec LiveState Recovery Image	SV2I				
4281	StarView Metafile	SVM				
4282	Flash Video Debug	SWD				
4283	Settlers II Map	SWD				
4284	SWiSH Project	SWI				
4285	Swish-e Index	SWISH-E				
4286	Taverna Workbench	T2FLOW				

	Workflow Definition					
4287	thinBasic Console Script (Obfuscated)	TBASICCX				
4288	MS Visual Studio Symbol Cache	SYMCACHE				
4289	ZX Spectrum State Snapshot	SZX				
4290	DB/TextWorks Database Primary Textbase Definition	TBA				
4291	thinBasic GUI Script (Obfuscated)	TBASICX				
4292	DB/TextWorks Database Menu Screen	TBM				
4293	Psion Series 3 eBook	TCR				
4294	SlamDB Database	TDB				
4295	TinyDisk Meta File	TDF				
4296	TECkit Compiled Mapping	TEC				
4297	Black And White 2 Terrain Data	TER				

4298	Terragen Terrain	TERRAIN, TER				
4299	Croteam Texture	TEX				
4300	TEXinfo Source	TEXI, TEXTINFO				
4301	FormTool Gold Form	TFM				
4302	Terragen 2 World Data	TGD				
4303	MDL Molfile Transportable Graphic Image	TGF				
4304	Tree Generator 3D Tree	TGF				
4305	Terragen 2 World	TGW				
4306	Thor Compressed Archive	THR				
4307	AVCHD Thumbnail Index	TID				
4308	TI Interactive Workbook	TII				
4309	Infinity Game Engine Compressed Tileset	TIZ				
4310	Taijin Media Net Karaoke Song	TJN				

4311	Wintec Tools GPS log	TK1				
4312	tKC Cracking Tutorial	TKC				
4313	TimeLiner 5.0 Timeline	TL5				
4314	Aurora Engine Talk Table	TLK				
4315	AZZ Cardfile Database (RTF)	TMP				
4316	AZZ Cardfile Database (ASCII)	TMP				
4317	Nero Audio Peak	TMP				
4318	TI-Nspire OS Image	TNO, TNC				
4319	TI-Nspire CAS OS Image	TNC				
4320	TI-Nspire Document	TNS				
4321	TI-Nspire PublishView Document	TNSP				
4322	Toast CD Image	TOAST				
4323	Waltop Digital Ink-pad Graphic Image	TOP				
4324	TopSolid Project	TOPPRJ				

4325	TinkerPlots Document	TP				
4326	TexMod Package	TPF				
4327	Tochal Package	TPK				
4328	TR Assistant Dictionary	TRD				
4329	Star Wars Galaxies Archive	TRE				
4330	Garmin GPS PCX5 Track Data	TRK				
4331	Magellan GPS Waypoint Data	TRK				
4332	Ports of Call Saved Game	TRP				
4333	Traverse PC Desktop Survey Data	TRV				
4334	Qt Translation Source	TS				
4335	TatukGIS Project	TTKGP				
4336	TVgenial Skin	TVGSKIN				
4337	TeamViewer Video Session	TVS				
4338	Celestia Font Texture	TXF				

4339	DVD TEXT Data	TXTDT				
4340	Assembly Manifest Store	AMX				
4341	Assembly Manifest Index	AUX				
4342	Blu-ray Disc Movie Index	BDMV				
4343	Blu-ray Disc Movie Object	BDMV				
4344	QuickBooks for Windows Component File Search Dictionary	CFS				
4345	MS Help Library Index	MSHI				
4346	SolidWorks 2001 Drawing	SLDDRW				
4347	Universal 3D Image	U3D				
4348	WinCC User Archive Export	UAP				
4349	Samsung YP-P2 Theme	UCI				
4350	Crazy Machines Model	UCM				
4351	Universal Classification Standard Database	UCS				

4352	UC Browser Theme	UCT				
4353	VBA32 Antivirus Signature	UDB				
4354	NHTSA UDS-1992 Crash Test Data	UDS				
4355	Sierra Generations Geneology Family	UDS				
4356	Ellisys Visual USB Data	UFO				
4357	UMD Photobook	UMD				
4358	Ulead Private Data	UPD				
4359	Uniprint Unified Printer Parameter	UPP				
4360	AppFace Skin	URF				
4361	USeq Genome Data	USEQ				
4362	EVGA Precision X Skin	USF				
4363	ThemeEngine Theme/Skin	USKN				
4364	EAGLE User-Specific Parameters	USR, EAGLERC				

4365	SafeGuard PrivateCrypto Encrypted Archive	UTI					
4366	Emergency 3D Model	V3O					
4367	Vis5D Dataset	V5D					
4368	Virtual CD v4 log	VBL					
4369	VisualBoyAdvance Movie Capture	VBM					
4370	Visualization of Compiler Graph	VCG					
4371	Avira AntiVir Virus Database	VDF					
4372	Adobe InDesign Document (XML)	IDML		Y			
4373	VisiForm Form	VFT					
4374	Creative Webcam Video Effects Pack	VFZ					
4375	Video Game Music	VGM					
4376	Yamaha PSR-9000 Custom Voice	VIC					
4377	ViX Image Catalog	VIX					

4378	VMware Localization	VLCL				
4379	Ashlar-Vellum Drawing	VLM				
4380	Vocaloid Motion Data					
4381	VirtuaNES Movie Capture	VMV				
4382	Sony Ericsson Mobile Phone Note	VNT				
4383	Valve Package	VPK				
4384	Garmin Voice	VPM				
4385	Vox Proxy Macro	VPM				
4386	Visual Paradigm for UML Project	VPP				
4387	Avast! Setup/Update Package	VPU				
4388	Ventrilo Audio Recording	VRF				
4389	Geospatial Data Abstraction Library	VRT				
4390	ParaView Legacy VTK Data	VTK				

4391	ParaView VTK Rectilinear Grid	VTR				
4392	ParaView VTK Structured Grid	VTS				
4393	Indeo Video Format Extension	IFV				
4394	Voxel Animation	VXL				
4395	Solo Explorer Transcription	W2M				
4396	Black and White 2 Wall Data	WAL				
4397	MultiBit Wallet	WALLET				
4398	WinBreadboard Circuit Schematic	WBD				
4399	eBeam Whiteboard	WBD				
4400	WebShots Image	WBZ				
4401	WinGenea Family Tree	WDF				
4402	DynaDoc Electric Exchange Document	WDL				
4403	3D WohnungsPlan Project	WDS				
4404	Weather Tool Weather Data	WEA				

440 5	Wolfenstein Weapon Definition Script	WEAP				
440 6	WebM Multimedia Container	WEBM				
440 7	MS SharePoint Web Part	WEBPART				
440 8	EViews Workfile	WF1				
440 9	AWG Waveform Data Point	WFM				
441 0	Wings 3D Mesh	WINGS				
441 1	MS Visual Studio Work Item Query	WIQ				
441 2	Xara Internal Graphic Image	WIX				
441 3	VISI-Series CAD Work File	WKF				
441 4	Adobe AIR Application	AIR				
441 5	MS OLE 1.0 Native Compound Package					
441 6	MS SharePoint Workspace	GRV				
441 7	MS SharePoint Workspace Tool Archive	GTA				

4418	GetText Portable Object	PO				
4419	WeatherLink Weather Data	WLK				
4420	MSC Nastran Desktop Document	WM3				
4421	Wink Presentation	WNK				
4422	Web Open Font Format Package 1	WOFF				
4423	ACT! Word Processor Document	WPA				
4424	iSeries Client Access WorkStation Profile	WS				
4425	Wise Script	WSE				
4426	Whisper 32 Passwords	WSP				
4427	Windwos Sidebar Style	WSSTYLES				
4428	Media Center Recorded Television Show	WTV				
4429	WhatsUp Gold Network Map	WUP				

4430	Yokogawa Oscilloscope Captured Data	WVF				
4431	Must Music Audio	WVZ				
4432	WYSIWYG Design	WYG				
4433	Parasolid CAD Model	X_T				
4434	DarkCryptTC Encrypted File Container	XDC				
4435	MS Windows Isolated Storage Data	DAT				
4436	McAfee VirusScan Log	ETL, BAK				
4437	Chrome Local Database	LDB, SST				
4438	MS Windows Recycled File Reference					
4439	MS Windows Cache Database	DB				
4440	Norton Security Log	DAT				
4441	McAfee VirusScan Configuration Data	DAT				

4442	xfit XDD Format Data	XDD				
4443	WinArchiver Extended Disc Image	XDI				
4444	LCDStudio Design	XDS				
4445	XenoDream Graphics Data	XEP				
4446	Primavera Project Management Exchange	XER				
4447	XeX Web Page Definition	XEX				
4448	Binary Device Interface File Format	XFB				
4449	GraphEdit Filter Graph Markup Language (XML)	XGR				
4450	XACT Global Settings	XGS				
4451	Hotbar Compressed Skin Image	XIP				
4452	Bitdefender Plug-in	XMD				
4453	MediaForge Runtime Player	XMFG				

	Distribution Project					
4454	XNA Game Studio Binary Package	XNB				
4455	XPilot NG Map	XP2				
4456	KiriKiri Adventure Game System Package	XP3				
4457	LCDStudio Configuration Playlist	XPL				
4458	Xset Plug-in	XPL				
4459	Microsoft Dynamics AX Export (ASCII)	XPO				
4460	Microsoft Dynamics AX Export (UTF)	XPO				
4461	MonkeyJam Exposure Sheet	XPS				
4462	Timeless Multi-user Time and Expense Data	TMD				
4463	JasperReports JasperPrint Document	JRPRINT				
4464	SAS Transport XPORT Format	XPT				

4465	XQuery Source/Module	XQ, XQM, XQY				
4466	XESS Worksheet	XS3, XS4, XS5				
4467	XACT Sound Bank	XSB				
4468	XTrkCAD Project	XTC				
4469	Winstep Xtreme Theme Pack	XTREME				
4470	Xbox 360 User Interface	XUI				
4471	Declan Word Database	XWF				
4472	XACT Wave Bank	XWB				
4473	WinPlot Chart	XWP				
4474	XZP Container	XZP				
4475	YUV4MPEG2 Video	Y4M				
4476	Outerra Captured Video	YOG				
4477	BYOB Project	YPR				
4478	BYOB Sprite	YPR				
4479	ZModeler 3D Model	Z3D				

4480	HLGuard Z Configuration	ZCFG				
4481	ZX-Edit Document	ZED				
4482	ZeroG Subtitles	ZEG				
4483	Zope Binary Export	ZEXP				
4484	ZjStream Page Description Language (Motorola)	ZJS				
4485	ZjStream Page Description Language (Intel)	ZJS				
4486	MS Outlook Journal Object					
4487	Easy CD Creator Drag To Disk Data	ZL				
4488	ZMA Impedance Response Data	ZMA				
4489	Sage Backup	0				
4490	Novell ZENworks Desktop Management Image Archive	ZMG				
4491	ZSNES Movie Capture	ZMV				

4492	Zune Playlist	ZPL				
4493	Zillions of Games Saved Game	ZSG				
4494	ZSNES Saved State	ZST				
4495	Zsync Metadata	ZSYNC				
4496	ZBrush ZTool Native Saved Tool Configuration	ZTL				
4497	Visual Paradigm for UML License Key	ZVPL				
4498	Psion Compressed eBook	ZVR				
4499	Safe Media Recorded Voice	ZVR				
4500	ZiLOG Developer Studio Workspace	ZWS				
4501	Speculator 97 Shapshot	ZX82				
4502	ZX-Modules Meta Archive	ZXB				
4503	ZX-Editor Second Edition Document	ZXE				
4504	ZX-Paintbrush Image	ZXP				

4505	SWiSH Max Multimedia Effects	SFX				
4506	Chrome Safe Browsing IP List					
4507	Chrome Browser Cache					
4508	MS Cryptnet URL Cache Metadata					
4509	Chrome Browser Saved Session					
4510	Chrome Plug-In Application	CRX				
4511	MS F# Optimization and Signatures	OPTDATA, SIGDATA				
4512	iPhoto Library Thumbnails	DATA				
4513	Finder Backup Burnable Archive Book Mark					
4514	iBooks Asset					
4515	OneDrive Sync Log	ODL				
4516	Adobe Portable Document Format (PDF/A-2a)	PDF	Y	Y	Y	
4517	Adobe Portable Document Format	PDF	Y	Y	Y	

	(PDF/A-2b)					
4518	Bio-Rad Scan	1SC				
4519	Infinity Game Engine Rule Set	2DA				
4520	Nintendo DS Sound Format Rip	2SFLIB				
4521	Adobe Portable Document Format (PDF/A-2u)	PDF	Y	Y	Y	
4522	Adobe Portable Document Format (PDF/A-3a)	PDF	Y	Y	Y	
4523	Adobe Portable Document Format (PDF/A-3b)	PDF	Y	Y	Y	
4524	Adobe Portable Document Format (PDF/A-3u)	PDF	Y	Y	Y	
4525	360-Degree Desktop Image	360				
4526	3Doku Game Data	3DOKU				
4527	3GPP Audio	3GA				
4528	PolySpace Check Results	CHK				
4529	GoDot 4-bit Graphics Image	4BT				

4530	777 Compressed Archive	777				
4531	AZZ Cardfile Index	~I				
4532	SPACK Archive	SIP				
4533	LZ Archive	LZ				Y
4534	Apple II Finder Index	DATA				
4535	Apple II Macro	MACRO, MAC, MACS, TXT				
4536	MS Windows Vault Schema	VSCH				
4537	MS Windows Vault Policy	VPOL				
4538	MS Visual Studio AddIn Store Index	STORE				
4539	Zemana Threats Database	ZDB				
4540	MS Visual Studio Debugger Configuration	VSDCONFIG				
4541	NuGet Package	NUPKG				
4542	MS Help Container	MSHC				
4543	Adobe AIR Signed Package	SPI, ACX, CFG				

4544	MS Windows Store App Package	APPX				
4545	MS SQL Server Data Tier Application Package	DACPAC				
4546	QuickBooks Auto Correction Dictionary	SOT				
4547	MS LightSwitch Package	LSPKG				
4548	MS Visual Studio Extension Cache	CACHE				
4549	MS Visual Studio Extension	VSIX				
4550	McAfee Quarantined File Details	BUP				
4551	MS Visio 2013 Document (Open XML)	VSDX		Y		
4552	MS Visio FoxPro Memory Variables	MEM				
4553	HP Raster Printer Driver Objects	RPO				
4554	MPEG Movie Fragment					
4555	Brother Printer Driver	BCM				

4556	Chrome Dictionary	BDIC				
4557	Intuit Form Index	FDFI				
4558	Norton QBackup Data	QBD, QBI				
4559	Quickbooks Printer Settings	QBP				
4560	MS Exchange/Outlook Offline Storage (2003-2010)	OST				Y
4561	MS Exchange/Outlook Offline Storage (2013)	OST				Y
4562	MS Event Trace Log	ETL				
4563	Localization Resource Package	PAK				
4564	Quickbooks Segment Data					
4565	MS Windows JavaScript Resources	RESJSON				
4566	MS Visual Studio Shell	PKGDEF				
4567	MS Visual Studio IntelliSense Code	SNIPPET				

	Snippet					
4568	MS SQL Server Breadcrumb	BC				
4569	CoffeeScript JavaScript	COFFEE				
4570	Quickbooks Backup Log	SYB				
4571	WinZip Archive (Advanced)	ZIPX				Y
4572	Adobe Portable Document Format (PDF/E)	PDF	Y	Y	Y	
4573	Adobe Portable Document Format (PDF/E-1)	PDF	Y	Y	Y	
4574	Adobe Portable Document Format (PDF/UA)	PDF	Y	Y	Y	
4575	Adobe Portable Document Format (PDF/X-1a)	PDF	Y	Y	Y	
4576	Adobe Portable Document Format (PDF/X-3)	PDF	Y	Y	Y	
4577	Adobe Portable Document Format (PDF/X-4)	PDF	Y	Y	Y	
4578	Adobe Portable Document Format	PDF	Y	Y	Y	

	(PDF/X-4p)					
4579	Adobe Portable Document Format (PDF/X-5)	PDF	Y	Y	Y	
4580	Adobe Portable Document Format (PDF/X-5g)	PDF	Y	Y	Y	
4581	Adobe Portable Document Format (PDF/X-5n)	PDF	Y	Y	Y	
4582	Adobe Portable Document Format (PDF/X-5pg)	PDF	Y	Y	Y	
4583	Adobe Portable Document Format (PDF/VT)	PDF	Y	Y	Y	
4584	Adobe Portable Document Format (PDF/VT-1)	PDF	Y	Y	Y	
4585	Adobe Portable Document Format (PDF/VT-2)	PDF	Y	Y	Y	
4586	Adobe Portable Document Format (PDF/VT-2s)	PDF	Y	Y	Y	
4587	Minecraft Land Database	LDB				
4588	Minecraft Level Data					

4589	Minecraft Level Manifest					
4590	VMware Cached Application Icon	APPICON				
4591	VMware Cached Application Data	APPINFO				
4592	Apple Website Shortcut	WEBLOC				
4593	Apple Website Archive	WEBARCHIVE				
4594	MultiBit Core Wallet Data	DAT				
4595	Berkeley UNIX Mailbox Table of Contents					
4596	Wii Texture Palette	TPL				
4597	Firebird Database	FDB				
4598	Skype Conversation Audio (Compressed)	SIL				
4599	Brother/Babylock /Bernina Home Embroidery	PEC				
4600	RealPlayer Video	IVR				
4601	Zisofs Compressed					

	Archive					
4602	AutoCAD R2.5 Drawing	DWG				
4603	AutoCAD R2.6 Drawing	DWG				
4604	AutoCAD R9 Drawing	DWG				
4605	AutoCAD R10 Drawing	DWG				
4606	AutoCAD R11/R12 Drawing	DWG				
4607	AutoCAD R13 Subtype 10 Drawing	DWG				
4608	AutoCAD R13 Subtype 11 Drawing	DWG				
4609	AutoCAD R13 Subtype 12 Drawing	DWG				
4610	AutoCAD R14 Subtype 13 Drawing	DWG				
4611	AutoCAD R14 Subtype 14 Drawing	DWG				
4612	AutoCAD R2000 Drawing	DWG				
4613	AutoCAD R2004 Drawing	DWG				

4614	AutoCAD R2007 Drawing	DWG				
4615	Steganos Security Suite Virtual Secure Drive	SLE				
4616	AES Crypt Archive	AES				
4617	Better Portable Graphics Image	BPG				
4618	Puffer ASCII Armored Encrypted Archive	APUF				
4619	WhereIsIt Catalog	CTF				
4620	EnCase Evidence Segment v2.00	Exnn, Ex01				Y
4621	Genetec Video Archive	G64				
4622	Forte Agent Newsreader Character Map	COD				
4623	1Password 4 Cloud Keychain Encrypted Attachment	ATTACHMENT				
4624	Windows User State Migration Tool Data	DAT				

462 5	Puffer Encrypted Archive	PUF				
462 6	Google WebP Image	PUF				
462 7	ShadownProtect Backup (Full Image)	SPF				
462 8	MultiBit Blockchain	SPVCHAIN				
462 9	IBM DB2 Conversion	CNV				
463 0	VocalTec Media Descriptor	VMD				
463 1	MultiBit Wallet Information	INFO				
463 2	1Password 4 Cloud Keychain Encrypted Data					
463 3	Qimage Filter	FLT				
463 4	Huskygram/Poem /Singer Embroidery Design	CSD				
463 5	Jeppesen Flight Log	LBK				
463 6	BitLocker Encrypted Disk Image (Vista)					
463 7	BitLocker Encrypted Disk					

	Image (Windows 7)					
4638	Mac OS X Program (PowerPC 64bit)					
4639	Mac OS X Dynamic Library (PowerPC 64-bit)	DYLIB, KEXT				
4640	MS Windows MSinfo Data	MOF				
4641	ASCII85 Encoded File	B85				
4642	LZ4 Compressed Stream	LZ4				Y
4643	AppleWorks 5 Document	CWK				
4644	AppleWorks 6 Document	CWK				
4645	Ami-Back Hard Drive Backup	BAC				
4646	MS Windows Update Binary Delta Compressed					
4647	Free Lossless Image Format Image	FLIF				
4648	Rowperfect Session Analysis	STG				
4649	Magic Lantern Video	MLV				

4650	Web Open Font Format Package 2	WOFF2				
4651	Palm OS Calendar	DBA				
4652	Lepton Compressed JPEG Image	LEP				
4653	EndNote Library	ENL				
4654	Show Partner Graphics Image	GX2				
4655	SpeedTouch Router Firmware	BIN				
4656	Graphics Kernel System Image	GKS				
4657	Dore Raster Image	DORE, IMG				
4658	Panda 3D Transform Definition	EGG				
4659	AlZip EGG Compressed Archive	EGG				
4660	EGG Video	EGG				
4661	Maya 3D Image (64bit; binary)	mb				
4662	Gerber Vector Image	GBR				

4663	SeqBox Archive	SBX, SEQBOX				
4664	LyNX Archive	LNX				
4665	PackDir Compressed Archive	PACKDIR				
4666	Scifer Compressed Archive	SEN, BA				
4667	Softlib Compressed Archive	SLB				
4668	WARC Archive	WARC				
4669	ARC Internet Archive	ARC				
4670	CDX Internet Index	CDX				
4671	BSDIFF Compressed Archive					
4672	Generic DIFF Archive					
4673	International Patching System Archive	IPS				
4674	UPS Patch Archive	UPS				

4675	VCDIFF Compressed Archive	VCDIFF				
4676	Adobe Portable Document Format v1.1	PDF	Y	Y	Y	
4677	Adobe Portable Document Format v1.2	PDF	Y	Y	Y	
4678	Adobe Portable Document Format v1.3	PDF	Y	Y	Y	
4679	Adobe Portable Document Format v1.4	PDF	Y	Y	Y	
4680	Adobe Portable Document Format v1.5	PDF	Y	Y	Y	
4681	Adobe Portable Document Format v1.6	PDF	Y	Y	Y	
4682	Adobe Portable Document Format v1.7	PDF	Y	Y	Y	
4683	Adobe Portable Document Format (PDF/X-1:1999)	PDF	Y	Y	Y	
4684	Adobe Portable Document Format (PDF/X-1:2001)	PDF	Y	Y	Y	

4685	Adobe Portable Document Format (PDF/X-2)	PDF	Y	Y	Y	
4686	Adobe Portable Document Format (PDF/X-1a:2003)	PDF	Y	Y	Y	
4687	Adobe Portable Document Format (PDF/X-3:2003)	PDF	Y	Y	Y	
4688	Block Hash Loc	BHL				
4689	Mtree Index					
4690	Cache Directory Tag	TAG				
4691	Symbian/EPOC release 3, 4, 5 Installer	SIS				
4692	Iomega Backup	113				
4693	Oracle Database Backup	ARC				
4694	Ableton Live Metadata	AMS				
4695	FruityLoops / FL Studio Project	FLP				
4696	Jeskola Buzz Song	BMX, BMW				
4697	Tableau Packaged Workbook	TWBX				

4698	Propellerhead Reason NN-XT Patch	SX2				
4699	Studio Session Song (MacBinary)	SSS				
4700	Direct Stream Digital Music	DSF				
4701	RF64 Broadcast Wave Format Audio	RF64, WAV				
4702	KSS Music	KSS				
4703	KSSX Music	KSS				
4704	Nintendo Entertainment System Sound Extended	NSFE				
4705	Picasa Movie Project	MXF				
4706	MS Internet Explorer v11 Tracking Protection List	TPL				
4707	PCAP Next Generation Dump	PCAPNG				
4708	Amazon Kindle Update Package	BIN				
4709	Universal Voxel Translator	TOX				

4710	LZFSE Compressed Archive	LZFSE				
4711	Apache Avro Object Container	AVRO				
4712	RCFile Columnar Data	RC				
4713	Emulator Emaxsynth Samples	EZ2				
4714	Emulator III Synth Samples	EZ3, ISO				
4715	Lua Bytecode	LUAC				
4716	Interplay ACM Music	ACM				
4717	GameCube / Wii AST Sound	AST				
4718	GameCube / Wii BRSTM Sound	BRSTM				
4719	STOS Memory Bank Sounds / Images	MBK, MBS				
4720	WinAHX Tracker Music	AHX				
4721	MS Windows Service Control Manager Log	.				
4722	QuickBooks for Windows	.				

	Component File Search Index					
4723	MS Windows Localization Dictionary	DUB				
4724	Mozilla Firefox Safe Browsing Database	SBSTORE				
4725	PowerShell XML Schema	RLD				
4726	TurboTax Profile	Profile				
4727	Vertex Shader	VS				
4728	MS Windows Input Method	IM				
4729	XAML Binary	XBF				
4730	Mozilla Firefox Compressed Portable Data	MOZLZ4, JSONLZ4				
4731	Mozilla Firefox Browser Manifest	JA				
4732	MS Windows Service Control Manager Log	EVM				
4733	VMWare Installer Data	.				

4734	Microsoft Roaming Browser Password	.				
4735	Quickbooks for Windows Search Index	CFX				
4736	MS Packed Digital Signature	P7X				
4737	Chrome Browser Visited Links Database	.				
4738	MS Windows Package Deployment Metadata	PCKGDEP				
4739	MS Windows Package Deployment Recovery Metadata	RECOVERY				
4740	MS Windows Vault Credentials	VCRD				
4741	SQLite Database Shared Memory	DB-SHM, SQLITESHM				
4742	SQLite Database Write-Ahead Log	SQLITE-WAL				
4743	Linux Symbolic Link	.				
4744	PKCS12 Personal Exchange Format	PFX, P12				

4745	ARCV Archive	0				
4746	AUS Backup Data Archive	.				
4747	True Box Shot Cover	DRC				
4748	Apple iOS Photo Database Cache	.				
4749	MS OneNote Table Of Contents	ONETOC				
4750	MS Windows NT Binary Printer Description	BUD				
4751	ProCite Bibliography v4	PDT				
4752	All SoundTracker Module Music	AST				
4753	AProSys Module Music	APS				
4754	Beepola Module Song	BBSONG				
4755	MPEG-2 Transport Stream	M2TS, MTS				
4756	Stereo Double Chaos Music Composer Song	CMS				
4757	Future Composer Module Music	BSI				
4758	Liquid Digitized Sample Sound	LDS				

4759	OctaMED v2.10 Module Music	MED4				
4760	Onyx Module Music	OMF				
4761	SCC Blaffer NT Music	SBM				
4762	SCC Blaffer NT Instrument	SBK				
4763	SoundFX Module Song	SFX, SFX2				
4764	Soundtracker v2.6 Module Song	ST26				
4765	Ice Tracker Module Song					
4766	HMI Music	HMI				
4767	Adlib Tracker II Instrument	A2I				
4768	Adlib Tracker II Instrument Bank	A2B				
4769	Adlib Tracker II Module Song	A2M				
4770	Adlib Tracker II Tiny Module Song	A2T				
4771	Adlib Tracker II Pattern	A2P				
4772	Adobe Portable Document Security Data	ACRODATA				

4773	Quickbooks Update Log	LOG, OLD				
4774	FI Data Profiler Statistical Analysis	FIS				
4775	QuickBooks for Windows Update Descripti	DAT				
4776	MS Visual Studio Extension Description	TXT				
4777	Boom Tracker v4.0 Module Song	CFF				
4778	DOSBox Raw OPL (DRO) Song	DRO				
4779	Steinberg VST2 Music Plugin Presets	FXP				
4780	Musink Song	MUSINK				
4781	Lytro Image	LFP				
4782	Speech Synthesis Markup Language	SSML				
4783	VoiceDescription					
4784	Audfprint Fingerprint	AFPT				
4785	Audfprint Fingerprint	AFPK				

	(Columbia Peaks)					
4786	SoundHelix Song	XML				
4787	Olympus Raw Image	ORF				
4788	Panasonic Raw Image	RAW, RW2, RWL				
4789	Rawzor Image	RWZ				
4790	DNG Camera Image Profile	DCP				
4791	PCO B16 Digital Camera Image	B16				
4792	FLIR Open Floating Point Format Image	FPF				
4793	ChiefLZ LZA Compressed Data v1	LZA				
4794	ChiefLZ LZA Compressed Data v2	LZA				
4795	ChiefLZ LZZ Compressed Data v2	LZZ				
4796	Hammer Compressed Game Data	HMR				

4797	HAP Archive v2.10	HAP				
4798	Becky Email Message	BMF				
4799	Long Range ZIP Archive	LRZ				
4800	Random Access Compression Archive	RAC				
4801	Simple Highspeed Archiver Archive	SHARC				
4802	Terse Compressed Archive					
4803	TTW Compressed Archive	CR				
4804	Tzip Compressed Archive	TZ				
4805	Yaz0 Compressed Archive	SZS				
4806	ZSQ Compressed Archive	ZZZ, ?Z?				
4807	SLIM Compressed Archive					
4808	Turbo Packer Compressed Archive					
4809	Apple Alias/Shortcut					

4810	Disk Doubler Archive	DD, SEA				
4811	Info File Database	FLR				
4812	RFFlow Diagram	FLO				
4813	Timeline Maker Diagram	TLM, TLMP, TLM3, TLM4, TLMZ				
4814	Disk Imploder Image	DMP, DEX				
4815	File Imploder Archive	IMP				
4816	A2R Disk Image	A2R				
4817	WOZ Disk Image	WOZ				
4818	Analog Box Modular Song	ABOX2				
4819	GarageBand Instrument Presets	PST				
4820	WebHelp Page	HTM				
4821	Atari STT Disk Image	STT				
4822	Pasti Atari Floppy Disk Image	STX				
4823	G64 Floppy Disk Image	G64				

4824	DSK-PRO Compressed Disk Image	PDI				
4825	86F Disk Image	86F				
4826	86F Compressed Disk Image	86F				
4827	CopyQM Floppy Disk Image					
4828	Floppy Disk File Compressed Disk Image	FDF				
4829	SolidWorks eDrawings Assembly (Zip Comp	EASM				
4830	Quick Release Sector Transfer Disk Imag	QRST				
4831	EZ-DiskCopy Pro Disk Image	RIM				
4832	XPACK Disk Image	XDI				
4833	DMK Disk Image	DMK, DSK				
4834	Mirage Microdrive Snapshot Tape Image	SNX, SNAPSHOT				
4835	Oric Disk Image (Old)	DSK				

4836	Oric Disk Image (New MFM)	DSK				
4837	LDBS Disk Image	LDBS				
4838	LDBS Disk Image (UTF-8)	LDBST				
4839	IPF Disk Image	IPF				
4840	KryoFlux Disk Image	RAW				
4841	High Efficiency Image Container Image	HEIC				
4842	AbiWord Template	AWT				
4843	WinUndelete Index	WUI				
4844	SciTex ContinuousTone Image	CT, SCT, SCITEX				
4845	Sonic Global Image	GI				
4846	Rox Data Disc Image Layout	ROX				
4847	Rox Audio Disc Image Layout	ROX				
4848	Atari CAS Cassette Tape Image	CAS				

4849	Perfect ZX Tape Image	PZX				
4850	BeagleWorks Document					
4851	BeagleWorks Spreadsheet					
4852	BeagleWorks Database					
4853	BeagleWorks Drawing					
4854	BeagleWorks Painting					
4855	COSMI Desktop Publishing Document	PUB, DTP, BRO, BCD, CRD				
4856	Yozo Office Document	EIO				
4857	Farallon Replica Document	RPL				
4858	Uniform Office Format Document	UOP				
4859	Affinity Publisher Document	AFTEMPLATE				
4860	Calamus Document	CDK				
4861	Canvas 3.5 Document	CVS				
4862	Dynamic Publisher Screen Picture	PCT				

4863	Dynamic Publisher Font	FNT				
4864	Adobe InDesign Book	INDB				

Image Display

Working with Images

You can use LAW to view the images associated with a page, open images in an external viewer, or view image properties. You can view common formats of image files, such as TIFF files, by using either the Image display that is built into CloudNine™ LAW or by using an external viewer.
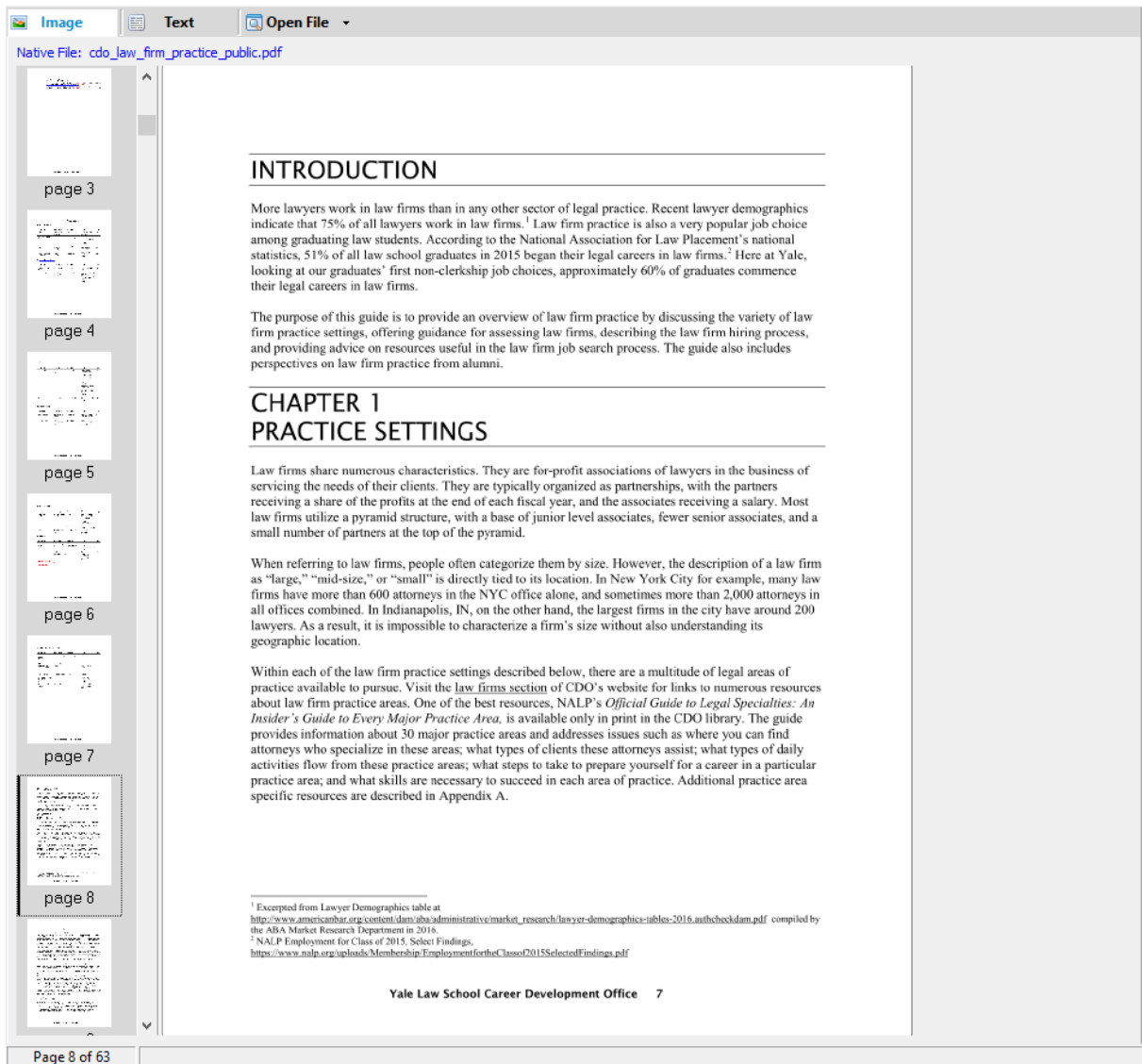
☐ **To view an image**

- From the main window, select an item and then click the **Image** tab.

    If the item has an associated image file, the image will appear in the **Image** tab. Otherwise a graphic that says **No Image Available** will appear.

    To view certain types of image files in the Image panel, for example with DWG drawing files, you can use the Batch Processing utility to convert the image file to TIFF and then review the TIFF in the Image panel. For more information about converting items to TIFF using the Batch Process utility see: E-Printing, TIFF, and PDF Conversion.

    If the item is a document that consists of multiple images, you can navigate between images by selecting thumbnails that appear in the leftmost column.
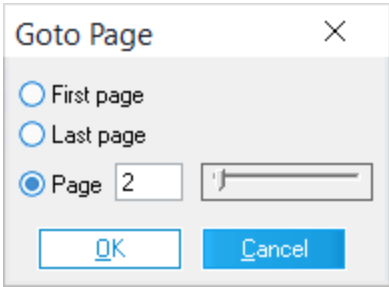
⊟ **To switch page and thumbnail modes**

On the **View** menu, select: **One Page, Thumbnails,** or **Page and Thumbnails.**

- **One Page** - shows just the currently selected page.

- **Thumbnails** - shows just the thumbnails for the page images, and not the page preview.

- **Page and Thumbnails** - This is the default mode. It shows both the preview of the full page and thumbnails for the page images.

⊟ **To navigate and select pages**

LAW provides several ways to navigate between and to select pages of multi-page documents:

Action	Steps
Open the Goto Page dialog	In the main window double-click the page count area of the status bar in the lower-left corner of the main window. The Goto Page dialog opens. Use this dialog to go to the First page, Last page, or a specific page. **Goto Page** ✕ ○ First page ○ Last page ◉ Page 2 OK Cancel
Move between pages	• On the Page menu, select **First Page**, **Previous Page**, **Next Page**, or **Last Page**. • On the main toolbar, click one of the navigation buttons. • Right click in the thumbnails area and then select a navigation control.
Select or unselect a page	• Press and hold the CTRL key and click a thumbnail. • Click to the right of the thumbnail and then press the spacebar. • Click the full-page preview and then press the spacebar. When a page is selected, the background of selected page is black.

Action	Steps
Select a range of pages	• Press and hold the CTRL key and click a thumbnail at one end of the range. • Press and hold the SHIFT key and click the thumbnail at the other end of the range.
Select all pages	Click in the thumbnails region and then press CTRL+A.
Unselect all pages	Press ESC.

⊟ **To manipulate page display**

When you use the Image Viewer, you have the following options for manipulating the way the page displays. These ways are described as follows:

Action	Steps
Zoom in.	• In the main window, on the **View** menu, click **Zoom In**.
Zoom out.	• In the main window, on the **View** menu, click **Zoom Out.**
Zoom to selection.	• Press and hold down the left mouse button and drag to select the area to zoom; release the mouse. LAW zooms to the area defined by the rectangle. Double-click to return to the **Best Fit** state.
Best entire page in Viewer.	• In the main window, on the **View** menu, click **Best Fit**.
Fit page to viewer width.	• In the main window, on the **View** menu, click **Fit to Width**.
Lock or unlock the zoom across pages.	• Press CTRL+Z; or in the main window, on the **View** menu, click **Zoom Lock**. A lock icon displays on the **Image** button. • To zoom in, press CTRL+PAGE UP; to zoom out. press CTRL+PAGE DOWN.
Unlock the zoom.	• In the main window, on the **View** menu, click **Zoom Lock** to remove the check mark next to **Zoom Lock**.
Move the view across a zoomed image.	• Click and drag the scrollbars. Or

Action	Steps
	• Press and hold the CTRL key and press UP ARROW, DOWN ARROW. LEFT ARROW, or RIGHT ARROW keys.
Pan Window	1. In the main window, select an image. 2. On the **View** menu, click **Pan Window**. 3. A small pan window with a black box showing the zoomed selected image opens. You can shrink or enlarge the window to view the image contents.
Scale to gray for all pages (only for viewing; cannot be saved.)	This feature can improve the readability of some text. It is for viewing only and does not alter the image in any way. 1. In the main window, select an image. 2. On the **View** menu, click **Scale to Gray**.
Invert page color on all pages (only for viewing;	1. In the main window, select an image. 2. On the **View** menu, click **Invert**.

Action	Steps
cannot be saved.)	This feature is useful when viewing documents that have shaded or colored backgrounds, making them difficult to interpret. The Invert feature reverses the colors and can help to clarify the image. This feature does not alter the image in any way; it is for viewing purposes only.
Rotate pages.	1. In the main window, on the **Page** menu, click **Rotate Left**, **Rotate Right**, or **Rotate 180**. If no pages are selected, only the current page is rotated. If one or more pages are selected, all selected pages are rotated the specified direction. The rotation applied to an image is not saved automatically. An unsaved rotation is evident if the main image window shows the current page as rotated but the thumbnail view shows the original orientation. 2. Save the rotation for the image, if necessary. In the main window on the **File** menu, click **Save**. The current orientation for all pages is saved; the thumbnails and image update with the new rotation. Rotating an image that has been endorsed by LAW may result in undesired results if the endorsement is later modified or removed. See Header/Footer Options for further information on endorsing.

⊟ **To open an image in an external viewer**

1. From the main window, select an item.

2. Click the **Tools** menu.

   If the item has an image file then **Launch Viewer** will be enabled.

3. Click **Launch Viewer**.

   This feature opens the image in whichever image viewer is registered in the operating system as the default for the specified image type.

   If the image is modified in the external viewing application, you will need to switch documents in LAW before you save changes; otherwise, a locking violation will occur.

Viewing Image File Properties

You can view the properties for both the current page and the entire image when working with records with associated image files.

1. Select a page.

2. On the **Page** menu, click **Properties**. The **Page Properties** dialog box appears. It provides the height and width of the image in both inches and pixels, the resolution, the color format, and the compression type for the current page.
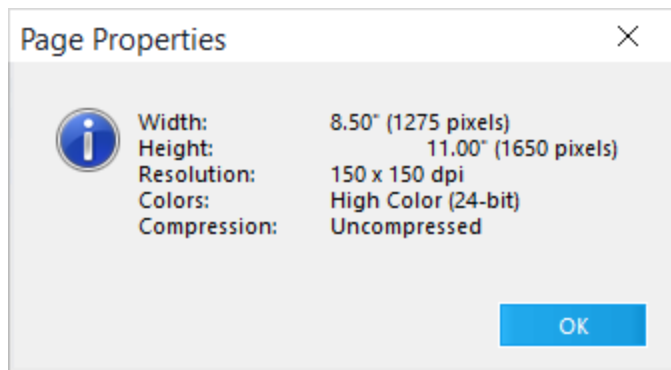
1. Select an image for which you want to view properties.

2. In the main window, on the **Edit** menu, click **Properties**.

   A file properties dialog provides file attributes, file size, and the actual file name for the image.
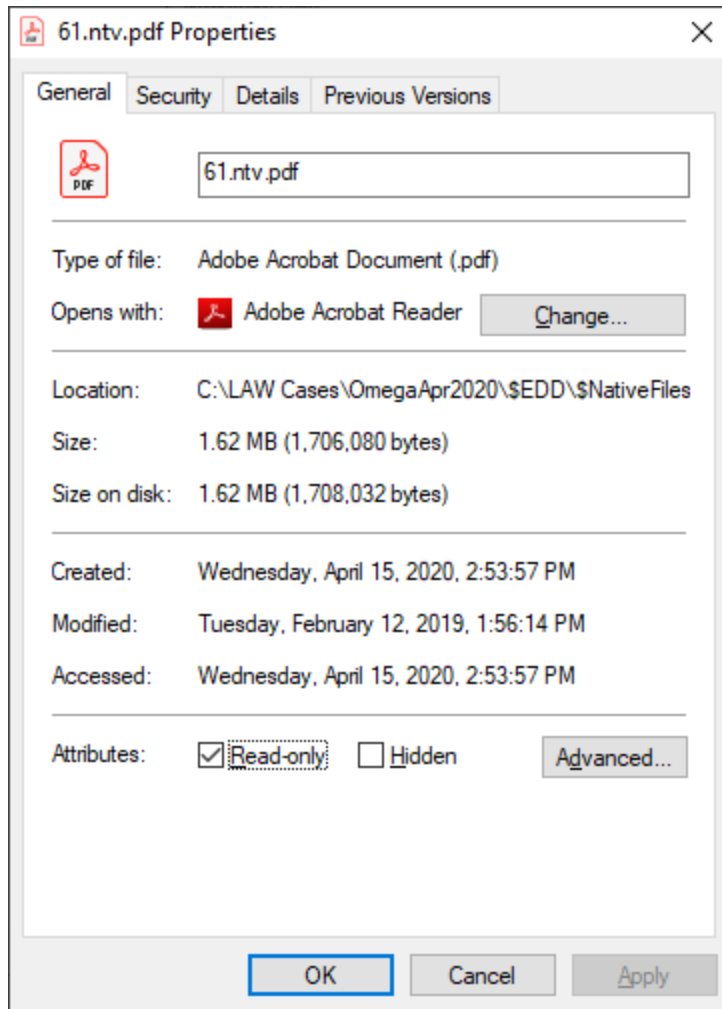
Note the following about image file properties:

- For scanned or imported images (non-ED), CloudNine™ LAW does not display the actual file names for the images in the document list.
- File names consist of the **ID** field in the database, zero-padded to 8 characters, followed by the file extension.
- For images created via the TIFF Conversion batch process, the actual file name will be displayed in the page-level **PageFilename** field.

To view native file properties

The steps to view native file properties depend on whether the native file has an image file associated with it.

To view file properties for native files with no image files

1. Select a file in the main window.

2. On the **Edit** menu, click **Properties**.

    The native file properties appear. If an image does exist in addition to a native file, the image properties will be shown by default.

To view file properties for native files with image files

1. Select a file in the main window.

2. Right-click the native file hyperlink, which is located above the image display, and then click **Properties**.

Manipulating Documents

After documents are brought into a case, you have many options for cleaning up images, and for adding, deleting, and reorganizing documents and pages.

💡 Turbo Import enabled cases have Moving, Splitting, and Replacing documents disabled.   Use an Electronic Discovery enabled case if you anticipate needing these abilities.

Page-level Cleanup

Image enhancements are page cleanup operations applied to individual pages. Examples include deskew and rotate pages. Enhancements may be performed at the document-level or page-level. Page-level options are found in the Page menu, or by right-clicking a page in the thumbnail display.

⊟ To deskew a page

1. On the **View** menu click **Thumbnails**, or you can click **Page and Thumbnails**.

2. Select an image.

3. Click **Deskew** or press **F4.**

    If multiple pages are selected, then all selected pages will be deskewed.

    If no pages are selected, only the current page will be deskewed. This is ideal when inspecting documents on the page level and only a few unacceptably skewed pages exist.

See the Batch Processing section to learn about deskewing larger sets of documents.

<u>⊟ **To enhance images**</u>

1. In the main window, in the image viewing area, select an image.

2. On the **Page** menu, click **Enhance Image**.

   The **Select Image Filters** dialog box appears.

   Select Image Filters

   Available Filters
   ☐ Black-Border Removal
   ☐ Deskew
   ☐ Hole Removal
   ☐ Line Removal
   ☐ Noise Removal

   OK

   Cancel
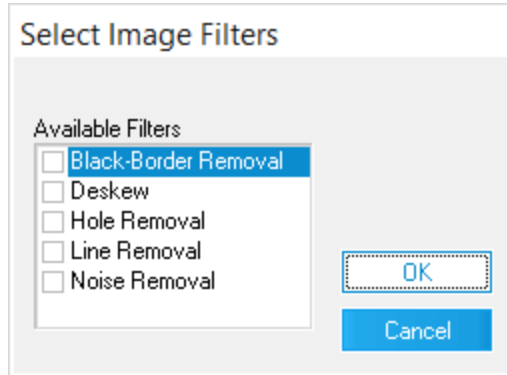
3. Use the information in the following table to select from among available filters, and then click **OK**.

Use this filter	To do this
Black-Border Removal	Remove black edges from pages. This filter will cleanup only black edges that are even. If the black edge is uneven or slanted down the page, it will not be filtered. If receiving uneven borders, it is due to the scanner model being used and the scan area will have to be adjusted in order to remove them. The scan area can be adjusted from the Scanner Settings dialog. Black borders left on pages can prevent LAW from recognizing blank pages, so this filter should be selected if using the 'Drop Blank Pages' scan option. The black-border removal filter can also be applied to multiple documents during Batch Processing.
Deskew	Straighten images that show a slant from their correct orientation. Skewing occurs if the original document was unevenly pulled when it was fed into the scanner. Deskewing an image makes the image contents more legible and can drastically improve OCR results. As such, it is a crucial step in the quality control process.
Hole Removal	Removes afterimages of standard size holes (1/4" - 5/16") left from scanning pages that were hole punched. Hole removal can be done for pages of RAW Image and scanned documents, and pages of documents imported in ED Loader and converted to TIFF before hole removal.

Use this filter	To do this
	The letters o and e and zeros, are ignored by the hole removal process. If needed, the image borders can be configured for removing holes on images from the Configure Scan Filters dialog box (Scan > Scan Options > Configure Filters).
Line Removal	Remove black lines from pages. Lines must be black, straight, and even.
Noise Removal	Reduce the amount of random dots and specks that appear on the scanned image. OCR results may improve if Noise Removal is performed on a document before converting it to text.

⊟ To rotate images

LAW allows users to rotate pages in the event that one or more pages are improperly oriented.

To perform this action	Do this
Automatically rotate pages while scanning.	Pages may be rotated automatically while scanning using the 'Output Rotation' setting. For more information on rotating pages at scan time, see Scan Options.

Rotate one or more pages during the quality control process.
 	
Pages may also be rotated during the quality control process if they were not corrected at scan time or were acquired from another source.
	1. From the current page, or after selecting multiple pages, click **Page.**
	  • If no pages are selected, only the current page will be rotated.
	  • If one or more pages are selected, all selected pages will be rotated.
	2. Click one of the following
	  • **Rotate Left** (CTRL+L)
	  • **Rotate Right** (CTRL+R)
	  • **Rotate 180**
	3. On the **File** menu, click **Save**.
	
	Page and thumbnail orientation changes to new setting.

⚠ Care should be taken when rotating an image that has been endorsed in CloudNine™ LAW. This operation may create problems if the endorsement is later modified or removed. See Header/Footer Options for more information on endorsing.

Moving Documents and Pages

You can move pages, documents, and folders. These options are especially useful if documents have been scanned into the wrong folder or if you want to re-organize documents.

⊟ To move documents

1. Select one or more documents.

2. Do one of the following:

   - On the **Edit** menu click **Move Document(s).**

   Or

   - Right-click the document list, point to **Edit** and then click **Move Document(s)**.

3. The **Move Document(s)** dialog box appears.
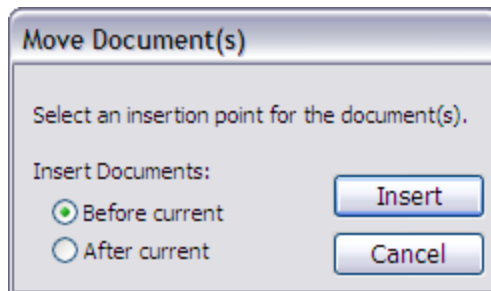
4. Browse to a document to select it as the current document.

5. Do one of the following:
   - Select **Before Current** to insert the document before the currently selected document.

   Or

   - Select **After Current** to insert documents after the currently selected document.

6. Click **Insert**.

📝 Documents can be moved within the same folder; however, the insertion point cannot be one of the selected documents.

⊟ **To move folders**

• On the **Folder** menu, click **Move**.

See the [Establishing Folder Structures](#) for more information.

⊟ **To move pages**

Consider the following information before you move pages:

• Pages can be moved within a single document by selecting a document and viewing the thumbnails display on the main interface.
• Moving pages in the thumbnails display is not currently supported for any image records stored as single-page, such as images scanned while using the Serialized Storage Schema option or images converted to serialized TIFF images via single document or batch TIFF conversion.
• Moving pages does not move page information. For example, if you move a page, its page ID, header, footer, and size, will not be moved.
• If you move a page, pages may need to be renumbered after the move.
• Because header/footer size info will not be moved. Pages should only be moved within a document in which all or no pages have been endorsed with the same settings; otherwise, unexpected results may occur if re-endorsed.

To move pages using Thumbnails:

1. Page thumbnails must be visible to move pages. If thumbnails are not currently visible, on the **View** menu, click either **Thumbnails** or click **Page and Thumbnails**.

2. From the thumbnail display, select the pages to move.

3. Click and hold on any of the highlighted pages.

4. After the icon changes and drag to the selected insertion point and then release the mouse.

To move pages using the Move Page(s) dialog box:

1. Page thumbnails must be visible to move pages. If thumbnails are not currently visible, on the **View** menu, click either **Thumbnails** or click **Page and Thumbnails**.

2. From the thumbnail display, select the pages to move.

3. Click and hold on any of the highlighted pages.

4. On the **Edit** menu, click **Move Page(s)**.

    Clicking **Move Page(s)** opens the **Move Page(s)** dialog box. You can also open the **Move Page(s)** dialog box by right-clicking the selected page(s) and then clicking **Move Page(s)**.

    ```
    Move Page(s)                          [X]

    Page(s) to move : 2-3

    Select an insertion point for the page(s).
    Insert Pages:
                                      [  Insert  ]
       ( ) Before current
       (•) After current             [  Cancel  ]
    ```
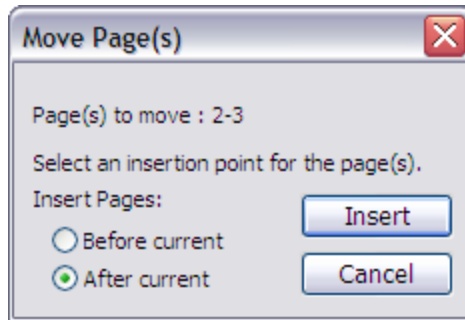
5. Click where you want to insert the highlighted page(s).

6. Do one of the following:

    • Select **Before current** to insert the page(s) before the selected page.
    Or
    • Select **After current** to insert the page(s) after the selected page.

7. Click the **Insert** button.

Deleting Documents, Pages and Folders

You can delete pages, documents, and folder structures from a case directly from the main form. From a grid display you can delete one or more documents, an entire range of pages in a document, or specific pages from a document.

⚠ If you have deduplication enabled, then it is recommended to enable "Refresh duplicate status after deleting records" (**Tools>Options>Preferences**) prior to deleting documents or folders.

⊟ **To delete documents**

1. Select one or more documents from the document list.

2. Do one of the following:

    • Press the DELETE key.
    Or

- On the **Edit** menu, click **Delete** and then click **Document(s)**.

The **Delete Document(s)** dialog box appears.
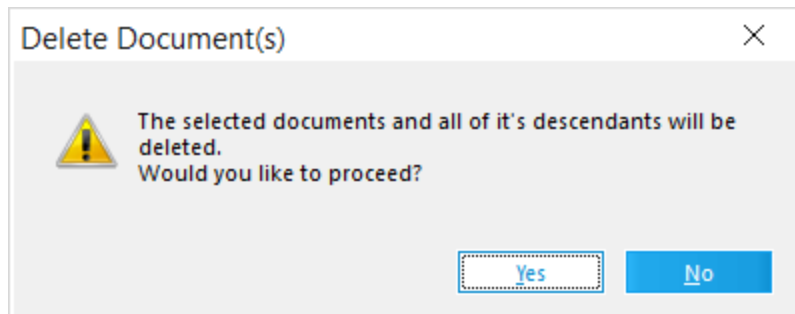
3. Click **Yes**.

⚠ Records that were imported via Turbo Import will delete all records in the family. For example, selecting the second of two attachments and clicking **Delete** will delete all three records (the parent and both attachments).

⊟ To delete pages

1. Select one or more pages from the thumbnails display.

2. On the **Edit** menu, click **Delete** and then click **Page(s)**.

The **Delete Page(s)** dialog box appears.
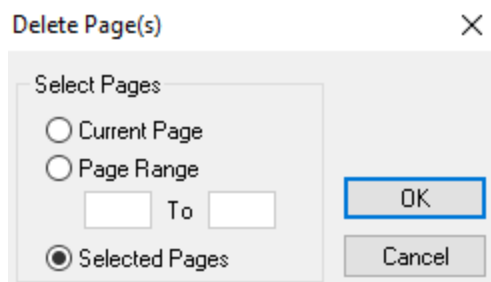
3. Select **Current Page** or enter a range of pages, and then click **OK**.

📝 Please note the following when deleting pages:
- Deleting pages in PDFs is not supported in CloudNine™ LAW.
- If an image has associated OCR text, the deleted pages will be removed from the OCR as well (text-based OCR only) and the remaining OCR pages will be renumbered if page identifiers are found (i.e., <<< Page 1 >>>).

⊟ To delete folder structures

You can delete a folder and all its contents, including subfolders and their contents.

1. From the main window, do one of the following:

   - Right-click a folder and then click **Delete**.

   Or

   - Select a folder and then click the delete button: ![delete button].

   The **Delete Folders and All Subfolders** dialog box appears.
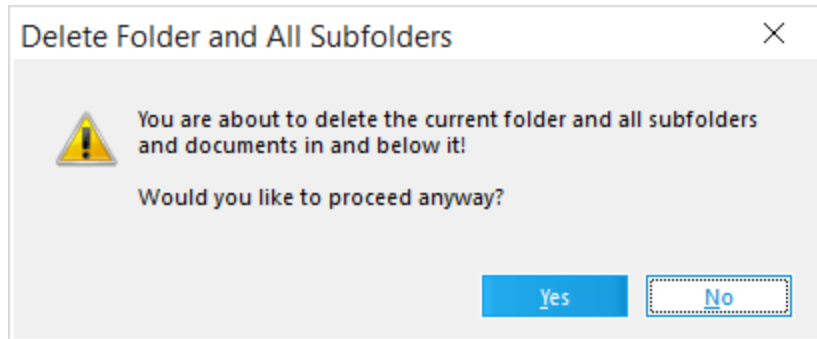
2. Click **Yes** to delete the folder and all its contents or click **No** to cancel.

⊟ To delete records from a grid display

- On either a standalone or embedded grid display, select records to delete and then press the DELETE key.

⚠ Use caution when using this feature as anywhere from one record to all records in the case may be selected at once and deleted from the grids.

Splitting Documents

You can split a document into multiple documents. Splitting may be configured to split every page of a document into its own document. Splitting may also be based on page selection, barcode pages, or by the presence of blank pages.

⊟ To split a document

1. Select a document.

2. On the **Edit** menu, click **Split Document**. You may receive a warning that you could lose metadata and file links if the document you are splitting is electronic.

Split Document

Split Selection Criteria
- ○ Barcode break sheets
- ○ Blank pages
- ● Every page
- ○ Selected pages
  - ☐ Drop selected pages   Configure...

Metadata Options
Metadata retention:
Copy to all records   ▼

☑ Auto number remaining DocID's   OK
Starting suffix: .002   Cancel
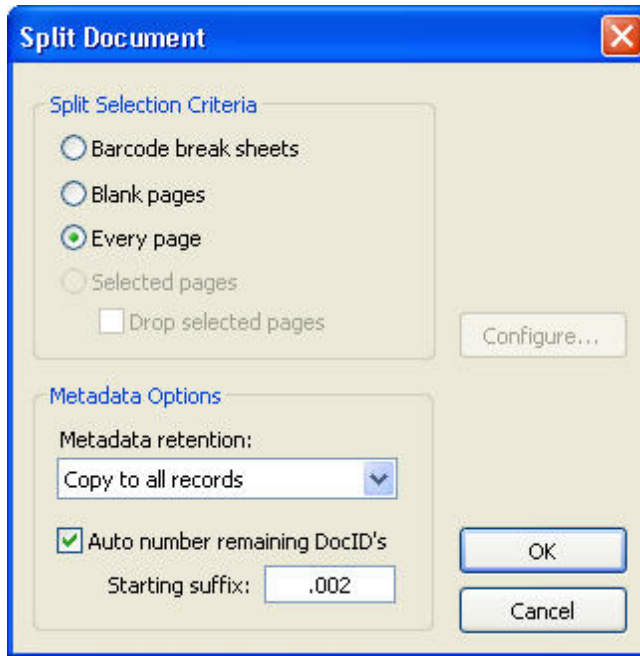
3. Apply options to split documents according to the following table:

Option	Description
Barcode Break Sheets	Processes documents in compliance with any barcode break sheets that are detected, and then removes the barcode break sheets from the page output. • Splits the document if a document break is detected. • Creates a new folder if a folder break is detected. • Separates attachments if attachment sheets are detected. Deletes from the image after being processed. • Click the **Configure** button for more supported barcode settings and types. You can specify break sheet settings from the Imaging tab of the Options form. If no pages with barcode breaks are found, the operation will be canceled. This setting may be useful if the **Detect Barcode Breaks** scan option was disabled while scanning. See the Using Barcodes topic for additional barcode information.
Blank Pages	Removes blank pages from the document. Detection of blank pages may be configured as follows:

Option	Description
	• Click the **Configure** button for blank page filter options. These options are listed as follows: **Pristine White.** Removes pages only if they completely blank and contain no discernable visual noise. This option is best used for electronic documents that were converted directly to TIFF or PDF. Scanned images may require a slightly less sensitive filter. **Dirty White.** Removes pages that are blank even if a small amount of visual noise is detected. Visual noise includes such things as speckles, creases, and folds. This setting is recommended for scans of good or excellent quality scanned documents. **Very Dirty White.** Removes pages that are blank even if a large amount of visual noise is detected. This setting is recommended for scans of poor quality documents. **One Line Acceptable.** Removes pages that contain a single line of text, for example, "This page intentionally left blank".
Every Page	Splits every page of the document into its own single-page document.
Selected Pages	Designates the currently selected pages as the starting page of new documents. This setting is only available if one or more pages are selected. Because the first page (of the current document, prior to splitting) is automatically included as the start of the first sub-document, selection of this page is not necessary.
Drop selected pages	Drops all selected pages. This will also be the case if barcode break sheets or blank pages as the separator pages are manually selected.
Metadata Options (for ED Records)	Use these options for records imported with ED Loader and then converted to TIFF using CloudNine™ LAW. **Discard all metadata.** Removes all ED import metadata associated with the original record, with the exception of the DocID field. This includes important values used to indicate duplicate record status, metadata pulled from the native file, and ED Loader session information. All records created after the split (including the first record) will lose the value used to indicate the file is an ED record. You will no longer be able to perform ED-related operations with these records such as converting to TIFF and exporting native files. **Copy to all records.** Records created by the split inherit the metadata of the original record.

Optio n	Description
	The original native file will be associated with all new records. The native file is not copied; all new records will point to the same file. For new records beyond the first record, this native file link is created by placing the path to the native file into the "NativeFile" field in the LAW case. Because of this behavior, if the newly split records are included in a TIFF conversion process, the same native file will be converted for each of the records involved in the split.
	Copy to first record only - Only the first record created by the split inherits the metadata of the original record. Other records created as a result of the split do not inherit ED Loader metadata, with the exception of DocID. Other user-defined field data is retained for all records.
Auton umber	For any record created as a result of the split operation, this option will automatically number the `DocID` values with a suffix. To use this feature, enable the "Auto number remaining DocID's" setting in the Split Document dialog and enter the value in the "Starting Suffix" field. The default is ".002". The value in the "Starting Suffix" field value will be appended to every record created as a result of the split with the exception of the first, or original, record. The suffix will increment by one for each record.

✎ For non-ED records, the index information from the original document is applied to all new documents. This may cause duplicate values if unique fields are defined, so any duplicate values will automatically be cleared. See below for information on metadata handling for ED records.

Merging Documents

You can can merge two or more documents together. Merging documents can make sense, for example, if each page of a single document is scanned as a series of separate documents. Also, if records that were converted to TIFF are imported, they may arrive as one document per page, in which case you would want to merged page ranges into whole documents.

⊟ **Preparing to merge documents**

Consider the following facts before merging documents:

- **Folder location of target documents.** The documents to be merged must be located in the same folder. If documents in different folders need to be merged, the Move Documents function may be used to move them into the same folder.

⚠ Use caution when merging ED records. Important metadata and file links may be lost depending how the documents are merged.

- **Merge sequence.** The documents will be merged in the same order they appear in the document list. To merge them in a different order, move the documents prior to the merge operation. All PageID information for the pages will be retained when merging documents; however, the index information for the first document will be used as index information for the new document. Be sure to verify this information after the merge.

- **Performance considerations.** Because LAW stores multi-page documents in multi-page image format, the image file has to be physically rebuilt, with all pages from the 2nd to the Nth documents being appended to the first document selected. This can take some time depending on the number of pages being merged. LAW can typically merge 100 pages in less than 5 seconds, but as the number of pages increases, the average time per page increases.

  To cancel this process press the ESC key.

⊟ To merge documents

1. Select two or more documents.

2. On the **Edit** menu click **Merge Documents**.

   Merge Documents is not enabled if a single document is selected.

   If at any time you need to cancel a merge operation, press the ESC key.

Inserting Documents and Pages

You can insert scanned documents, scanned pages, and existing images in the desired locations within the current folder.

⊟ Inserting a document versus inserting a page

The main insertion modes are listed along with descriptions for the best use of each:

- **Inserting a document.** Use this mode when you want to add a document after the first round of scanning is done.

  Insert multiple documents if the **Detect Barcode Breaks** setting is enabled and the pages are separated by barcode break sheets. This feature is important because, unless documents are specified by a query, all processing functions, such as batch processing and exports, are executed in scan order.

- **Inserting a page.** Inserting a page is often used when a page, such as the back of a page, was skipped during the initial scan process.

⊟ **To insert documents within the current folder**

1. Select a document.

2. On the **Edit** menu click **Insert** and then click **Scanned Document(s)**. The document is inserted above the currently selected document.

⊟ **To insert new pages**

1. On the **View** menu click **Thumbnails** or **Page and Thumbnails**.

2. Select the thumbnails display on the main form.
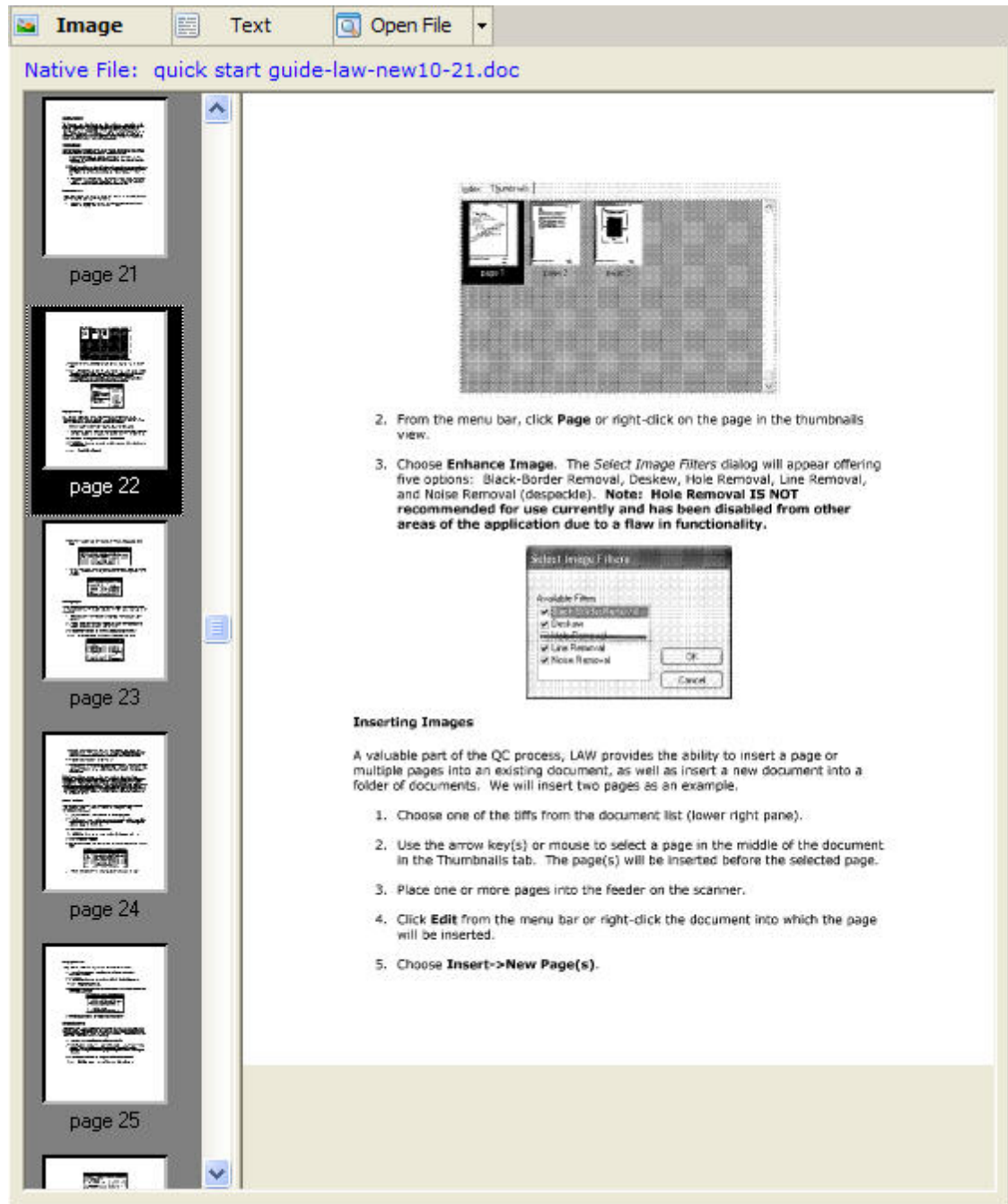
CloudNine™ LAW will always insert a page or document prior to the one highlighted. In the screen image above, a new page would be inserted between pages 21 and 22

2. Click a page that the inserted page will precede and then press the SPACEBAR.

3. On the **Edit** menu, click **Insert**, and then click **New Page(s)**.

⊟ **To insert existing pages**

1. On the **Edit** menu, click **Insert** and then click **Existing Page(s)**,

2. Browse to the image file to be inserted and then click **Open**. The image is inserted as a page in the document above the currently selected page.

Replacing Documents and Pages

The Replace feature inserts a page or document in place of an existing page or document. You use this feature when you need to rescan one or more pages due to quality issues with the initial scan.

📝 The detection of barcode breaks is temporarily disabled when replacing pages, replacing documents, or inserting pages.

⊟ **To replace a document using a scanner**

1. Select the document to be replaced in the document list.

2. Insert the replacement document into the scanner.

3. On the **Edit** menu click **Replace** and then click **Document**.

4. Click **OK**.

   The new or existing document replaces the selected document.

⊟ **To replace a document with an existing document**

1. Select the document to be replaced in the document list.

2. On the **Edit** menu, click **Replace** and then click **Image from File(s)**.

3. Browse to the desired image file and click **Open**.

   The new or existing document replaces the selected document.

⊟ **To replace a page**

Insert the replacement page into the scanner.

1. On the **View** menu click **Thumbnails** or click **Page and Thumbnails**.

2. Select the thumbnails display on the main form.
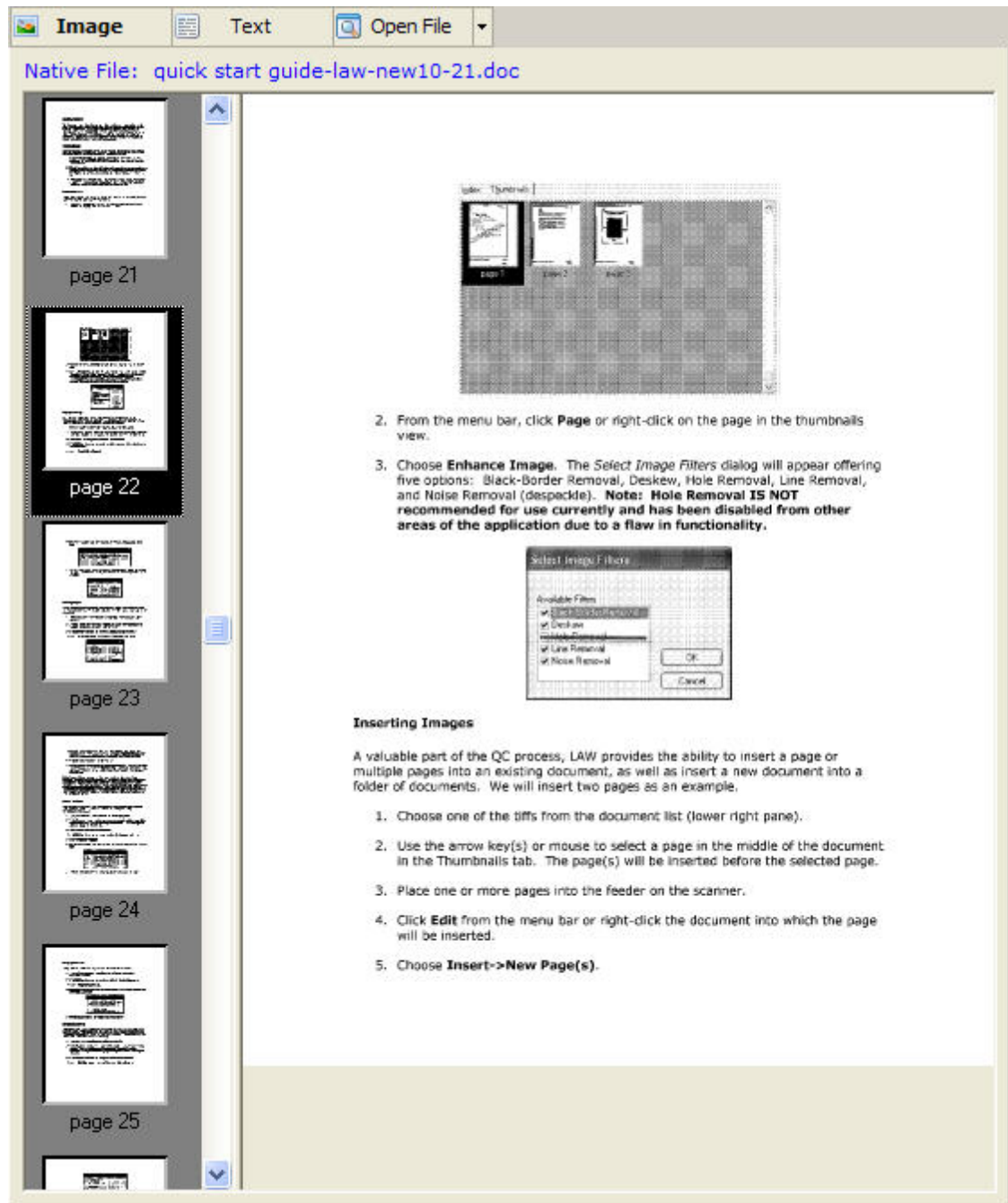
3. Select one or more pages to be replaced and then press the SPACEBAR key.

4. On the **Edit** menu, click **Replace** and then click **Page(s)**.

5. Click **OK**

   The selected page is replaced with the newly scanned page.

Working with Attachments

You have several options for working with document attachments, including:

- Adding attachments to a particular document.
- Removing attachments from documents.
- Performing quality control on attachments to verify that all attachments identified actually exist, and that all attachments have a corresponding parent document.

⊟ **To add attachments**

1. In the document list, select documents to be attached.

2. Do one of the following:

   - Press SHIFT+INSERT.

   Or

   - On the **Edit** menu click **Attachments** and then click **Attach to Previous**.

   All selected documents will be attached to the previous document. The documents to be attached must be consecutive and on the same level if attaching multiple documents.

   This means that all selected documents must be currently unattached and cannot have attachments of their own. Because the documents are always attached to the

previous document, if the parent and documents to be attached are not consecutive, the documents must be rearranged so the documents to be attached are positioned immediately after the designated parent.

⊟ **To remove attachments**

To remove one attachment

1. Select an attachment.

2. On the **Edit** menu, click **Attachments**, and then click **Detach Document**.

   Although multiple documents may be selected, only the current document will be detached. When removing individual attachments from a document with multiple attachments, if an intermediate attachment is removed, it will be shifted down in the document list to the position immediately after the last attachment for the current parent. This is necessary to ensure parent/children integrity.

To remove multiple attachments

1. Select any one of multiple attachments to a document.

2. Do one of the following:

   • Press SHIFT+BACKSPACE.

   Or

   • On the **Edit** menu, click **Attachments**, and then click **Detach All**.

⊟ **To validate attachments**

This function performs checks on the database to ensure that any document marked as a parent has at least one attachment, and any document marked as an attachment has a parent document. LAW automatically corrects any errors found and writes to a log file for later verification. The validate function should be performed on large databases containing many parent/attachment groupings.

How attachments are identified in the database:

The following fields identify attachment information in the LAW 5.0 database:

AttachPID: Identifies the parent ID of the attachment. The ID referenced is the unique ID assigned by LAW to each record scanned or imported into the LAW database.

AttachLVL: References the level of attachment. A zero (0) indicates either a parent record or no attachment and a one (1) indicates a child.

BegAttach: References the beginning number of the attachment. This is the first number assigned to the parent document of the attachment group.

EndAttach: References the ending number of the attachment group. This is the last number assigned to the document page within the attachment group.

AttRange: Provides the range from the start of the parent to the last page of the final attachment.

Attachmt: Populates the parent level only. This is the list of attachments found within the parent document.

To validate attachments

- On the **Edit** menu, click **Attachments**, and then click **Validate**.

Annotating Documents and Pages

You can add annotations to TIFF images. After you create an annotation object, you can then customize its properties. You can later edit your annotations or permanently merge them to the file.

⚠ There is a limit for merging annotations to images. The limit is 9931 pixels by 14045 pixels. If using paper size A0 then you can use up to 300 DPI(Dots Per Inch). If using A4 size then up to 1200 DPI.

⊟ **Overview of annotation tools**
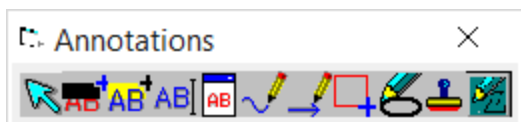
The following tools are available for annotating TIFF images:

- **Select** - Move or resize annotation objects.
- **Redact** - Add a solid rectangle to hide page content.
- **Highlight** - Add a transparent rectangle.
- **Text** -- Add a text box.
- **Popup** - Add a captioned popup text box.
- **Freehand line** - Draw a freehand line.
- **Arrow** - Draw an arrow or a line.
- **Rectangle** - Draw a rectangle or rounded rectangle.
- **Ellipse** - Add an ellipse to the image.
- **Rubber stamp** - Paste an external picture file onto the current TIFF.

- **Line tool** - Draw a polygon.

Annotations can only be added, deleted, or modified if the annotation toolbar is displayed. Displaying the annotation toolbar changes the mouse behavior from image to annotation mode.

To create annotations

1. Select a page.

2. Click the **Image** tab.

   - On the **Tools** menu, click **Annotations**, and then click **Toggle Toolbar.**

   Or

   - Press CTRL+T.

   The toolbar activates.

3. Click one of the tools.

4. Apply the tool to the image.

To save annotations

- Click outside the annotations area and then follow prompts to save the changes.

  Or

- On the **Tools** menu, click **Annotations**, and then click **Save by Default**.

  Annotations are saved automatically when you click outside the annotation area.

After an annotation has been created on a document, you can display or hide the annotations on all documents and you can configure whether annotations will be printed. This option not only affects how the annotations are displayed but how they are printed as well. When the annotations are hidden, the documents can be printed in their original form. If the annotations are visible, any documents containing annotations will also be printed with the annotations visible.

To hide annotations

- On the **Tools** menu, click **Annotations**, and then click **Hide Annotations.**

Or

- Press SHIFT+F12.

To unhide annotations

- On the **Tools** menu, click **Annotations**, and then click **Hide Annotations.**

📝 To suppress printing of annotation, you can also use the **Do not print annotations** option available in the [Print options](#) in the Batch Process utility. If you select this option, annotations will not print regardless of whether they are set to visible or not.

⊟ To merge annotations

Use this function to permanently mark the current document with any annotations that have been applied to it. Annotations that are not merged will be lost if you perform image cleanup.

⚠ Consider the following facts before you merge annotations:
- After the annotations have been merged with the document they cannot be removed.
- Merging annotations converts the image to grayscale.
- By default, you can preserve the color information of the annotation, the images will need to be exported using the Merge Annotations + Retain Color settings in the [Options tab](#) of the Export Utility.
- Popup annotations are merged as an image icon.

  - On the **Tools** menu, click **Annotations**, and then click **Merge Annotations.**
Or
  - Press CTRL+F12.

Annotations on the currently selected page will be merged.

Merging a color annotation onto a B&W document will result in the annotation being converted to a B&W annotation to match the color properties of the document.

⊟ To modify annotation object defaults

You can configure the default properties for common annotation object properties.

1. On the **Tools** menu, click **Annotations**, and then click **Default Properties**.

2. Select a property and then set options as needed:

   - **Line Color**
   - **Line Width -** options are 1, 2, 3, 5, 10, 15 or 20.
   - **Redact Color**
   - **Rubber Stamp** - selects the source image file.
   - **Text Color**
   - **Text Font**

   New annotations will conform to the new defaults.

 ⊟ **To customize an existing annotation**

After you add an annotation you can change its color, add a border and vary other characteristics of its appearance.

- Right-click an annotation and then click **Item Properties**.

   A dialog box opens with settings particular to that object type available for you to configure.

 ⊟ **To enable sticky mode**

Sticky Mode keeps the currently selected tool available after applying the tool to the image. This setting is useful when you need to apply the same type of annotation repetitively. If Sticky Mode is not selected, the mouse cursor will return to the selection tool after each annotation is applied.

- On the **Tools** menu, click **Annotations**, and then click **Sticky Mode.**

Working with Native Documents

Native documents are the source documents upon which electronic discovery is based. They may be PDF files, Word documents, Excel files, or any number of other file types. The main tasks involved in working with native files are: extracting page counts, opening the files in the application registered to open them, inserting new native documents into the case, and converting native documents to TIFF or PDF.

Extracting Page Counts

You can extract estimated page counts without having to print to paper or convert native files to TIFF or PDF. To generate estimated page counts for most common native file formats that have been imported into a case, use the Electronic Discovery Loader (ED Loader) or Turbo Import. Note the following when extracting page counts:

- Page counts are estimated because some source applications are unable to provide an exact page count without actually sending the document to a printer. The page counts returned using this process should only be considered an estimated page count.
- To obtain a more accurate page count, convert the native files to TIFF or PDF, or print the files.
- ED Loader and Turbo Import extracts page estimated counts by opening files in the native application listed in the SourceApp field and retrieving the page count value.

Not all applications support page count extraction. For example, you cannot extract page counts from Microsoft Outlook items. If a page count cannot be extracted, a warning message will be returned to the error log.

To extract page counts

1. Do one of the following:

   - Run a query using Query Builder.

   Or

   - On the **Tools** menu, click **Display All Records**.

2. On the **Tools** menu, click **Extract ED Page Counts**.

   A status window appears.

   After the process finishes, the **Page Count Extraction Complete** message box provides:

   - Number of files processed.
   - Count of pages discovered.
   - Elapsed time.
   - Speed in pages per hour.
   - Number of errors. If errors occurred during processing, you are prompted to view the error log,

3. In the grid display, the **EDPages** column contains estimated page counts.

Applications that support page count extraction

The following table lists source applications and whether they support page count extraction:

Source application	Supports page count extraction?	More information
Adobe Acrobat	Yes	
AutoVue Suite	Yes	
Binary/Hex Printer	Yes	
Corel WordPerfect	Yes	
eDrawings Viewer	Yes	
Image Printer	Yes	Reads the page count from the image.
Internet Explorer	Yes	Uses the alternate HTML engine to calculate page counts. Therefore, the output may not exactly match the output printed with Internet Explorer.
Microsoft Excel	Yes	Page counts for items with a source application of Microsoft Excel are estimated. Estimates are based on the TIFF, PDF, and e-Print Excel print options for the case. **To view print options for Excel** 1. On the **Tools** menu, click **Batch Process**. 2. Click **Options**, click **TIFF Options**, and then click **Excel**.
Microsoft Outlook	No	
Microsoft PowerPoint	Yes	
Microsoft Visio	Yes	
Microsoft Word	Yes	
Quick View Plus	No	
Shell Printer	No	

Source application	Supports page count extraction?	More information
Snapshot Viewer	Yes	
Text/RTF Printer	Yes	
VoloView Express	Yes	Always returns a page count of 1.
<No Source Specified>	No	Always returns 1 page to account for a slip sheet.

Launching Native Files

The Open File drop-down list includes options for reviewing common file types quickly and efficiently using CloudNine™ LAW and AutoVue, Quick View Plus, or Lotus Notes.

Note the following facts when opening native files:

- A viewer application or the native application must be installed to open native files.
- When selecting non-EDD records, the native file review mode options are ignored since native files do not exist for these record types.

🗹 If using Quick View Plus version 9 or later, please see Avantstar's license agreement prior to using this application with CloudNine™ LAW.

⊟ **To open native documents**

After native documents are loaded via ED Loader or Turbo Import, they can be opened from within CloudNine™ LAW or in any associated application installed on the computer.

Open files using any of these methods:

- Click the native file hyperlink located above the **Image** display.

Image	📄 Text	🔍 Open File ▾
Native File: Carolina Power _Light Company Attach.doc ←		
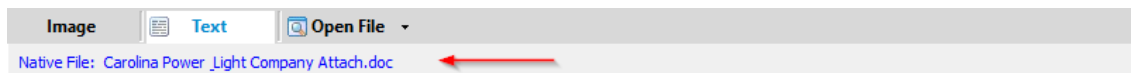
Or

- Right-click the native file hyperlink and then click **Open**.

  When a user clicks the hyperlink to launch a native file, the file will launch in the application that is specified for that document in the SourceApp index field. This field is populated automatically during an ED Loader session and is based on the specifications in the file type database. If the value is set to "<**No Source Specified**>", LAW will attempt to launch the file in the application assigned to this file type in the operating system. If no application is assigned in the OS, LAW will attempt to launch the file in a text editor.

  The native file may also be launched by right-clicking the hyperlink and selecting Open. The application to open the file will be determined using the methods explained in the previous paragraph.

Or

- Click **Open File**. This button is located above the native file hyperlink.
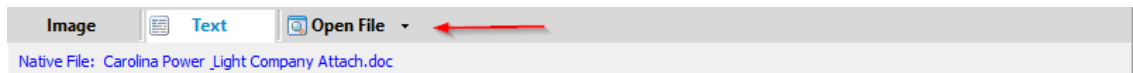
  The **Open File** button is similar to the hyperlink in that it will launch the native file using the application specified in the SourceApp field, in the operating system, or a text editor (see above section for details). However, this option provides more control as it allows the user to choose the application with which to open the native file. To choose an application, click the downward pointing arrow located beside the **Open File** button. Next, choose one of the popular applications in the list to view the file in that application or select "**Choose Program**..." to select any other application installed on the computer.

  Another option available in the **Open File** drop-down list is **Change Source Application**. This option can be used to change the value listed in the SourceApp field for the current document. The change will affect the TIFF Conversion and E-Print processes since the SourceApp values determine the application used when printing or converting the file.

⊟ To open files with viewer applications

In the **Open File** list, click one of the following review modes:

- **Quick View Plus Review Mode** to open the file in Quick View Plus.
- **AutoVue Review Mode** to open the file in AutoVue.
- **Lotus Notes Review Mode** to open the file in Lotus Notes.

When a review mode is selected, the corresponding native files are automatically opened in the selected review mode when a new record is selected. Each file opens in the same window, closing the previously opened file. The active record's DocID is

displayed in the title bar. When viewing files in the selected review mode, the files in the native viewer are synchronized with the corresponding records in CloudNine™ LAW.

⊟ To enable native e-mail review

After import, e-mail messages may be opened by their native applications, regardless of how ED Loader or Turbo Import converted the file during the import process. You can open top-level, parent messages in mail stores as well as top-level loose messages (MSG and EML) on disk.

1. Click the arrow to the right of the **Open File** button. The arrow is located above the image display.

2. Click **Review Parent E-Mails Natively**.

    E-mail files open in the application associated with the file type in the operating system. For example, PST files open in Outlook; NSF files open in Lotus Notes. Mbox mail store files open in Eudora, or whichever Mbox-compatible application you have installed that is associated with that file type. For more information on applications that might be associated with Mbox files, see Importing E-Mail Files.

📝 The mail stores and loose messages must be in their original locations from which they were processed by ED Loader. If they have been moved, LAW will not be able to locate them when attempting to launch the native e-mail. If this occurs, an error message will appear stating the file could not be found and then LAW will launch the version of the file located in the <case root>\$EDD\$NativeFiles folder.

To open e-mail one time in its native application

E-mails can also be opened natively without enabling the **Review Parent E-Mails Natively** option.

• Right-click the hyperlink above the image display and then click **Open Source E-Mail Natively**.

⊟ Reviewing native e-mail

Lotus Notes and Outlook email messages may be opened in their respective native applications after import into CloudNine™ LAW, regardless of how ED Loader or Turbo Import converted the file during the import process. This feature supports top-level, or parent, messages in mail stores as well as top-level loose messages (MSG and EML) on disk.

To review native e-mails

- In ED Loader, right-click the hyperlink above the image display and choosing **Open Source E-Mail Natively.**

Emails open in their native application.

To enable the option to review native e-mail items

1. Click the arrow to the right of the **Open File** button.

2. Click **Review Parent E-Mails Natively**.

   LAW will open e-mails in either Microsoft Outlook or Lotus Notes when launching the files via the hyperlink above the image display or the Open File button.

📝 The mail stores and loose messages MUST be in their original locations from which they were processed by the ED Loader. If they have been moved, LAW will not be able to locate them when attempting to launch the native e-mail. If this occurs, an error message will appear stating the file could not be found and then LAW will launch the version of the file located in the <case root>\\$EDD\\$NativeFiles folder.

⊟ **Working with native files using Windows Explorer**

Native files are stored in a special folder structure within the case folder when imported using the Electronic Discovery Loader or Turbo Import. These files are not stored in the folders that appear in the folder list on the main form but are instead stored within the <case root>\\$EDD\\$NativeFiles folder.

To work with native files using Windows Explorer

To work with native files using Windows Explorer do one of the following:

- On the main form, right-click the hyperlink that is located above the Image display and then select **Open Containing Folder**.

  Windows Explorer opens the folder that contains the native file. The native file is selected.

Or

- In LAW view the **ID** field.
  - In records that reference native files, the ID field value will contain the folder name for the native file.
  - The folder path is relative to the $NativeFiles folder.
  - For example, assuming that the file is a Word document, if a record's ID value is 1234, then the path to the native file would be:

    `<case root>\$EDD\$NativeFiles\00\00\12\34.NTV.doc`

- Note that ID values are padded with zeroes to form an 8-digit number when used for this purpose; for example, an ID value of 1 for a native record would result in a native path of:

`00\00\00\01.NTV.doc`

Understanding how this function works will allow you to browse to the native files when not using the **Open Containing Folder** option.

Inserting Electronic Documents

Inserting an electronic discovery record in an existing folder of records may be useful when you want to add skipped files or when working with unsupported embedded files.

📝 This process is enabled for Electronic Discovery enabled cases only.

⊟ **To insert electronic documents**

1. On the **Edit** menu, click **Insert** and then click one of the following:

- **E-Document(s)**, and then click **Before Current** to insert record(s) before currently selected record.
- **E-Document(s)**, and then click **After Current** to insert record(s) after currently selected record.
- **E-Document Attachment(s)**, and then click **Before Current** to insert record(s) as attachment to the record before the currently selected record.
- **E-Document Attachment(s)**, and then click **After Current** to insert record(s) as attachment to the currently selected record.

ED Loader opens in **Insert Mode**.
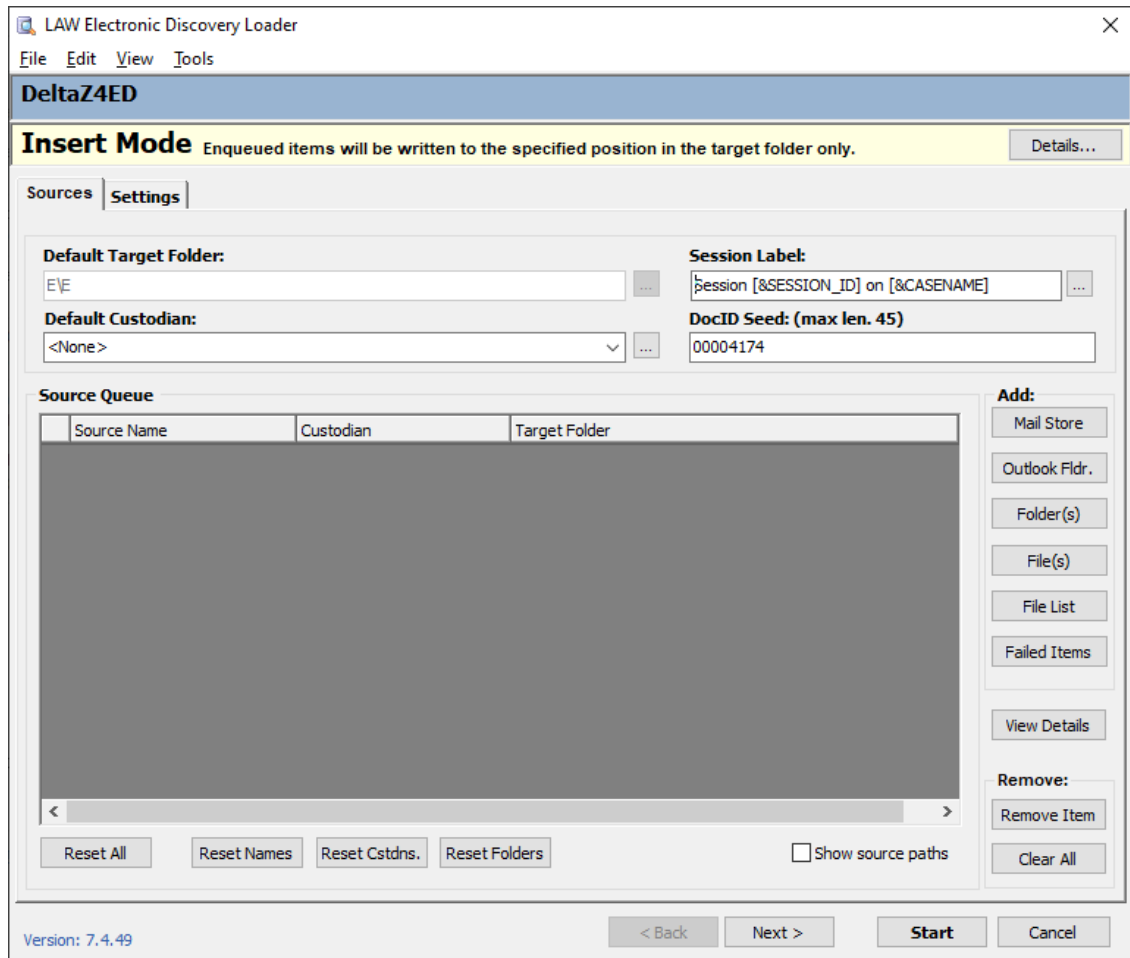
2. Click **Details**.

   The **Insert Mode Details** dialog box appears, indicating where the document will be inserted.

3. Review the information and then click **OK**.

4. Select files to insert.

5. Set any desired options in the **Settings** tab.

6. Click **Start** and then click **OK**.

   The import process starts. The selected file(s) will be imported into the specified location in the case.

📝 The Default Target Folder setting cannot be configured inserting e-documents. The value will be set to the folder that was selected when choosing to insert an e-document.

Converting Documents to TIFF

Single document TIFF conversion, also referred to as *manual TIFFing*, makes it easy to review a native file, make adjustments if needed, and process (or re-process) to TIFF. Once printed, users can review the image and choose to either save or discard it. Saving the image will commit the image to LAW by either replacing an existing image or by inserting the image, depending on whether or not an image previously existed for that record.

This feature provides a simple method of opening and printing otherwise unsupported file types, provided the native application is installed on the machine. This feature is also useful when reviewing and re-processing "problem" supported file types.

Multiple options should be reviewed prior to using this method of converting to TIFF images:

- Decide whether to store the resulting image as serialized (single-page) or multi-page.
- Decide whether or not to generate printed text, that is, text created during a TIFF conversion when using the LAW Image Driver.
- Determine the desired color reduction setting.
- Decide whether or not to drop blank pages.

⚠ When you are doing single-document TIFF conversion, the time zones that are associated with image files do not automatically adjust to match the time zones of the native files. In such circumstances, if you need dates to match between the native files and image files, you can manually change the time zone on your system prior to printing to match the time zone of the native files.

⊟ **To configure options for batch TIFF conversion**

1. On the **Tools** menu, click **Batch Process**.

2. In the **Batch Processing** dialog box, click **Options**, and then click **TIFF Options**.

3. Select the **TIFF Output** category.

4. In the **Active Driver** list, click one of the following print drivers:

   - **LAW Image Driver**
   - **LAW Image Driver 300 DPI**

5. Set the other TIFF output options as needed and then click **OK**.

For more information about the TIFF output options, see [Output Settings for E-Print, TIFF Conversion](#).

6. Close the **Batch Processing** dialog.

   The selected options will now apply to the single document TIFF conversion process in addition to the batch TIFF conversion process.

⊟ **To convert a single document to TIFF**

1. Select a document to be printed from its native application.

2. Above the image display on the main form, click the hyperlink or click **Open File**.

3. In the native application, print the file.

4. In the print dialog box, select the **Informatik Image Driver** or the **LAW Image Driver**.

5. Click **Properties** to adjust settings, as needed.

6. Print the file.

   After the file has been converted to a TIFF image, the **Image Acquired** dialog box appears.
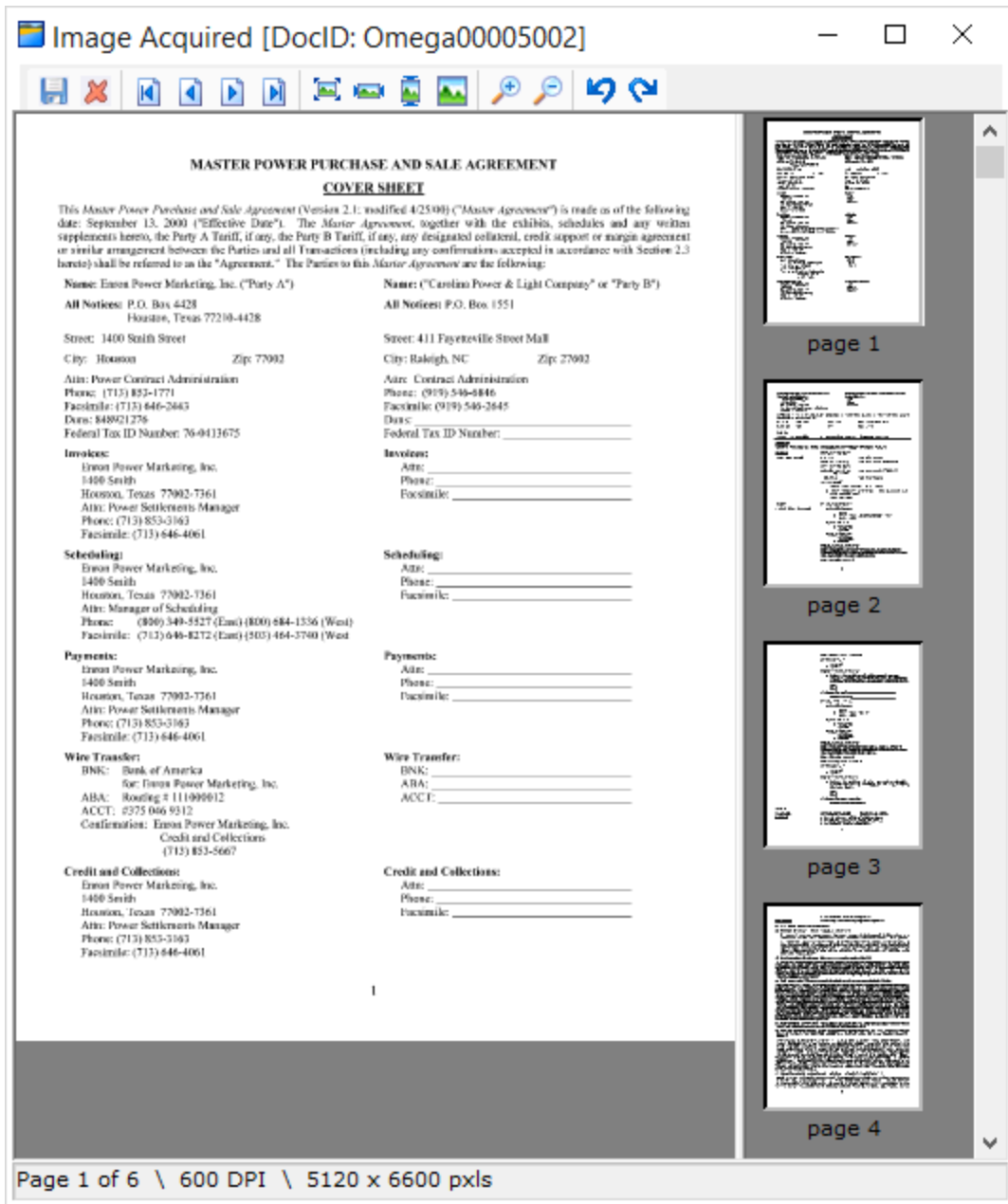
7. If the image is acceptable, click the **Save the Image** button, .

    Clicking the **Save the Image** button adds the TIFF image to the selected record.

    If you want to discard the TIFF image, click the **Discard the Image** button, .

Grid Displays

The grid displays in LAW are simply spreadsheet views that you can configure to show metadata associated with documents and pages. Grids help to fulfill major discovery functions, including: querying and analysis, quality control, tagging, batch processing, and reporting.

Each row of a grid holds the data for a record. Each record corresponds with an individual document or page. Each row is divided into multiple columns, also called *fields* or *index fields*, which hold metadata about the record, such as its document ID, page number or file type.

Launching the Grids

CloudNine™ LAW provides two kinds of grid:

- **Embedded**. In an embedded grid, search results are displayed in a panel that is integrated into the main window of CloudNine™ LAW. Because this view shares the main window with other tools, it can be most useful when working with a limited number of fields or shorter sets of query results.
- **Standalone**. In a standalone grid, search results are displayed in a window that is separate from the main window. Because this view occupies its own window, it can be most useful when you want to work with many fields or longer sets of query results.

⊟ **To open a grid**

1. From the main window, on the **Tools** menu, click **Search Records**. The **Database Query Builder** dialog box opens.

2. Configure a query to select specific records, or to return all records, leave the query with its default settings.

3. In the **Send Results To** list select one of the following:

   - **Grid View (Embedded)**. Returns query results to the embedded view.
   - **Grid View (Standalone)**. Returns query results to the standalone view.

4. Click **Execute**. Query results are returned to an embedded grid or a standalone grid.

⊟ **Other methods for starting grids**

To start a grid use one of the following methods:

- On the main toolbar click the globe button: .

Or

- On the **Tools** menu, click **Display All Records**.

  All records in the case are listed.

Or

- On the **Folder** menu, click **Grid View**.

  The records in the currently selected folder are listed.

Or

- On the **Folder** menu, click **Grid View (Recurse)**.

  The records in currently selected folder and its subfolders are listed.

Or

1. On the main form click the **Grid View** button.

2. Click **Yes** in the prompt to run a search to populate the grid. The **Database Query Builder** appears.

   - To show results in the embedded grid, select **Send results to grid on main form.**
   - To show results in a standalone grid clear **Send results to grid on main form.**

3. Add any additional search criteria and then click **Execute**.

📝 Full text searches cannot be returned to the embedded grid. When **Full text search** is selected, **Send results to grid on main form** is disabled.

⊟ **To set a default grid**

You can set as default your own preferred grid view.

1. On the **Tools** menu, click **Options**.

2. Click the **Preferences** tab.

3. Select **Send query results to grid on main form by default**. Results for new queries will be sent to the embedded grid view.
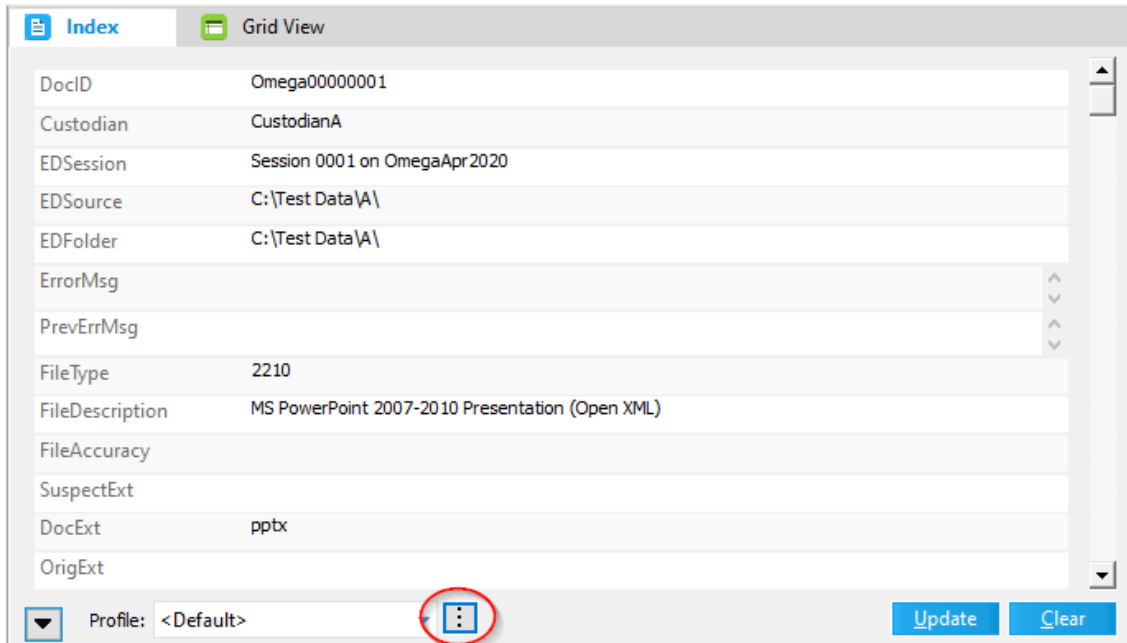
Customizing the Grid View

You can change how the grid shows or hides columns, adjust column width and row height, and change the colors used. You can also make fields visible or hide fields. You can also view any extended properties or Office properties associated with a document.

⊟ **To show or hide fields**

To show or hide fields in the embedded grid

1. From the main form, on the **Index** tab, click the **...** button next to the **Profile** list.

2. In the **Modify Fields** dialog box, select or deselect **Visible** on fields to make them visible or hidden.
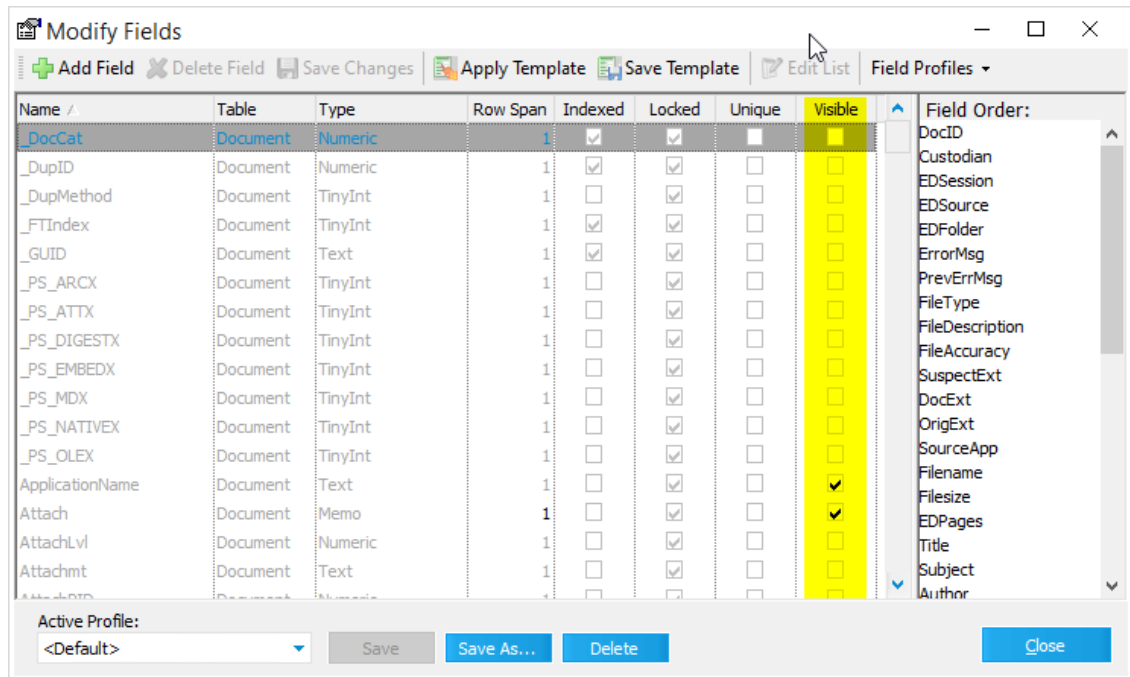
3. Click either **Save** to keep the fields you selected visible in the current profile, or click **Save As** and then create a new grid profile.

4. Close the **Modify Fields** dialog box.

Any field with **Visible** selected in the previous steps can be seen the next time you display the embedded grid.

To show or hide fields in the standalone grid:

1. From within a grid view, right-click any column heading. The **Field List** dialog box appears.

Field List

- TextXStatus
- ThreadID
- TiffStatus
- TimeAccessed
- TimeAppEnd
- TimeAppStart
- TimeCreated
- ☑ TimeLastMod
- TimeLastPrnt
- TimeRcvd
- ☑ TimeSent
- TimeZoneProc
- ☑ Title
- ☑ To
- Unread
- UserId
- Volume
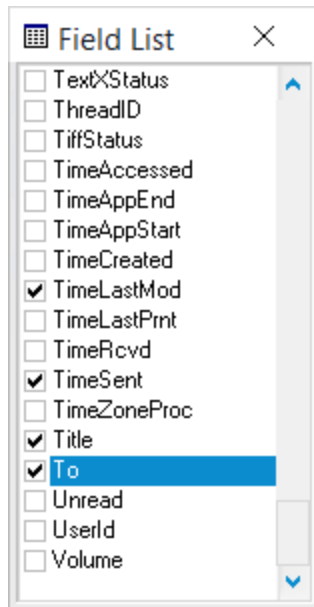
2. Do the following:

   - Select any field you want to show.
   - Deselect any field you want to hide.

To view extended properties

Custom metadata found in imported documents is placed into special fields called extended properties. You can use grid controls to view the extended properties of documents.

To view extended properties, you must customize the view of the grid control. Then, you can identify any extended property by looking for those preceded by *EP*. For example, if you import a Word document that contains a value of *Jones* in its *Typist* field, LAW will create a new field for the case called *EPTypist* and populate the field for that document with the value *Jones*.

To view extended properties from the embedded grid

1. From the main form, on the **Index** tab, click the **...** button next to the **Profile** list.

2. In the **Modify Fields** dialog box, scroll down to find fields that begin with **EP**.

   Fields that begin with **EP** contain extended property data. These fields can also be identified by looking at the **Table** column. Any field belonging to the **Extended** table is an extended field.

3. Select **Visible** on extended property fields as needed.

4. Click either **Save** to keep the fields you selected visible in the current profile, or click **Save As** and then create a new grid profile.

5. Close the **Modify Fields** dialog box.

The extended fields you selected will be visible the next time you display the embedded grid.

To view extended properties from a standalone grid

1. From the main form, on the **Tools** menu, click **Display all Records**.

   • Or click the Globe icon.

   A standalone grid opens.

2. Right-click one of the column headings.

   The **Field List** appears.

3. Select **HasExtProps**. The **HasExtProps** column appears in the grid. You might have to scroll left or right to find the column.

4. Drag the **HasExtProps** column to the grouping area.
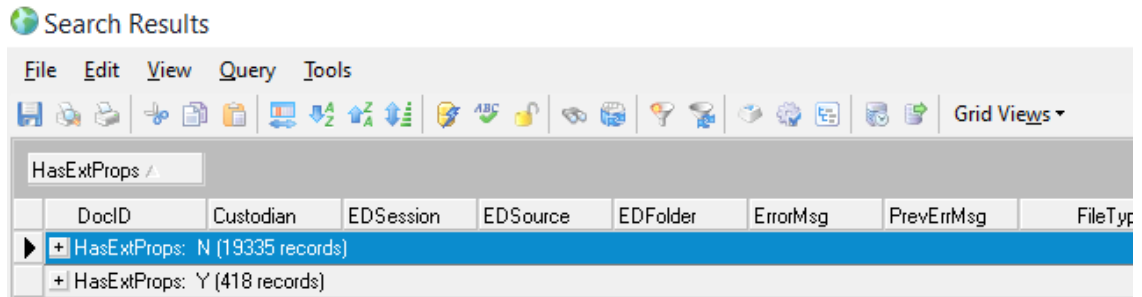
5. Expand the **HasExtProps** record set.

6. Select any record with **HasExtProps** set to **Y**.

7. On the **View** menu, click **Extended Properties**.

   A panel opens to the right of the main grid window. Any extended properties that exist for the selected document are visible.
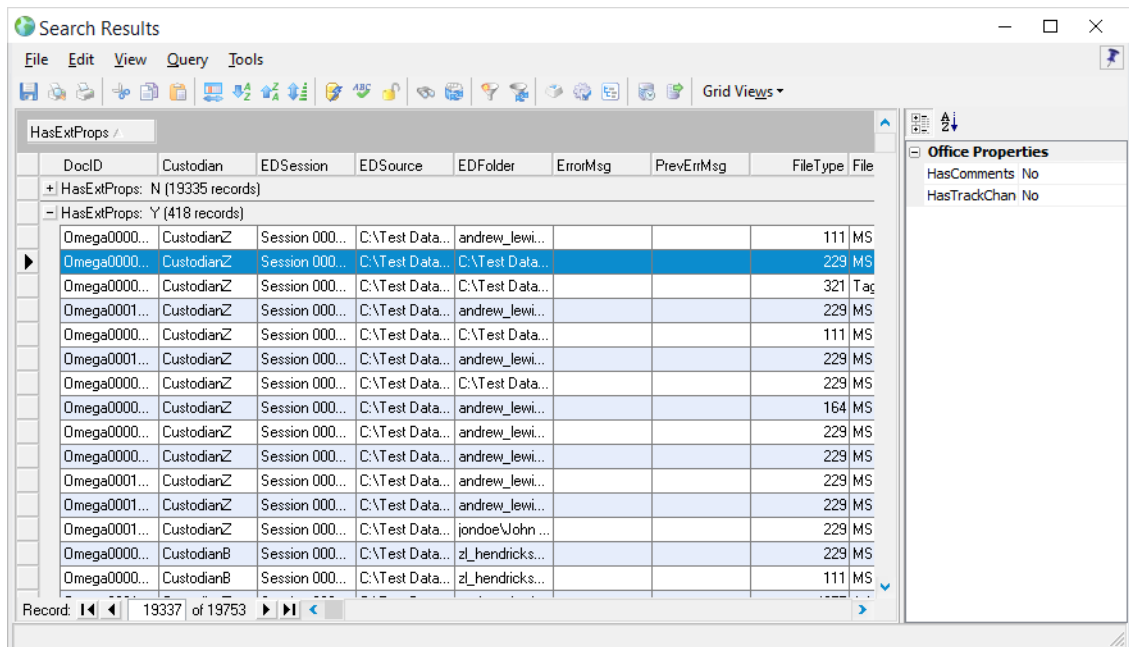
⊟ **To move a column**

1. From within a grid view, right-click any column heading.

2. Do one of the following:

• Manually select a column heading and drag it to a new location.

Or

- Right-click a column cell and then select either:
  - **Send Column Left-most**. Moves the column to the first position on the left in the grid.
  - **Send Column Right-most**. Moves the column to the first position on the right in the grid.

  If you close the grid you are prompted to save the change to the current grid profile. For more information on grid profiles see: Managing Grid Views.

To change column width

1. From within a grid view, click and drag either edge of a grid column heading. Release the mouse button when the column heading reaches the width you want.

   Or
   - From either an embedded grid or a standalone grid, right-click within a column cell and then select Shrink Column to Window. The width of the column adjusts to the space available in the window.

To change row height

- Click and drag the top or bottom edge of any row. Release the mouse button when the row reaches the height you want.

To move columns, rows, and cells

Columns and rows can be manipulated in a number of ways to make certain aspects of quality control easier and more efficient.

- **To move a column**. Click and hold the column header and then drop it to the desired location.
- **To move a column to the right-most position in the grid**. Right-click any cell in that column and then click **Send Column Right-most**.
- **To move a column to the left-most position in the grid**. Right-click any cell in that column and then click **Send Column Left-most**.

To change grid colors

1. From a standalone grid, in the **View** menu, select **Grid Colors**.
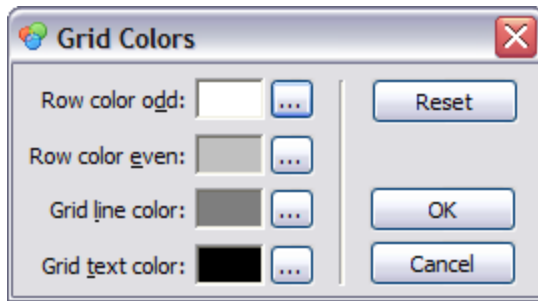
The **Grid Colors** dialog box opens.

2. Click the button next to any of the following:

   - Row color even
   - Row color odd
   - Grid line color
   - Grid text color

3. In the **Color** dialog box, select a color and then click **OK**.

4. Click **OK** again to save your selection.

📝 Note the following:
   - While you are editing the grid colors, if you click the **Reset** button the currently selected grid colors return to the colors selected when you opened the **Grid Colors** dialog box.
   - If you close the **Grid Colors** dialog box, grid colors change to those you selected. The colors persist when you close the grid and then re-open it. They also persist in the embedded grid view.
   - If you then re-enter the grid, open the **Grid Colors** dialog box, and then click **Reset**, the colors will not change to their original defaults. The colors do change to their values that were in place when you opened the dialog box.

⊟ **To sort grid records**

In the standalone and embedded grids, you can sort records based on one or more visible index fields.

To sort by a single field when the grid is not grouped

In the column by which want to sort, click a cell and then do one of the following:

   - On the **Tools** menu, click **Sort Records**, and then click **Ascending** or **Descending**.
   Or

- Click either the **Ascending** ( ) or **Descending** ( ) button located on the grid toolbar.

To sort by a single field when the grid is grouped

When the grid is grouped, you will need to use the column headers to sort the grid, because sorting the grid from the grid toolbar will cause you to lose the grid grouping. For more information about grouping search results, see Grouping Search Results on a Grid.

1. Click the column for the field you want to use to sort the records.

   By default the records are sorted by the field in ascending order. When fields are sorted in ascending order, the up arrow is displayed next to the field name in the column header.

   The down arrow is displayed next to the field name when the records are sorted in descending order.

2. To sort the records by the field in descending order, click the column again to resort the records by the field in descending order.

   The sort order is retained when grouping by one or more fields, and groupings are retained when sorting by a field from a column header. For example if you sort the records by the DocID field, and group the records by the DocExt field, the records will be grouped by file extension, and the records listed under each file extension will be listed in DocID order.

To sort by multiple fields

You use the Advanced Sort feature to sort by up to four index fields at one time. A different sort direction may be specified for each of the four fields: ascending or descending.

1. On the **Tools** menu, click **Sort Records**, and then click **Advanced Sort**.

   Or

   • Click the **Advanced Sort** button on the toolbar ( ).

   The **Advanced Sort** dialog box appears.
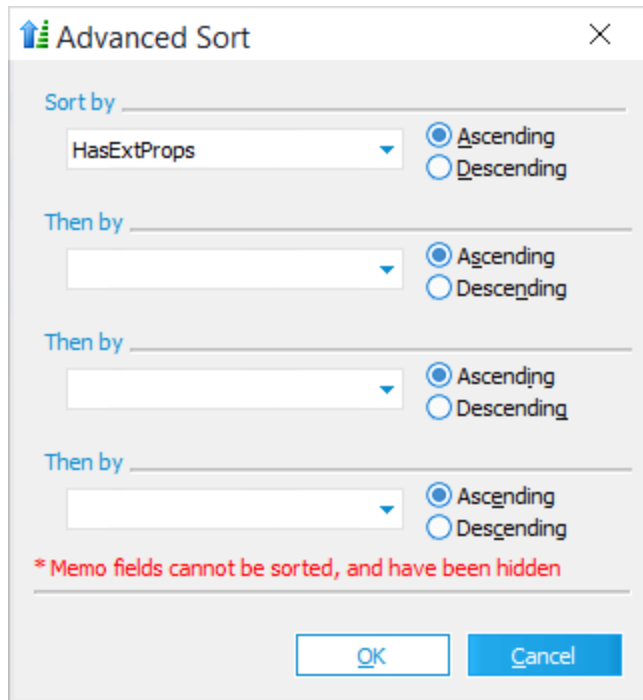
2. Choose fields from one or more of the drop-down lists.

   Note the following:

   • Memo fields cannot be sorted and therefore will not appear in the lists.

   • Records are sorted in the order in which they appear in this dialog box. For example, in the above image, records would first be sorted by DateSent in Ascending order, then by From (Descending), then by EDFolder (Ascending), then by Importance (Descending).

3. Click **OK** to apply the sort to the current set of records.

⊟ <u>**To view attachment fields**</u>

1. From the main form, on the **Tools** menu, click **Display all Records**.

   • Or click the Globe icon.

   A standalone grid opens.

2. On the **View** menu, click **Attachment Fields**.

3. Scroll to the far right of the grid.

   The following fields are now available: **BegAttach**, **EndAttach**, **AttRange**, amd **Attachmt**.

4. Right-click on a column header to display the **Field List** and then select **AttachPID** and **AttachLvl** fields.

5. Interpret values shown in these fields as follows:

- **BegAttach**

    References the beginning number of the attachment. This is the first number assigned to the parent document of the attachment group.

- **EndAttach**

    References the ending number of the attachment group. This is the last number assigned to the document page within the attachment group.

- **AttRange**

    Provides the range from the start of the parent to the last page of the final attachment.

- **Attachmt**

    Populates the parent level only. This is the list of attachments found within the parent document.

For more information about these fields, please see the Field Descriptions topic.

Filtering Search Results on a Grid

You can filter the records shown in a grid based on the values stored in fields. Filtering can be performed on the entire database or on search results.

The grid displays do not currently support Unicode. However, Unicode data can be displayed by resting your pointer over a cell containing Unicode. The Unicode data appears in a pop-up text box beside the cell. For more information about support for Unicode in CloudNine™ LAW, see: Unicode Support.

To filter records

1. Open a grid display.

2. Do one of the following:

- To return all records that match the value in a cell, right-click the cell, and then click **Filter by Selection**.
- To return all records that do not match the value in a cell, right-click the cell, and then click **Filter Excluding Selection**.
- To return all records containing duplicate values in a specific field, right-click any cell in the field's column, and then click **Filter by Duplicate Values**.

You can also filter records by duplicate values by clicking **Find Duplicate Values** from the **Tools** menu on the main window. For more information, see To filter records by duplicate values in this topic.

For example, to view only records with the .xls file extension, you would right-click one of the cells containing xls, and then click **Filter by Selection**.
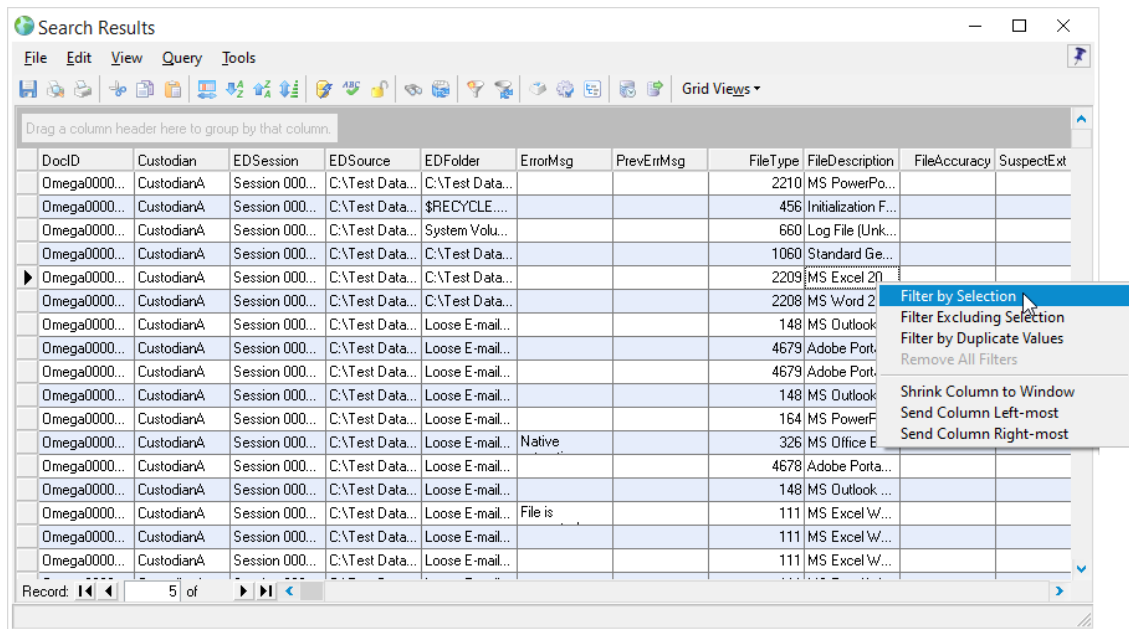
Clicking **Filter by Selection** filters the search results so that only records containing files with the .xls file extension are displayed.

3. Add more filters on the search results as needed.

📝 To process the filtered documents, launch the Batch Process or Export Utility from the grid; only the current record set will be selected for processing.

To filter records by duplicate values

In addition to filtering records using the **Filter by Duplicate Values** menu selection in the grid view, you can also locate duplicate values within specific case fields using the Find Duplicate Values menu selection on the Tools menu in the main LAW window.

1. In the main window, on the **Tools** menu, click **Find Duplicate Values**.

   Clicking **Find Duplicate Values** opens the **Select Target Field** dialog box.
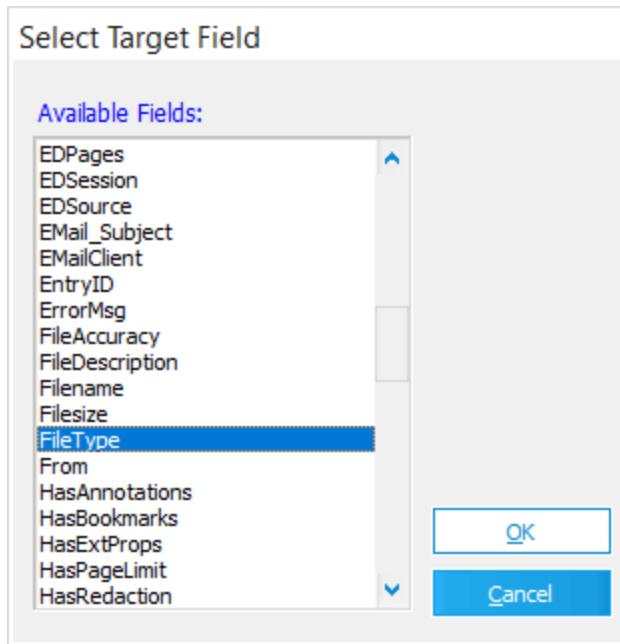
2. In the **Available Fields** list, click the field where you want to find duplicate values.

3. Click **OK**. Your search results are opened in the grid view. All records containing duplicate values in the selected field are listed in the search results.

    Null values are not considered when identifying duplicate values in a field. If there are no duplicate values in the selected field, the *No records were found for the specified query.* message is displayed.

4. To sort the duplicate values in the selected field in ascending or descending order, click the field's column header to sort the records.

⊟ To remove a filter

You can remove filters to view the original set of records returned for the search results.

1. Right-click any cell in the grid. The filtering options appear.

2. Click **Remove All Filters**.

Grouping Search Results on a Grid

You can group search results based on field values. This feature is useful when you want to view records organized by field values for the purpose of analysis or review.
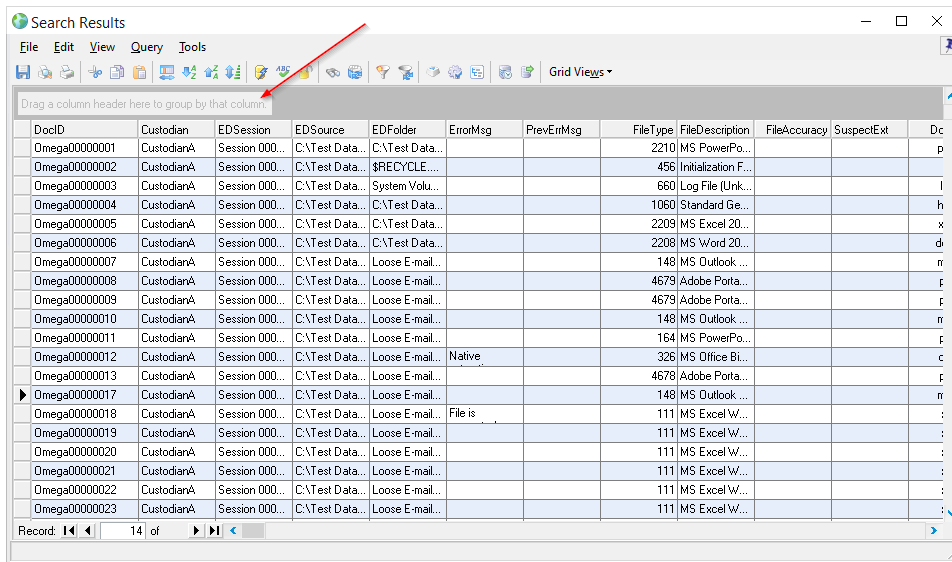
The number of records that contain a particular value is listed beside the value for each group.

The following table describes how to work with grouping records:

When you want to do this	Perform these steps
View grouped records. Add a group.	1. Start a grid view. 2. Drag the column header of the field you want to group by into the grouping area. The grouping area is located just above the column headers. Documents are grouped by each unique value found in that field.
Add a second level of grouping.	• With one or more groups already added to the grouping area, select a field and then click and drag it into the grouping area.
Expand an individual group.	• Click the plus sign **(+)**. When a top-level group is expanded, a second grouping will appear below it. Up to four levels of grouping may be applied at one time.
Collapse an individual group.	• Click the minus sign **(-)**.
Expand or collapse all groups.	• Right-click any group and then select either **Expand All Groups** or **Collapse All Groups**.
Remove groups.	• To remove a single grouping, click and drag the column header from the grouping area to the area containing the column headers.

When you want to do this	Perform these steps
	• To remove all groups at once, right-click on any grouping in the grid and then select **Clear All Groups**.

Managing Grid Views

After you close a grid, if you changed certain grid properties, you are prompted to save the properties to a grid profile. A grid profile captures: visibility and placement of fields, column width, and row height.

When you save a grid profile you give it a name and set its access level. The access level can be set to one of three levels:

- **User** - Available to the current user in the current case. Stored in the case folder structure ($UserData). A profile of this type may be deleted only by the user who created it.
- **Shared** - Available to any user in the LAW case in which the profile was created. If a profile is shared, LAW will automatically display "(Shared)" after the profile name. This profile is also stored in the case folder structure ($UserData). A profile of this type may be deleted by any user.
- **Global** - Available to any user in any LAW case. If a profile is global, LAW will automatically display "(Global)" after the profile name. Global profiles are stored in <application path>\Shared folder. A profile of this type may be deleted by any user.

📝 The grid displays do not support Unicode. However, Unicode data can be displayed by resting your pointer over a cell containing Unicode. The Unicode data appears in a pop-up text box beside the cell.

⊟ **To create a grid profile**

1. From within either type of grid, change the visibility of fields, their placement, the width of any column, or the row height. For more information on making these changes see: Customizing the Grid View.

2. If using either type of grid, on the grid view menu bar, click **Grid Views** and then click **Manage Views**. If you are using a standalone grid you may alternatively click the **View** menu, click **Grid Views** and then click **Manage Views**. The **Manage Grid Views** dialog box appears.
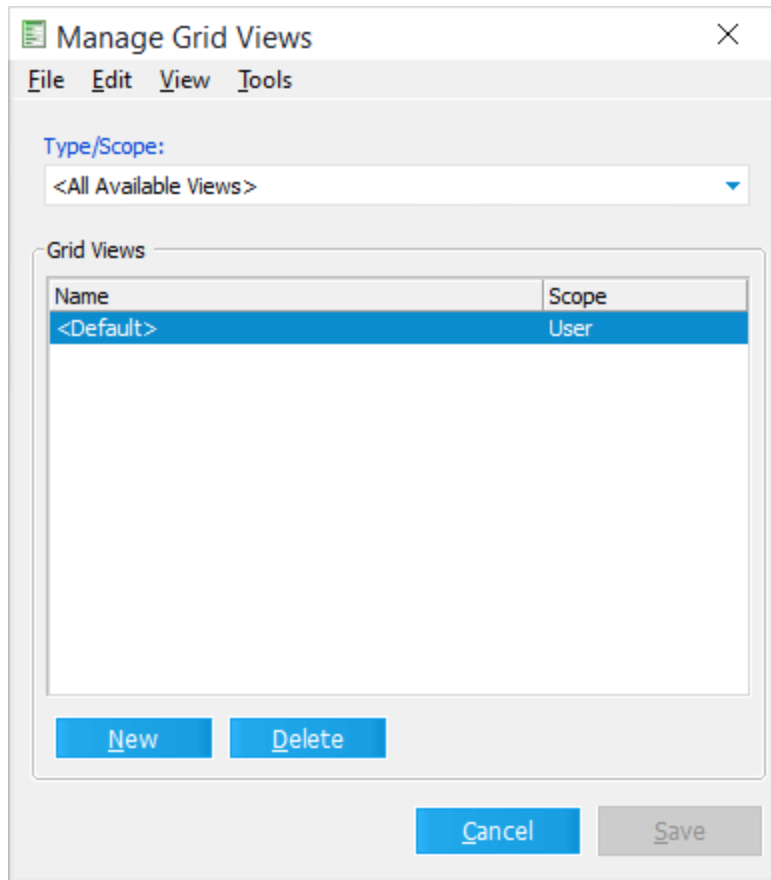
3. Click **New**.

4. Type a name for the profile.

5. Click the list next to the name field and then select a scope.

6. Click **Save**.

To modify an existing grid profile

You can modify any grid profile, including the <Default> profile.

1. From either type of grid, on the grid menu, select **Grid Views** and then select a grid profile.

2. Change the column placement, visibility of fields, or row height of the grid as needed.

3. Again, on the grid menu, select **Grid Views** and then click **Manage Grid Views**.

4. Click **Save**.

⊟ **To switch profiles**

You can switch between profiles. When you switch profiles, the settings for the newly selected profile are loaded.

- In the active grid, on the **View** menu, click **Grid Views** and then select a grid view.

⊟ **To delete a grid profile**

If the scope of a grid profile is set to Shared or Global, then the profile may be deleted by anyone. A profile created at the level of User may be deleted only by the user who created it. The <Default> profile may not be deleted.

1. In a grid display, on the **Views** menu, click **Grid Views** and then click **Manage Views**. The **Manage Grid Views** dialog box appears.

2. Select a profile to delete.

3. Do one of the following:

    - Press the DELETE key.

    Or

    - On the **Edit** menu, click **Delete**.

⊟ **To change the default path for global queries and profiles**

To share a global profile among multiple computers,you place the file that holds the profile on a network share that is accessible to all computers. Then you can open LAW on each computer and configure the default path to point to the file located on the network share.

The new path becomes the default for each of the following:

- Global queries
- Global index field profiles
- Global grid profiles

1. From the main window in CloudNine™ LAW, on the **Tools** menu, click **Options**, and then click the **Preferences** tab. The **Preferences** tab appears.
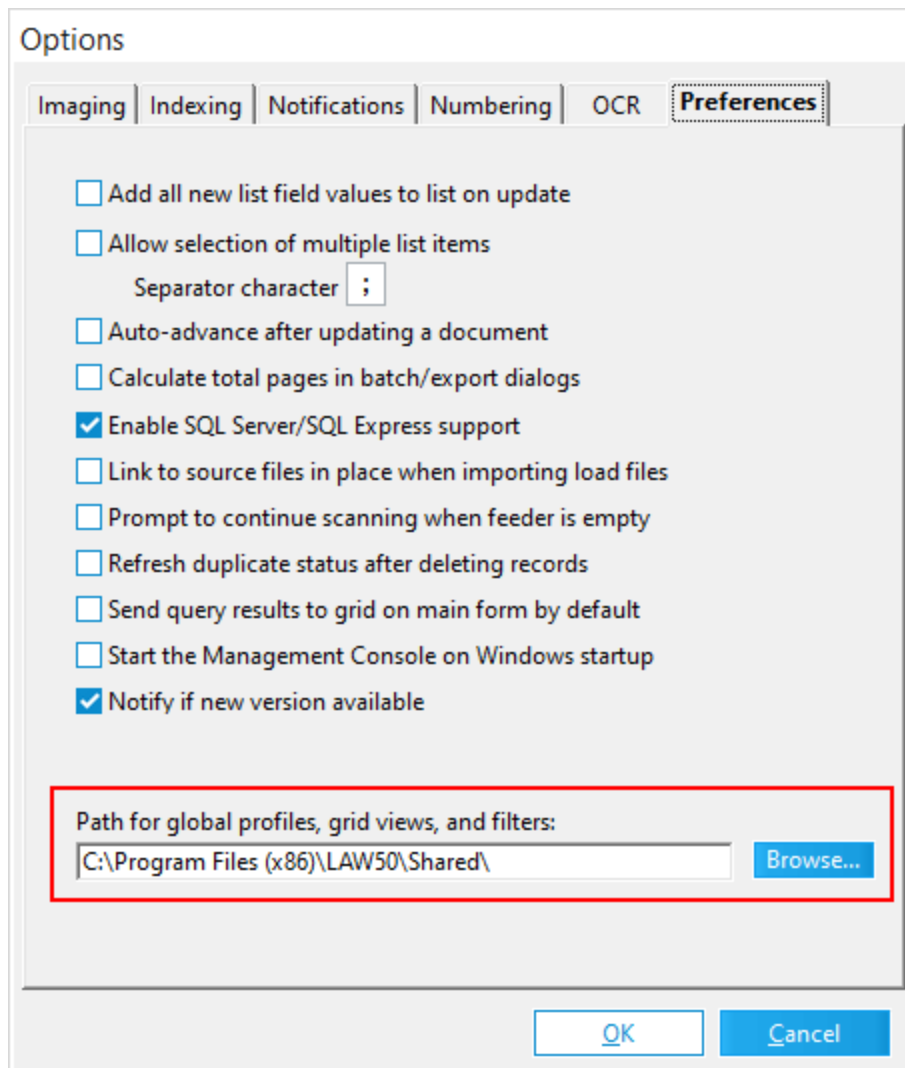
2. Click **Browse**.

3. Type a network path or select a folder.

4. Click **OK** and then click **OK** again.

5. Switch to Windows Explorer.

6. Copy the folders in C:\Program Files\LAW50\Shared\.

7. Paste the folders to your newly chosen folder.

Grid Functions

This topic describes procedures for working with grid data and viewing grid reports.

📝 The grid displays do not currently support Unicode. However, Unicode data can be displayed by resting your pointer over a cell containing Unicode. The Unicode data appears in a pop-up text box beside the cell.

⊟ **To copy contents between columns**

The contents of a grid column, can be copied into another column.

1. Make sure a field to accept the incoming data has been created.

2. Start a standalone grid.

3. Click the column header of the source field.

4. On the **Edit** menu, click **Copy**.

5. Click the column header of the destination field. Note that LAW will not copy data into locked or system fields.

6. On the **Edit** menu, click **Paste**.

7. Click **Yes** to proceed with the copy.

⚠ Copying data into a field of a different type (e.g. memo to text) in this manner could result in a loss of data.

⊟ **To save grid data to file**

You can save the visible field data that is displayed in a grid. Saving grid data to a file is useful when you want to work with grid data in a word processor or spreadsheet. Only fields visible in the grid will be included in the output file.

Text formats
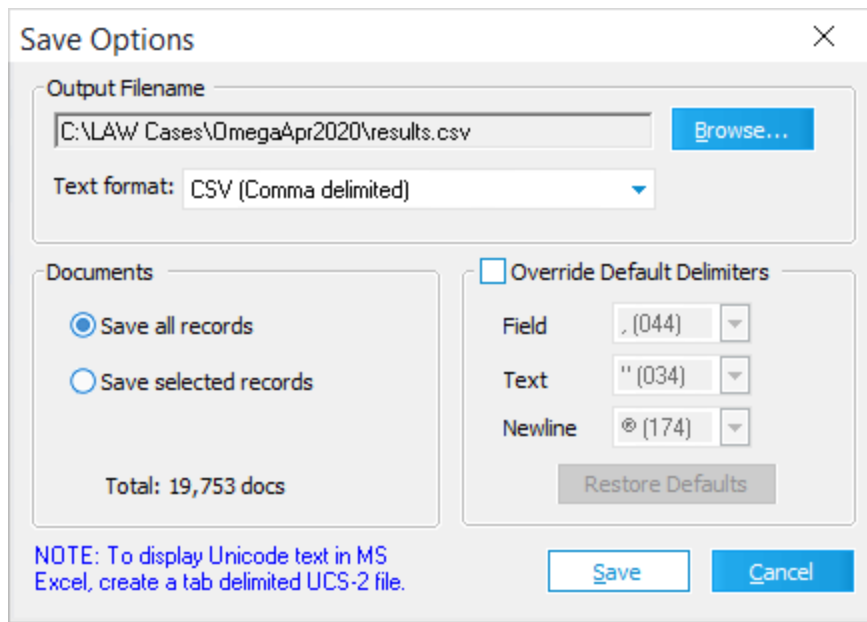
CloudNine™ LAW can save grid data to a text file encoded using any of the following text formats:

- Comma separated value (CSV): ANSI. Can be imported into Microsoft Excel.
- Tab delimited: ANSI. Can be imported into Microsoft Excel.
- Tab delimited: Unicode UCS-2. This format can be opened directly with versions of Microsoft Excel.

- Tab delimited: Unicode UTF-8. Can be imported into Microsoft Excel.

📝 If you want to open the file directly using a version of Microsoft Excel, using the **Tab delimited: Unicode UCS-2** format is recommended. To open a file saved to a different format using Excel, try opening a new spreadsheet in Excel first, and then import your file using the data import function within Excel.

To save grid data to file

1. From a grid, on the **File** menu, click **Save**, or click the Save button in the toolbar. The **Save Options** dialog box appears.

2. Configure options for saving the file. These options are described as follows:

When you want to do this	Perform these steps

Save the file to a different location or change the name of the file.
 	
The default path and file name for saving grid data to file is:
`<current case`
	1. Click **Browse**.
	
	  The **Save Results As** dialog box appears.
	
	2. Select a new location to save the file, type a different filename, or change the text format for the file.
	
	3. Click **Save**.
	
	  The **Save Results As** dialog box closes. The **Save Options** dialog box is still open. Note that your selections are saved.

When you want to do this	Perform these steps
	`path>\results.c` `sv.`
Change the text format of the output file.	Click the **Text format** drop-down, and then select the text format for the output file.
Choose between saving all the records in the grid or just the records that are highlighted.	Select either: • **Save all records**. Saves all the records showing in the grid. Or • **Save selected records**. Saves just the records that are highlighted in the grid. If no records are highlighted, then only the currently selected record is saved.
Specify text delimiters other than the defaults.	Select **Override Default Delimiters** and then, as needed, select new characters to use to specify fields, to surround text, and to indicate new lines.
Reset text delimiters to their default values.	Select **Override Default Delimiters** and then click **Restore Defaults**.

3. Click **Save**.

4. After the file is saved, the **Save Results** dialog box appears.

5. Click **Yes** to open the file using the default application registered in Windows for the chosen file extension, or click **No** to return to the grid.

⊟ **To print the contents of a grid**

The visible field data associated with records displayed in a grid may be printed. Only fields visible in the grid will be included in the output.

1. Select records to print or select none to print all records.

2. On the grid toolbar, click the Print button ( )and then click either:

• **Print Selected Records Only**.

Or

• **Print All**.

2. Select a printer and set other print options.

3. Click **OK**.

You can use the Batch Update tool to change the value stored in one or more fields for all the records in a grid at once. For example, if you sent all the source documents for a case to a specific custodian, you could use the Batch Update tool to update the Custodian field for all the case records at once.

1. From a standalone grid, on the **Edit** menu, click **Batch Update**. The **Batch Update** dialog box appears.
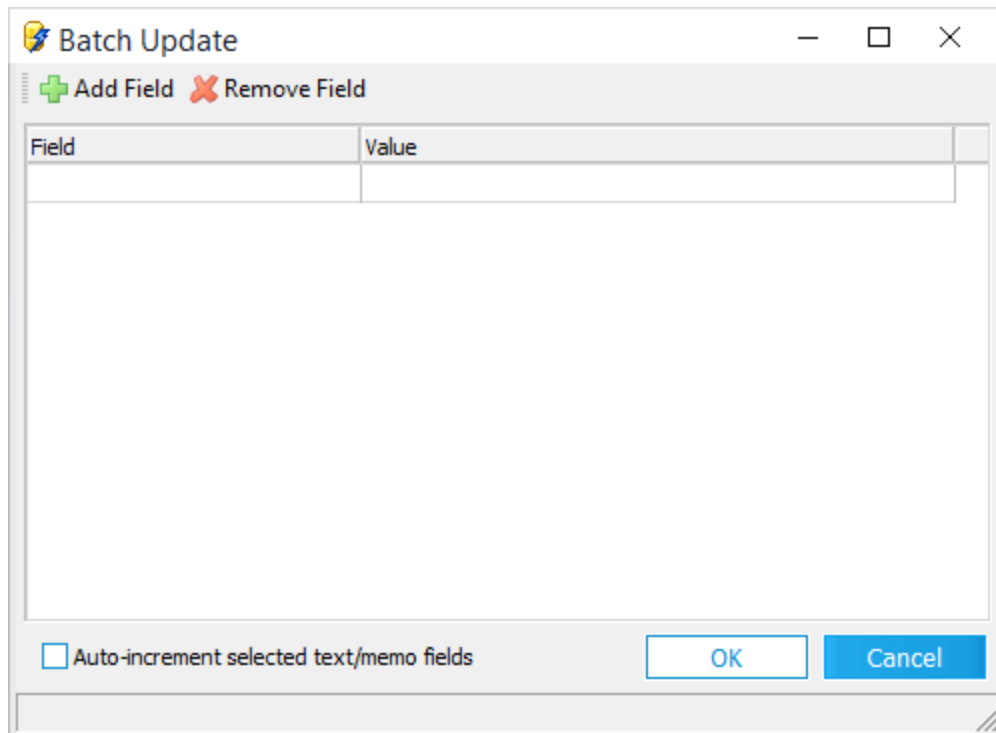
2. In the **Field** list select the field that you want to update.

3. In the **Value** area type the value that should go in the field.

4. Exercise the following options as needed:

   - To add a new field to the list, click **Add Field**.
   - To remove a field from the field list, click anywhere in the row and then click **Remove Field**.
   - To append an incrementing number to each value, select **Auto-increment selected text/memo fields**.

5. Click **OK**. A message box reports the number of records updated.

⊟ To reset flags for indexing or OCR

In the standalone grid display, you can reset flags to ON or OFF that apply to full text indexing or OCR. The flag setting options described here apply flags to all records in the grid display, not just to highlighted records.

1. Open a standalone grid.

2. Click the **Tools** menu.

    • To reset tags for full text indexing on all records in the grid, click **Reset Full Text Flags** and then click **ON** or **OFF**.

    • To reset tags for OCR on all records in the grid, click **Reset OCR Flags** and then click **ON** or **OFF**.

For information on working with OCR flags, see Flagging Documents/Pages for OCR. For information on working with full text indexing flags, see Full Text Indexing.

⊟ To check spelling of grid data

You can use the spell check feature to find and fix misspelled words in user-defined fields. The spell checker cannot be used to check spelling in system fields or fields that are locked.

1. Ensure the user-defined, unlocked field to be searched is visible in the standalone or embedded grid.

2. Select a cell in the column that you want to spell check.

    • If in an embedded grid, on the grid toolbar, click the spell check button:

    • If in a standalone grid, click the spell check button, or on the Tools menu click Spell Check.

3. The **Spelling Check** dialog box appears. The first word in the column not found in the dictionary is displayed in the **Change To** field.

4. Exercise an option to spell check the word that appears in the **Change To** field. These options are described as follows:

To use this option	Perform these steps
Ignore this instance of the word.	• Click **Ignore**.
Ignore all instances of the word.	• Click **Ignore All**.
Edit the word directly but do not add it to the dictionary.	• Edit the word in the **Change To** field and then click **Change**.
Edit the word directly and add it to the dictionary.	• Edit the word in the **Change To** field and then click **Add**.
Replace this instance of the word with a suggested word.	• Double-click the suggested word.
Replace all instances of the word with a suggested word.	• Select the suggested word and then click **Change All**.

⊟ **To use a grid to permanently delete records**

From a standalone grid you can permanently delete records along with their associated files and field data.

⚠ Deleting records from the grid is a permanent operation and cannot be undone.

1. Select one or more rows to be deleted.

2. On the **Edit** menu click **Delete Record(s)**.

3. Click **Yes** on the warning message box.

    The records are permanently deleted.

⊟ **To view document and page totals**

The number of documents currently displayed in the grid is shown at the bottom of the dialog in between the navigational arrows. If a page-level query was executed, this number will be the total number of pages instead.

• From a standalone grid, on the **View** menu, click **Doc/Page Totals**.

    The document and page counts appear in the lower right corner of the grid. For example, Documents: 660 / Pages: 21,166.

⚠ Because additional time is needed to calculate the total documents and total pages information, viewing totals for documents and pages will introduce a slight delay, relative to the size of the case, when opening either grid or when returning records from the query builder. To prevent this delay, simply disable this setting via the standalone grid. On the **View** menu, click **Doc/Page Totals**.

⊟ **To generate an index summary**

An index summary can be generated from the standalone grid. When invoked, this feature will display a message box containing three pieces of information: total number of documents currently displayed in the grid, total number of pages associated with the documents currently displayed in the grid, and the total number of fields associated with the currently displayed documents that are coded with information.

From a standalone grid, on the **Tools** menu, click **Summary.** The **Index Summary** message box appears.

Index Summary ✕

   ⓘ   Documents: 19,753
            Total Pages: 135
            Coded Fields: 0

OK
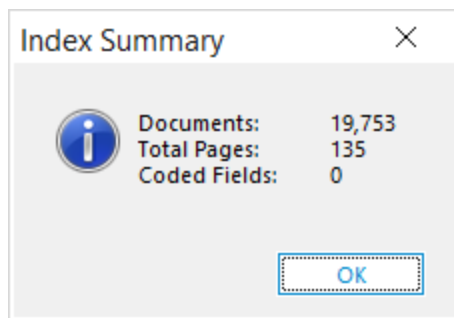
Creating Control Lists from a Grid

From a grid display, you can create control lists, which can be used to import text files into CT Summation and other applications.

The control list that a grid display generates is a text file with a .lst extension.

For each record in the control list, the file contains a beginning document number (BegDoc#) and the path to the associated text file.

During the control list export process you can optionally export the text from each document listed. You may specify to include: text from optical character recognition (OCR), printed text, or extracted text. By default, the limit of exported text files is 1,000. You can increase this number by editing an initialization file. For more information see **Configuring control lists for large record sets** in this topic.

📝 A control list may also be created by the Export Utility of CloudNine™ LAW.

1. From the main window, on the **Tools** menu, click **Search Records**. The **Database Query Builder** dialog box opens.
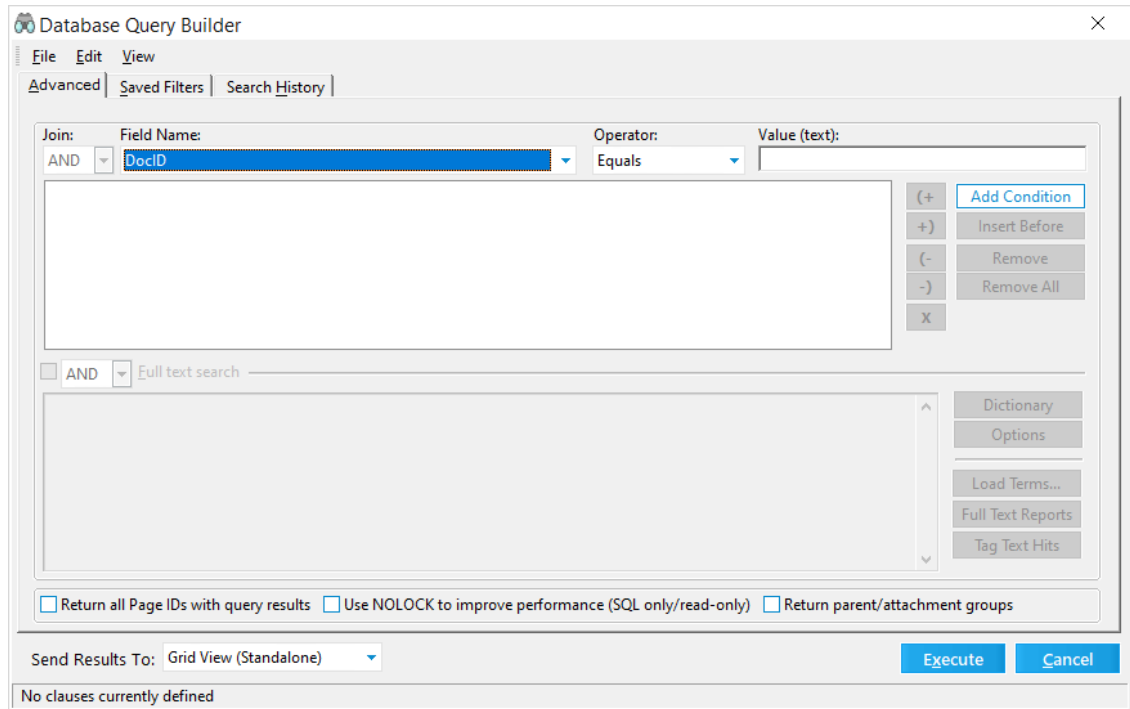
2. Configure a query to select specific records, or to return all records, leave the query with its default settings.

3. In the **Send Results To** list select **Grid View (Standalone)**.

4. Click **Execute**. Query results are returned to a standalone grid.

5. On the **Tools** menu, click **Build Control List**. The **Build Control List** message box appears.
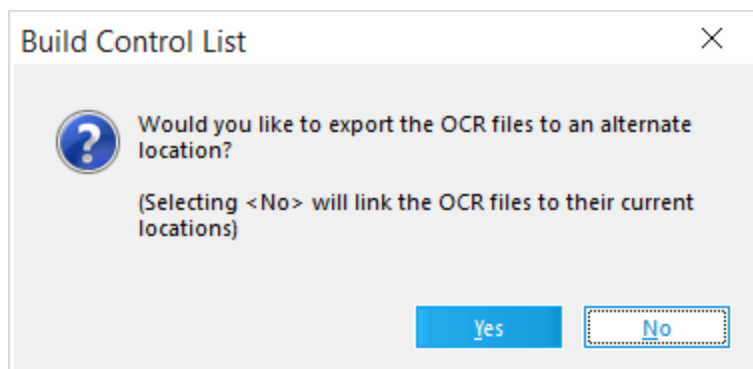
6. Do one of the following:

   - Click **No** to link the control list text path to the current location of the text.
   - Click **Yes** to identify a new path for copied text files, and then specify that path.

   After the control list file is created, a confirmation message appears.

7. Click **Yes** to view the control list, or click **No** to return to the grid.

⊟ **Configuring control lists for large record sets**

By default, LAW will place no more than 1,000 text files in the selected output folder. If more than 1,000 files are found prior to the text export, a notification will appear.

The files per folder limit can be modified by adding the following setting in the C:\Program Files (x86)\Law50\law50.ini file:

```
[Summation]
ControlListFileLimit=1000
```

If the `[Summation]` section already exists, then just place the `ControlListFileLimit` key below the existing section. Change the value as needed. After invoking the Build Control List menu item and choosing Yes to export the text files to a new location, if LAW determines the number of text files will exceed this value, an error message is displayed.

The number in parentheses will match the value in the INI setting or the default of 1,000. Specify the name of the first folder to hold the exported text files. After the specified number of text files are placed in this folder, LAW creates a sequential folder to hold the next set.

If a case is enabled for electronic discovery ("ED-enabled) and the records in the standalone grid have associated images, LAW may prompt to choose between the DocID or BegDoc# fields for the image tag (or document identifier).

If the BegDoc# is not populated for the images in an ED-enabled case, the DocID field will be used automatically. Lastly, LAW will offer to launch the control list file once it has been created. The file extension is .lst and can be viewed in any text editor.

Creating Outlook .PST Files

From a standalone grid, you can create Outlook PST files for visible records of the following file type:

- Messages imported from Outlook mail stores
- Loose Outlook messages (*.msg)
- Loose RFC-822 messages (*.eml)

Note that only top-level messages and loose e-mail items are added. Message attachments become part of the parent items, regardless of whether or not these attachment records are shown in the grid.

[−] **To create Outlook PST files**

 As of Version 6.17.96+, you have the ability to create a PST from MBOX files.

1. From the main window, on the **Tools** menu, click **Display All Records**, or run a query using Query Builder with results sent to a standalone grid.

2. From a standalone grid with source records visible, on the **Tools** menu click **Create Outlook PST**.

   The **Create Outlook PST** dialog box appears.

   If no supported message records exist in the record set, a message box reports this condition and then returns to the grid.

3. Click **Browse** to specify a path and file name for the new PST. If an existing PST is selected, LAW will present an option to either append to or overwrite that file.

4. Specify the root output folder, noting the following:

   - The **Root Output Folders** area below the output path contains two columns. The first column will display "Loose Messages" for any supported loose e-mail message records found in the grid and will display the file name (minus the extension) of the original PST mail store from which the store-based records originated. These values will be used as the root folders in the output PST file. To change any of these default folders, type the values into the text box or boxes.

   - The second column will display **<Loose E-Mails on Disk>** for the supported loose e-mail message records found in the grid and will display the path to the original PST mail store for any store-based records. The Create Outlook PST feature creates new PSTs (or appends existing) by accessing these original stores and/or loose messages.

   - The mail stores and loose messages must be in their original locations from which they were processed by the ED Loader. If they have been moved, LAW will not be able to locate them and the new PST files cannot be generated. LAW will present a list of mail stores that have been moved when invoking the menu item in the grid.

5. Click **OK**.

   A status bar displays the percentage completed.

   When complete, a report appears that lists the total number of top-level messages added, the number of errors, elapsed time, and average speed. If errors occurred during the process, the error log may be launched from the status screen as well. Error logs are stored in the root of the case folder in a file named `pst errors.txt`.

Searching

Query Builder is the tool you use in LAW to search full-text and metadata associated with documents and pages.

Creating Queries

You use the Database Query Builder utility, also known as Query Builder to search case records. A search can be based on field values, the full text of documents, or on some combination of both. For more details on performing full text searching or combining field value searches with full text searching see Full Text Searching.

To start the Query Builder from the **Tools** menu click **Search Records**, or click **Search Records** on the Toolbar. The **Database Query Builder** displays.
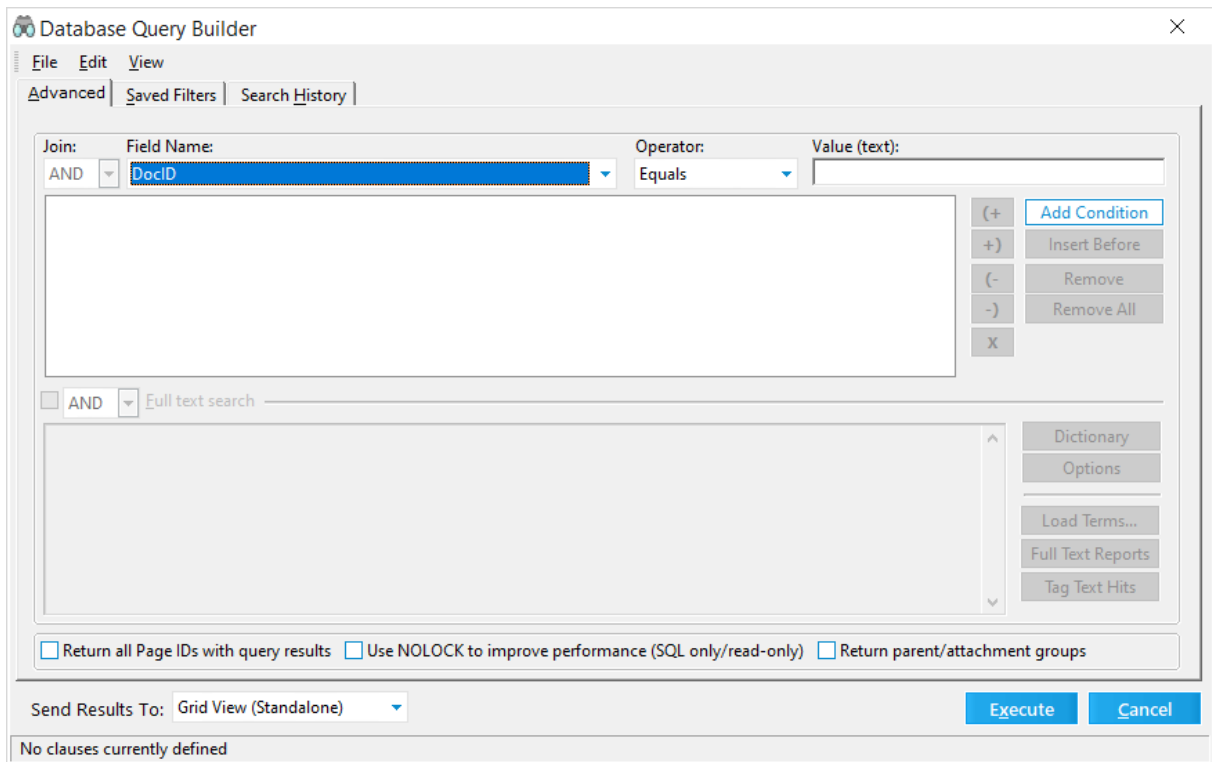
To run a basic query

1. In the **Database Query Builder** dialog box select a **Field Name**, select an **Operator**, and if necessary type comparison text into the **Value (text)** field.

Option	Description
Field Name	Lists all the fields in the current case. Select the field to be searched from this list. For long field names, if you cannot view the full field name in the Field Name field, place your mouse pointer over the Field Name field to display the field's full name. 🗒 In Access-based cases, the Database Query Builder does not list extended properties. You can create queries that use the HasExtProps field, send these results to a grid, and then sort and filter by extended properties, which are visible in grid displays in Access-based cases.
Operator	The Operator determines what type of search to apply for the specified value. Available operators are: **Equals** - matches specified value (NOT case sensitive). **Does Not Equal** - does not equal specified value (NOT case sensitive). **Greater Than** - greater than specified value. **Less Than** - less than specified value. **Greater or Equal** - greater than or equal to specified value. **Lesser or Equal** - less than or equal to specified value. **Is Empty** - field has no value. **Is Not Empty** - field has any value.
Value	The string or value to search for in the specified field. • Wildcard characters (***** for any string of characters, and **?** for any single character) can be used with either the **Equals** and **Does Not Equal** operator. • The **Is Empty** and **Is Not Empty** operators do not require a value. The **Value** field will be removed if either of these operators is selected.

3. Click **Add Condition**.

4. Add more conditions as necessary to modify the query.

To modify the query like this	Try this
Narrow the query.	Add an OR condition.
Broaden the query.	Add an AND condition.
Group or ungroup conditions.	• Use the **(+** and **+)** buttons to group a condition. • Use the **(-** and **-)** buttons to ungroup a condition. • Click the **X** button to remove all groupings.
Create or modify a search based on keywords. For SQL Server-based cases only.	1. Remove any field based conditions. 2. Click **Dictionary**. 3. Select words to add to the query.
Remove a condition.	Select the condition and then click **Remove**.
Remove all conditions.	Click **Remove All**.

5. In the **Send Results To** list, select the utility that will receive the query results:

   - Batch Process
   - Batch Update
   - Export Utility
   - Grid View (Embedded)
   - Grid View (Standalone)
   - Report Viewer
   - Scan For Errors

6. Select the output options as needed:

   - **Return all Page ID's with query results** - Select this option to return a page-level query for the returned documents. The grid view will display a record for every page of each document. Additional page-level fields also become available after selecting this option.

   - **Return parent/attachment groups** - Displays documents matching the specified search criteria and will also display any parents or attachments of those documents. This does not imply that both the parent/attachments also match the search criteria, however. Enabling this option may require additional time for the query to return results.

   📝 When the Return parent/attachment check box is selected in the Database Query Builder dialog box and you have field search information in the top box of the Advanced tab and search text entered in the Full text search box at the bottom of the tab, when the search runs, LAW will do the following in the order listed:

   1. LAW will run the field(s) search.

2. LAW will return all parent documents and attachments associated with the documents returned in the field search.

3. LAW will run the full-text portion of the search against the documents returned for the field search results and its associated parent documents and attachments.

The end search results will be the field search results and the parents documents and attachments associated with the field search results that match the field search criteria and the full-text search criteria.

- **Use NOLOCK setting to improve performance (SQL only/read-only)** - This option can help to improve performance of queries of SQL Server-based cases. With this option, the result set is read-only, and updates will not be available in the grid. The NOLOCK setting should only be used in cases where updates in the grid are not necessary, for example, when executing a query that will be used to run a batch process or export.

7. Click **Execute**.

After you run a search it is automatically saved in the **Search History** tab. You can also save the search so that it appears in the **Saved Filters** tab. For more information see Saved Searches and Search History.

Field-Based Queries

To create field-based queries

1. From the main window in CloudNine™ LAW, on the **Tools** menu, click **Search Records**. The **Database Query Builder** opens.

2. Configure your search as follows:

To find documents that match these criteria:	Configure search Field - Operator - Value like this:
Microsoft Office documents with more than one revision. A document increases its revision number each time it is saved after being edited.	Revision | Is Greater Than | 1
Microsoft Word or Excel file with tracked changes.	HasTrackChanges | Equals | Y
E-mails with "Accounting" in the subject line.	EMail-Sub | Contains | Accounting
E-mails sent after June 15 2010.	DateSent | Greater than | 6/15/2010
Any document created before June 15 2010	DateCreated | Less than | 6/15/2010

To find documents that match these criteria:	Configure search Field - Operator - Value like this:
Documents whose text was successfully extracted during TIFF conversion process.	TextPStatus | Equals | C
Documents that had no text extracted during TIFF conversion process.	TextPStatus | Equals | N
Documents whose text extraction during TIFF conversion process resulted in an error.	TextPStatus | Equals | E

3. Click **Add Condition**.

4. In the **Send Results To** field, select one of the tools as needed.

5. Click **Execute**.

Full Text Searching

You can use the Query Builder to perform full text searching of case records, and to perform complex searching by creating a search based on full text and field values.

Note the following facts about full text searching:

- Full text search is supported only for SQL Server-based cases.
- Case records must be indexed prior to searching. For more information on indexing see Full Text Indexing.

You can also use the Query Builder to export the case dictionary.

To run a full text search

1. Start the Query Builder. Do one of the following:

- From the main window, on the **Tools** menu click **Search Records**.

Or

- On the ribbon, click the **Search Records** button ( ).

2. The **Database Query Builder** dialog box appears.
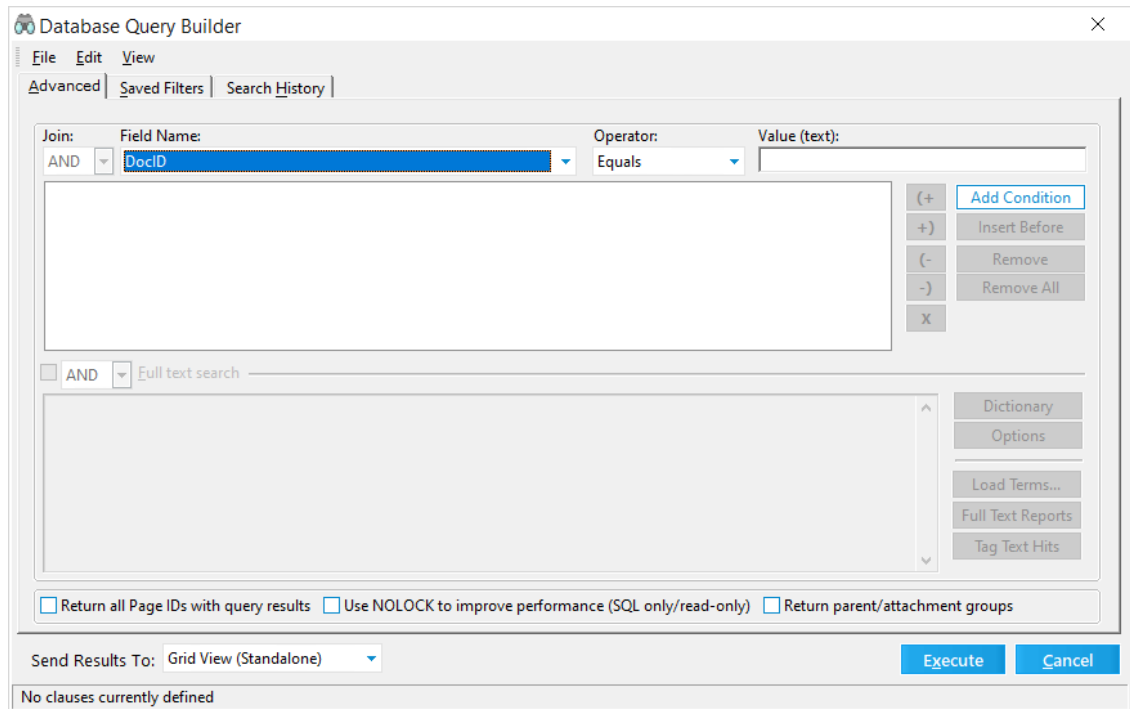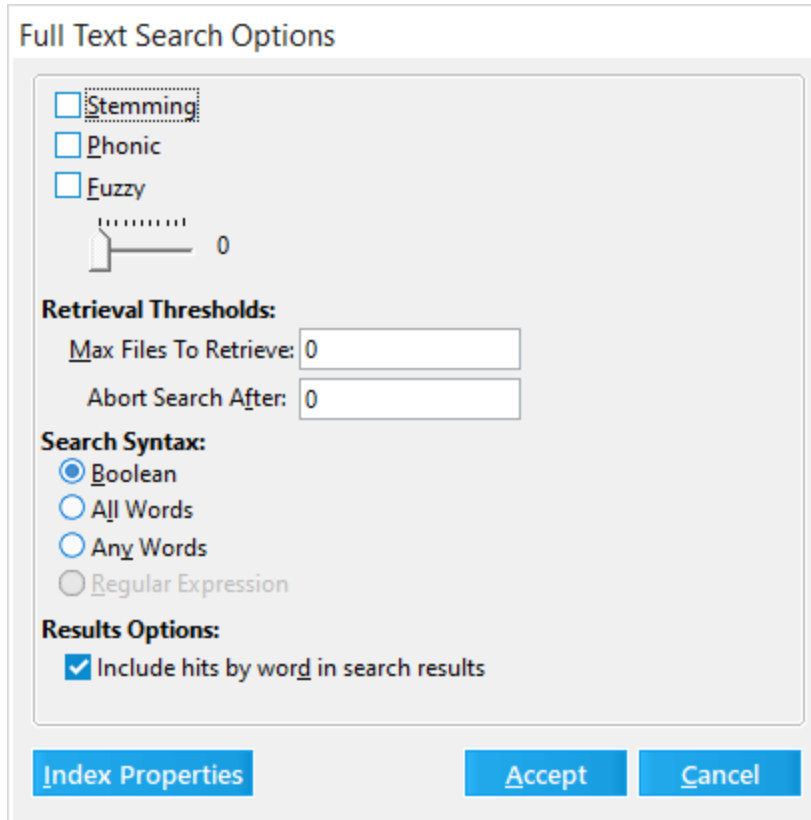
3. Select **Full text search**. This is only enabled if you have previously created a Full Text Index.

4. Add terms to the text box by performing any of the following actions:

   - Type terms separated by spaces directly into the text box.
   - Click **Dictionary**, type a term into the **Lookup** field, click **Add (F3)**, and then click **Done**.
   - Click **Load Terms**, select a text file, select an operator to use, and then click **Accept**.

5. Configure full text search options as needed. For more information, see the To configure full text searching section in this topic.

6. In the **Send Results To** list, select a utility to receive search results:

   - Batch Process
   - Batch Update
   - Export Utility
   - Grid View (Embedded)
   - Grid View (Standalone)
   - Report Viewer
   - Scan For Errors

7. Click **Execute**.

After you run a search it is automatically saved in the **Search History** tab.

⊟ **To configure full-text search options**

The search options defined in the Full Text Search Options dialog box from the Database Query Builder dialog box are saved at the user level and only apply to the full-text searches in the Database Query Builder dialog box. These search options do not apply to search queries in the Full Text Search Options dialog box.

1. From the main window, on the **Tools** menu click **Search Records**.

2. In the **Database Query Builder** dialog box select **Full text search** check box and then click **Options**.

The **Full Text Search Options** dialog box appears.

3. Configure full text search options as needed:

- **Stemming** - includes records in the result set that contains words with variant endings compared to the search term. For example, the search term depend will return records that contain depend, depends, depending, etc.

- **Phonic** - includes records in the result set that contains words that sound similarly to the search term. For example, the search term pear will return records that contain pair, per, pure, etc.

- **Fuzzy** - includes records in the result set that contains words with similar spelling as the search term. For example, the search term case, might return records that contain cash, cale, cake, etc. You set the fuzzy value to a number between 1-10, with 1 being the least fuzzy and 10 the most.

- **Retrieval thresholds**

  - **Max files to retrieve** - Sets an upward limit on the number of files to return. In any new case the default maximum number of files to retrieve is unlimited, which appears in the field as **0**.

  - **Abort Search After** - Sets an upward limit on the number of files to search. The default value for this field is unlimited, which appears in the field as **0**.

- **Search syntax**

  - **Boolean** - Supports standard AND/OR connectors between search terms.

  - **All Words/Any Words** - Alternative to using Boolean that implies all AND's and OR's respectively between words.

- **Include hits by word in search results** - When enabled, LAW will include a temporary ft_HitsByWord field in the search results in the standalone grid.

  For each document, this field contains the search words that matched each document and the frequency of those words. Search words and their frequency are comma-separated and multiple search words are separated by a hard return character.

4. Click **Accept**.

 ⊟ **Tagging text hits**

You can create a Tag (Boolean) field value and then apply it to query results, by using the Tag Text Hits feature.

This feature can be a quicker alternative to running a search and then having to wait for the search results to populate a grid display, and tagging documents from that interface (if needed), especially when dealing with large amounts of data. The flagged field can later be queried to pull results or used in conjunction with other queries.

To tag text hits

1. From the main window on the **Index** menu click **Modify Fields**.

2. Create a tag field or a numeric field. The following list provides considerations for choosing the field type and name:

- Name the field after the search term in some way, for example "contains_Smith".

- Create a document-level tag (Boolean) field if you want simply to record whether or not the record contains the search term. Records that contain the term are marked Yes, else No.

- Create a numeric index field if you want a count of the number of text hits found in each record.

3. After the field is created, on the **Tools** menu click **Search Records**.

4. Select **Full text search** check box and then provide search terms.

5. Click the **Tag Text Hits** button.

   The **Select Target Field** dialog box appears with all user-defined tag and numeric fields listed.

6. Select the field to be used as the target field and then click **OK**.

   After the query has run a message box provides a summary. It lists the number of affected documents, the total number of hits, and the elapsed time.

📝 This feature does not incorporate any database conditions that may be selected when performing the text search. Only full text searching is supported.

⊟ **To search by multiple terms**

You can search for multiple words that occur in a specified sequence by entering the sequence of words to be searched into the full text search text box.

If the search syntax is set to **Any Words** or **All Words**, then the sequence of words must be wrapped in quotes to prevent the search from inserting AND's or OR's between the words in the sequence.

Example searches

Request description	Matching text	Does not match
Security Code (If using Any Words/All Words syntax, then use: "Security Code".)	"I entered the security code". (Words occur in sequence.)	"To disable security enter the code". (Words occur, but not in sequence.)
Enter * Code (If using Any Words/All Words syntax then use: "Enter * Code".)	"enter unique code" , "enter key code"	"Enter Code"

Note the following about multiple term searching:

- Wildcards can be incorporated into term searches to match all or part of the words in the sequence similar to a single term search with the added restriction that the wildcard occur in sequence.

- Each word in the term is always counted as a hit in the ft_HitCount column and highlighting view. The search query "Security Code" will return a minimum of two hits (one for each of the two words that comprise the term). Full Text reports count the occurrence of the entire term as one hit, as do counts in the ft_HitsByWord column which is controlled by the "Include hits by word in search results" Full Text Search Option

Working with noise words

This topic section describes noise words, their impact on search, and how to edit the list of noise words.

What are noise words?

Noise words are words that are ignored by the indexer because they occur so commonly that they are of little use in searching content.

How noise words impact search

The effect of noise words in a search query typically manifests itself when searching for terms or word sequences. The search engine effectively treats a noise word in a search query as a word-level wildcard, matching any word that occurs at that position.

Effectively, a noise word is processed as an "any word" wildcard (*), so in the above example the search query is processed as: Harold * Cat.

A single word search query for a noise word will return no records. For example, a search query for the term "because" would yield no results.

Examples

The following table describes examples of how the noise word "The" effects search.

Request description	Matching text	Does not match
The Car (If using Any Words/All Words syntax then use: "The Car")	"Red Car","Blue Car","Fast Car"	
Harold The Cat (If using Any Words/All Words syntax then use: "Harold The Cat")	"Harold my cat"	"Harold My Friend" (Term search, only matches one of the required words in the sequence).

To edit the noise word list

LAW manages noise words at the application level in a file named noise.dat. This file is located in the DTConfig folder which can be found in the installation path of CloudNine™ LAW.

1. Use Notepad or some other text editor to open the noise.dat file.

2. Add or remove noise words from the list.

3. Save the file.

4. On the **Tools** menu click **Full Text Index** and then click **Re-Index All Documents**.

📝 Removal of noise words from noise.dat can result in reduced performance of indexing and search operations. This is because any word removed from the noise list is indexed along with other keywords.

⊟ To view Full Text Reports

The Full Text Search Reports feature can be used to create Full Text Reports based on a single search or multiple search queries and to run multiple text search queries at once to obtain document and hit counts without returning records to the grid. You can also tag search queries and view search results for tagged search queries in the Full Text Search Reports dialog box, as well as calculate the uniqueness of a search query compared to the other selected search queries currently in the Full Text Search Reports dialog box.

⊟ To view a Full Text Report

1. On the **Tools** menu click **Search Records**.

2. Select **Full text search** check box, and then click the **Full Text Reports** button. The **Full Text Search Reports** dialog box opens.
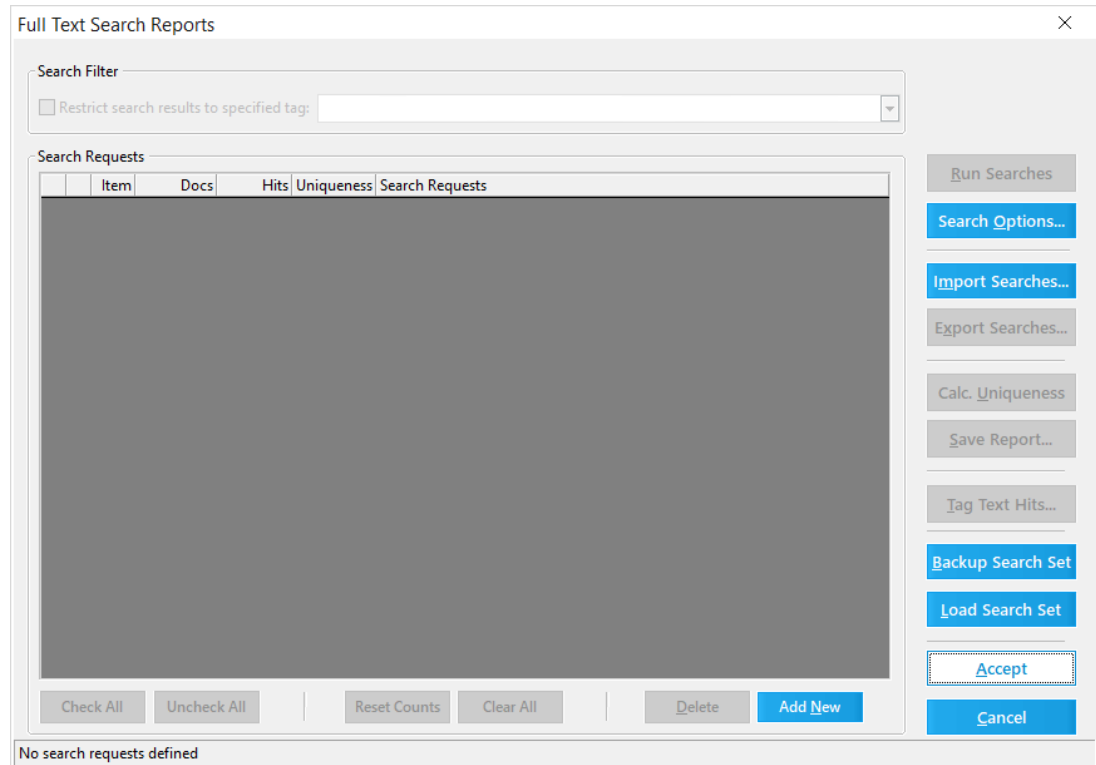
3. Add search queries to the **Full Text Search Reports** dialog box.

4. Define the search options.

5. To include a search query in the search results, select the check box for the search query.

   To exclude a search query from the search results, clear the check box for the search query.

   By default, when a search query is added to the **Full Text Search Reports** dialog box, the check box for the search query is selected. To select all check boxes, click the **Check All** button. To clear all check boxes, click the **Uncheck All** button.

6. Click the **Run Searches** button to display the **Full Text Search Report** results.

   - **Item.** The ID number assigned to a search query when it is added to the Full Text Search Report dialog box.
   - **Docs.** The total number of documents containing the search query.
   - **Hits.** The total number of search hits matching the search query.
   - **Uniqueness.** The total number of search hits unique to the search query when comparing the search query to the other selected search queries in the Full Text Search Reports dialog box. The Uniqueness value can help determine the effectiveness of the search query for the case.

By default, the **Uniqueness** column values are not calculated for the selected search queries when you click the **Run Searches** button. The selected search queries must be run before they can be compared for calculating uniqueness.

7. To calculate the **Uniqueness** values for search quests, select the check boxes for the search queries you want to compare, and then click the **Calc. Uniqueness** button.

   The check boxes for two or more search queries must be selected before you can calculate the search query uniqueness values. Whenever a search query check box is cleared, the **Uniqueness** column values for all the search queries is reset to **?**, and the uniqueness will need to be recalculated by clicking the **Calc. Uniqueness** button again. If additional files are added to or removed from the case after calculating uniqueness, you will need to click the **Calc. Uniqueness** button again to refresh the **Uniqueness** column values.

   To save the Full Text Search Report values, see <u>To save a Full Text Report</u>.

8. When you are done viewing the results in the **Full Text Search Reports** dialog box, click the **Accept** button.

   Clicking the **Accept** button saves your changes and closes the **Full Text Search Results** dialog box.

⊟ **To add search queries to the report**

There are two ways to add search queries to the Full Text Search Reports dialog box. Search queries can be manually added individually or search queries can be imported into the dialog box. For more information about importing search queries, see <u>To import search queries into the report</u>.

1. On the **Tools** menu click **Search Records**.

2. Select **Full text search** check box, and then click the **Full Text Reports** button. The **Full Text Search Reports** dialog box appears.

3. Click the **Add New** button. A new record is created in the **Search Requests** list.

4. In the **Search Requests** column for the new record, enter the text of the new search query.

⊟ **To define the search options**

The search options defined in the Full Text Search Options dialog box from the Full Text Search Reports dialog box are saved at the case level and only apply to the full-text search queries in the Full Text Search Reports dialog box. These search options do not apply to search queries in the Database Query Builder dialog box. All users in the case will have the same search options defined for the search queries in the Full Text Search Options dialog box (accessed by clicking the Search Options button in the Full Text Search Options dialog box).

Anytime the search options are edited and the changes saved in the Full Text Search Options dialog box, the current search results in the Full Text Search Reports dialog box are reset to *?*. The search queries in the Full Text Search Reports dialog box need to be rerun to update the search results.

1. In the **Full Text Search Reports** dialog box, click the **Search Options** button.

    Clicking the **Search Options** button opens the **Full Text Search Options** dialog box.

    Full Text Search Options

    ☐ Stemming
    ☐ Phonic
    ☐ Fuzzy

        ⌷────── 0

    Retrieval Thresholds:
    Max Files To Retrieve: 0
    Abort Search After: 0

    Search Syntax:
    ◉ Boolean
    ○ All Words
    ○ Any Words
    ○ Regular Expression

    Results Options:
    ☑ Include hits by word in search results

    [Index Properties]   [Accept]   [Cancel]

    By default, only the **Boolean** and **Include hits by word in search results** check box are selected.

2. Configure full text search options as needed:

- **Stemming** - includes records in the result set that contains words with variant endings compared to the search term. For example, the search term depend will return records that contain depend, depends, depending, etc.

- **Phonic** - includes records in the result set that contains words that sound similarly to the search term. For example, the search term pear will return records that contain pair, per, pure, etc.

- **Fuzzy** - includes records in the result set that contains words with similar spelling as the search term. For example, the search term case, might return records that contain cash, cale, cake, etc. You set the fuzzy value to a number between 1-10, with 1 being the least fuzzy and 10 the most.

- **Retrieval thresholds**

  - **Max files to retrieve** - Sets an upward limit on the number of files to return. In any new case the default maximum number of files to retrieve is unlimited, which appears in the field as **0**.

  - **Abort Search After** - Sets an upward limit on the number of files to search. The default value for this field is unlimited, which appears in the field as **0**.

- **Search syntax**

  - **Boolean** - Supports standard AND/OR connectors between search terms.

  - **All Words** - Alternative to using Boolean that implies all ANDs and ORs respectively between words. All of the words in the search query must be present in the record for a record to be retrieved in your search results.

  - **Any Words** - Alternative to using Boolean that implies all ANDs and ORs respectively between words. Any of the words in the search query can be located in a record.

- **Include hits by word in search results** - When enabled, LAW will include a temporary ft_HitsByWord field in the search results in the standalone grid. For each document, this field contains the search words that matched each document and the frequency of those words. Search words and their frequency are comma-separated and multiple search words are separated by a hard return character.

3. To view the full-text index properties, click the **Index Properties** button.

   Clicking the **Index Properties** button opens the **Full Text Index Properties** dialog box. For more information about the Full Text Index Properties, see Full-text Indexing.

4. When you are done reviewing the index properties, click the **Done** button, to close the **Full Text Index Properties** dialog box.

5. In the **Full Text Search Options** dialog box, click the **Accept** button to save and apply the search option settings.

⊟ **To import search queries into the report**

In the Full Text Search Reports dialog box, search queries can be created manually or imported from a line-delimited .txt file.

1. In the **Full Text Search Reports** dialog box, click the **Import Searches** button. Clicking the **Import Searches** button opens the **Select Input File with Search Terms** dialog box.

2. Browse to and select the search query .txt file you want to import, and then click the **Open** button. A message is displayed indicating the number of search queries successfully imported.

3. Click **OK** to close the message. The imported search queries are added to the **Search Requests** list in the **Full Text Search Reports** dialog box.

4. To view the search results for the imported search queries, click the **Run Searches** button.

⊟ **To export search queries from the report**

Search queries added to the Full Text Search Report dialog box can be exported to a line-delimited .txt file.

1. In the **Full Text Search Reports** dialog box, click the **Export Searches** button. Clicking the **Export Searches** button opens the **Select Output File for Search Terms** dialog box.

2. Browse to where you want to save the search query .txt file.

3. In **File name** field, enter the file name for the search query .txt file, make sure **Text Files (*.txt)** is selected in the **Save as type** field, and then click the **Save** button.

   A message is displayed indicating the search queries were successfully exported.

4. Click **OK** to close the message. The .txt file containing the exported search queries is created in the directory you selected.

⊟ **To tag search queries in the report**

Tags can be applied to search queries in the Full Text Search Reports dialog box using the Tag Text Hits feature. After applying tags to a search query in the Full Text Search Reports dialog box, you can restrict search results in the Full Text Report to a specific tag. Before search queries can be tagged, the tag fields you want to apply must be created in CloudNine™ LAW. For more information, see Creating Tag Fields.

If there are no tag fields created for the case, clicking the Tag Text Hits button generates the following error message:
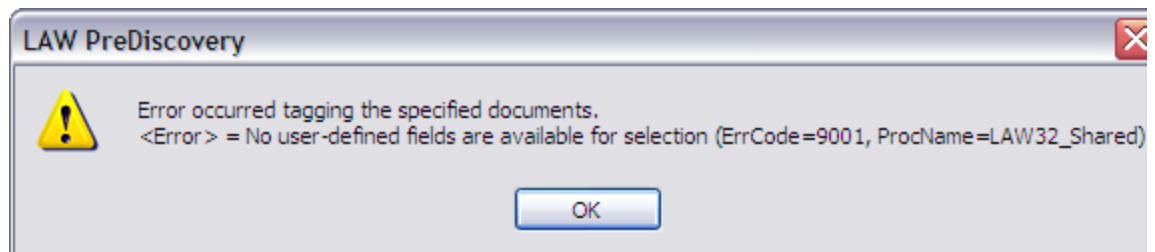
1. In the **Full Text Search Reports** dialog box, select the check boxes for the search query to which you want to apply a tag.

2. Click the **Tag Text Hits** button.

Clicking the **Tag Text Hits** button opens the **Select Target Field** dialog box. The tag fields created for the case are displayed in the **Available Fields** list.
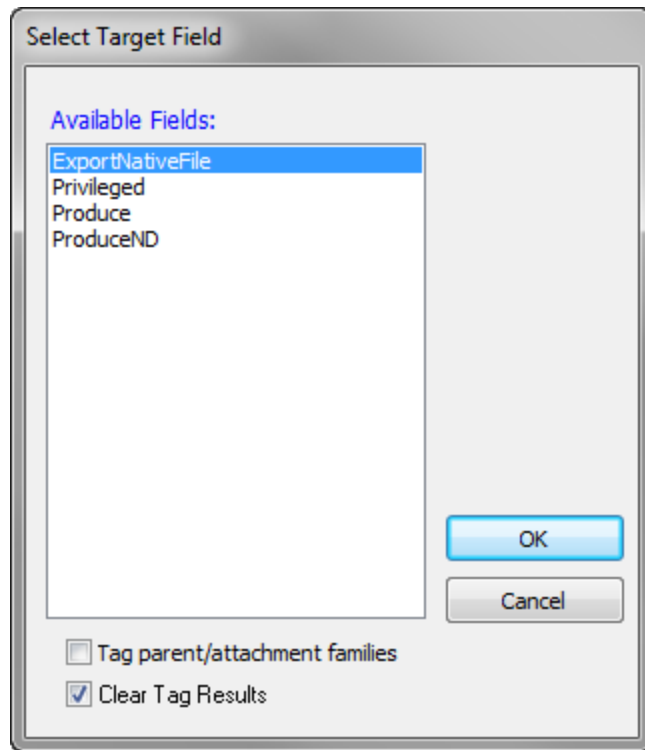
3. Click the tag field you want to apply to the selected search queries.

4. If you want to apply the tag to document families, select the **Tag parent/attachment families** check box.

   By default, the **Tag parent/attachment families** check box is not selected.

   If the tag currently selected in the **Select Target Field** dialog box has already been applied to any of the documents in the case, the **Clear Tag Results** check box determines whether the existing tags applied to the documents in the case that match the selected tag are cleared from all documents in the case when the selected search queries run, before applying the tag selected in the **Select Target Field** dialog box to the documents returned in the search results. By default, the **Clear Tag Results** check box is selected.

5. If you want to clear the tag results, leave the **Clear Tag Results** check box selected.

   If you do not want to remove the tag currently selected in the **Select Target Field** dialog box from the documents in the case before applying the tag to the documents returned in the search results for the selected search queries, clear the **Clear Tag Results** check box.

6. Click **OK**.

   Clicking **OK** applies the selected tag to the selected search queries. When tagging is completed, the **Tag Text Hits Complete** message is displayed. The message

includes the number of documents tagged and the time elapsed for the tagging process.

Tag Text Hits Complete

The tagging process was successfully completed.

Docs Tagged: 34
Elapsed Time: 1 sec

OK
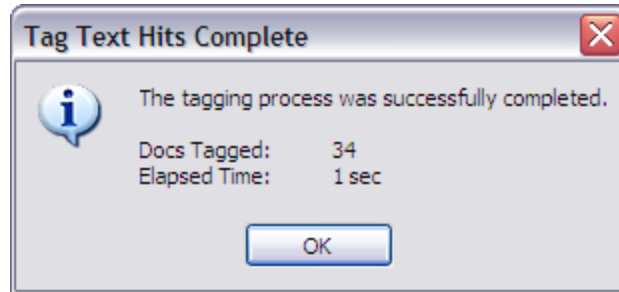
7. Click **OK** to close the message.

⊟ **To restrict search results by tag**

In the Full Text Search Reports dialog box, you can restrict the search results to a specific tag using the Restrict search results to specific tag check box. The Restrict search results to specific tag check box is enabled if a tag has been applied to documents within one or more search queries in the Full Text Search Reports dialog box.

1. In the **Full Text Search Reports** dialog box, select the **Restrict search results to specific tag** check box.

2. Click the down arrow button, [⌄], in the **Restrict search results to specific tag** list, and then click the tag for which you want to view search results.

    The list contains all the tag fields created for the case. When you click a tag in the **Restrict search results to specific tag** list, the **Search Requests** list is updated and only displays the search results for the documents in the search queries that are tagged with selected tag field.
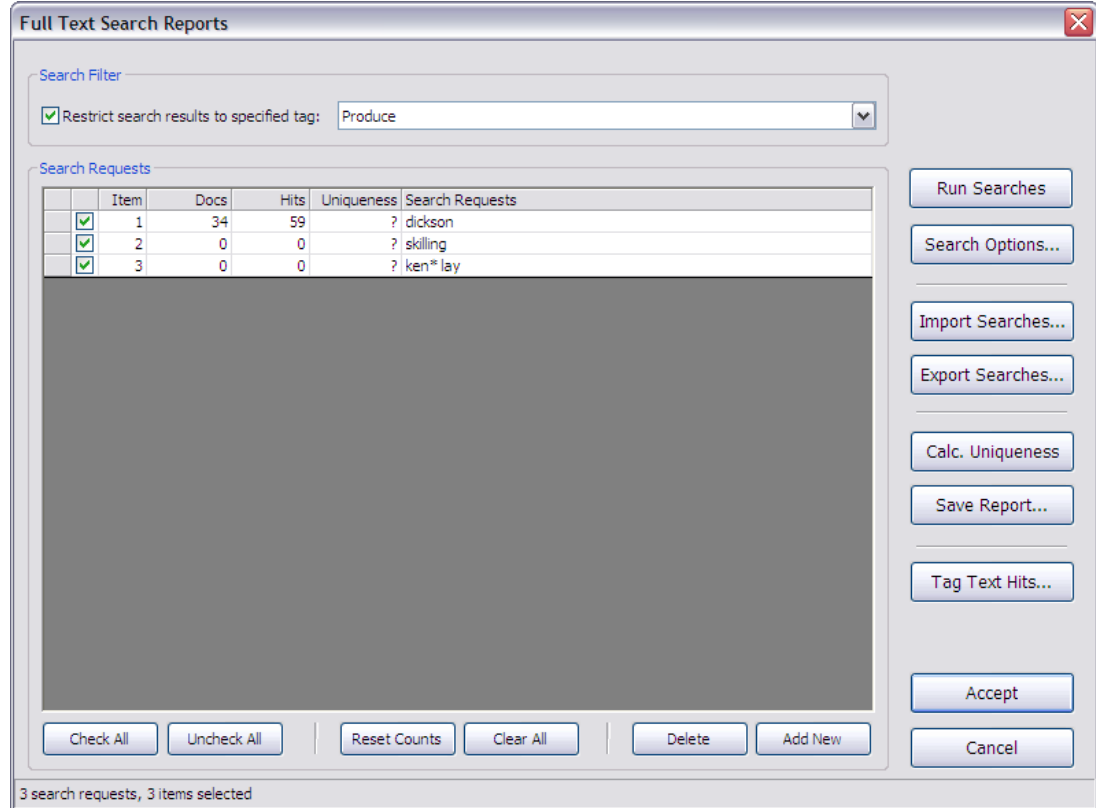
3. To display the search results for all search query in the **Full Text Search Reports** dialog box, regardless of the tag selected in the **Restrict search results to specific tag** list, clear the **Restrict search results to specific tag** check box.

   If you calculated the uniqueness for the search query, selecting or clearing the **Restrict search results to specific tag** check box resets all values in the Uniqueness column to ?. The uniqueness will need to be recalculated.
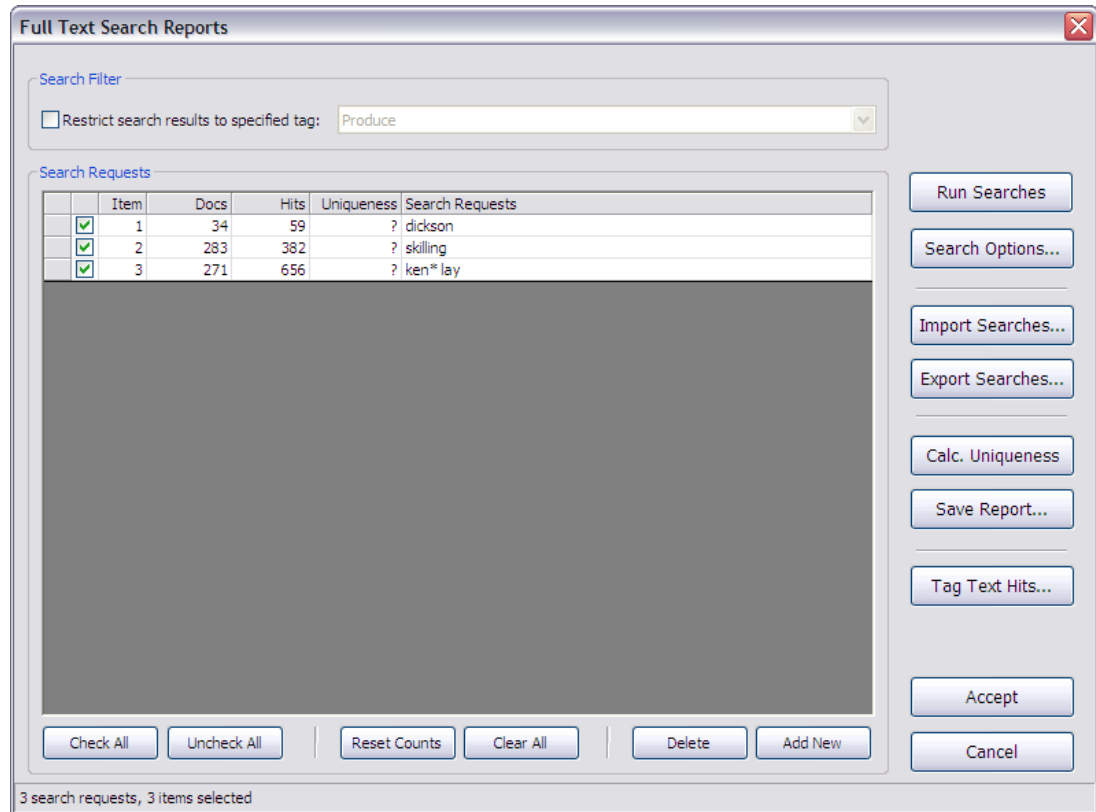
☐ **To save a Full Text Report**

Full Text Reports can be saved as an .htm, html, or Microsoft Excel .xls or .xlsx file. Before a Full Text Report can be saved to file, the search queries in the Full Text Search Reports dialog box must be run.

If you save the Full Text Report when the Restrict search results to specified tag check box is selected, the Full Text Report will display the search results for search queries tagged with tag selected in the Restrict search results to specified tag list.

1. In the **Full Text Search Reports** dialog box, click the **Save Report** button.

   Clicking the **Save Report** button opens the **Save Report As** dialog box. Full Text Reports can be saved as an .htm, html, or Microsoft Excel .xls or .xlsx file
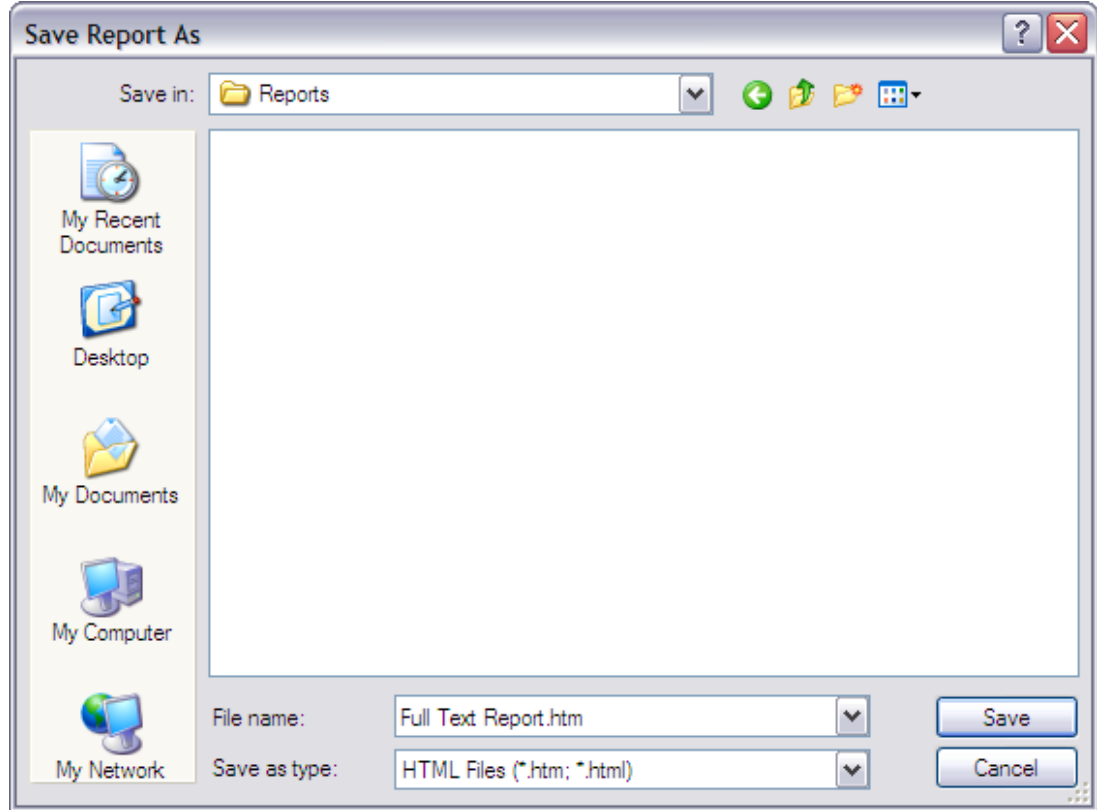
2. Browse to where you want to save the report, and in the **File name** field, type the report file name.

   The **Save as type** field defaults to **HTML Files (*.htm; *.html)**.

3. In the **Save as Type** list, click **HTML Files (*.htm; *.html)** or **Excel Files (*.xls; *.xlsx)**, and then click the **Save** button.

   The Full Text Report is created in the directory you selected.
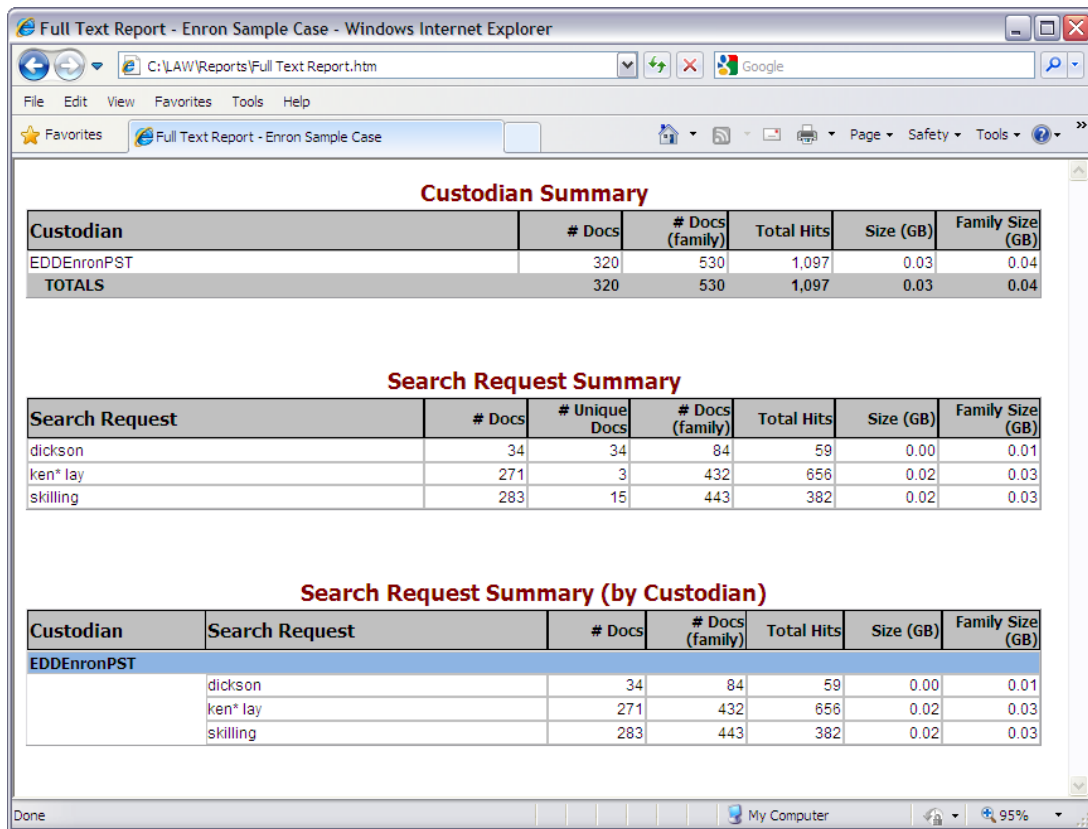
The **Size (GB)** and **Family Size (GB)** columns are not populated in the Full Text Report for cases that are not enabled for electronic discovery due to the absence of the Filesize field in cases not enabled for electronic discovery.

⊟ **To clear the current search results**

The existing search results for the current search queries in the Full Text Search Reports dialog box can be cleared. Then next time you run the search queries, the search queries will be run against the entire case.

1. In the **Full Text Search Reports** dialog box, click the **Reset Counts** button.

   Clicking the **Reset Counts** button opens the **Clear All Searches** message.
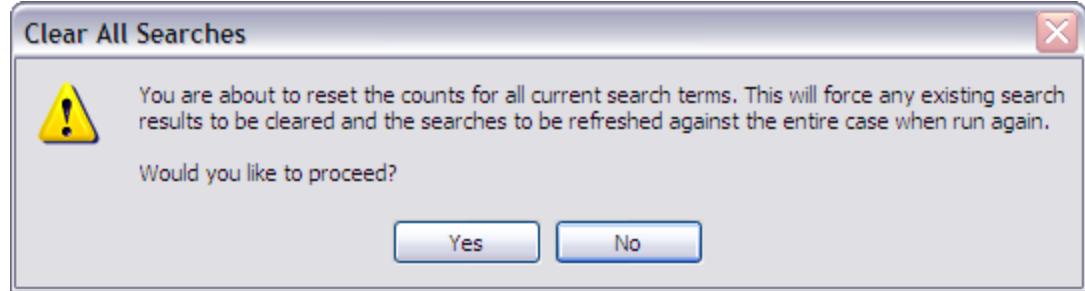
2. Click **Yes** to clear the search results and close the message.

    All search query values in the **Docs**, **Hits**, and **Uniqueness** columns are reset to **?**.

□ **To delete a search query**

In the Full Text Search Reports dialog box you can delete individual search queries or delete all search queries at one time.

To delete an individual search query:

1. On the **Tools** menu click **Search Records**.

2. Select **Full text search** check box, and then click the **Full Text Reports** button.

    The **Full Text Search Reports** dialog box opens.

3. Select the row for the search query you want to delete.

    To select a row, click the box to the left of the search query check box.

4. Click the **Delete** button.

5. Click **Yes** when asked, *You are about to delete [number] search request(s). Would you like to proceed?*.

Clicking **Yes** deletes the search query from the **Full Text Search Reports** dialog box.

To delete all search queries:

1. On the **Tools** menu click **Search Records**.

2. Select **Full text search** check box, and then click the **Full Text Reports** button.

   The **Full Text Search Reports** dialog box opens.

3. Click the **Clear All** button.

4. Click **Yes** when asked, *You are about to clear all current search terms and any corresponding results. Would you like to proceed?*.

   Clicking **Yes** deletes all the search queries and search results from the **Full Text Search Reports** dialog box.

⊟ Backup Search Set - Version 6.18+

In the Full Text Search Reports dialog box in Version 6.18+, you can backup search queries and name that series of searches to be loaded at a later time.

1. On the **Tools** menu click **Search Records**.

2. Select **Full text search** check box, and then click the **Full Text Reports** button.

   The **Full Text Search Reports** dialog box opens.
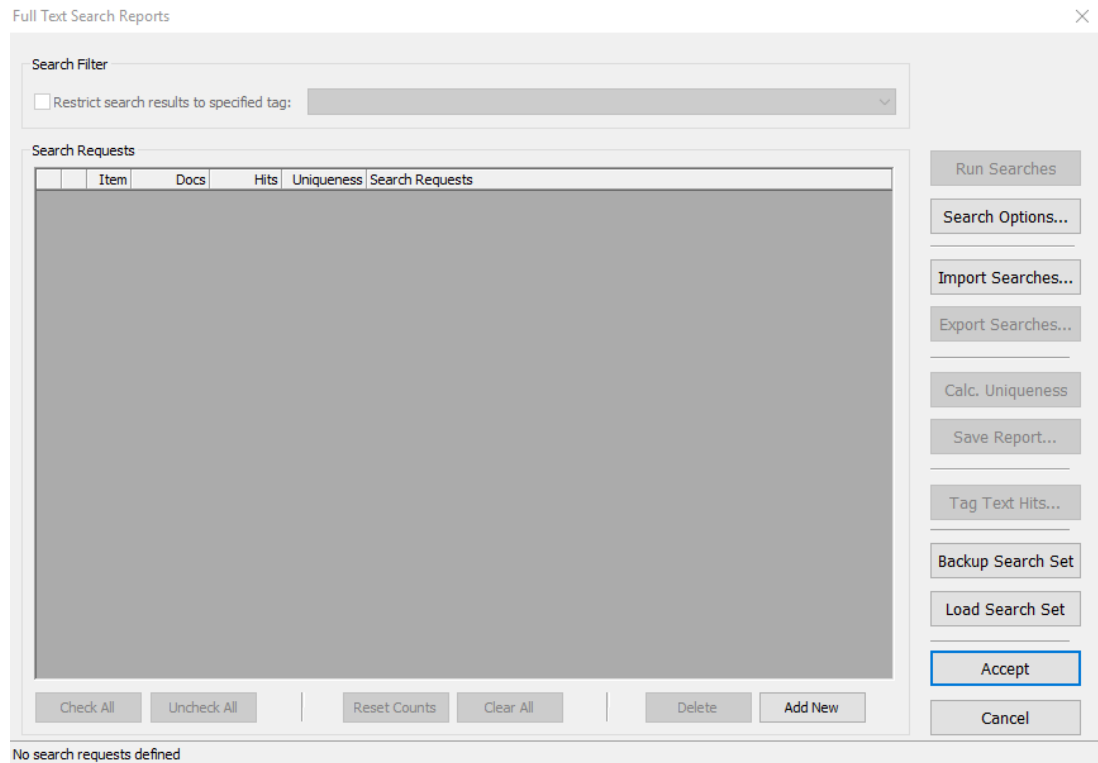
Version 6.18+

3. Then Import Search terms and/or Add New Search terms

4. When your list of terms has been added to the Search Request, then select **Run Searches**.
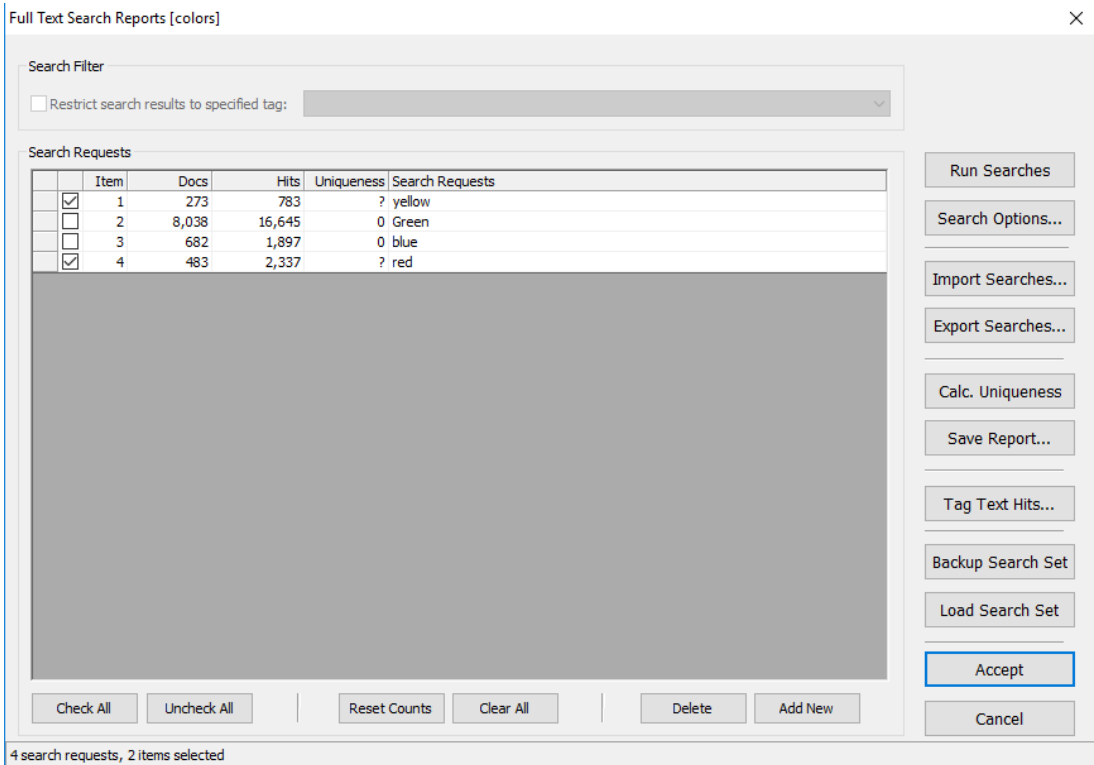
Version 6.18+

5. Selecting **Backup Search Set**, opens the **Search Set Backup Name** window.
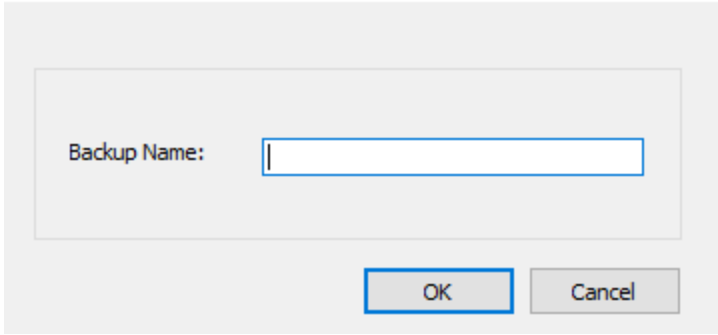
6. Enter a name that describes or summarizes the searches into the box for Backup Name.

7. Select **OK**, to close the **Search Set Backup Name** window and save all of the searches under the chosen Backup Name.

8. All of the searches are backed up and the Search Requests section of the Full Text Reports resets as if there are no search terms.

⊟ **Load Search Set - Version 6.18+**

In the Full Text Search Reports dialog box in Version 6.18+, you can backup search queries and name that series of searches to be loaded at a later time.

1. On the **Tools** menu click **Search Records**.

2. Select **Full text search** check box, and then click the **Full Text Reports** button.

3. The **Full Text Search Reports** dialog box opens.

Version 6.18+
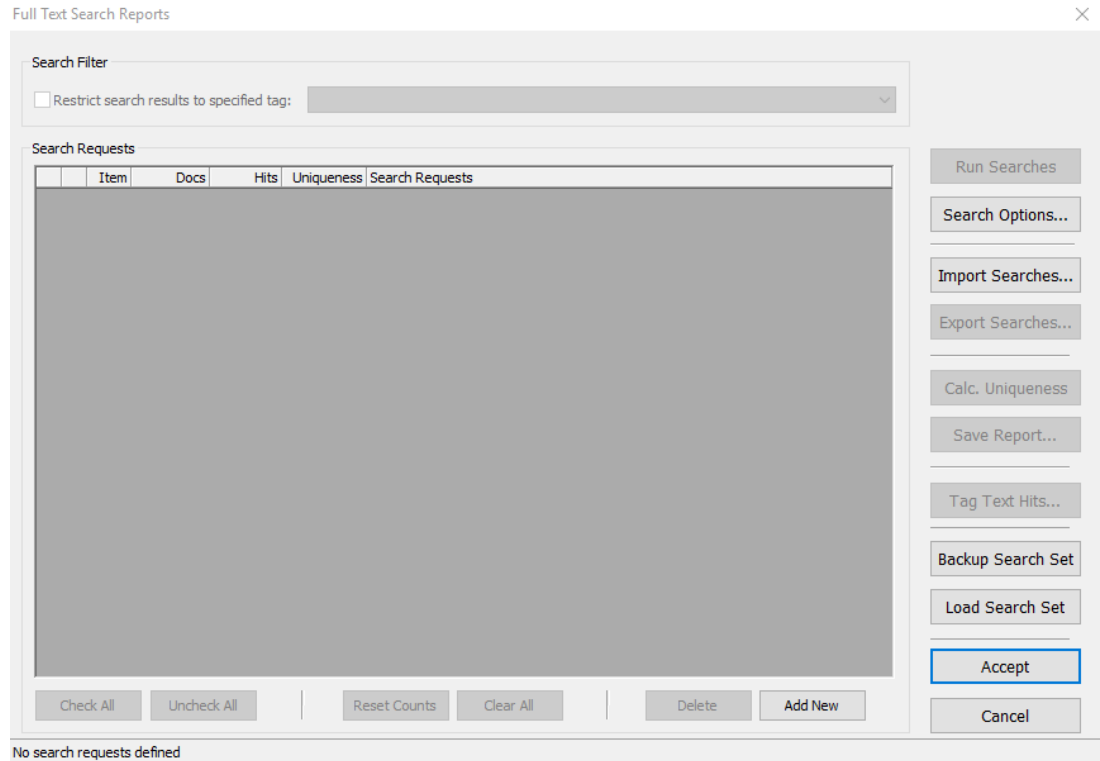
4. Select Load Search Set.

5. The Select Search Set window will open in a new window.

Select Search Set

	Display Name	Backup By	Backup At	Machine	IP	Status
	Names	woja	5/23/2018 4:37:42 PM	7009	10.209	
	Government	woja	5/23/2018 4:36:42 PM	7009	10.209	

Selected search set : Names

OK   Cancel
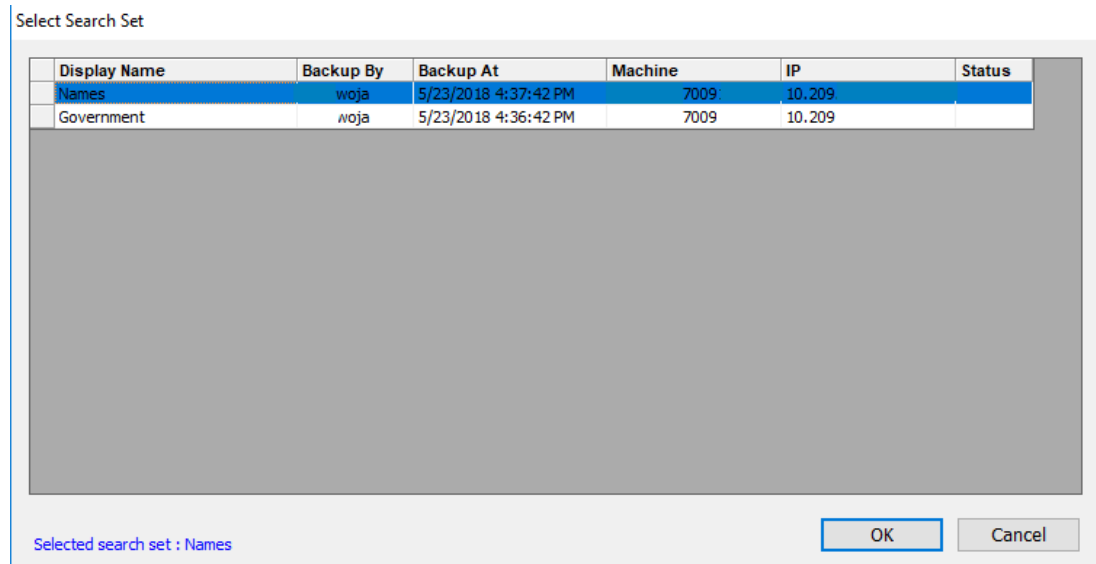
6. Select Search Set contains important information for your reference.

- Display Name: This is the name given to the Backup Search Set.

- Backup By: This is the login of the user who created the Backup Search Set.

- Backup At: This is the date and time that the user created the Backup Search Set.

- Machine: This is the computer name that was used to create the Backup Search Set.

- IP : This is the IP address of the computer that was used to create the Backup Search Set.

- Status: Shows if the Search Set is currently loaded into Full Text Search Reports.

    - Active: This is the current search set that is displayed in Full Text Search Reports.

    - Empty Status: There is not a search set displayed in Full Text Search Reports.
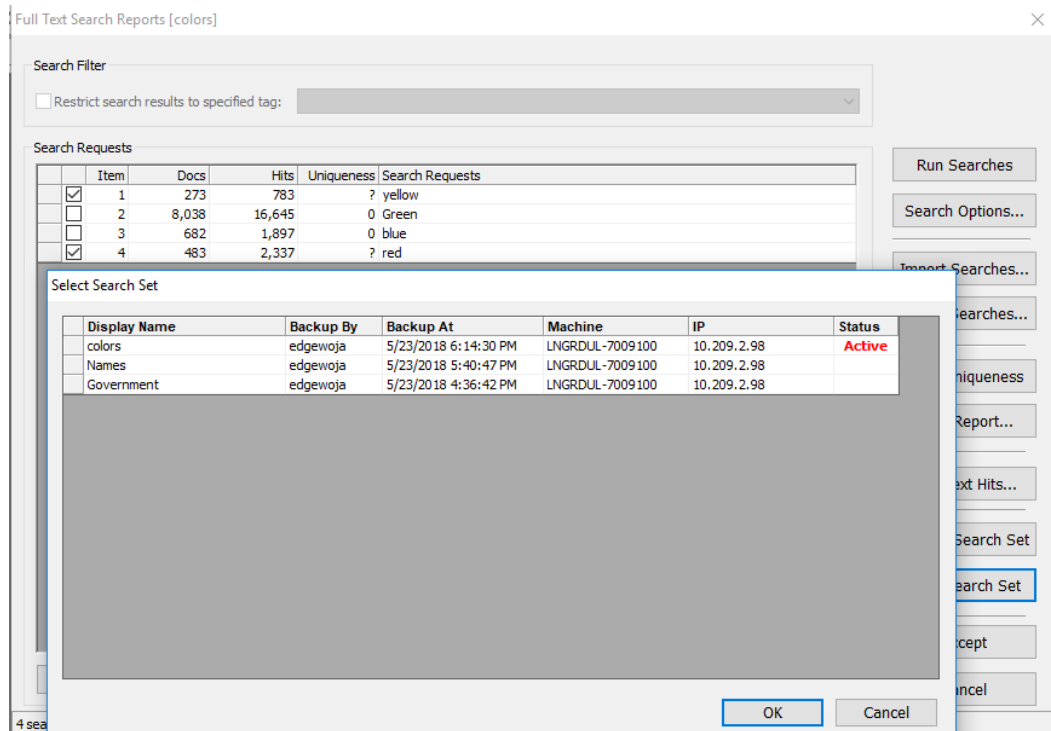
The loaded search set saves the Docs & Hits for the Search Requests from the time that the Search Set was created. If additional documents are added since the creation date then you will need to **Run Searches** again.

7. Select the Display name for the set of searches that you would like to load from the list.

8. The row will be highlighted and the name of the selected search set will also be displayed in the lower left corner.

9. Select **OK**.

10. The Load Search Set window will close and the Full Text Search Reports window will be updated with the search set and the Search Set Name in the top.
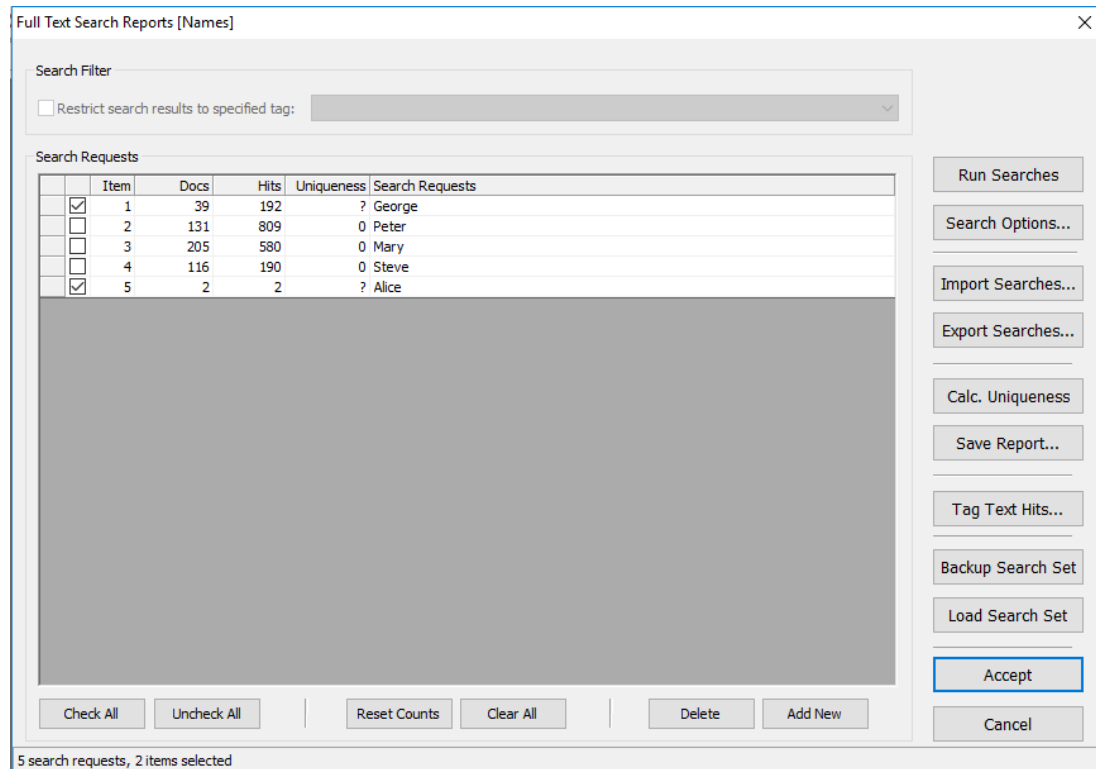
11. The loaded search set can then have the hits updated with **Run Searches** or you can **Add New** search requests.

⊟ **Changing a Search Set**

Changes can be made to a saved search set.

Load a saved search set.

The name of the search set is displayed in [] to the right of Full Text Search Reports.

The loaded search set can then have the search set hits updated by selecting **Run Searches**.

- Or you can Add New search requests to the search set.

- Or you can Delete a search request from the search set.

- Or you can Import Searches into the search set.

Any changes to the search set will be saved when selecting **Backup Search** or **Load Search Set**.

> Once the changes have been saved there is not an option to revert to a previously saved version.

To save hits to a memo field

After you run a full text search in a standalone grid, you can save the search results in a user-defined, document-level memo field.

To save results to a memo field

1. Run a full text search.

2. When the results display in the grid on the **Tools** menu click **Persist Text Hits**.

3. In the **Persist Text Hits** dialog box click the **Target field for preserving text hits** drop-down list and then either:

   • Select an existing memo field.

   Or

   • Select **<Create New Field...>** and then follow prompts to create a new memo field.

4. Click **Accept**.

   If hits already existed in the field, the new, unique values will be appended, with each hit separated by a semi-colon.

   📝 If a term, or multi-word, search is executed, each word of that term is treated as a separate search term.

⊟ **To export the dictionary**

The case dictionary can be exported from the Fulltext Dictionary dialog box. The dictionary export creates a UCS-2 tab-delimited CSV file. The CSV file contains a listing of every word in the case's full-text index, and includes the document and hit count for each word. The dictionary export supports words containing Unicode characters.

📝 Attempting to use a text editor or Excel to open a dictionary that was exported as a Comma Separated Value (CSV) file could cause the text editor or Excel to stop responding. This is because exporting the dictionary as a CSV can create very large files.

1. From the main window, on the **Tools** menu click **Search Records**.

   Clicking **Search Records** opens the **Database Query Builder** dialog box .
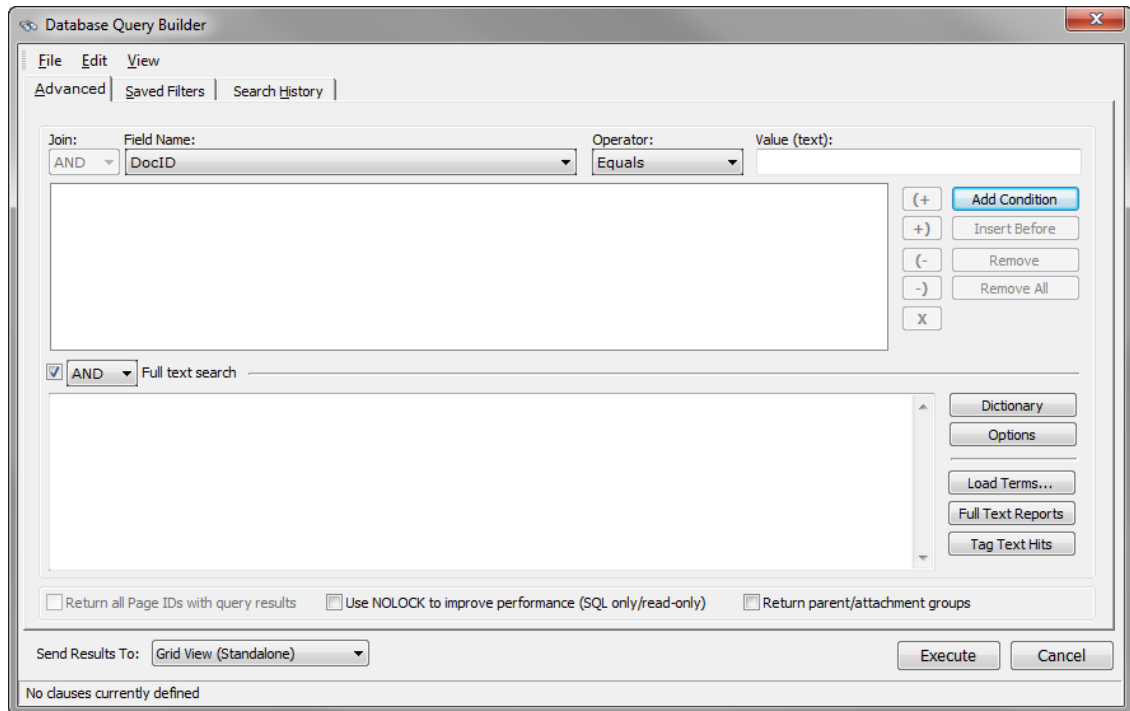
2. On the **Advanced** tab, click the **Dictionary** button.

    Clicking the **Dictionary** button opens the **Fulltext Dictionary** dialog box.
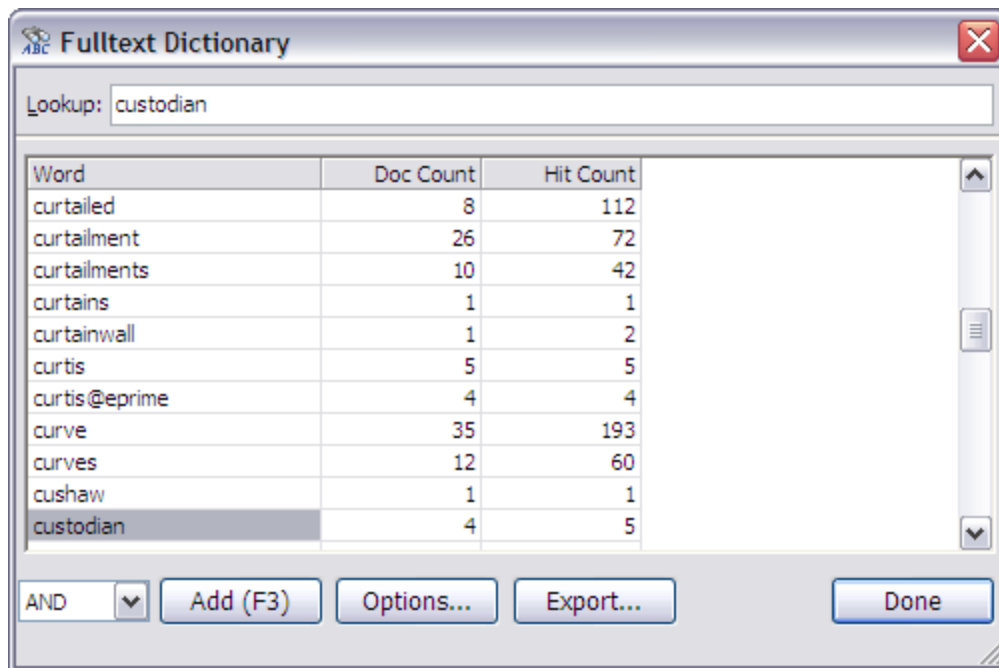
3. Click the **Export** button.

Clicking the **Export** button opens the **Select Output for Dictionary Export** dialog box.
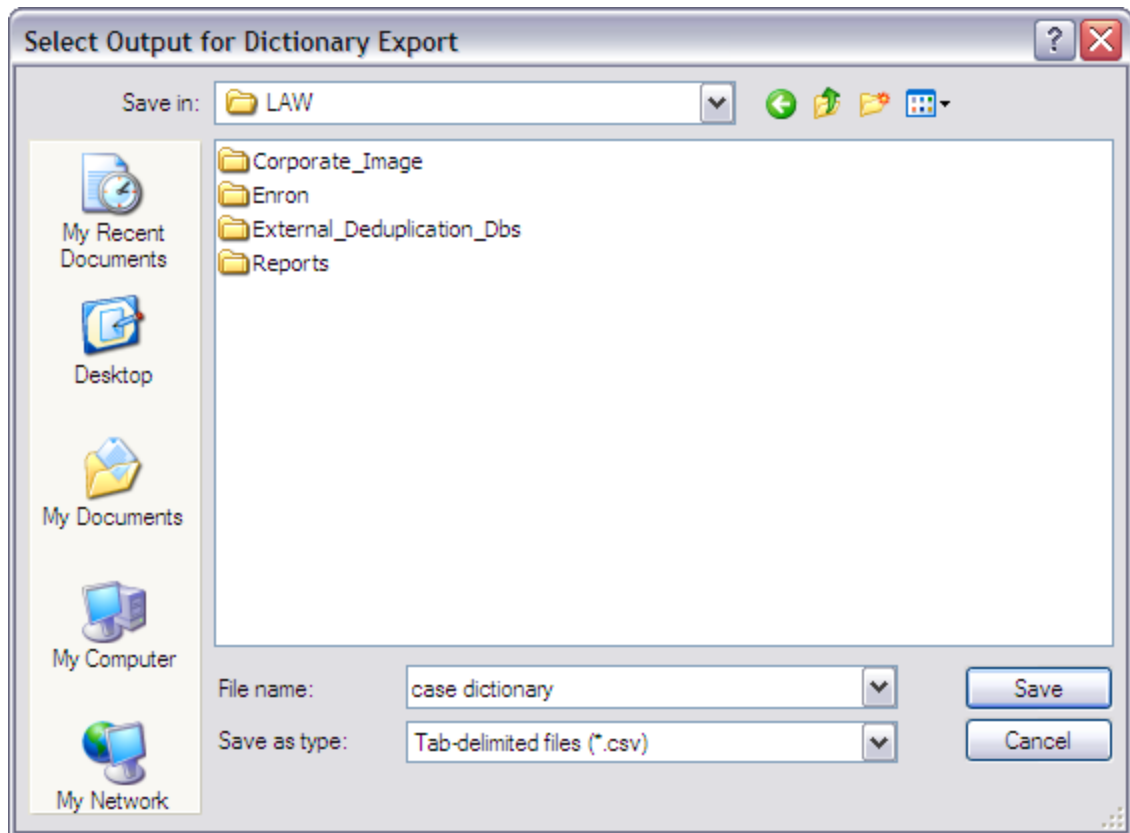
4. Browse to where you want to save the dictionary .csv file

5. In the **File name** field, type the file name, and then click **Save**.

   Clicking **Save** generates the dictionary .csv file and opens the **Open Output File Now** message.
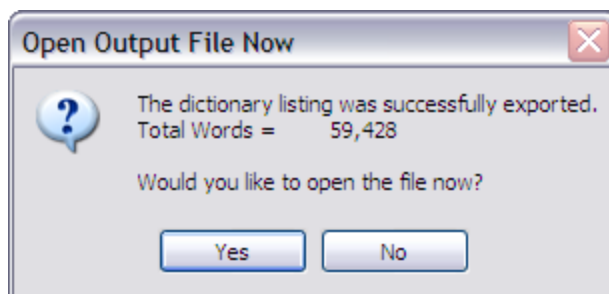
6. Click **Yes** to view the dictionary .csv file or click **No** to return to the **Fulltext Dictionary** dialog box.

Saved Searches and Search History

The Query Builder utility provides several options for reusing previously created searches. You can:

- Save searches.

- Run previously saved searches.

- Run searches from the search history.

- Edit searches that are saved stored in history.

To start the Query Builder from the **Tools** menu click **Search Records**, or click **Search Records** on the Toolbar. The **Database Query Builder** displays.
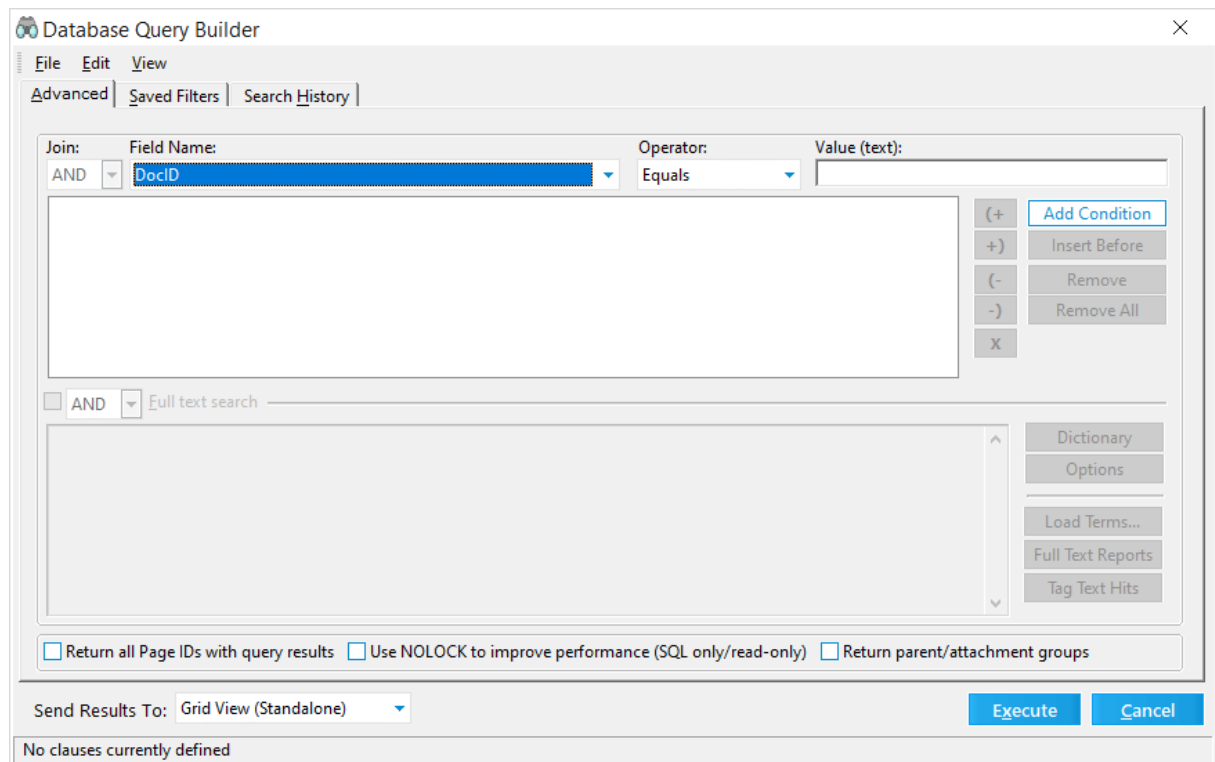
To Save a Search

1. From the **Database Query Builder**, create a query. For more information on creating queries using fields, see Creating Queries. For more information on creating queries using full text, or fields combined with full text, see Full Text Searching.

2. With the query open, on the **File** menu, click **Save**.

3. In the **Save As** dialog box, select a storage level for the search. This selection determines who will be able to find the search to run it later.

   - **User (Available to only you)**
   - **Shared (Available to all users in this case)**
   - **Global (Available to all users across cases)**

4. Type a name and a description for the search and then click **OK**. The search will appear in the **Saved Filters** tab.

To Run/Edit a Saved Search

1. In the **Database Query Builder**, click the **Saved Filters** tab. Previously saved searches are listed.

2. If necessary, select a **Storage Level/Scope**. This setting can apply a filter to show searches by level of availability:

   - **All Available Views**. The default. Shows all searches available to you at any level.
   - **User (Available to only you)**. Shows only searches that are visible to your profile.
   - **Shared (Available to all users in this case)**. Shows searches that any user of this case can use.
   - **Global (Available to all users across cases)**. Shows searches that can be run by any user across all cases.

3. Right-click on a search request and click **Open**, or double-click one of the searches in the list. The **Advanced** tab displays and the selected query is open.

4. Modify the query if needed.

5. In the **Send Results To** list, select a utility to receive the search results:

   - Batch Process
   - Batch Update
   - Export Utility
   - Grid View (Embedded)
   - Grid View (Standalone)
   - Report Viewer

6. Save the query using one of these methods:

   - On the **File** menu, click **Save**. Select a storage level, type a name and a description, and then click **Accept**.
   - Run the query. Click **Execute**.

After you run a search it is automatically saved in the **Search History** tab.

To Run/Edit a Search from Search History

1. In the **Database Query Builder**, click the **Search History** tab. Previously run searches are listed.

2. Right-click on a previous search request and click **Open,** or double-click one of the searches in the list. The **Advanced** tab displays and the selected query is open.

3. Modify the query if needed.

4. In the **Send Results To** list, select a utility to receive the search results:

   - Batch Process
   - Batch Update
   - Export Utility
   - Grid View (Embedded)
   - Grid View (Standalone)
   - Report Viewer

5. Save the query using one of these methods:

   - On the **File** menu, click **Save**. Select a storage level, type a name and a description, and then click **Accept**.
   - Run the query. Click **Execute**.

After you run a search it is automatically saved in the **Search History** tab.

To Edit the Default Save Path for Queries and Profiles

1. On the **Tools** menu click **Options** and then select the **Preferences** tab.

Options

| Imaging | Indexing | Notifications | Numbering | OCR | **Preferences** |

☐ Add all new list field values to list on update

☐ Allow selection of multiple list items

 Separator character `;`

☐ Auto-advance after updating a document

☐ Calculate total pages in batch/export dialogs

☑ Enable SQL Server/SQL Express support

☐ Link to source files in place when importing load files

☐ Prompt to continue scanning when feeder is empty

☐ Refresh duplicate status after deleting records

☐ Send query results to grid on main form by default

☐ Start the Management Console on Windows startup

☑ Notify if new version available

Path for global profiles, grid views, and filters:

`C:\Program Files (x86)\LAW50\Shared\`   Browse...

OK   Cancel

2. Click the **Browse** button for the **Path for global profiles, grid views, and filters** field.

3. Select a new path for storing queries/profiles.

📝 By default, user and shared queries are stored in the case folder structure under the $UserData folder. Global queries are saved by default to the <application path>\Shared folder.

💡 If you modify the save path for queries/profiles, and you have existing queries/profiles already saved that are global, you must move those previously saved items from the default folder to your newly specified path.

Search Operators

Search operators allow you to formulate or write your own advanced queries to garner stronger search results from your case records. Once you learn to use search operators, you can advance to typing complex searches that will help you locate information that might otherwise takes hours of review to uncover.

Types of Search Operators in LAW:

- Document Level (Boolean) - Boolean operators are based on the binary logic used in computers today, producing strict true or false results. In CloudNine™ LAW, Boolean operators search at the document level. Boolean operators used in LAW include AND, OR, and AND NOT.

- Word Level (Proximity) - Proximity operators search at the word level and are useful when looking for content that appears in records either in direct succession or adjacent order, or in close succession to each other within a specified range. This number refers to the maximum number of intervening indexed words.

- Character level (Wildcards) - Wildcard operators are symbols you can use as a substitute for characters or series of characters in a search term, creating a broader search with stronger results. Using wildcard characters helps you locate:
  - Variations on a root word
  - Possible misspellings of a name or word
  - Words or names that might include punctuation (apostrophes)

Searching in LAW is not case sensitive, so you do not have to enter all caps when typing in operators. You should type spaces between search terms and the operator (LayK AND LangW), except when searching with characters or using symbols and punctuation.

Search Operators

Search Operators		
Operator	**Query**	**Results**
DOCUMENT LEVEL		
AND contains both words	lay AND lang	Finds all records with both the words: lay and lang
OR contains either word	lay OR lang	Finds all records with either lay or lang, or both
AND NOT contains first word, but not second	lay AND NOT lang	Finds all records with lay, but not lang

Search Operators		
Operator	**Query**	**Results**
WORD LEVEL		
w/5	lay w/5 lang	Finds lay within five words of lang
not w/12	lay not w/12 lang	Finds lay where it is not within 12 words of lang
w/5 xfirstword	lay w/5 xfirstword	Finds lay when it occurs in the first five words of a document
w/5 xlastword	lay w/5 xlastword	Finds lay when it occurs in the last five words of a document
LIKE	LIKE deposition	Finds synonyms from the thesaurus for the search term specified; might locate testimony
% performs a fuzzy search	Phil%	Finds Phil, Philip, and Philllip * Fuzzy searching finds words even if they are misspelled. The position of the % character determines how many letters at the start of the word must match exactly. For example: ba%nana must begin with ba and have at most one difference between it and banana. The query: b%%anana finds words that begin with b and have at most two differences between it and banana. For more information, see Fuzzy Searching.
# performs a phonic search	#Smith	Finds words that sounds alike, such as Smith and Smythe For more information, see Phonic Searching.
~ stemming at the end of a word finds grammatical variations of a word	manage~ apply~	Finds manager and management Finds applies, applied, applying For more information, see Stemming.
CHARACTER LEVEL		

Search Operators

Operator	Query	Results
? represents any character in its place in the character sequence	wom?n ??99 10:??	Finds the following: woman, women Finds all dates in the year 1999 Finds all timeframes of 10:00 o'clock (a.m. or p.m.), i.e. 10:00, 10:42
= matches any single digit	=55 =12	Finds all records that contain the number 55 Finds dates with the number 12, such as 12/01/2001 and 08/12/2005
* matches multiple characters	Phil*	Finds Phil, Philip
## regular expression	"##app.*ie"	Finds apple pie Finds search terms that includes a combination of characters. A regular expression included in a search query must be in double quotes and must begin with ##. For more information, see Regular Expressions.
NUMERIC		
< less than	< 50 Florida < 32803	Finds numbers less than 50 Finds Florida followed by a number less than 32803
> greater than	> 50	Finds numbers greater than 50
<= less than or equal to	<=50	Finds numbers less than or equal to 50
>= greater than or equal to	>=50	Finds numbers greater than or equal to 50
= equal to	=50	Finds the number 50

Search Operators		
Operator	**Query**	**Results**
<x and >x not equal to	<50 and >50	Finds all numbers except 50
~~ numeric range	10 ~~ 20	Finds any numbers between the two numbers, such as between 10 and 20 For more information, see Numeric Range Searching.
TO	10 TO 20	Finds numbers in text within the specified range * The TO operator requires numeric text before and after the operator.

Coding

Coding is the process of marking a document with data. Coding can be used in queries to sort or filter documents according to criteria you specify.

Document-Level Coding

Document-level coding is a way to track information about records to aid in retrieval. This data is stored in the index fields, which are typically created when setting up the case. Information that applies to the entire document is considered document-level and can be displayed on the Index display on the main form.

User defined page-level fields can also be displayed in the Index display, but are not editable. Page-level fields created by users can only be edited using the Import Tag List and Auto-Numbering features.

⊟ **To edit an index field for a document**

1. Select the document in the document list.
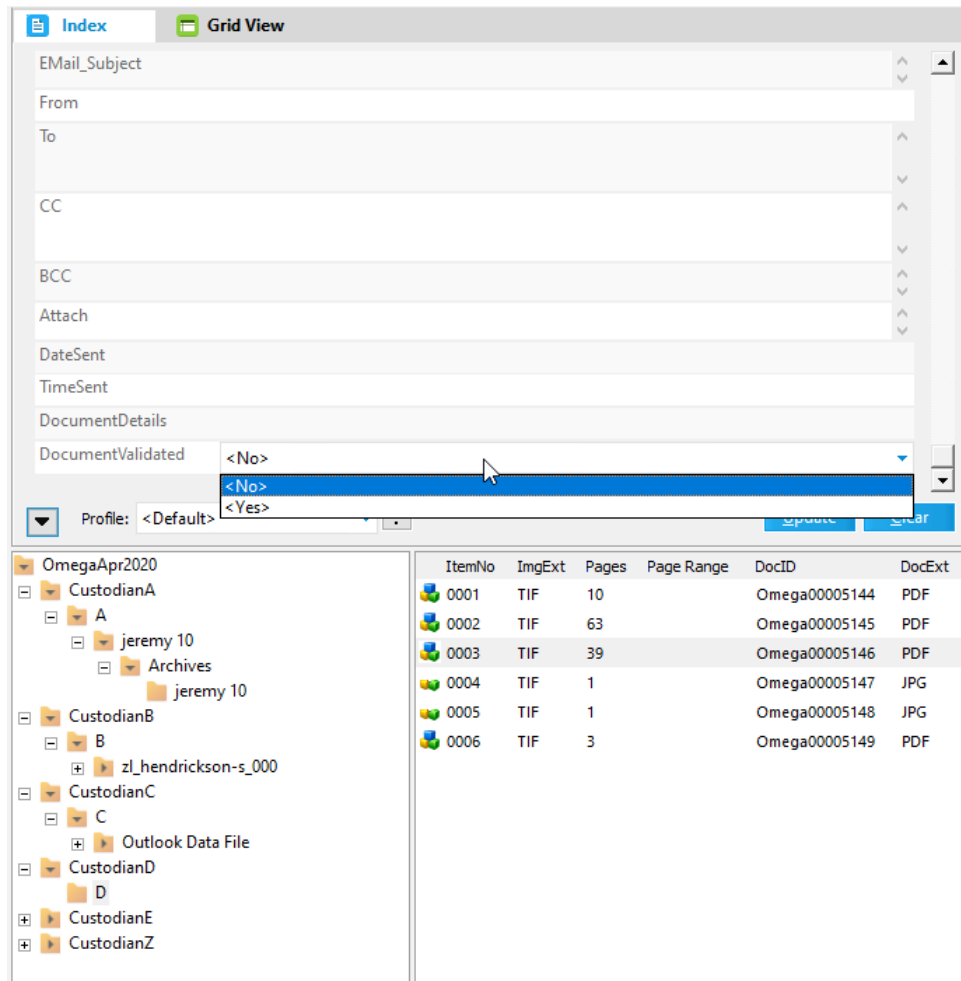
2. In the **Index** area scroll to the field you want to use for coding.

3. Select **<Yes>** or **<No>**.

4. Click **Update**.

   The values are validated based on the field types. If the values pass validation they are saved. If any values violate the rules for the field the update operation generates an error message and cancels. For example, the update would cancel if you attempted to load: duplicate values into a field requiring unique values, or a list of names into a numerical field.

CloudNine™ LAW provides the following two options to save time for users who are coding large batches of documents. When combined these options can help reduce the number of keystrokes and mouse actions needed to code.

Option and description	Steps to configure
Auto-Advance After updating a document the next document is loaded automatically. When enabled you do not need to press the TAB or the DOWN ARROW key, or switch to the mouse each time you need to move to the next document.	1. On the **Tools** menu click **Options**. 2. Click the **Preferences** tab. 3. Select **Auto-advance after updating a document** and then click OK.
Default Field Sets the initial focus on a specific field whenever a document is selected. The default field is useful when coding large batches of documents. This eliminates the need to tab around or use the mouse to set the focus back to the index fields.	1. On the **Index** menu click **Default Field**. 2. Select the field name. The default field is denoted by a check mark. • To disable the default field setting, simply select the same field again.
Add list items automatically When enabled, after a list field is updated with a value, the value is added to the list.	1. On the **Tools** menu click **Options**. 2. Click the **Preferences** tab. 3. Select **Add all new list field values to list on update**, and then click **OK**.
Update multiple documents LAW can update multiple documents with the same values. To update fields for multiple documents, See Batch Updating for additional information.	1. Select all documents to be updated in the document list by using the CTRL key, the SHIFT key, or by pressing CTRL+A. 1. Type common values in chosen fields. 2. Click **Update**. If the **<Update>** button is clicked while multiple documents are selected, the **Batch Update** dialog box appears allowing you to select only those fields to be updated.
Select multiple list items when updating a single document Helps to reduce the amount of time required to select list items.	1. On the **Tools** menu click **Options**. 2. Click the **Preferences** tab. 3. Select **Allow selection of multiple list items**, and then click **OK**.

Numbering Documents/Pages

You can apply numbers to documents or pages. Differences between document-level and page-level coding are described as follows:

- **Document level.** A document-level field applies a numeric or alphanumeric field value to documents that you specify. Typically, document-level numbering is used to uniquely identify documents. It is also used to apply categories to documents.
- **Page level.** A page-level field applies a value to the pages that might exist within documents. The most commonly used page-level field is **Page ID**. You typically use page-level numbering to uniquely identify pages across all documents in a case.

Note the following facts that apply specifically to numbering pages:

- When the Page ID field is numbered, CloudNine™ LAW will automatically update the **BegDoc#** and **EndDoc#** fields to match those values. Other user-defined page-level fields may be numbered as well.
- In an Access case, with the exception of blanks, each **Page ID** must be unique.
- SQL and ADS cases allow duplicate page IDs.
- If duplicates are encountered during any of the numbering processes, either you will receive an error, or LAW will modify the **Page ID**s by adding a "–DUP1", "–DUP2", etc. to the end of them.

[-] **To configure numbering of documents and pages**

1. From the main window, on the **Tools** menu, click **Options**.

   Or

   - From the **Batch Processing** tool, click **Options**, click **OCR**.

2. Click the **Numbering** tab.

3. Configure numbering options. These options are described as follows:

Option	Description
Use document/page level separator for Page IDs	Specifies a character to use to separate PageIDs. The default is a period.
Use alpha-numeric Bates numbering	Adds a Bates number ending in either a number or an alphabetical character.

Option	Description
	Bates numbers created with an ending alpha character are incremented as `abc001a`, `abc001b`, `abc001c`, etc.
	This functionality can be disabled by clearing the **Use alpha-numeric bates numbering** check box.
	• To configure this option, on the **Tools** menu, click **Options** and then click the **Numbering** tab.
	By disabling this setting, LAW will number the same sequence as follows: `abc001a`, `abc002a`, `abc003a`, etc. This is useful for Bates numbering if the Bates numbers all contain the same alpha suffix.
Use document level attachment numbering (ie. `ABC001[00-01]`)	Assigns a special suffix to a user-specified document level numbering scheme for parent and attachment records.
	When enabled, if the collection to be numbered contains parent and/or attachment record types, the value specified by the user will be appended with a suffix in this format:
	`[<attach number>-<total # of attachments>]`
	You can access this feature by first creating a document level index field to populate with the desired numbering scheme.
	Records that are not parents or attachments will not receive this suffix.
	This feature only applies to editable document level index fields (as opposed to page level numbering) and applies to the document numbering batch process and the **Auto Number** feature, which is available under the **Edit** menu.
Use rolling numeric sections (ie. `ABC.001.001.0001`)	Changes the pattern of values to use for numbering.
	The setting applies to auto-numbering, the batch document numbering process, and both document-level and page-level fields.
	Section delimiter specifies the character that separates sections in a numbering scheme. The default is a "." (period). For example, the following contains four sections if the period is the chosen delimiter:
	`ABC.0001.001.0001`
	Rolling will not occur in sections containing non-numeric characters.
Section delimiter	Allows you to specify a character to use to separate sections.
	The default is a period.
Allow page level numbering to span across sections	Numbers pages sequentially from page to page or from document to document.
	Values ending in a numeric suffix are incremented numerically (e.g., `ABC001`, `ABC002 ... ABC027`). Pages ending in an alphabetical suffix
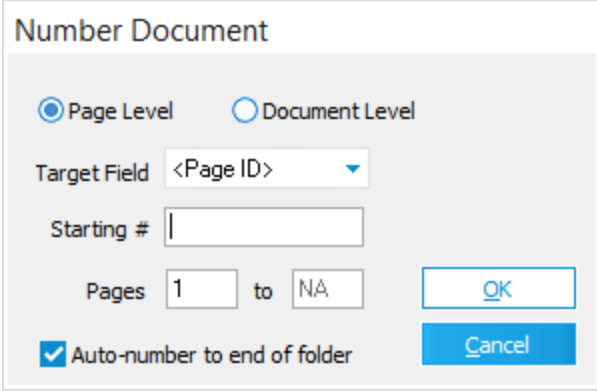
Option	Description
Allow parent/attachment families to span across sections	are incremented alphabetically (e.g., `ABC001a, ABC001b ... ABC001z`). This is the standard method of numbering records. However, if numbering the documents using a split document/page level scheme (e.g., `ABC001-001, ABC001-002, ABC001-003`, with the next document starting with `ABC002-001`), you must select **Use document/page level separator for Page IDs** and then specify the character to use for the breaks. The default is underscore (_). • To configure this option, in the main window, on the **Tools** menu, click **Options** and then click **Numbering**. If this option is enabled, and the break character is detected when switching between documents, the portion of the string before the break character will be incremented by one. The portion after the break character will be reset to one and will use the same number of characters for padding as the previous document.

⊟ To number documents or pages

You use the Auto-Number function to efficiently number or renumber document-level or page-level fields of the current document or all of the documents from the specified page or document to the end of the current folder.

📝 You can use the Batch Processing tool to number documents and pages. For more information see Document Numbering.

1. On the **Edit** menu, click **Auto-Number**. The **Number Document** dialog box appears.

   Number Document

   ◉ Page Level   ○ Document Level

   Target Field `<Page ID>` ▼

   Starting # [   ]

   Pages [1] to [NA]   OK

   ☑ Auto-number to end of folder   Cancel

2. Configure numbering options as needed:

- **Page Level** or **Document Level**. The Page Level option will only apply to records with associated images. When using page=level, any records without images are ignored.

- **Target Field**. Select from the list of fields that are available for numbering (i.e., user-defined fields). If Page Level is chosen, then only page-level fields will appear in the list. If Document Level is chosen, then only document-level fields will appear in the list.

- **Starting #**. Type the starting number to be placed in the selected field.

  The default starting number is the value of the **Target Field** for the currently selected page or document.

- **Field names**. For both document and page level numbering, users may also include a specific field name in the **Starting #** field using the following notation: `&[<field name>]`. For example, `&[BegDoc#]` will number the selected target field with the current **BegDoc#** values. Multiple fields can also be used in the **Starting #** field. For example, "`&[Page] of &[Pages]`" (without the quotes) will result in the text "`1 of 20`" in the selected target field.

  The following fields can be used when numbering with field codes:

  &[Page] – Current page of the document.

  &[Pages] – Total pages in document.

  &[Page ID] – Page ID value.

  &[0] - &[000000000000] (12 zeroes) – Displays an incrementing value starting at 1 and resets at the beginning of each document. The zeroes are used to format the string with zero padding.

  &[<fieldname>] – Valid for all other LAW fields.

Production Notes

- The document/page level numbering feature is not supported when used in conjunction with the "`++`" option on a LAW field.

- If a numbering string ends with "`]`" it is assumed the string ends with a field. This string will not be automatically incremented by LAW to avoid the confusion of the extra digits in the string. For example, `&[Page]_001` becomes: `1_001`, `2_002`, `3_003`,... but `001_&[Page]` becomes: `001_1`, `001_2`, `001_3`,...

- The field notations explained above can also be used in the document numbering batch process **Starting #** field.

- The field replacement feature is not supported if **Document Level Attachment Numbering** is enabled. To configure this option, on the **Tools** menu, click **Options** and then click the **Numbering** tab.

- If the currently selected record has an associated image, the **Pages** boxes will be populated with the currently selected page and the ending page. If numbering image records, set the starting and ending pages. If the ending page exceeds the page count of the current image, LAW will only number to the end of the current document.

- If the **Auto-number to end of folder** option is selected and the user plans to number a page-level field, the ending page is disabled and LAW will number all the way to the end of the current folder. This feature helps to fix numbering mistakes in a single document that cause subsequent documents in the folder to be incorrectly numbered. If numbering a document-level field, LAW will automatically auto-number to the end of the folder. If only the current document requires updating with a document-level number, edit the field value in the Index display after ensuring the field is visible.

Numbering during the scan process

You can automatically number pages as they are scanned. At scan time any gaps in the numbering of originals are removed.

1. On the **Index** menu, click **Increment Mode**.

2. Select a mode:
   - **Automatic**. Forces all pages to be numbered based on the previous document. If no previous document exists or the previous document is not numbered, LAW will prompt for a starting number
   - **Manual**. Prompts you for the starting number whenever a new scan is started or a break sheet is detected. This option is helpful if there are frequent gaps in the numbering because it give you a chance to verify the starting page of each new batch. The default Page ID will be the next logical Page ID, which is the same as would be used with automatic numbering. If the page matches, then click OK to begin scanning.
   - **Manual (Auto)**. Does the same thing as the manual mode, except that you are not prompted to enter a starting bates number during a batch when break sheets are used.
   - **None**. Disables document auto-numbering.

Document-level attachment numbering example

In this example, a parent document contains two attachments.

- A **Starting #** of `ABC0001` is entered into the **Number Document** dialog box.
- **Use document level attachment numbering** option in the Numbering tab is selected.
- The user has created a document level text field named **ProdNo**, which is selected in the Number Document dialog box.

Number Document

○ Page Level   ● Document Level

Target Field ProdNo ▼

Starting # ABC000001

Pages NA to NA   OK

☑ Auto-number to end of folder   Cancel

The selected document level field, after numbering is complete, will contain the following:

> ABC000001[00-02] - parent
>
> ABC000001[01-02] - attachment 1
>
> ABC000001[02-02] - attachment 2

If an attachment is included in a collection to be numbered without its parent, the parent will also receive a value in the selected field, since the attachment's value relies on the parent's value. Any other attachments of the same record not included in the selected range will not be numbered. If the parent already contained a value, the attachment value will be based on the parent's numbering scheme even when attempting to auto-number. Therefore, the parent's field must be cleared or the entire family range must be selected in order to renumber with a different scheme.

If an attachment range is modified after numbering a family using this feature, the family will need to be renumbered. This will not be done automatically.

Prior to using this feature and exporting from CloudNine™ LAW, ensure the target application supports the brackets and dashes included in the scheme if utilizing the field containing these values as the image tag or file naming scheme.

⊟ **Modifying the default suffix**

An initialization setting in the Law50.ini file is available to modify the default suffix of `[<attach number>-<total # of attachments>]`.

The Law50.ini file is located in the C:\Program Files (x86)\Law50 directory.

If the `[Preferences]` section already exists, place `AttNumSuffix=[00-00]` below it.

```
[Preferences]
AttNumSuffix=[00-00]
```

The value shown, `[00-00]`, is the default format. This suffix is used if the initialization setting does not exist or is invalid. The value that is used must contain:

- Opening and closing characters, such as brackets or parentheses. Ensure the two characters are different.
- A separator character, such as a hyphen.
- At least one zero character before and after the separator character. The minimum value is: `[0-0]`. The number of zeroes before or after the separator pads the value with zeroes. For example, `[000-000]` displays as `[002-009]`.

This feature is not supported when auto-numbering with field codes included, such as &[Page ID].

⊟ **To number individual pages manually**

The auto-numbering functions work well for numbering batches of sequentially numbered pages. However, if frequent gaps in the numbering scheme or intermittent alpha suffixes on pages exist, users may have to manually edit Page IDs.

1. Select the page to renumber and then:
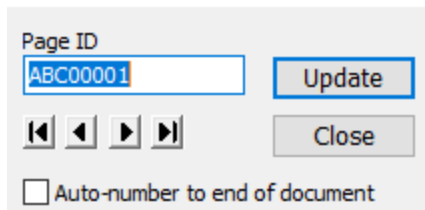
   - On the **Index** menu, click **Edit Page ID**.

   Or

   - Press CTRL+E.

   The **Edit Page ID** dialog box appears.

   Edit Page ID

   Page ID
   ABC00001   Update

   ⏮ ◀ ▶ ⏭   Close

   ☐ Auto-number to end of document

2. Type a new Page ID for the selected record.

   - You can use the arrow controls to navigate between pages. Use these controls if you want to manually select individual pages for renumbering, or if you want to designate a starting point for auto-numbering.
   - If necessary, select **Auto-number to end of document**. This option extends the numbering as specified in the Page ID box from the currently selected page to the end of the document.

3. Click **Update**.

📝 The Edit Page ID feature will allow you to change the page number on a page or the entire document. If you need to renumber the document or an entire folder, use the Document Numbering feature.

⊟ **To find a page by PageID**

1. Press CTRL+F.

   Or

   - On the **Index** menu, click **Find Page ID**.

2. Type the page ID that you want to find and then click **OK**.

   The page with the matching Page ID opens.

📝 To locate groups matching a specific pattern or ranges of Page IDs, use the Query Builder.

⊟ **Rolling numbering more information**

This example illustrates the use of the rolling numbering feature.

The **Use rolling numeric sections** setting is enabled and the value `ABC.0001.001.0001` used to number a document-level index field.

```
ABC.0001.001.9998
ABC.0001.001.9999
ABC.0001.002.0001
ABC.0001.002.0002
```

If the **Use rolling numeric sections** setting is disabled, the values will be incremented as follows (using the above example values):

```
ABC.0001.001.9998
ABC.0001.001.9999
ABC.0001.001.10000
ABC.0001.001.10001
```

Note the following facts about this example:

- By default, when the numbering sequence increments high enough to roll into the next section, the section that rolled will increment back to the value of "1" instead of "0". So `001.999` becomes `002.001` (not `002.000`).
- The other settings on the Numbering tab can be used with the rolling numeric sections option. When the document/page level separator is enabled, the number will first be split into prefix and suffix sections and then incremented accordingly. If

either the prefix or the suffix contains a matching rollover character, rollovers will occur at the page and document levels.

- The alpha-numeric Bates numbering setting may be used with rolling sections as well. For example, `ABC.999.999.9999` would increment to `ABD.000.000.0001` with both settings enabled. If the alpha-numeric option is disabled while rolling numeric is enabled, the value would become `ABC1.000.000.0001`. However, if a non-numeric character exists in a section, that section will not rollover. For example, `001.99z` would increment to `001.99aa`.

- If **Use document level attachment numbering** is enabled, the `[00-00]` suffix will be applied to the end of the user-defined starting value. The rollover calculations occur prior to appending this suffix.

- The sub-option, **Allow page level numbering to span across sections**, will determine whether or not pages of a document will span across more than one document level. This numbering option allows users of Ringtail to number documents in conformance with the numbering scheme utilized frequently in Australia for document productions.

Incremental Numbering Syntax for Pages

You can auto-number documents on a page level, using a seed value contained in an index field. For example, if you have a file name field such as ABC0001 you can number PageID's based on the field and with each page incrementing automatically.

When you number a page level field with a document level index field, use `&[<Field Name>]` to apply the value of the document level field to the page level destination field for each page.

- To increment the document field for each page use the syntax:

  `&[<Field Name>]++`

  Adding `++` at the end of the field increments the document level index field for each page in the document.

📝 This `++` syntax is also used in the endorsing function in batch processing when applying headers and footers.

Batch Updating

A batch update applies the same update to multiple documents at one time.

Note the following facts about batch updates:

- Batch updates can be run either from a grid view or from the main window.
- A batch update run from a grid view applies the update to the records listed in the grid.
- A batch update run from the main window applies the update to pages and documents selected under the Index tab of the main window.

For more information about selecting records using grids see Launching the Grids.

For more information about updating documents individually, see Document-Level Coding.

⊟ **Batch updates in grid views**

1. From a standalone grid or embedded grid click the batch update button: [icon].   The **Batch Update** dialog box appears.
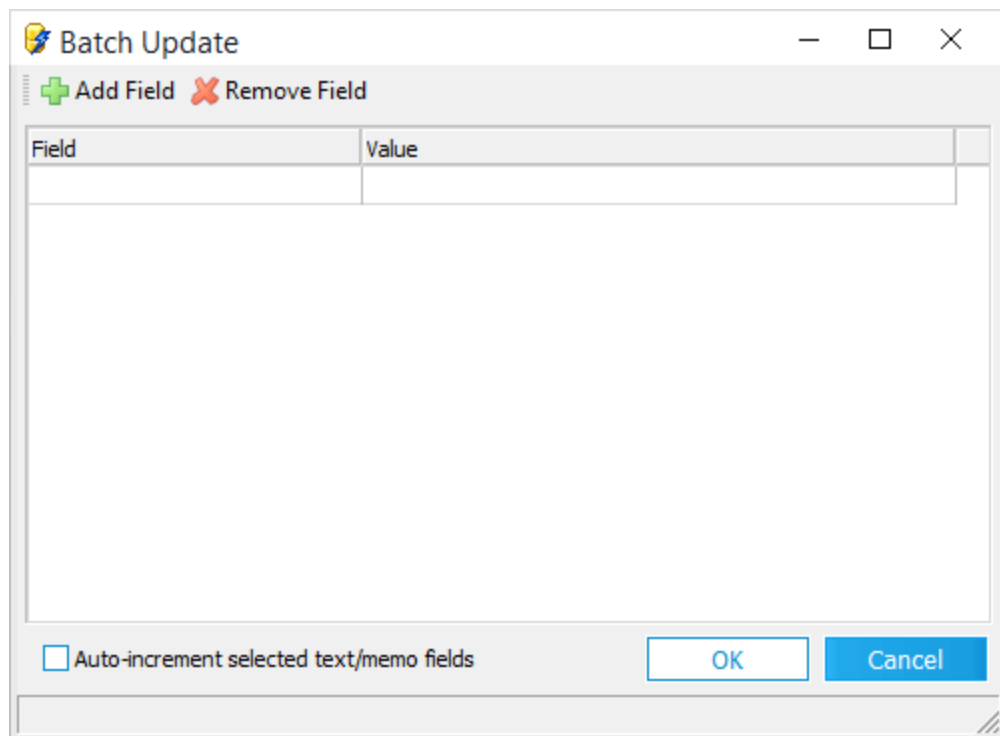
2. Select fields and values to update.
   - To add a field initially, click in the empty field cell, click again on the list control that appears in the cell, and then select a field from the list.
   - To add or remove fields, select the field and then click **Add Field** or **Remove Field**.
3. Select **Auto-increment selected text/memo fields**, if necessary. When enabled any value entered for text or memo type fields increment by one for each updated

record. This feature could be used to assign a new, unique identifier to all or a subset of documents in a case.

4. Click **OK.** A message box appears that reports the number of records updated.

6. Click **OK**.

1. Select the documents to be updated.

   For example, in the following screenshot, these pages are selected: 0002, 0004, 0006, 0007, and 0009.

	ItemNo	ImgExt	Pages	Page Range	DocID	DocExt
	0001	TIF	1			
	0002	TIF	1			
	0003	TIF	1			
	0004	TIF	1			
	0005	TIF	1			
	0006	TIF	1			
	0007	TIF	1			
	0008	TIF	1			
	0009	TIF	1			

2. Enter the common values in the fields that you want to update.

   For example, in the following screenshot, in the **SourceApp** field, *Microsoft Word* is selected. The **SourceApp** field in each record selected in the previous step will be updated with *Microsoft Word*.

3. Click **Update**. The **Batch Update** dialog box appears.

4. Select any fields to be updated.

    In the following screenshot, **SourceApp** is selected for update.
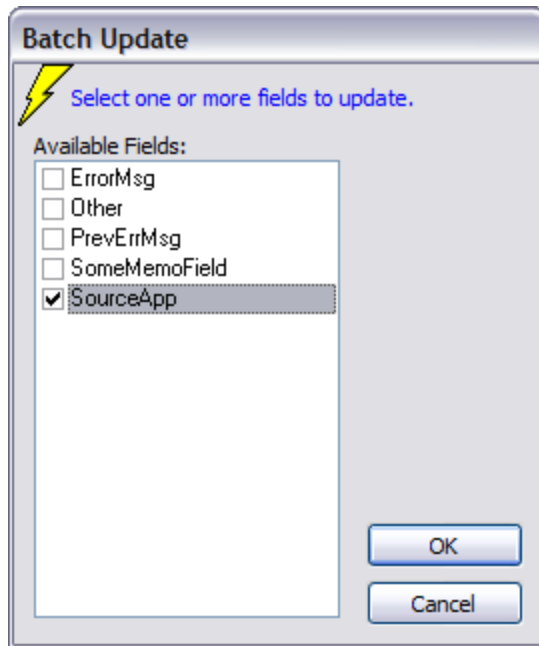
5. Click **OK**.

6. Click **OK** in the **Batch Update** message box, which confirms that updates were successful.

Using Text Files for Coding

CloudNine™ LAW can import delimited text files to link records in LAW with existing index information stored in delimited text format. This feature is useful when coding was performed in another application, for example.

📝 In Version 7.0 & 7.1, Turbo Import cases are not eligible for scanning, importing (dii, opt, dat, or csv) load files, case to case imports, or raw image imports. Only EDRM XML load files are supported. Not all options are available in Turbo Import enabled cases for File, Edit, and Folder. The Scan tab is not able to be viewed in Turbo Import enabled cases.

In Version 7.2+ Delimited text files and Tag lists for overlaying fields onto records in Turbo Import enabled databases are available for use.

⊟ **To import delimited text files**

1. On the **File** menu click **Import**, and then click **Delimited Text**.

2. The **Import Delimited Text** dialog appears.

3. Select a delimited text file (*.csv , *.txt) to import.

    A sample of the data contained in the file is displayed. This preview can be used to check the order of the fields being imported and whether or not the first record contains the field names.

4. If necessary, adjust the **Character Encoding** value to ensure the file is parsed correctly.

5. To ignore the first row if the first record of the file contains field names, select **First row contains field names.**

6. Select the fields being imported from the list of **Available Fields** according to the following requirements:

    *   The fields must appear in the same order as they appear in the text file.

    *   The records must either be already numbered (i.e., PageID for image records) or have at least one coded field to act as the image tag. Otherwise, the coded data cannot be linked to the images.

    *   **Select Image Tag** must be marked as one of the fields to import. The **Image Tag** field must be selected because it is used to match the imported data with existing records. It acts as a "link" between the records in the imported field information and the existing records in the LAW case. If no match is found for the incoming record, it will be ignored. If a duplicate match is found, both records matching the **Image Tag** value found in the LAW case will be updated with the same information.

📝 Extended property, page-level, and system fields with field names that start with an underscore, _, are not shown in the **Available Fields** list. In version 7.2+ Import Set, EdaId, Custodian Id, ImportSet Id, EdSource Id, EdFolder Id, and EDSession Id are not listed in the **Available Fields** list nor **Image Tag** list.

7. Select **<!-SKIP FIELD->** for fields not to be imported.

8. Select a **Data Delimiter** to allow other types of delimited files to be imported.

9. Click **Begin**.

📝 To return the options on this page to their original values, click **Restore Defaults**. This action resets the delimiters back to the default comma/quote delimiters.

Creating Tag Fields

Tag fields allow you to mark document or pages with a Boolean value (yes or no). Tags can be used for any number of purposes, for example, to mark documents that must be

converted to TIFF or that have already been converted. Tagging may be performed on individual records, on all records in a case, or on filtered results. Users may also import a list of unique IDs to toggle tag values.

The tagging feature has multiple uses. Users may choose to tag documents that need to be converted to TIFF, produced to paper, responsive documents, etc. Users may even wish to tag documents that should be produced at a larger paper size or produced in color. This feature makes it easier for any project, scanned or electronic discovery, to be produced.

Before documents can be tagged, one or more tag type index fields will need to be created.

⊟ **To create tag fields**

1. On the **Index** menu, click **Modify Fields**.

   Or

   • From the main menu, click the **Manage Your Profiles** button: [...].

2. The **Modify Fields** dialog box appears.
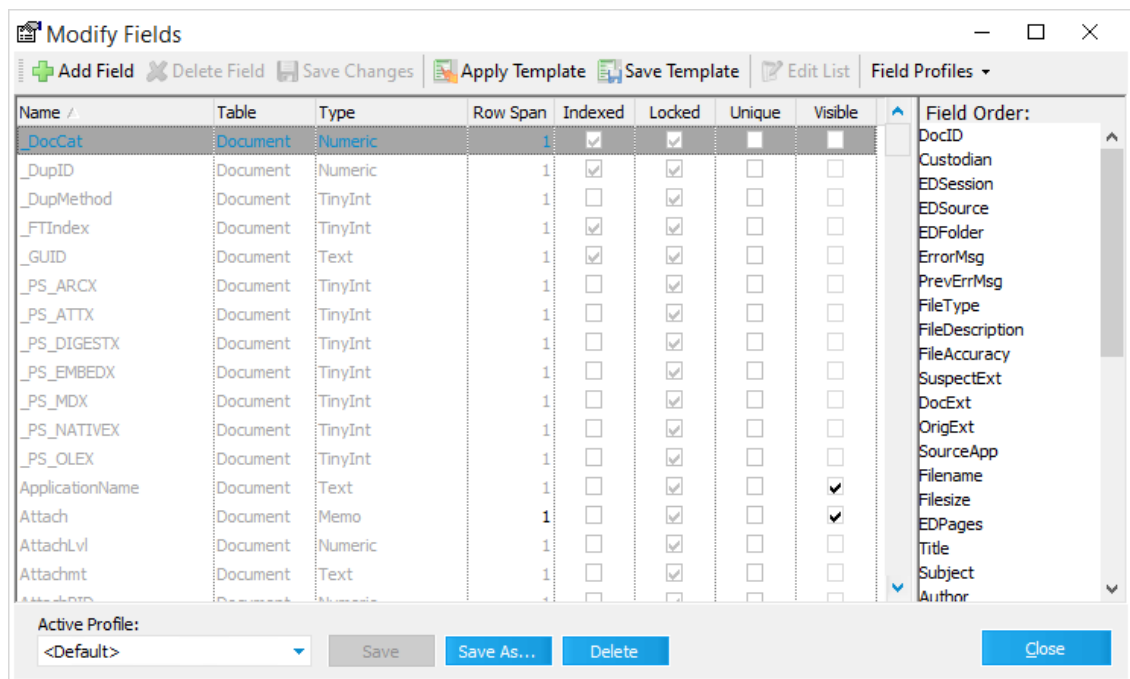
3. Click **Add Field.** The **Add Field** dialog box appears.

4. Type a name for the tag field and then make a selection from the **Table** list as Document-Level or Page-Level. For example, if you are creating a field to identify pages having suspect footers, select Page-Level. If you are creating a field to identify documents that are ready for export, select Document-level.

⚠ Tag name rules:
- Tag names can contain any combination of upper and lower case letters, numbers, and underscores
- Tag names are case-insensitive, meaning that if there is already a tag named "Bob", you cannot create another tag named "BOB"
- Tag names cannot begin with a number

5. Select **Tag (Boolean)** for the type.

6. Select **Insert at top of list** to insert the field at the top of the list in the **Index** display, making the field easier to locate.

☑ Leave **Indexed** and **Unique** unselected.

7. Click **OK** to create the tag field.

The process of tagging documents is discussed in the Tagging Records topic. For more information on creating index fields, see the Creating Index Fields topic.

Tagging Records

You use tag fields to mark records with a **Yes** or **No** value. In the grid displays, a **Yes** value appears as a checked checkbox. A **No** value appears as an unchecked checkbox. Tag fields are potentially useful for many purposes, such as tracking status of records. To learn how to create a tag field, see Creating Tag Fields.

You can tag records by using any of the following methods:

- Select records to update using the mouse.
- Edit records using hotkeys.
- Batch update.
- Tag list import. See the <u>Importing Tag Lists</u> topic for information on the third method of tagging multiple documents.
- Promote tags to near-duplicate documents. See <u>Promoting Tags to Near Duplicates</u> the topic for more information.

⊟ <u>**To tag records individually using a mouse**</u>

1. Open a grid display.

2. Make sure the tag field you want to work with is visible. Right-click the field names title bar.

   The **Field List** dialog box appears.

3. Select your tag field.

4. In the grid, select or deselect the checkbox in the tag field for the record.

⊟ <u>**To tag multiple records at once**</u>

1. Open a grid display.

2. Make sure the tag field you want to work with is visible.

3. Right-click the field names title bar.

   The **Field List** dialog box appears.

4. Select your tag field.

5. Filter records as needed.

6. Select rows to tag or leave rows unselected to tag all.

7. Right-click a cell in the tag field and then click one of the options:
   - **Tag Selected Rows as Yes.** Marks selected rows as **Yes**.
   - **Tag Selected Rows as No.** Marks selected rows as **No**.
   - **Toggle Tag for Selected Rows.** On selected rows, changes tags marked **No** to **Yes** and tags marked **Yes** to **No**.
   - **Tag All Rows as Yes.** Tags all rows in current view, whether selected or not to **Yes**.

- **Tag All Rows as No.** Tags all rows in current view, whether selected or not to **No**.

- **Toggle Tag for All Rows.** Regardless of selection, changes any tag in current view marked **No** to **Yes** and any tag marked **Yes** to **No**.

A message box provides the number of records updated.

8. Click **OK**.

You can assign a hotkey to tag fields. Tagging fields using a hotkey can be more efficient than using the mouse to select records. To tag using hotkeys you must perform three steps:

1. **Assign hotkeys to tags.** In this step you create a link between a keyboard key, such as F1, and a tag field.

2. **Enable review mode.** In this step you prevent conflicts between your hotkeys and those provided by default in CloudNine™ LAW. Enabling review mode temporarily suspends all default hotkeys in LAW and allows the hotkeys you assigned to function according to your configuration choices.

3. **Tag records using hotkeys.** In this step you use the assigned hotkey to edit the value in the tag field.

These steps are described in the sections that immediately follow:

To assign hotkeys to tags

1. In a standalone or embedded grid click the Tagging Hotkeys button: .

The **Tagging Hotkeys** dialog box appears. All existing tag fields are listed in the Tag Field column.
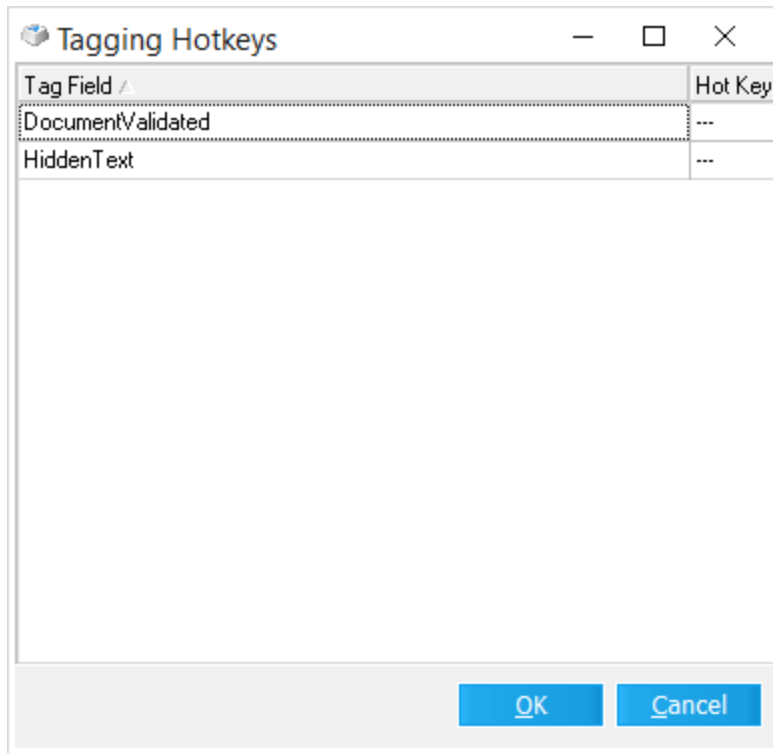
2. Select a hotkey for any tag field listed and then click **OK**.

To enable review mode

1. In a standalone or embedded grid click the Review Mode button: .

    A message at the bottom of the grid indicates that review mode is enabled:

    - When enabling review mode in the embedded grid, a Review Mode Enabled message box will appear after clicking the review mode button. The button will appear "depressed" to indicate that review mode is enabled (in both grids).

📝 When you are finished tagging with hotkeys, to disable review mode in either grid, click the **Review Mode** button again.

To use hotkeys to tag records

1. In a standalone or embedded grid click with review mode enabled, use the up and down arrow keys to navigate through the records in the grid display.

2. After a relevant record is found, press the assigned hotkey to toggle the tag value in the tag field.

- The cell displays a green check mark when a record is flagged with the Yes value. Press the hotkey a second time to toggle the current value.
- When you are finished tagging with hotkeys, to disable review mode in either grid, click the Review Mode button again.

⊟ To tag using batch updates

Batch updating is the process of applying the same value to an index field for multiple records. This feature can be used for tagging in addition to updating any other type of user-defined or any other unlocked index field. In most cases, the batch tagging options mentioned above will be more efficient than using this feature when working with tag fields.

1. Perform a search or filter to ensure only the desired records are displayed in the grid.

2. On the **Edit** menu, click **Batch Update**.

   The **Batch Update** dialog box appears.

3. Click within the cell in the **Field** column and then choose a tag field from the drop-down list.

   When a tag field is selected, a check box will appear in the associated **Value** cell.

4. Update the current record set as follows:

   - To update records to **Yes**, select the checkbox in the **Value** field.
   - To update records to **No**, deselect the checkbox in the **Value** field.

5. Click **OK**.

   All records currently displayed in the grid are updated.

Importing Tag Lists

The tag import file is a text (.txt) or comma separated value (.csv) file containing a list of unique identifiers used to locate the records in the case. The unique identifiers typically used in tag lists are the DocID or BegDoc# field. Tag lists make it easier to:

- **Flag multiple records**. This feature is especially useful when native or imaged files have already been distributed and further action such as converting to TIFF or printing a production set with specific documents is required.

- **Find records in a database created by a database application other than the type associated with the case.** If a different type of database was used to flag
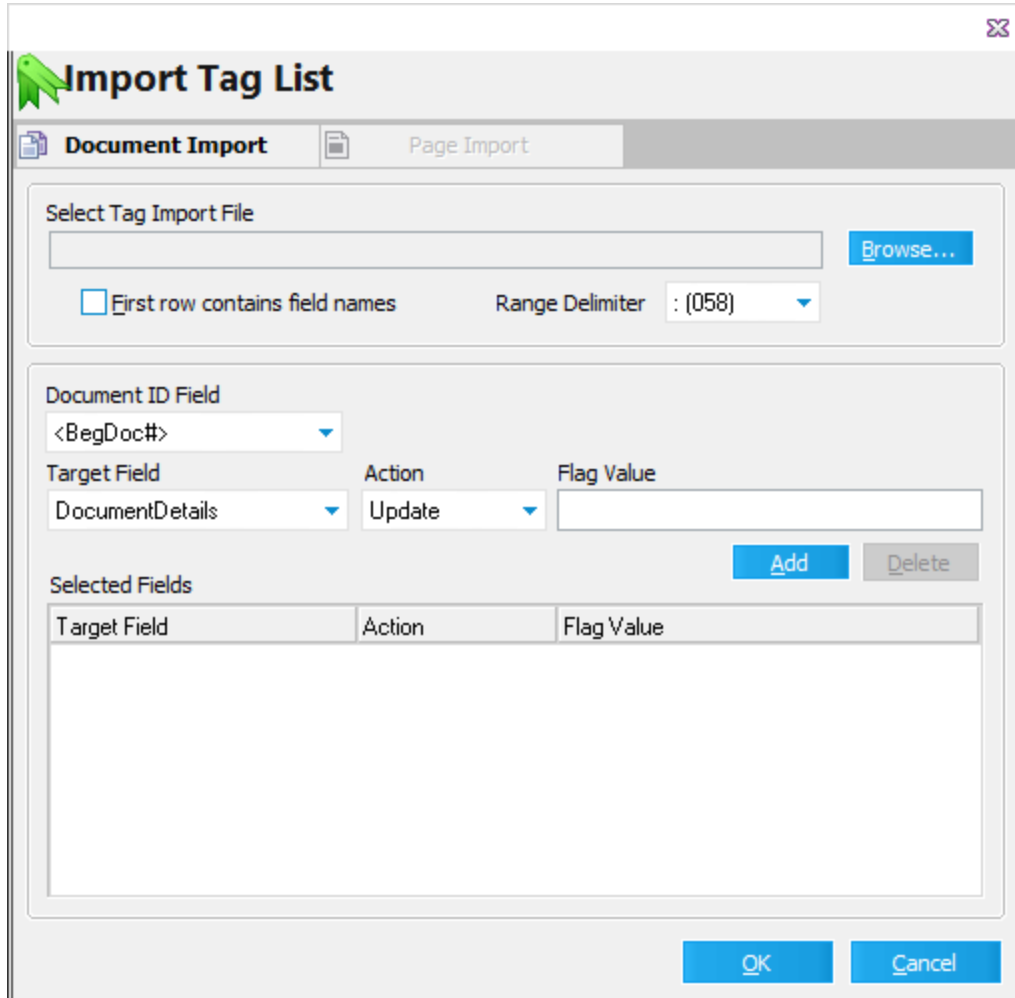
records and a list of documents to be produced was created, this list may be easily imported into the existing LAW case and later queried to locate the records for further processing.

🗒 In Version 7.0 & 7.1, Turbo Import cases are not eligible for scanning, importing (dii, opt, dat, or csv) load files, case to case imports, or raw image imports. Only EDRM XML load files are supported. Not all options are available in Turbo Import enabled cases for File, Edit, and Folder. The Scan tab is not able to be viewed in Turbo Import enabled cases.

In Version 7.2+ Delimited text files and Tag lists for overlaying fields onto records in Turbo Import enabled databases are available for use. "

⊟ **To import a tag list**

1. On the **File** menu, click **Import** and then click **Tag List**. The **Import Tag List** dialog box appears.

2. Click **Browse** to locate the tag import file.

If the import file's first record contains the field name, check the **First row contains field names** box. The range delimiter is used when importing ranges of records to be updated rather than a list of individual ID numbers (i.e. ID0001-ID0048).

3. Configure **Target Field**, **Action**, and **Flag Value** as needed. Note the following when configuring these options:

   • The **Document ID Field** lists fields that may be used to link the incoming import file with existing records. For example, if the user is provided a text file containing a list of DocIDs that match the DocIDs in the case, then the user would select DocID as the Document ID Field.

   • For greater performance in cases with a large number of records, it is recommended to apply an index to the selected Document ID field. You can manually apply a tag to a field by using the Modify Fields dialog box. However, CloudNine™ LAW will check for the existence of an index on the selected Document ID field. If the field is not indexed after initializing the import, LAW will allow the addition of an index for the selected Document ID field at that time. When adding an index using this method, the grid displays will need to be closed prior to adding the index. If the grid is active, LAW will display a prompt requesting the grid be closed in order to continue.

   • A memo field cannot be used as the Document ID field.

   • The **Target Field** is the field to be updated with the "tag" value. If a tag field is selected, the Flag Values will appear as "True" and "False". The Action drop-down will have two options: Update (which will update the records with the specified Flag Value) and Reverse (which ignores the Flag Value and simply toggles the current value of the tag field for each affected document). If other field types are selected, such as a text field, the Action options will change to Update (explained above) and Append, which allows users to append the specified Flag Value to any existing field data. Date fields will only have an Update option.

4. Click **Add.** The entry is added to **Selected Fields**.

5. Select additional target fields as needed.

6. Click **OK**. The import process starts.

   After the import is complete, a report appears that lists the number of records that have been updated and any errors that may have occurred during the import. These records may then be returned by a search using the filter functions or query tools.

Coding at Scan Time

Data may be coded at the same time the document is scanned. For efficiency purposes, coding at scan time is performed when the same value will exist for multiple records such as a Box or Folder label.

⊟ **To code at scan time**

1. Select the folder in which documents will be scanned.

2. Place the document in the scanner feeder.

3. Enter the values you need to populate.

4. Press F3.

   The new document is scanned and the field is populated accordingly.

Batch Processing

The Batch Processing utility enables you to perform repetitive operations, such as document numbering, applying endorsements or performing optical character recognition (OCR) to a selection of documents or to all documents in a case.

Batch processes can be applied to the following actions:

- Document and page numbering.
- Extract custom metadata.
- Split Adobe Acrobat PDF files by bookmark.
- Image cleanup.
- Endorse documents.
- Optical character recognition (OCR).
- Print images and native files.
- Find documents with double endorsements (scan for suspect footers.)
- Convert documents to TIFF or PDF.
- Update page color and size data.

In addition, the Batch Processing utility is capable of enrolling multiple computers to complete certain shared processing tasks, such as endorsing. For more information see: Distributed Batch Processing.

Performance and document page counts

In cases with a large number of documents and/or pages, a delay may be experienced when launching the Batch Process or Export Utility dialogs while LAW calculates the total number of pages to display.

To disable page counting

1. On the **Tools** menu, select **Options**, and then click the **Preferences** tab.

2. Clear the **Calculate total pages in batch/export dialogs** check box.
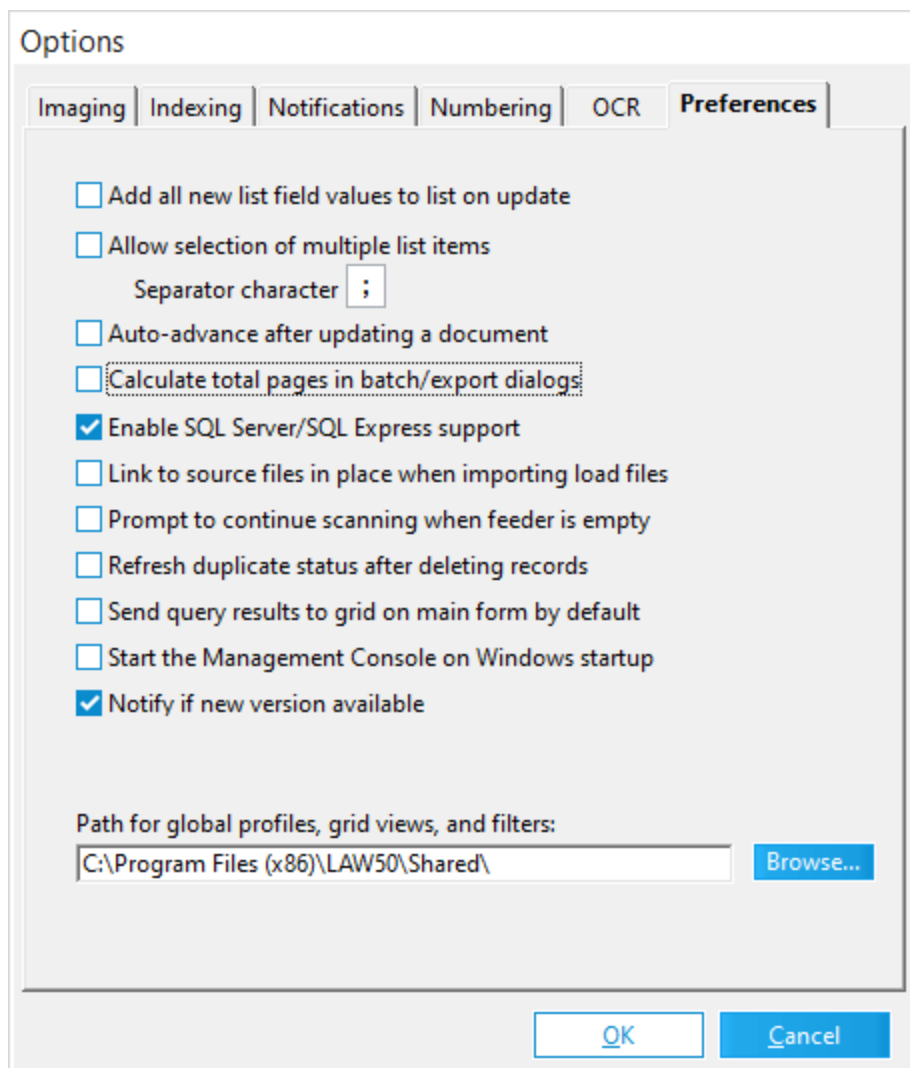
3. Click **OK**.

    Start the Batch Processing utility. The number of pages will no longer appear beside the number of documents.

📝 Some MSG files with large inline images are not able to re-size the image to fit the page when tiffing or printing via batch processing. This issue is by design, because

this is a limitation of the source applications not auto-sizing the images during the tiffing\printing process.

Selecting Documents for Processing
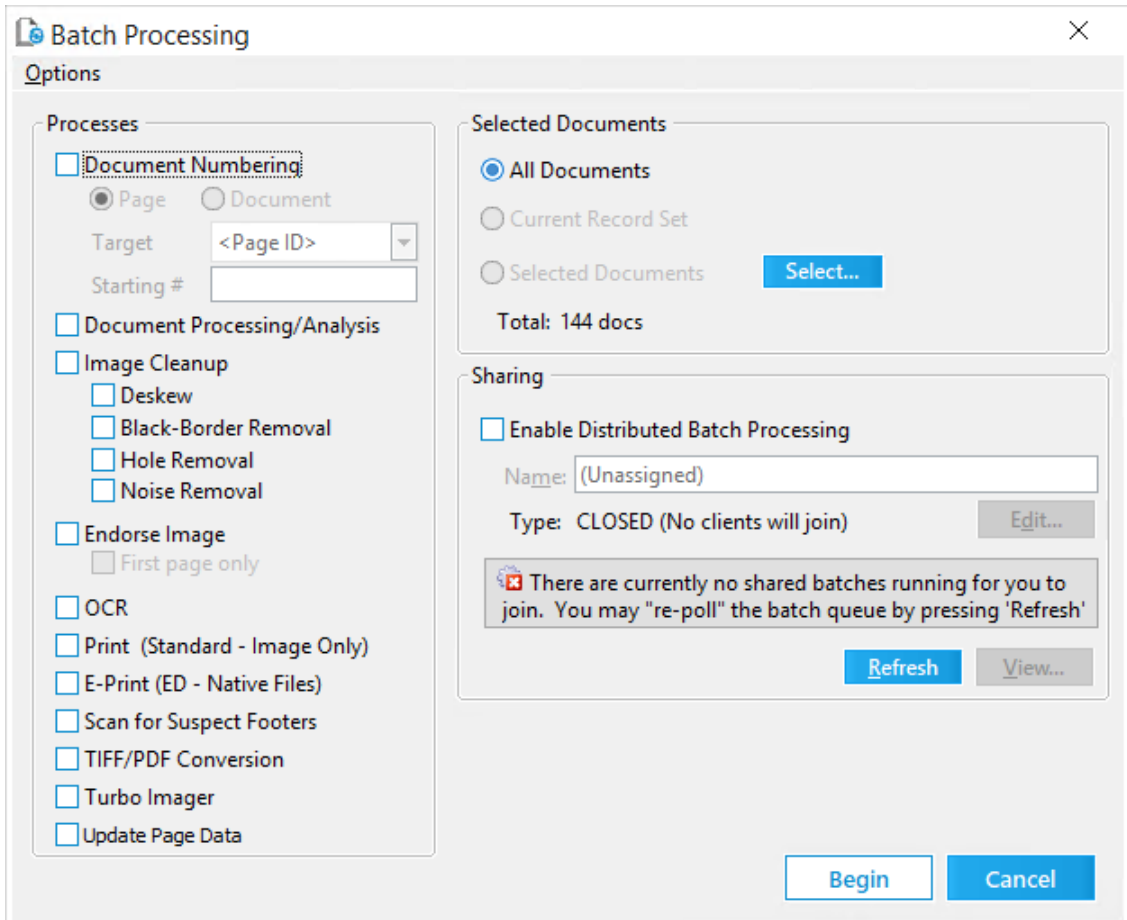
There are several methods for selecting items for batch processing:

- From within the Batch Processing tool you can: select all documents in the case, select entire folders, or select ranges of items within folders.
- From the Query Builder or from a grid you can send query results or grid items directly to the Batch Processing tool.

These methods are described in the following sections:

⊟ **To process all documents**

1. From the main form on the **Tools** menu, click **Batch Process**. The **Batch Processing** tool opens.

2. Select and configure options for batch processes as needed.

3. Select **All Documents**.

3. Click **Begin**.

1. Open a grid. For information on opening a grid see Launching the Grids.

2. On the **Tools** menu, click **Batch Process**. The **Batch Processing** tool opens. When opened from a grid, meaning the items that currently appear in the grid.

4. Select and configure options for batch processes as needed.

5. Click **Begin**.

1. From the main form on the **Tools** menu, click **Search Records**. The Database Query Builder opens.
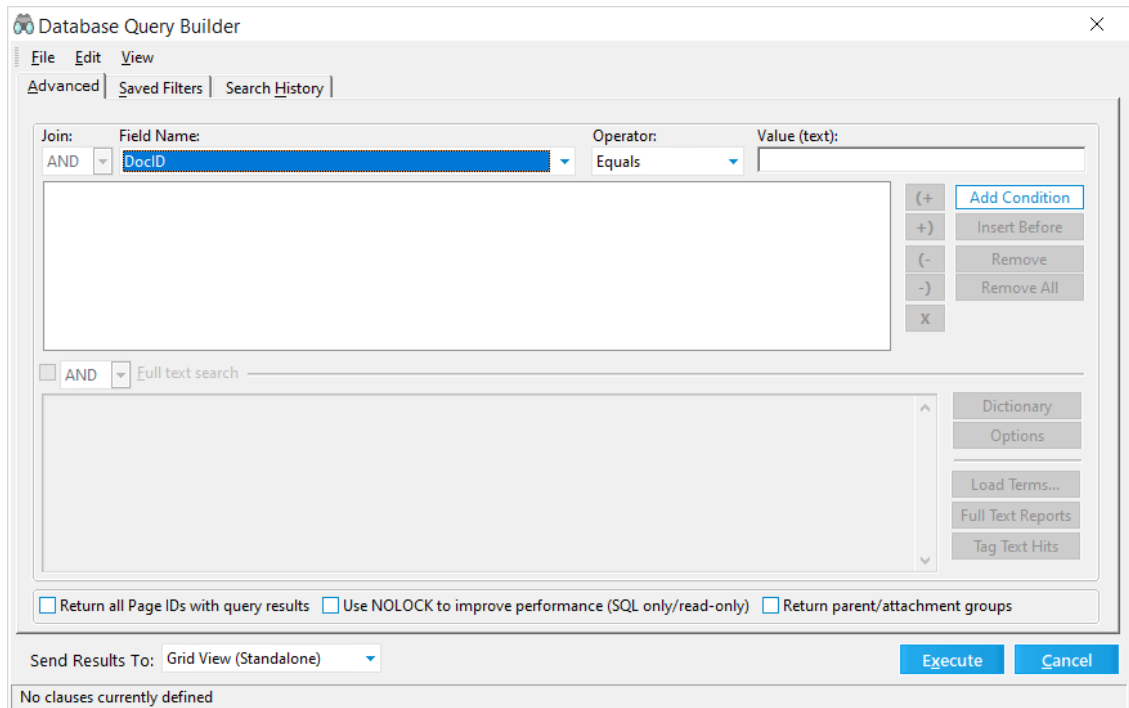
2. Configure a query. For more information on configuring queries see Creating Queries.

3. In the **Send Results To** drop down list, select **Batch Process**.

4. Configure any other query options as needed and then click **Execute**.

5. The **Batch Processing** tool opens. When opened from a query, the selection of the Batch Process tool defaults to **Current Recordset**, meaning the items returned from the query are those that are processed.

6. Select and configure options for batch processes as needed.

7. Click **Begin**.

⊟ To process folders

1. From the main form or from a standalone grid, on the **Tools** menu, select **Batch Process**. The Batch Processing tool opens.

2. Select and configure batch processes as needed.

3. Click **Select.** The **Select Folders** dialog box opens.

4. Expand the folder structures and place check marks next to any folder that contains documents you want to process.

5. Click **OK**.

6. Click **Begin**.
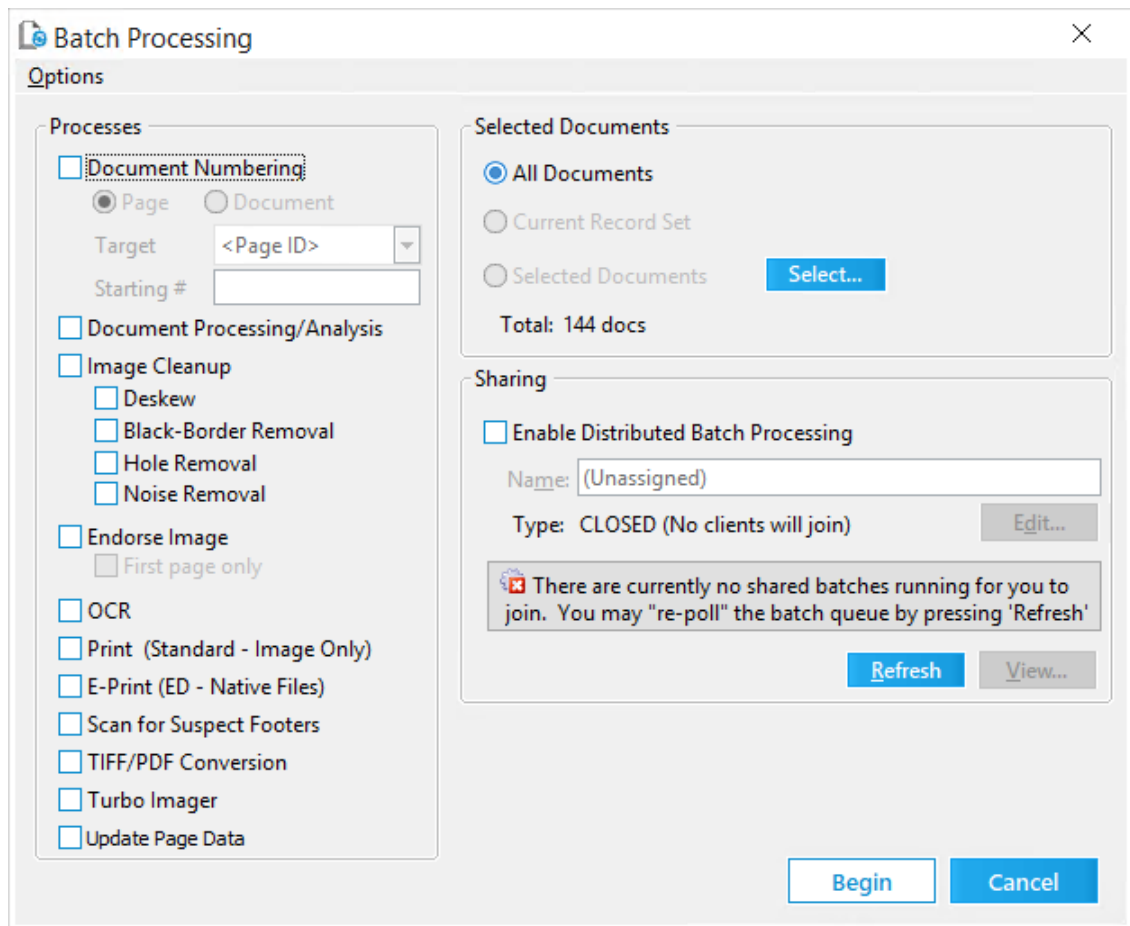
1. From the main form or from a standalone grid, on the **Tools** menu, select **Batch Process**. The Batch Processing tool opens.

2. Select and configure batch processes as needed.

3. Click **Select.** The **Select Folders** dialog box opens.

4. Expand the folder structures and place check marks next to any folder that contains documents you want to process.

5. To process a range of documents in a folder, place a check mark next to the folder and then click **Set Range**. The **Select Document Range** dialog box opens.

6. Select any two items to define a range of items and then click **OK**.

7. Select other folders and set ranges as needed.

8. When all folders and document ranges are selected click **OK**.

9. Click **Begin**.

Document Numbering

Document numbering is used to assign numbers to documents or pages. Typically, this means assigning an alphanumeric value, such as the Page ID to each page of a document so that the page can be reliably paired with an image file. Document-level fields may also be numbered using this process.

⊟ **To run a document numbering batch process**

1. From the main form on the **Tools** menu, click **Batch Process**. The **Batch Processing** tool opens.

3. Select the documents to number. For more information on selecting documents for batch processing, see [Selecting Documents for Processing](#).

4. In the **Processes** area, select **Document Numbering**.
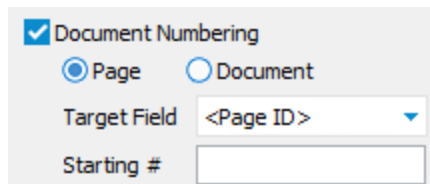
5. Select either **Page** or **Document**. Select the number to apply from the **Target Field** list.

6. Type a starting number.

   The value will increment by one for each document or page.

7. Click **Begin**.

Extracting Custom Metadata

There are two ways to extract metadata from documents in a case. Metadata can be extracted from documents during the import process when using LAW Electronic Discovery Loader to import files into a case or by using the Batch Processing utility after documents have been imported into a case.
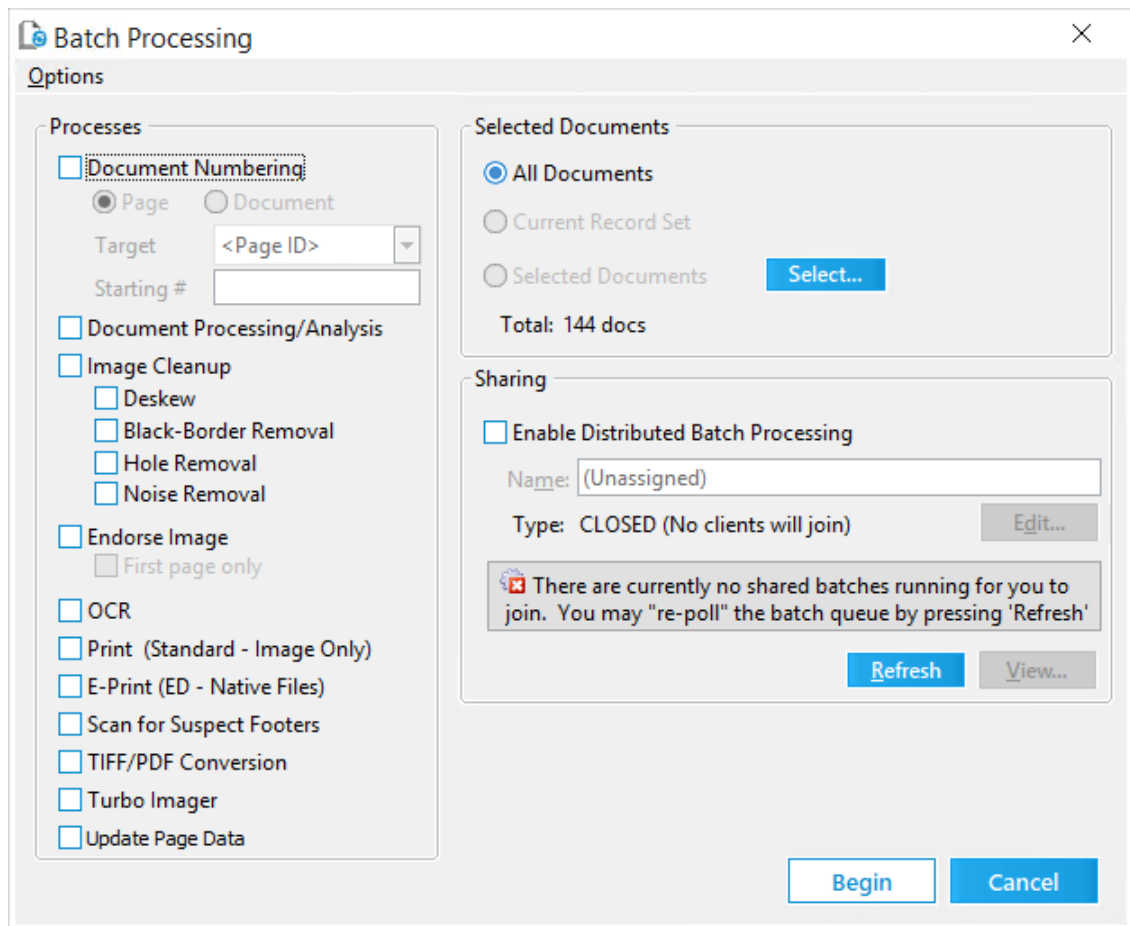
When extracting metadata, you can customize what type of metadata is extracted from the case files by selecting the metadata extraction options you want to apply. When importing documents, the metadata extraction options are defined on the Settings tab under the Metadata category in the LAW Electronic Discovery Loader dialog box. In the Batch Processing utility, metadata extraction options are defined in the Document Analysis Options dialog box.

For more information about extracting custom metadata during the import process, see Metadata.

The Document Processing/Analysis feature in the Batch Processing utility analyzes and extracts the metadata from the selected record set, based on the metadata extraction options selected in the Document Analysis Options dialog box. The Document Processing/Analysis feature in the Batch Processing utility also provides the option to split Adobe Acrobat PDF files by bookmarks into separate PDF files.

⊟ **To extract custom metadata using the Batch Processing utility**

1. From the main form on the **Tools** menu, click **Batch Process**. The **Batch Processing** utility opens.

2. Select the documents containing the metadata you want to analyze and extract.

   For more information on selecting documents, see <u>Selecting Documents for Processing</u>.

3. Select the **Document Processing/Analysis** check box.

4. On the **Options** menu, click **Document Analysis Options**.

   Clicking **Document Analysis Options** opens the **Document Analysis Options** dialog box. The **Document Analysis Options** dialog box contains all of the metadata extraction options available in the Batch Processing utility. By default, all of the check boxes, except the **Split document on bookmarks** check box, are selected.

- **Capture custom metadata for Adobe PDF files.** Extracts metadata field names and values that were assigned to the original Adobe Acrobat PDF. Such fields might include the names of e-mail attachments, or of PDF's embedded in other files such as in a Micrsoft Word document.

- **Capture custom metadata for MS Office files**. Extracts metadata field names and values that were assigned to Microsoft Office file, except for Publisher and Access files. Field names and data are brought into the LAW case as *extended properties*. See note below.

- **Capture EXIF metadata for image files (TIFF/JPEG)**. Extracts metadata field names and values from EXIF files. If found, custom metadata fields are added to the case database with field names preceded by **EP**.

- **Detect bookmarks in Adobe PDF files.** If an Adobe Acrobat PDF file contains bookmarks, assigns a Y to the HasBookmarks field.

- **Split document on bookmarks.** Adobe Acrobat PDF files containing bookmarks will be split into separate PDF files by each bookmark. When this check box is selected, the bookmark names are added the BookmarkName field.

📝 The PDF custom metadata extraction and the PDF split operation cannot be performed simultaneously or with other batch processing jobs in a batch. Each operation must be performed in a separate batch.

- **Detect comments for MS Word/Excel/PowerPoint and PDF files.** If comments in Microsoft Word, Excel, and PowerPoint files or sticky notes in Adobe Acrobat PDF files are detected, assigns a **Y** to the **HasComments** field.

- **Detect hidden rows and/or columns for MS Excel files.** If hidden columns or rows are found, assigns a **Y** to **HasHiddenRow** and **HasHiddenColumn**, respectively.

- **Detect hidden sheets for MS Excel files.** If hidden sheets are found, assigns a **Y** to the **HasHiddenSheet** field.

- **Detect hidden slides for MS PowerPoint files.** If hidden slides are found, assigns a **Y** to the **HiddenSlides** field.

- **Detect speaker notes for MS PowerPoint files.** If speaker notes are found, assigns a **Y** to the **SpeakerNotes** field.

- **Detect tracked changes for MS Word and Excel files**. If tracked changes are found, assigns a **Y** to the **HasTrackChanges** system field.

📝 Extended property metadata is placed in *extended property* fields that are created when the documents are imported or the metadata is extracted by the Batch Processing utility. The names of all extended property fields start with *EP*. The remainder of the field name depends on the name of the field as it exists in the source document. For example, if a Word document is imported that contains a custom metadata field called Typist, LAW will create a metadata field during the import or batch processing called *EPTypist*. Deleting a document will delete all corresponding extended properties for that document. For more information on extended properties, see: [Extended Properties in Grid Views](#).

5. Make sure the check box is selected for the options you want to apply during the metadata extraction.

6. Clear the check box for the options you do not want to apply during the metadata extraction.

7. Click **OK**.

   Clicking **OK** saves the option settings and closes the **Document Analysis Options** dialog box.

8. Optionally, select the **Enable Distributed Batch Processing** check box and configure the session as needed.

   For more information on using distributed batch processing see [Distributed Batch Processing](#).

9. Click the **Begin** button.

   When the batch process is completed, the **Status** dialog box is displayed.

10. Click **OK** to close the **Status** dialog box.

⊟ **To split PDF files**

Adobe Acrobat PDF files can be split into separate PDF files bases on the original PDF file's bookmarks. Using the Document Processing/Analysis feature in the Batch Processing utility, you can have LAW identify the PDF files containing bookmarks, and then have these PDF files split, based on the PDF file's bookmarks.

When a PDF file is split by bookmark, the original PDF file is deleted, and the PDF file containing the pages of the first bookmark becomes the parent file. The PDF files for the remaining bookmarks become the children of the first bookmark PDF file.

For example:

If a PDF file has 15 pages with 3 bookmarks (Bookmark 1 = pages 1-5, Bookmark 2 = pages 6-10, Bookmark 3 = pages 11-15), when the PDF file is split, the PDF file generated for bookmark 1 will be the parent file, and the PDF files generated for bookmarks 2 and 3 will be the child files.

1. From the main form on the **Tools** menu, click **Batch Process**. The Batch Processing utility opens.

2. Select the PDF files containing bookmarks that you want to split.

For more information on selecting documents, see Selecting Documents for Processing.

⚠ When splitting PDF files, all PDF files containing bookmarks identified by the Batch Processing utility will be split. Make sure you only select the PDF files you want to be split.

3. Select the **Document Processing/Analysis** check box.

4. On the **Options** menu, click **Document Analysis Options**.

    Clicking **Document Analysis Options** opens the **Document Analysis Options** dialog box.

5. Select the **Detect bookmarks in Adobe PDF files** and **Split document on bookmarks** check boxes.

📝 The PDF custom metadata extraction and the PDF split operation cannot be performed simultaneously or with other batch processing jobs in a batch. Each operation must be performed in a separate batch.

6. Click **OK**.

    Clicking **OK** opens the **Confirm PDF Split** message.
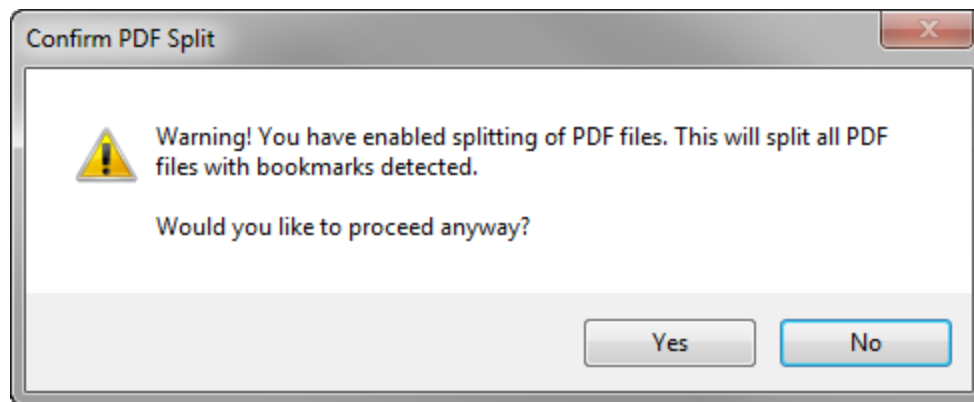
7. Click **Yes**.

8. Optionally, select the **Enable Distributed Batch Processing** check box and configure the session as needed.
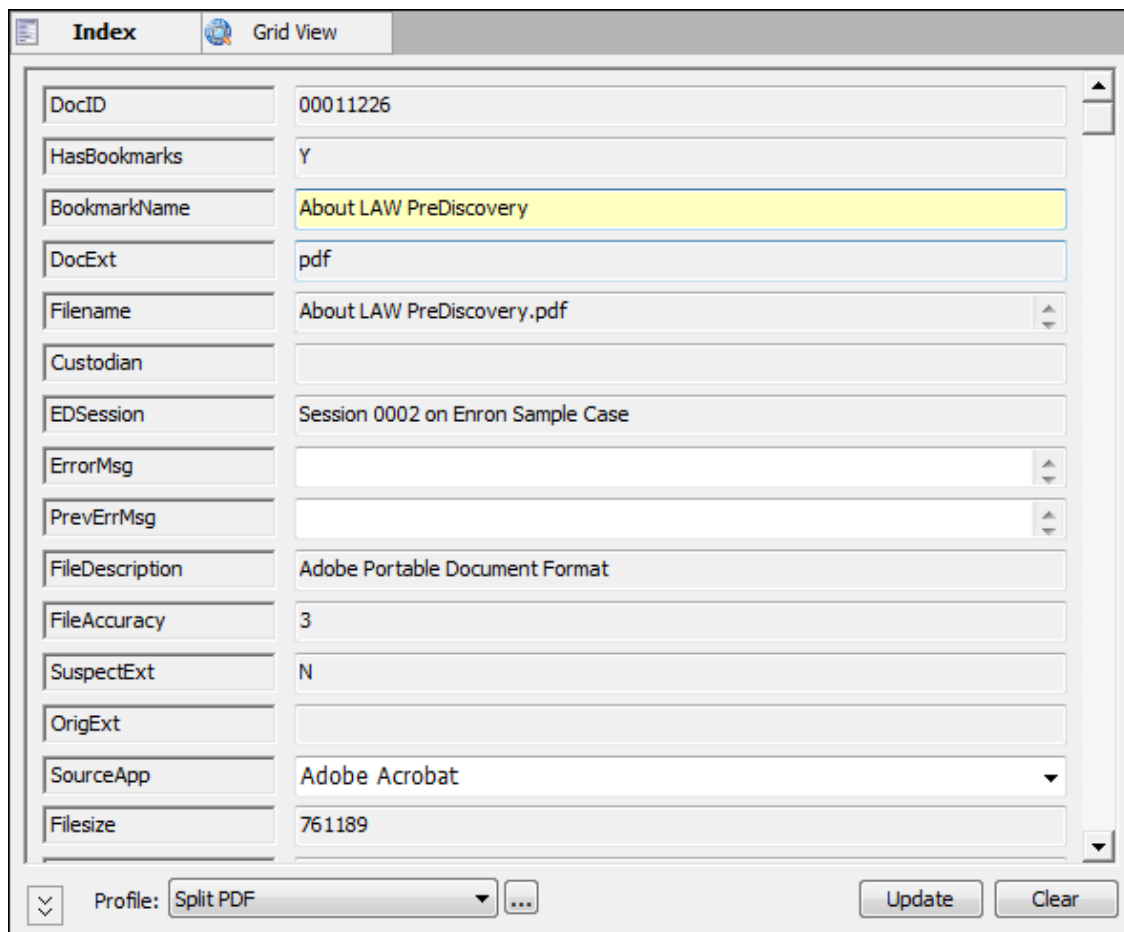
    For more information on using distributed batch processing see Distributed Batch Processing.

9. Click the **Begin** button.

    When the batch process is completed, the **Status** dialog box is displayed.

10. Click **OK** to close the **Status** dialog box.

When the batch process is completed the **HasBookmarks** field for the PDF files containing bookmarks is set to **Y**, and the **BookmarkName** field is populated with the name of the bookmark associated with the PDF file. If a bookmark name exceeds 251 characters, the bookmark name will be truncated.

Index	**Grid View**
DocID	00011226
HasBookmarks	Y
BookmarkName	About LAW PreDiscovery
DocExt	pdf
Filename	About LAW PreDiscovery.pdf
Custodian	
EDSession	Session 0002 on Enron Sample Case
ErrorMsg	
PrevErrMsg	
FileDescription	Adobe Portable Document Format
FileAccuracy	3
SuspectExt	N
OrigExt	
SourceApp	Adobe Acrobat
Filesize	761189
Profile: Split PDF ...	Update Clear

In the tree view document list on the **Index** tab, the PDF files generated from the bookmarks are listed as children of the original PDF file.

	ItemNo	ImgExt	Pages	Page Range	DocID	DocExt
	0001		0		00011226	PDF
	-- 0002		0		00011226.002	PDF
	-- 0003		0		00011226.003	PDF
	-- 0004		0		00011226.004	PDF
	-- 0005		0		00011226.005	PDF
	-- 0006		0		00011226.006	PDF
	-- 0007		0		00011226.007	PDF
	-- 0008		0		00011226.008	PDF
	-- 0009		0		00011226.009	PDF
	-- 0010		0		00011226.010	PDF
	-- 0011		0		00011226.011	PDF

Image Cleanup

The Batch Processing tool provides image cleanup options that can improve the legibility of black and white scanned images of paper documents. Eliminating data borders, holes, and noise from images can also help to reduce file size.

Note that if you are annotating a document and then run an image cleanup before merging the annotations, the annotations are lost.

⊟ **To run an image cleanup batch process**

1. From the main form on the **Tools** menu, click **Batch Process**. The **Batch Processing** tool opens.
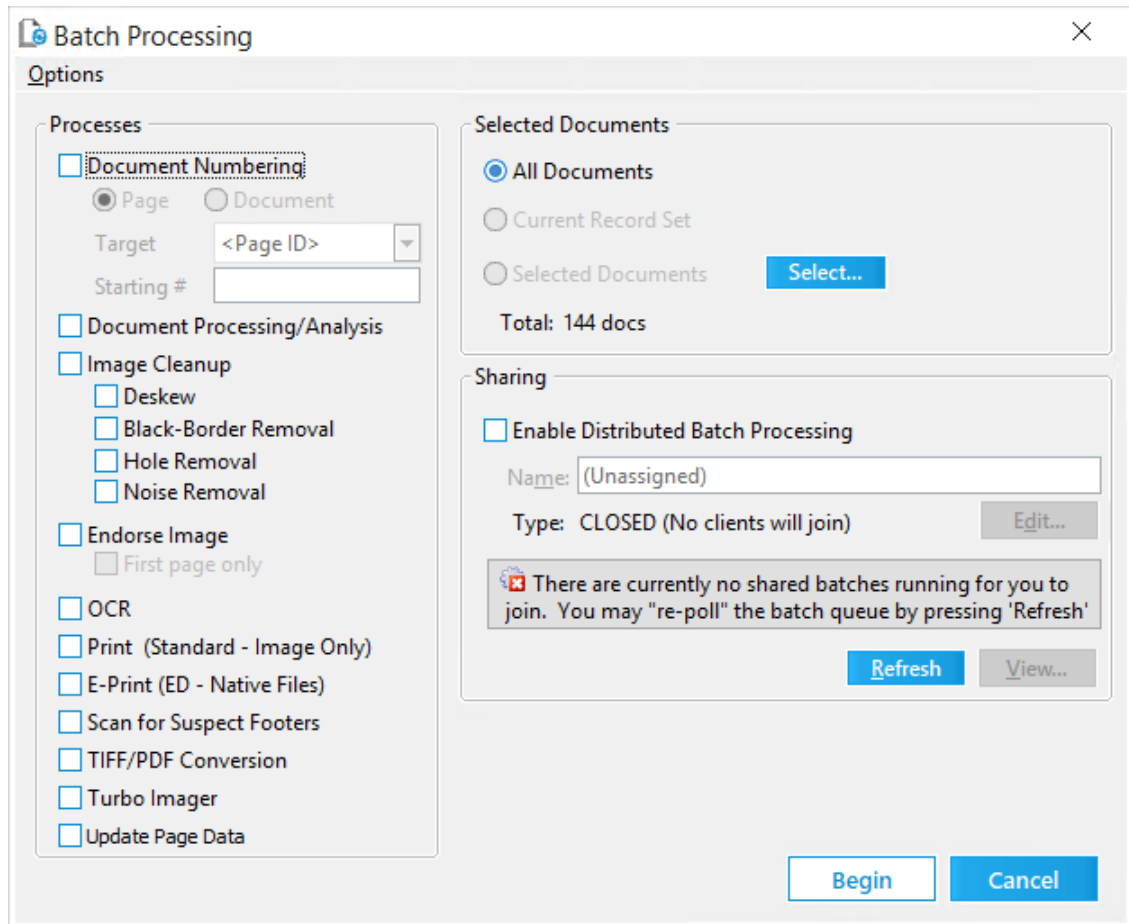
2. Select the documents to cleanup. For more information on selecting documents, see Selecting Documents for Processing.

3. Click **Image Cleanup**.

4. Select from the following options:

- **Deskew** - Straightens the alignment of the image.

- **Black-Border Removal** - Removes black borders from images. In order for black borders to be removed, the borders must be of uniform width (angled black edges will not be removed).

- **Hole Removal** - Removes afterimages of standard size holes (1/4" - 5/16") left from scanning pages that were hole punched. Perform quality control on images batch processed for hole removal. Hole removal can be done for RAW Image and scanned documents, and documents imported in ED Loader and converted to TIFF before hole removal. The letters o and e and zeros, are ignored by the hole removal process. If needed, the image borders can be configured for removing holes on images from the Configure Scan Filters dialog box (Scan > Scan Options > Configure Filters).

- **Noise Removal** -- Remove speckles from the image that result from dust on an image during copy or scanning.

5. Optionally, select **Enable Distributed Batch Processing** and configure the session as needed. For more information on using distributed batch processing see Distributed Batch Processing.

6. Click **Begin**.

Endorsing Headers and Footers

You can use the Batch Process tool to add custom headers and footers to images and both searchable and image-only Adobe Acrobat PDF files. The same header and footer may also be applied to printed images and PDF files during batch processing, although it will not be stamped on the image unless the endorse process is selected.

📝 After headers and footers are added to a PDF-converted file, and the PDF file is endorsed or printed, the original version of the PDF file, [original file name] _original.pdf, is created in the <case root>\$Image Archive folder, even if a PDF file is printed without the Endorse Image check box selected.
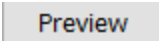
When applying header and footers, a border is added to the image to eliminate the chance of overwriting image data. Placing headers and footers on a border also makes it easier to edit or remove any header or footer previously applied by CloudNine™ LAW.

📝 The following languages are currently supported for endorsing Adobe Acrobat PDF images:

Bulgarian, Catalan, Czech, Danish, English, Estonian, Finnish, French, Greek , Haitian Creole, Hebrew, Hmong Daw, Hungarian, Indonesian, Italian, Klingon, Latvian, Lithuanian, Malay, Norwegian, Polish, Portugese, Romanian, Russian, Slovak, Slovenian, Spanish, Swedish, Turkish, Ukranian, Urdu, Vietnamese

If an endorsement contains a language other than one the languages listed above, the endorsement will not be applied to the PDF image.

Preview Window Version 7.0.206+

In Version 7.0.206+, the ability to preview your endorsement settings prior to endorsing was introduced. The preview button [Preview] allows the user to view the Font, Alignment, and positioning of the headers and footers on a sample image without endorsing.

1.   To use the preview window, select **Preview**. The Image Preview opens in a new window.

Image Preview

2.   The Image Preview toolbar allows you to adjust the displayed image.

3.

Icon	Description
Best Fit	Formats the sample image with sample endorsements in the Image Preview window so that all can be displayed.
Fit to Width	Formats the sample image with sample endorsements in the Image Preview window so that the width extends to the edge of the viewer. (This setting may cut off headers/footers from view.)
Fit to Height	Formats the sample image with sample endorsements in the Image Preview window so that the height extends to the edge of the viewer.
Actual Size	Displays the sample image with sample endorsements in the Image Preview window without formatting.
Zoom In	Allows the user to zoom in on parts of the sample image for closer review.
Zoom Out	Allows the user to zoom out on parts of the sample image.

4.   Selecting OK closes the Image Preview window.

After endorsing, you can also validate the endorsement using the Scan for Errors dialog box. See Scanning for Errors for details.

To add and configure a header and footer

1.   From the main form on the **Tools** menu, click **Batch Process**. The **Batch Processing** tool opens.
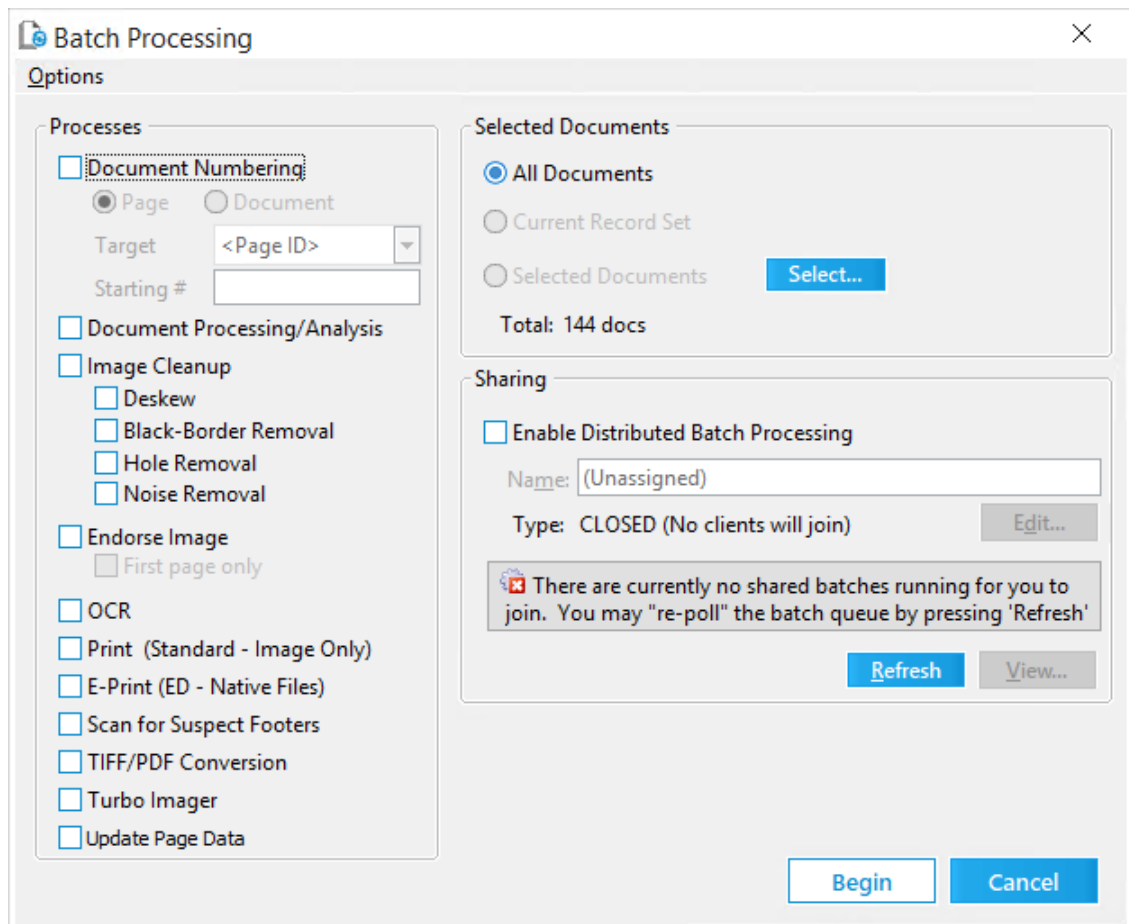
2. Select the documents to process. For more information on selecting documents see
    [Selecting Documents for Processing](#).

3. Select **Endorse Image** and then either select or clear **First page only**, as needed.

⚠ When using the **First Page Only** option, if the first page contains annotations, the
    annotations will be lost.

4. On the **Options** menu, click **Header/Footer**. The **Header/Footer** dialog box
    appears.

Header/Footer

Header
Left section: Center section: Right section:

Resize Header/Footer
⦿ Automatically based on endorsement text   ○ Manually
   ☑ Enable word-wrap   Header (in.) 0.5" ▾
                                                     Footer (in.) 0.5" ▾

[A] [#] [⊞] [≣] [ID]   [≣] [≣] [≣]
☐ Synchronize fonts for all sections
Footer
Left section: Center section: Right section:

☐ Save settings as default   Preview   OK   Cancel
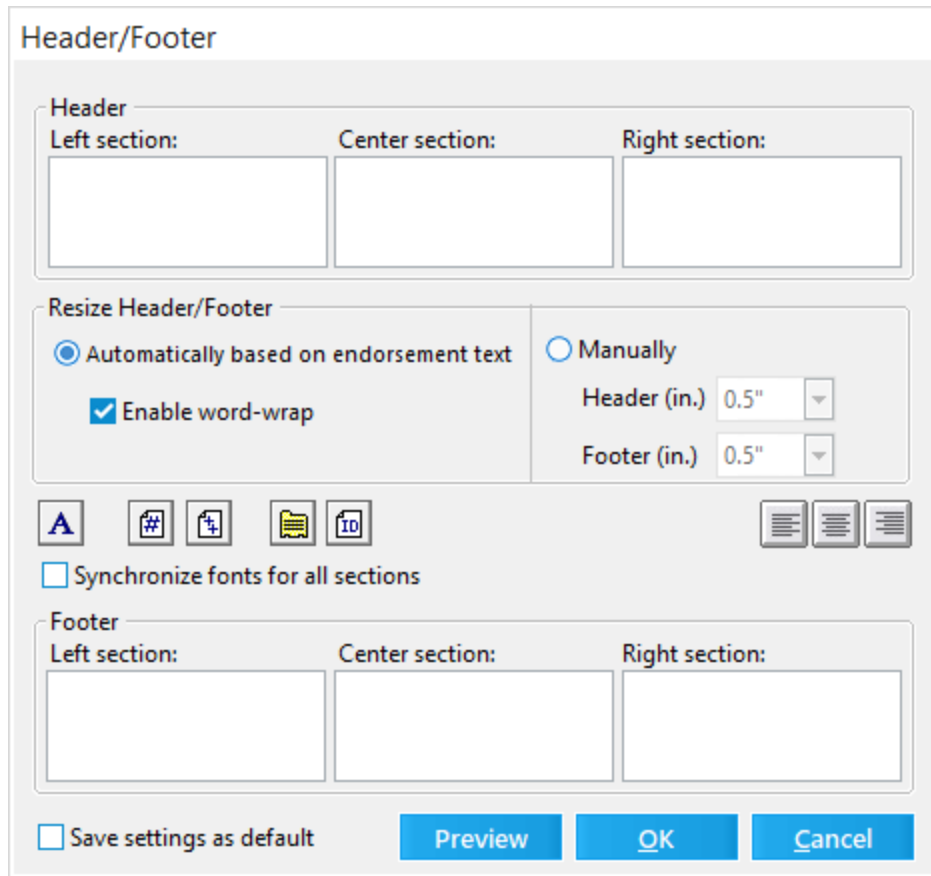
5. Add text as needed to occupy the left, center and right sections of the header and footer.

📝 Each text box can contain a maximum of 8 lines. For TIFF-converted files, it is best practice to only enter a maximum of 4 lines in each text box.

6. Configure header and footer options as needed:

When you want to	Do this
Resize Header/Footer	Select **Automatically based on endorsement text** or **Manually**
Select **Automatically based on endorsement text**	LAW automatically adjusts the size of the header and footer, based on the text and text settings entered for the header and footer in the Header/Footer dialog box. • Header and footer heights are automatically adjusted in increments of .25 inches.

When you want to	Do this
added in 6.14.062	
Apply word wrapping to the header/footer text on image files.	• Select the **Enable word-wrap** check box. To turn off word wrapping for header/footer text, clear the **Enable word-wrap** check box. By default, the **Enable word-wrap** check box is selected. This check box only applies to image files. Headers and footers are automatically wrapped on PDF files, regardless of the **Enable word-wrap** check box setting.
Manually	Select a value in the Header (in.) or Footer (in.) list Note the following: • The default size of 1/2" is adequate for 2 lines of text at the default font size. • The value you select for header or footer size only takes effect if the header or footer contains text. • If the header/footer text is too large for the specified border size, it will be cropped.
Change the font.	1. Select text to format and then click $\boxed{A}$. 2. The Font configuration will open in a new window.

When you want to	Do this
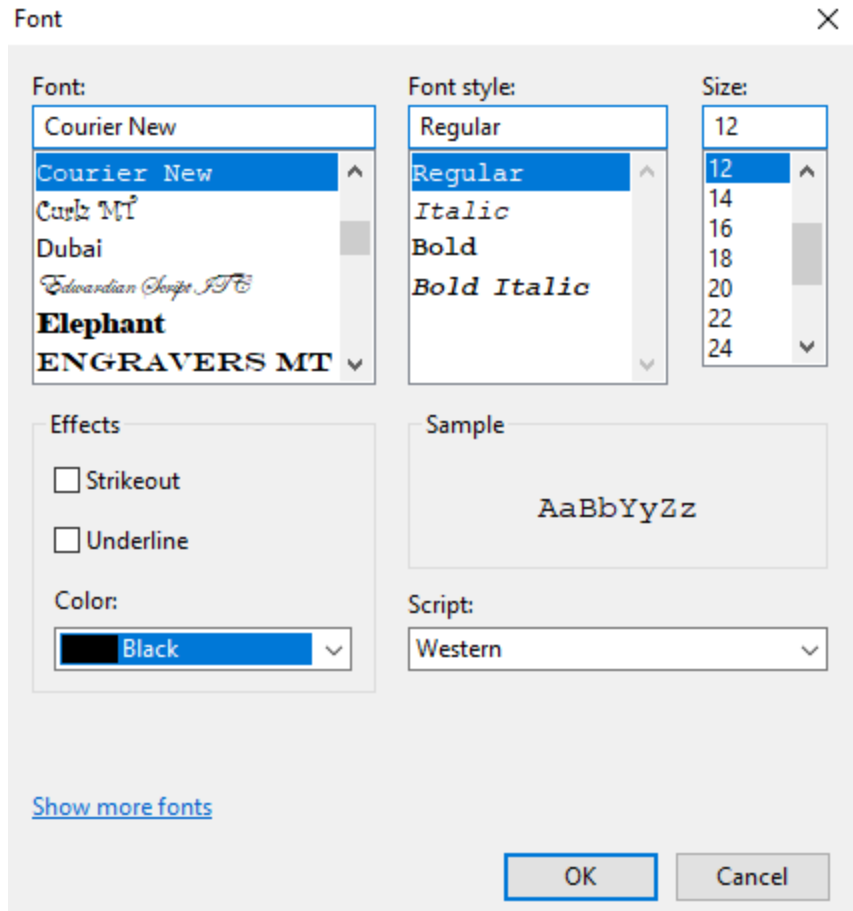
3. Configure the font as needed.

4. Select the color of the font as desired - Version 6.18+

When you want to	Do this

	Color:
	
	Black
	Black
	Maroon
	Green
	Olive
	Navy
	Purple
	Teal
	Gray
	Silver
	Red
	Lime
	Yellow
	Blue
	Fuchsia
	Aqua
	White
	
	5. Then select **OK.**
	
	Some colors endorsed on white may not have the text extracted through the OCR process. (For example: Silver, White, Lime, Aqua, Gray or Yellow fonts)
	
	📝 Currently, LAW only supports the following fonts when endorsing Adobe Acrobat PDF files:
	
	   • Times New Roman
	   • Courier
	   • Symbol
	   • Helvetica

Apply the selected font format uniformly to all header/footer sections.	1. Select **Synchronize fonts for all sections** check box. 2. Then select the font button: [A] to configure the text settings for all sections. Synchronize fonts for all sections must be selected prior to configuring the font, size, and/or color. Synchronize fonts for

When you want to	Do this
	all sections is not affected by right, center, or left justification introduced in version 7.0.206+.
Format fonts in each section independently.	1. Clear **Synchronize fonts for all sections** check box. 2. Select text to be changed and then click the font button: [A]. 3. Configure the font as needed and then click **OK**.
Add a page number to a section.	1. Click in a desired section. 2. Click the page number button: [#]. &[Page] is inserted into the section.
Add a page count to a section.	1. Click in a section. 2. Click the page count button: [🗐]. &[Pages] is inserted into the section.
Add a field value to a section.	1. Click in a section. 2. Click the field value button: [📒]. The **Select Field** dialog box appears.

When you want to	Do this
	Select Field Available Fields: <BegDoc#> <EndDoc#> ApplicationName Attach Author BatchStation BCC BookmarkName Categories CC Comments Conversation ConversationIndex Custodian DateAccessed OK Cancel 3. Select a field and then click **OK**. A token that represents the field value is inserted into the section.

Add the PageID to a section.   1. Click in a section.

2. Click the PageID button: [ID].

&[Page ID] is inserted into the section.

Left Justified Version 7.0.206+	1. Click in a section. 2. Click the Left Justified button: [≣]. 3. All text in the selected section will be Left Justified.
Center Justified Version 7.0.206+	1. Click in a section. 2. Click the Center Justified button: [≣]. 3. All text in the selected section will be Center Justified.
Right Justified	1. Click in a section.

When you want to	Do this
Version 7.0.206+	2. Click the Right Justified button: . 3. All text in the selected section will be Right Justified.
Configured default settings for headers and footers.	Select or clear **Save settings as default**.
Endorse documents with sequential values based on a starting value in a specified index field.	Type ++ after the field notation in the header/footer code. For example, a footer value of "&[DocID]++" would cause the documents to be endorsed sequentially, starting each document with the value in the DocID field.

7. Click **OK**.

8. Optionally, select **Enable Distributed Batch Processing** and configure the session as needed. For more information on using distributed batch processing see Distributed Batch Processing.

9. Click **Begin**.

 To change or remove headers and footers

1. From the main form on the **Tools** menu, click **Batch Process**. The **Batch Processing** tool opens.
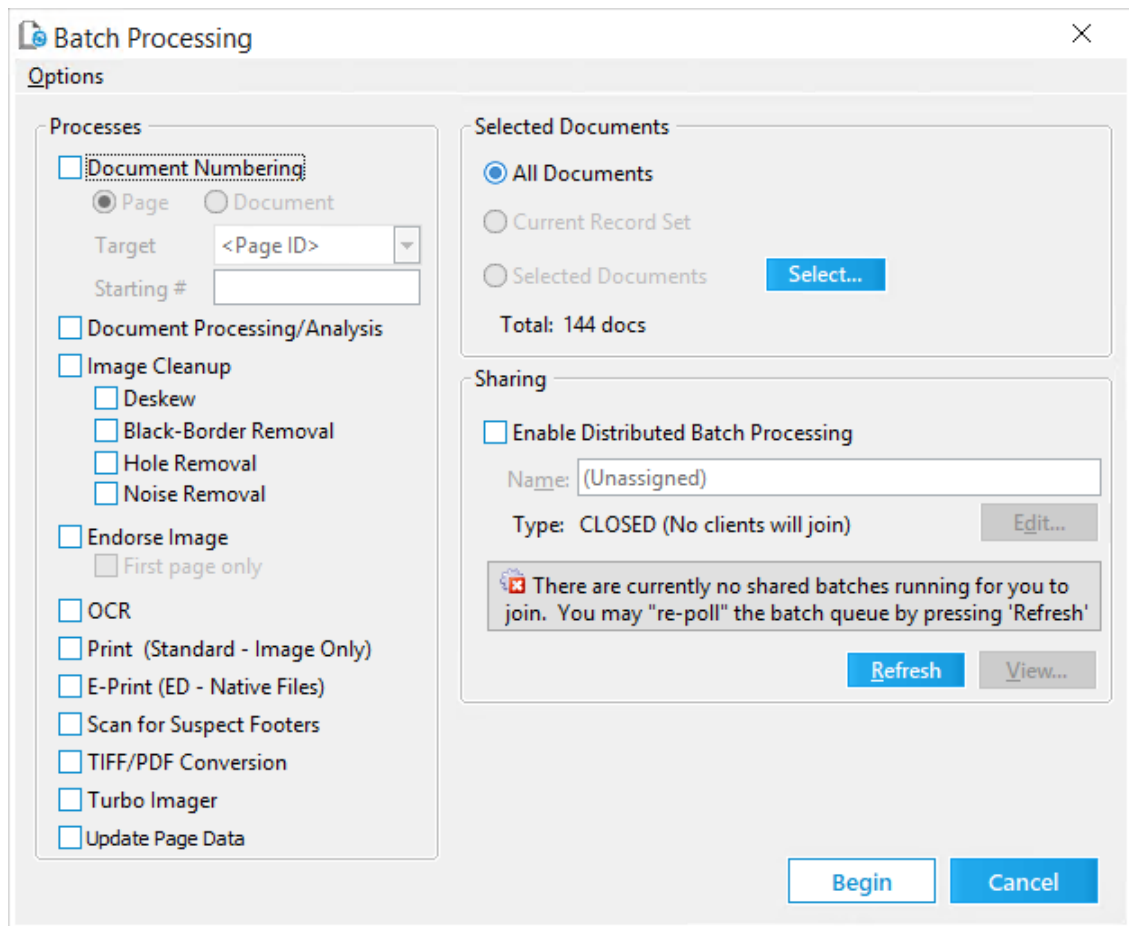
2. Select the documents that you want to apply headers/footers to, for example, select: **All Documents** or **Current Record Set**, or click **Select** to specify documents individually. For more information on selecting documents see Selecting Documents for Processing.

3. Select **Endorse Image** and then either select or clear **First page only**, as needed.

⚠ When using the **First Page Only** option, if the first page contains annotations, the annotations will be lost.

4. On the **Options** menu, click **Header/Footer**. The **Header/Footer** dialog box appears.

5. Do one of the following:

    - To create a new header/footer, edit the header and footer as needed.

    - To remove the existing header/footer, without adding a new one, remove any text in the header and footer fields, or set the border size to **None**.

6. Click **OK**.

7. Click **Begin**.

    CloudNine™ LAW removes the previously applied headers/footers and adds any new one that you specified.

⊟ **To validate endorsements**

After endorsing, you can also validate the endorsement using the Scan for Errors dialog box. See Scanning for Errors for details.

⊟ **Best practices for headers/footers**

Note the following best practices when working with headers and footers:

    - Before you apply a header or footer to a large set of documents, first apply the specified header/footer on a small subset of documents. Be sure that text fits and

that other results match your expectations and then if necessary adjust accordingly and retest.

- If trying to position text using spaces, it is easiest to use a monospace font, such as Courier New or Lucida Console in which all characters are the same width.
- Use caution when working with rotated images containing an existing endorsement.

    If the endorsement does not appear on the top or bottom of the image due to a manual rotation (as viewed in CloudNine™ LAW), removing or modifying the existing endorsement on this image will cause LAW to remove the endorsement (which LAW thinks exists on the bottom of the image) and may remove actual document data located at the bottom of the image. One way to prevent this from occurring is to first rotate the image so the endorsement that LAW applied to the image appears as it was applied.

Applying Watermarks

You can use the Batch Process tool to apply a watermark at the same time as you endorse or print. Applying a watermark permanently stamps an image onto the document.

⊟ **To apply a watermark**

1. From the main form on the **Tools** menu, click **Batch Process**. The **Batch Processing** tool opens.

2. Select the documents to watermark. For more information on selecting documents, see Selecting Documents for Processing.

3. Click **Options** and then click **Watermark**. The **Watermark Settings** dialog box opens.
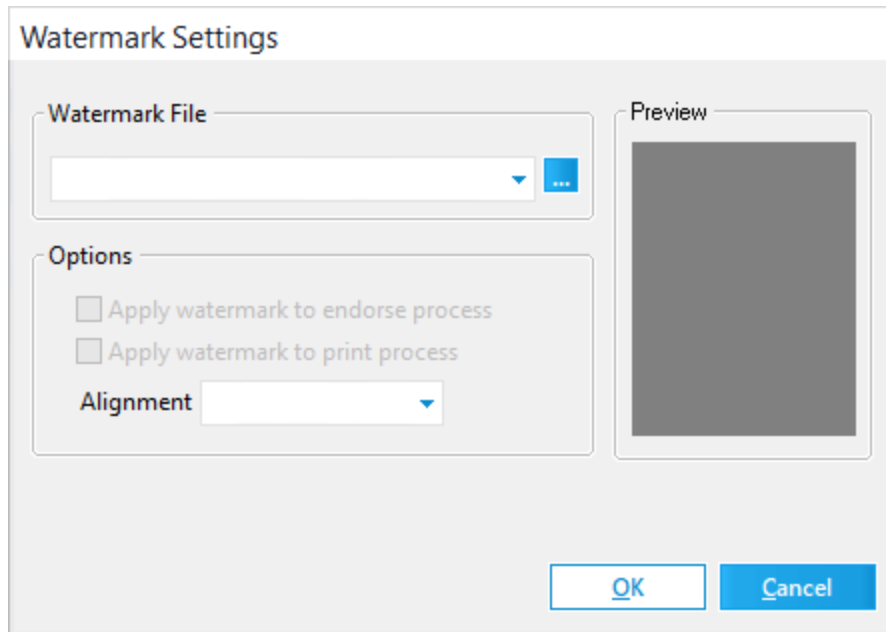
4. Select or browse to an image file. Most commonly used image file formats are supported, for example: bitmap, GIF, JPEG, PNG, and TIFF.

5. Specify whether to apply the watermark to just the endorse process, the print process or both.

    - **Apply watermark to endorse process** - adds the watermark to whatever other endorsement you select.

    - **Apply watermark to print process** - adds the watermark to printed output. If selected, then also select an alignment for the watermark: Top Left, Top Right, Bottom Left, or Bottom Right.

7. Click **OK** and then click **Begin**.

⚠ Endorsed watermarks cannot be removed. Given that there is usually some trial and error involved in applying graphics to files and given that watermark requirements can change over the course of a project, it is considered a best practice to back up the case and images and test the watermark on a small batch of records before you endorse the full set of records with a watermark.

⊟ **Considerations for applying watermarks**

Before you apply a watermark, note the following considerations:

- Unlike endorsements, watermarks cannot be removed once applied. It is recommended that you backup your case and image files before applying a watermark.

- If a watermark is applied during an endorsement where text is also being applied, the watermark will be aligned to the additional header or footer applied to the

document. If the text needs to later be modified, re-applying the endorsement will cause LAW to remove the old header/footer and re-apply the new header/footer text. Some of the watermark's image data may exist in this region and would be lost in this situation. Avoid this situation by either creating watermarks that contain wide margins so image data does not exist outside the header/footer regions or apply the watermark as a final step.

- Different image formats will be applied differently on the various image types. For best results, if the source documents are TIFF images, use/create a watermark which is also a TIFF image using the same resolution as the original document. If the watermark appears expanded or smaller more than expected, it could be due to a large difference in the image resolutions. Color formats should also be considered. Applying a color watermark on a black and white document will result in a black and white watermark.

- Various colors resolve different when applied as a watermark. White and other light colors, such as yellow resolve as transparent. Black resolves as black. Medium to dark colors, such as red, green, and blue, resolve as shades of gray.

- GIF images with transparent regions are not compatible with this feature.

- If the dimensions of the watermark are greater than the size of the document, the watermark will be resized to fit to page.

- For very large jobs, it can help to take the file size of the watermark image into consideration. The time required to apply a watermark increases with the file size of the watermark. It is recommended to use a small-sized watermark file. For example, a watermark endorsement job might achieve a rate of 21,000 pages per hour using a 4 KB watermark file. Running the same job using a 400 KB file might achieve a rate of only 16,000 pages per hour.

💡 If you need to redact a batch of documents all in the same spot on the page, you can use the watermark feature. First, create a new document in Microsoft Word. In the Word document, position a text box with a black background on the redaction spot and then print the document to TIFF file. Switch to CloudNine™ LAW. In the batch process settings for watermark select the TIFF file. Try the batch first on a couple of test documents to be sure of the positioning. When you are certain the position is correct for all the documents, run the batch.

Batch Processing OCR

You can use the Batch Processing tool to perform OCR on documents.

⊟ **Before starting an OCR batch process**
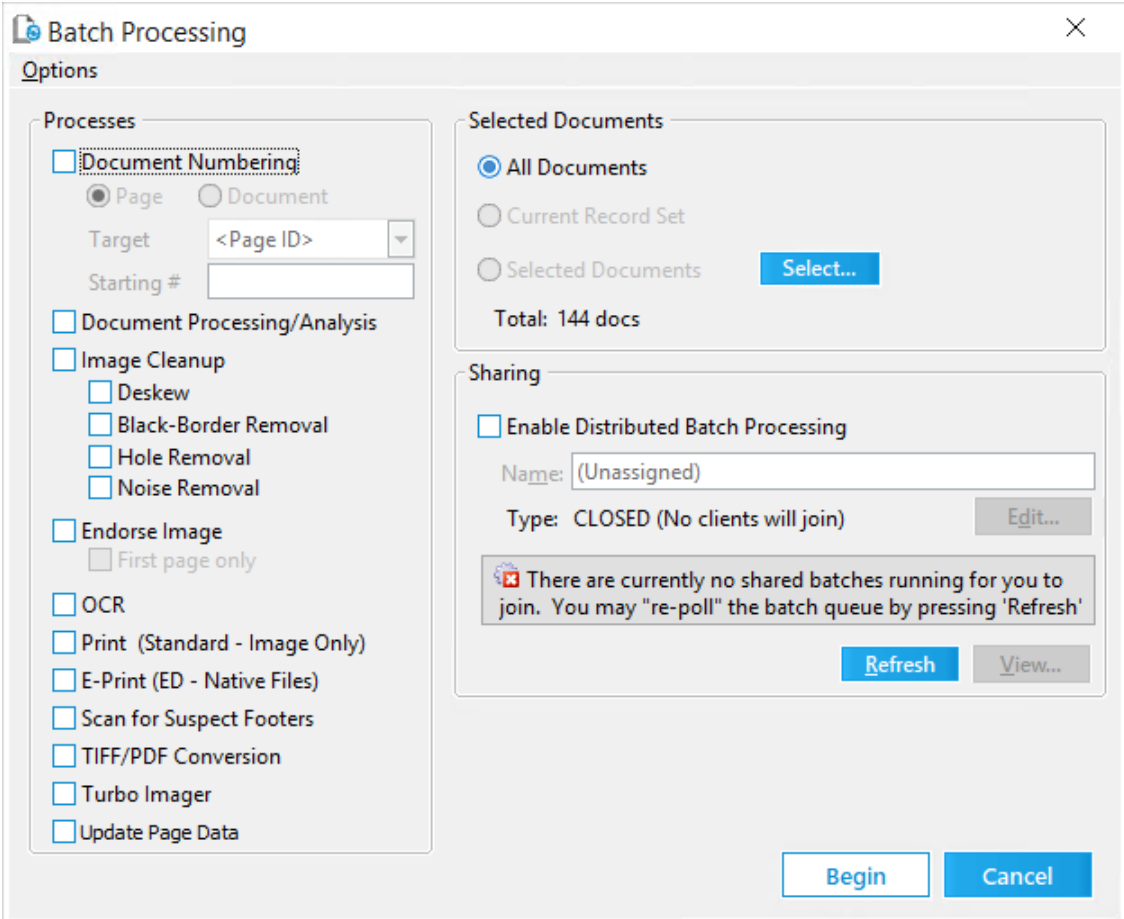
Note the following when preparing to OCR using a batch process:

- Each page that you intend to OCR must have its OCR flag set to On or Yes. For more information see Flagging Documents/Pages for OCR.

- Documents may be skipped, even if flagged, if they already have OCR for the specified output format and the "Overwrite Existing Files" OCR setting is not selected.

- When selecting the output format, keep in mind that most third-party applications cannot use non-text formats for search and retrieval capabilities.

To start an OCR batch process

1. From the main form on the **Tools** menu, click **Batch Process**. The **Batch Processing** tool opens.

2. Select the documents you want to OCR. For more information on selecting documents, see Selecting Documents for Processing.

3. Select **OCR**.

4. Click **Options** and then click **OCR**.

5. Configure OCR options as needed. For more information on configuring OCR options, see OCR Options.
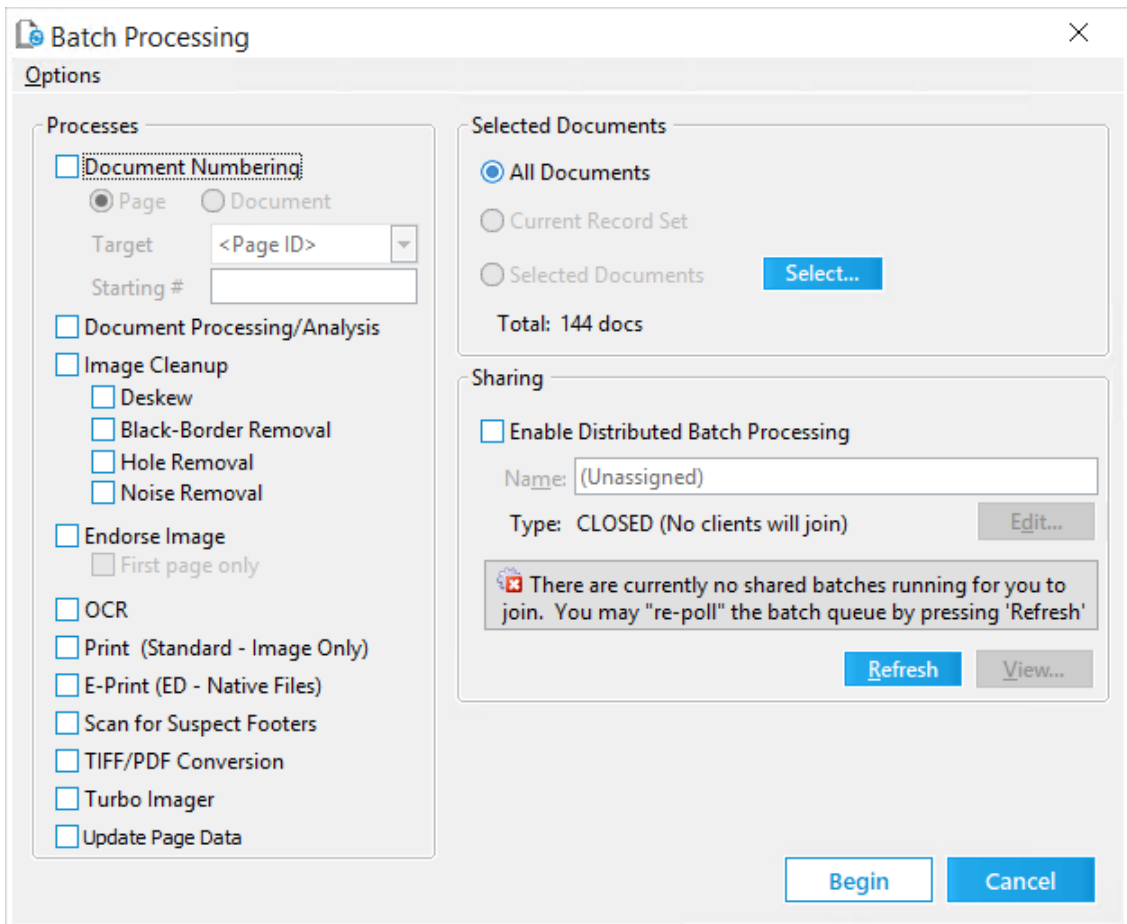
6. Optionally, select **Enable Distributed Batch Processing** and configure the session as needed. For more information on using distributed batch processing see Distributed Batch Processing.

7. After configuring OCR options, return to the Batch Processing tool and then click **Begin**.

Batch Printing

You can use the Batch Processing tool to send selected image records to a specified printer.

⊟ **To batch print images**

1. From the main form on the **Tools** menu, click **Batch Process**. The **Batch Processing** dialog box opens.

2. Select the documents to print. For more information on selecting documents, see Selecting Documents for Processing.

3. In the **Options** menu, click **Print Options**. The **Batch Print Options** dialog box opens.
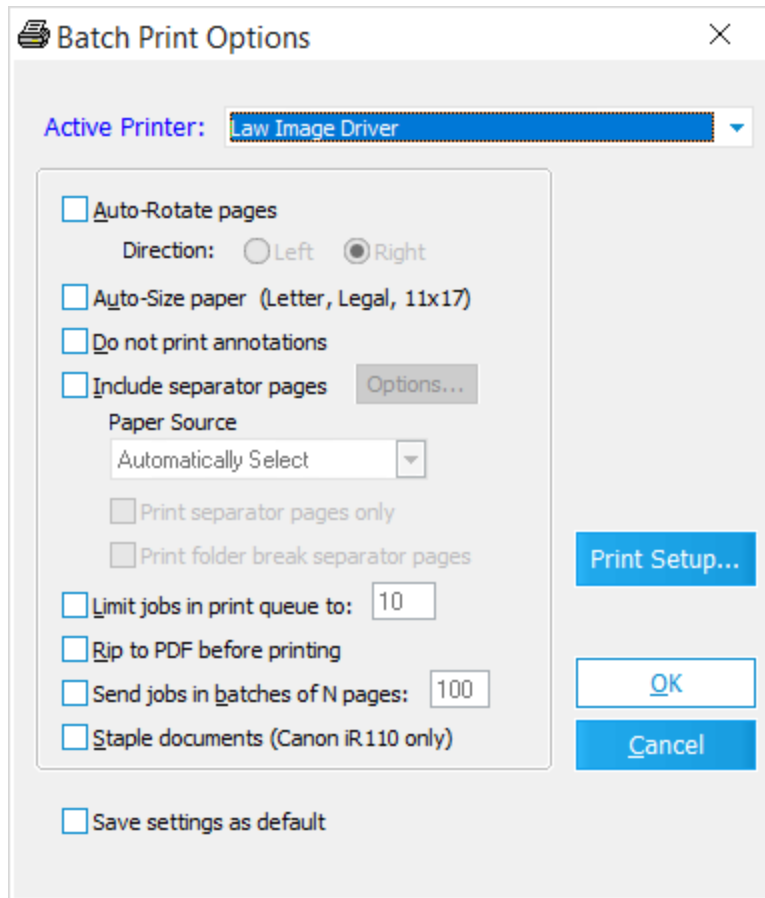
4. Configure options as needed. These options are described in the following sections of this topic.

5. Click **OK** and then click **Begin**.

Auto-Rotate Pages

This setting causes pages to be rotated 90 degrees. This setting can be useful when printing TIFF images of landscape-formatted pages.

Auto-Size Paper

This option automatically selects the paper size that most closely matches the image dimensions.

For example, a legal sized document may have been scanned as 8 ½" x 14" and endorsed in CloudNine™ LAW with a ½" footer resulting in an image size of 8 ½" x 14 ½". LAW detects the page size and sends it to the paper size that most closely matches the original size of the image; in this example, the document would be printed on legal sized paper. This feature will also work with documents containing mixed paper sizes.

To use this feature, you must also enable **Send jobs in batches of N pages,** otherwise a message box will appear stating the feature requires it and will enable the option automatically.

Enabling these two options also enables the printing of color separator pages. For more information, see the [separator pages](#) section in this topic.

Do Not Print Annotations

Use this setting to exclude non-merged annotations from printed output. If this setting is disabled, any non-merged annotations will appear on the printed output.

Include Separator Pages

When the **Include separator pages** check box is selected, separator pages will be printed in front of each document. The **Paper Source** list selection determines the paper tray used for the separator pages, enabling separator pages to be pulled from an alternate tray than the actual images. This allows the separator pages to be printed on color pages if the printer contains multiple trays. The available trays are determined by the specified printer driver and frequently apply to a wide range of models. As such, some trays listed may have no effect on the specific printer model used. Experiment to determine the actual trays used before batching a large set of documents when using this feature.

- **Options.** Clicking the **Options** button opens the **Map Placeholder Templates** dialog box. The **Map Placeholder Templates** dialog box is used to select the separator page template you want to use for batch print jobs. If you need to create or edit an existing custom separator page template, you can click the **Manage Templates** button in the **Map Placeholder Templates** dialog box to open the **Separator Page Options** dialog box, where custom separator page templates are created, edited, and deleted.

- **Print separator pages only.** When the check box is selected, only the separator pages for the selected documents are printed. The actual documents will not be printed. If needed, select the **Options** button to configure the separator pages prior to printing.

- **Print folder break separator pages.** When the check box is selected, a separator page is printed each time a new folder is encountered while printing the selected documents. Folder breaks can be configured in the **Separator Page Options** dialog box.

For more information about separator pages, see [Separator Pages](#).

Limit Jobs in Print Queue

This setting causes LAW to monitor the print queue for active jobs and limit the number of jobs in the print queue to the specified number. This can be beneficial for slower printers by minimizing the amount of information queued at any one time. If this feature is activated, LAW will stop sending documents to the printer once the limit has been reached and wait until the document currently being printed is complete before sending another.

Rip to PDF Before Printing

Use this setting to convert images to PDF format before sending them to the printer.

If you print using a PostScript printer driver, this option can decrease time required to print. The performance gain is the result of inherent compatibility between the PDF format and PostScript drivers.

Send Jobs in Batches of N pages

This setting controls the size of jobs sent to the printer. It can improve printing results in two ways:

- It can significantly improve printer performance when printing a large number of documents with only a few pages each on high-speed printers.

  For example, using the default spool limit of 100 to print 100 3-page documents would cause LAW to send 3 100-page documents to the printer as opposed to 100 3-page documents. This eliminates the majority of the extra time required by the printer for cycling down and then up again between documents.

- It corrects the problem with documents being printed out of order by various digital printers.

  The spoolers used by many high-speed printers, in an attempt to reduce printing time, will actually reorder documents in the print queue causing documents to be printed out of order even though they were sent to the printer in the original order. Batching the documents into large print jobs prevents the print spooler from reorganizing documents in most cases.

With this feature enabled, separator pages cannot be printed to a separate tray unless **Auto-Size paper** is also selected.

⊟ **Staple Documents**

This setting has been added specifically for the Canon iR110 printer to staple documents during the print process in CloudNine™ LAW. This is the only printer supported for stapling, although other models may in fact work as well.

⊟ **Tracking Print Jobs in the Spooler**

Each document sent to the print spooler will be named in the following format, making quality control of print jobs via the print spooler easier to perform:

`LAW Batch 000000 – <Description>`

- The count to the left of the hyphen will increment by one for each job.
- The `<Description>` will be replaced with the **DocID**, **BegDoc#**, or **ID** for documents.

  LAW will use whichever item is found first in the order shown. If **Send jobs in batches of N pages** is enabled, the `<Description>` portion will not be present as the job would contain multiple documents. For separator pages, the `<Description>` will be followed by a hyphen and then **Break** for document separator pages or **Folder Break** for folder separator pages.

Examples

Example (folder break): `LAW Batch 000276 – Folder Break`

Example (document break): `LAW Batch 000277 – Break`

Example (document): `LAW Batch 000278 – ABC00382`

Scanning for Suspect Footers

You can use the Scan for Suspect Footers batch process to help find documents having more than one endorsement. This process scans all pages for footers appearing to be 1 inch or larger and flags an index field that you select if any pages in a document contain suspect footers.

⊟ **To scan for suspect footers**

1. Create a *document-level* (Text) field. This field will be used to identify pages with suspect footers. For more information on creating (Text) fields see Creating Tag Fields.

2. From the main form on the **Tools** menu, click **Batch Process**. The **Batch Processing** tool opens.

3. Select the documents to scan. For more information on selecting documents, see Selecting Documents for Processing.

4. Optionally, select **Enable Distributed Batch Processing** and configure the session as needed. For more information on using distributed batch processing see Distributed Batch Processing.

5. Select **Scan for Suspect Footers**.

   If you have never run this batch process before, an **Invalid Suspect Field** message appears.

6. Click OK. The **Select Field For Suspects** dialog box appears.

7. Select the document-level field that you created to identify suspect footers and then click **OK**. The batch process starts.

E-Printing and TIFF Conversion

You can use the e-print batch process to print native files to paper.

You can use the TIFF conversion batch process to convert native files to TIFF images, or to reprocess files that are already in TIFF. In the process of converting native files to TIFF images the application displayed in the SourceApp field for each record is used to convert the native document to a TIFF image. For example, if Microsoft Word is the value in SourceApp, then Microsoft Word will be used to convert the document. The selected SourceApp must be installed on the computer in order to be used for TIFF Conversion. See the Output Settings for E-Print and TIFF Conversion section for information about native

application options and TIFF printer settings. For a list of source applications and supported file types, see Supported File Types.

This process uses the LAW Image Driver, or LAW Image Driver 300 DPI, selected files to TIFF images.

💡 Some MSG files with large inline images are not able to re-size the image to fit the page when tiffing or printing via batch processing. This issue is by design, because this is a limitation of the source applications not auto-sizing the images during the tiffing\printing process.

📝 To view page data (PageSize, PageWidth, PageHeight) in the index or grid view after converting PDFs to TIFFs using batch processing, you must run the Update Page Data batch process. See Updating Page Data for details.

Supported File Types

CloudNine™ LAW supports printing images and documents created in Microsoft Office and other applications. In addition to the default file types, you can specify custom file types for printing, provided that they can be opened and printed by one of the supported source applications. For a list of supported source applications please see System Requirements.

The source applications are the programs used to open and print documents, and must be installed on the same computer as LAW to print documents of that type.

⊟ **Supported source applications**

The following table lists the supported source applications and their common corresponding file types.

File Type	Source Application
*.pdf	Adobe Acrobat/Reader: • Adobe Acrobat Standard 9 • Adobe Acrobat Pro 8 or X • Adobe Acrobat Reader 8, 9, 10, or 11 Law PDF. This is an internal application provided for users without access to Adobe Acrobat/Reader.

File Type	Source Application
Supports over 450 file types. Please view the product website for a list of supported formats: www.cimmetry.com/_products/formats.html	AutoVue Suite
*.wpd	Corel WordPerfect
*.eprt, *.easm, *.edrw, *.eprtx, *.easmx, *.edrwx (eDrawings Files); *.sldprt, *.sldasm, *.slddrw (SolidWorks Files); *.dwf, *.dxf, *.dwg (DXF/DWG Files); *.3dxml (3DXML Files); *.stl (STL Files); *.prt, *.prt.*, *.xpr, *.asm, *.asm.*, *.xas (Pro/E Files); *.prtdot, *.asmdot, *.drwdot (SolidWorks Template Files)	eDrawings Viewer A version of eDrawings Viewer can be used to view or print .DWG files. Install a version of eDrawings Viewer, depending upon your version of CloudNine™ LAW. • For LAW version 6.3, install just eDrawings Viewer 2013 (32-bit version only). • For LAW version 5.9 – 6.2, install just EDrawings 2011 (32-bit version only). For example, if only EDrawings 2009 is installed along with LAW 5.9 or above, you will be prompted to install EDrawings 2011. It is recommended that you uninstall any versions of EDrawings prior to 2011. • For LAW 5.3.14 – 5.8.17 install just EDrawings 2009. • For LAW versions previous to 5.3.14 install just EDrawings 2008.
*.htm, *.html	Internet Explorer
Supports over 100 filetypes. For a list of filetypes, click: http://www.irfanview.com/main_formats.htm	IrfanView (Introduced in Version 6.17.96)
*.nsf	Lotus Notes
*.xls, *.xlw, *.wk?	Microsoft Excel

File Type	Source Application
*.doc, *.dot, *.htm, *.rtf, *.txt, *.wpd, Unicode text files	Microsoft Word
*.eml, *.idx, *.ics, *.msg, *.pst, *.ost, *.vcs	Microsoft Outlook • When tiffing MSGs with oversized images the oversized image is not able to resize to fit the page. This behavior is by design. LAW uses Outlook to print the documents and this result is the behavior of Outlook.
*.pps, *.ppt	Microsoft PowerPoint
*.mpp	Microsoft Project
.vs, *.v?x	Microsoft Visio
*.xps	Microsoft XPS Document Writer
*.snp	Snapshot Viewer
*.bmp	True Color (32-bit) Bitmap
*.dxf	VoloView Express

LAW directly supports printing of several file types. These are listed as follows:

- **Binary/Hex Printer** - *.bin, *.hex
- **Text/RTF Printer** - *.txt, *.rtf, *.ini, *.bat, *.vbs, *.java, *.cpp, and various other text based types.

📝 Unicode text files are not supported with the Text/RTF Printer. However, RTF with Unicode is supported. This is a limitation of the underlying component. To print Unicode text files, use Microsoft Word or the Shell Printer as the source application.

- **Image Printer** - *.awd, *.bmp, *.dcx, *.gif, *.jpg, *.pdf, *.pex, *.tif, *.xif

- **IrfanView -** IrfanView is a graphic viewer application that can be used for imaging many supported file formats. For a list of formats, click: http://www.irfanview.com/main_formats.htm

- **Native PDF Printer** - The Native PDF Printer source application can be used to print PFD (*.pdf) formatted files.

- **Shell Printer** - The Shell Printer source application can be used to print file types through any application that supports command line printing. In other words, if you can right-click on a file in Windows and select Print, to print the file through the associated application, then the application supports command line printing.

  When the Shell Printer is set as the SourceApp for a document in CloudNine™ LAW, then the application associated with that file type in Windows will be used to convert the file to TIFF or print the file to paper in CloudNine™ LAW.

  For example, a user imports a text file into LAW and sets the SourceApp to Shell Printer. On the user's computer, text files are associated with Notepad. When the user converts the file to TIFF in CloudNine™ LAW, Notepad will be used to print the file to TIFF or PDF. The output image will be added to the record in CloudNine™ LAW, as it would when using any other SourceApp.

  If using the Shell Printer, you must ensure that the application registered on the system for text files supports shell prints. For example, Notepad supports shell prints.

  Supported file types for the Shell Printer source application include *.xps files.

- **Compressed (ZIP archive) Files** - LAW also supports printing zipped archives (*.zip) and self-extracting zip archives (*.exe). Zipped files will automatically be included in both file and e-mail print jobs. The contents of the archive will be processed according to the specified file types for printing. If a zip file happens to contain a zip file, Z-Print will recursively open the archives and process the supported file types. The filename extraction format for Zip files is in the format <Archive>^<Filename>.

⊟ **Special file types**

LAW does not support printing Lotus 1-2-3 documents directly. In order to print these documents, you must have Microsoft Excel installed.

Printing WordPerfect files to MS Word may require an additional add-on found on the Microsoft Office installation CD. If this add-on is not installed prior to printing WordPerfect files, Word will be unable to recognize the file format and an error will be logged.

In order to use the "Snapshot Viewer", you must install support for the Microsoft Access Snapshot Viewer. If Microsoft Office with Access is installed, it can be added from the Office installation media. If Microsoft Access is not installed, a free viewer can

be downloaded from Microsoft.

Both Internet Explorer and Word are capable of printing HTML (*.htm / *.html) files. By default LAW prints these two file types to Internet Explorer due to issues with Word. If you experience any problems printing certain HTML files using Internet Explorer then try using Word to print.

Note: HTML files will always return a page count of 1 if the source application is set to Internet Explorer. If the source application is set to Microsoft Word, the page count will return 1 if the file is exactly 1 page long, or it will return 2 pages if the document is longer than a page. Accurate page counts for HTML files will be determined and logged after the file has been printed to either an image or paper.

Printing files with VoloView Express (*.dwg) automatically centers the drawing and fills the page.

📝 VoloView Express may not work correctly for the first document printed if the 'Drawing Settings' tab of the Page Setup is not the active tab. The last viewed tab remains the default. To ensure it works correctly, open a document, select the Drawing Settings tab, and click OK. This tab should remain the default tab allowing LAW to send the appropriate messages to the dialog.

Output Settings for E-Print/TIFF Conversion

You can use the E-Print batch process to print to paper native files that have been imported into a case. You can use the TIFF Conversion to convert native files to TIFF images. The batch process for TIFF conversion supports distributed batch processing. For more information, see Distributed Batch Processing.

📝 If you used ED Loader or Turbo Import to import the items that you intend to e-print or convert to TIFF, note that the time zone specified during import will persist when you e-print or convert the items to TIFF. For more information on managing time zone settings during import see either ED Loader import or Turbo Import settings for Time Zones.

For more information on source applications and file types supported for E-Print, and TIFF, production, see Supported File Types.

⊟ **To access the e-print and TIFF conversion output settings**

1. From the main window, in the **Tools** menu, click **Batch Process**. The **Batch Processing** dialog box opens.

2. In the **Options** menu, click **E-Print Options** or click **TIFF Options.**

   Clicking **E-Print Options** opens the **e-Print Options** dialog box. Clicking **TIFF Options** opens the **TIFF Conversion Options** dialog box.

⊟ **To view or edit file IDs and their file extensions**
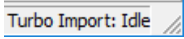
⊟ **To view file IDs and their file extensions in ED Loader cases**

1. In the main window click the **File** menu and then click **Import** and then click **Electronic Discovery.**

2. In ED Loader on the **Tools** menu, click **File Type Manager**.

3. The Manage File Types opens in a new window.
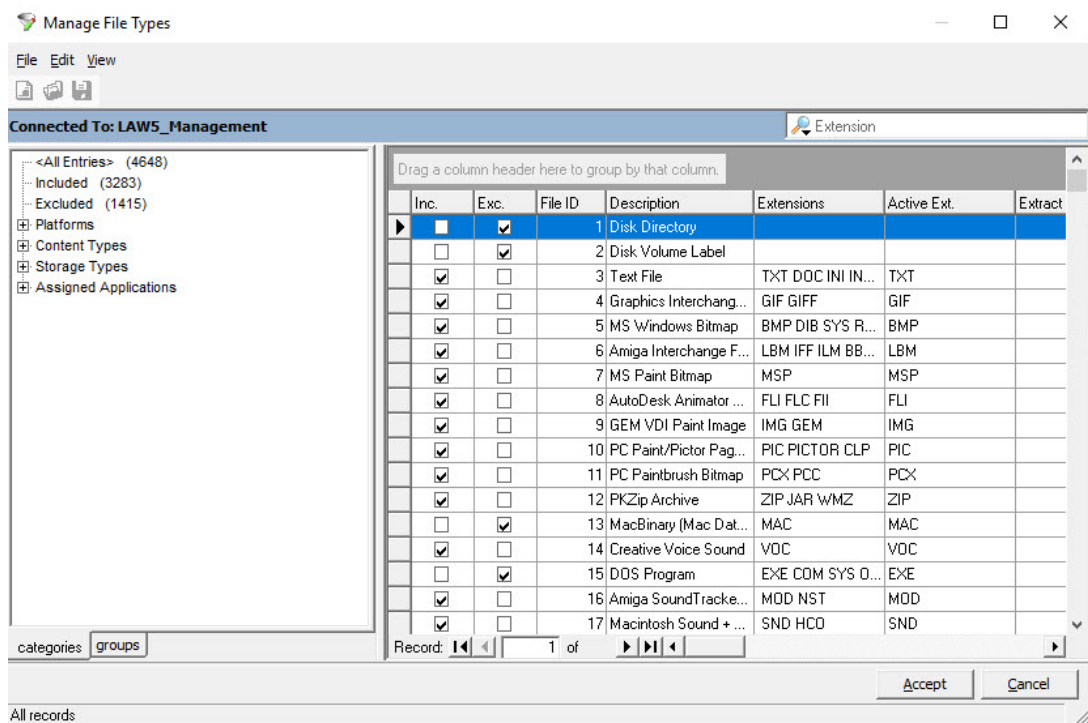
4. The **File ID** column contains the ID number for each file type.

⊟ **To view file IDs and their file extensions in Turbo Import cases**

1. Open a Turbo Import enabled case.

2. In the main window of the LAW user interface, locate **Turbo Import** in the lower right hand corner.

3. Double click on Turbo Import: Idle .

4. The Turbo Import opens in a new window.

5. Select ⚙ **Settings**.

6. The Import Settings window opens.

7. Select the **Filters** tab.
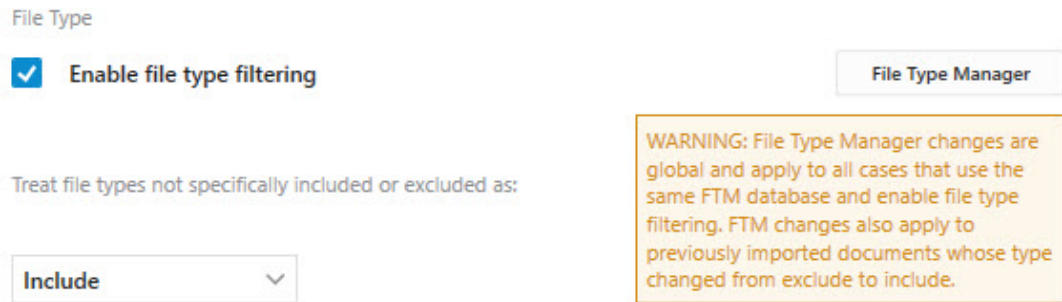
8. Select the **File Type Manager** File Type Manager .

9. The Manage File Types opens in a new window.
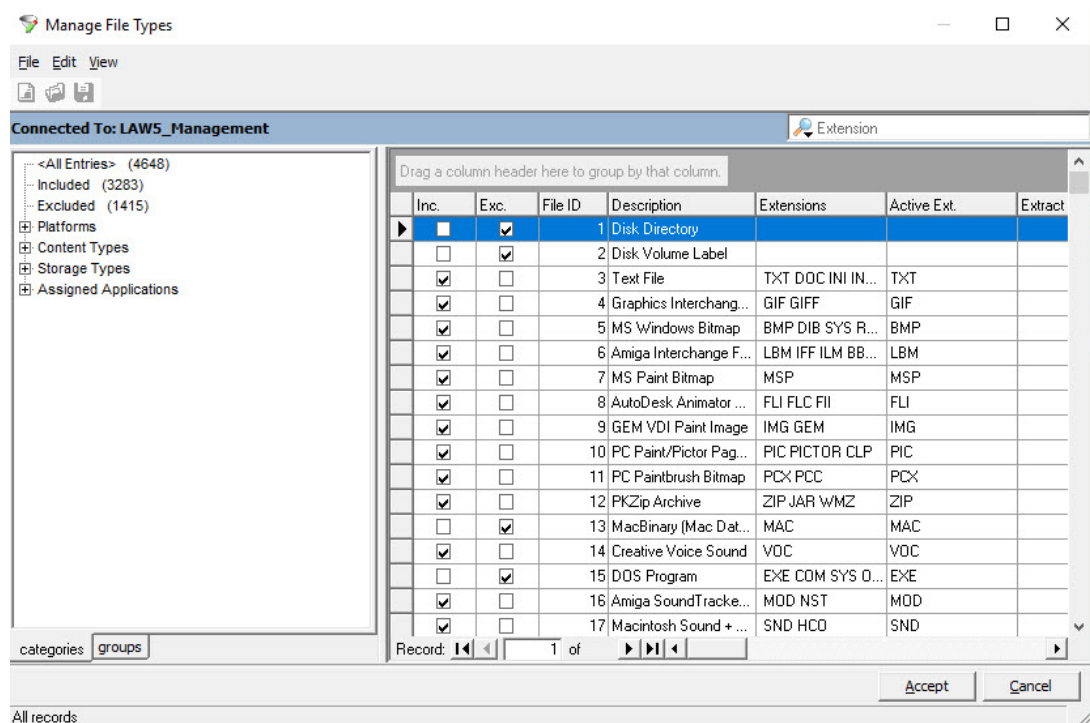
10. The File ID column contains the ID number for each file type.

To edit file IDs mappings to file extensions

*   To edit the default list of file types for this feature, place the following setting in the LAW50.ini file located in the application path (i.e. C:\Program Files (x86) \Law50):

```
[TreatNativeAsImage]
ImageFileTypes=321;298;146
```

The default types are shown above, separated by semi-colons. File IDs can be removed from the list and/or other image file IDs can be added. This feature is limited to image files that are supported by the imaging toolkit used by CloudNine™ LAW. An error will be logged if an image is not a supported file type.

⚠ Use caution when adding file types to the list if you plan to endorse the native image files. If the image dimensions are very small, such as 2x2, the endorsement may appear too large on the image or may not be viewable. To prevent this issue, try converting the image to a larger TIFF image (i.e. 8.5x11) instead of using the **treat native as image** setting.

⊟ **Tracking job status in the print spooler**

You can track the status of a job by finding the separator page name in the print spooler. Finding the name is easier if you understand the rules by which pages are named.

The name of each separator page or placeholder sent to the print spooler is formatted as follows:

```
LAW Batch 000000 - <document identifier> - <description>
```

- The count to the left of the hyphen increments by one for each job.
- <document identifier> is replaced with the **DocID**, **BegDoc#**, or, with **ID** for document separator pages and placeholders that are generated for documents that error during TIFF conversion. LAW will use whichever item is found first in the order shown. Folder breaks will not have the document identifier as they are not associated with a single document.
- <description> is replaced by **Separator** for document separator pages and **Placeholder** for documents that error during conversion to TIFF.
- The name of the print job for native files will display in the spooler as the filename stored in CloudNine™ LAW, such as **01.ntv.doc**.

Examples

- To create a folder break - E-Print: `LAW Batch 000276 – Folder Break`
- To create a document break - E-Print: `LAW Batch 000277 – ID000384 – Separator`
- To create an error placeholder - TIFF Conversion: `LAW Batch 000278 – ID000385 – Placeholder`

Acrobat

If you experience problems printing Adobe Acrobat files, try changing the **PostScript Options** in the **Acrobat** category.

To prevent possible problems with certain PostScript printers, CloudNine™ LAW prints PDF documents using as default the PostScript level of 3.

If necessary, this setting may be modified by enabling **Allow Binary Data**, and choosing the desired **Print Method**.
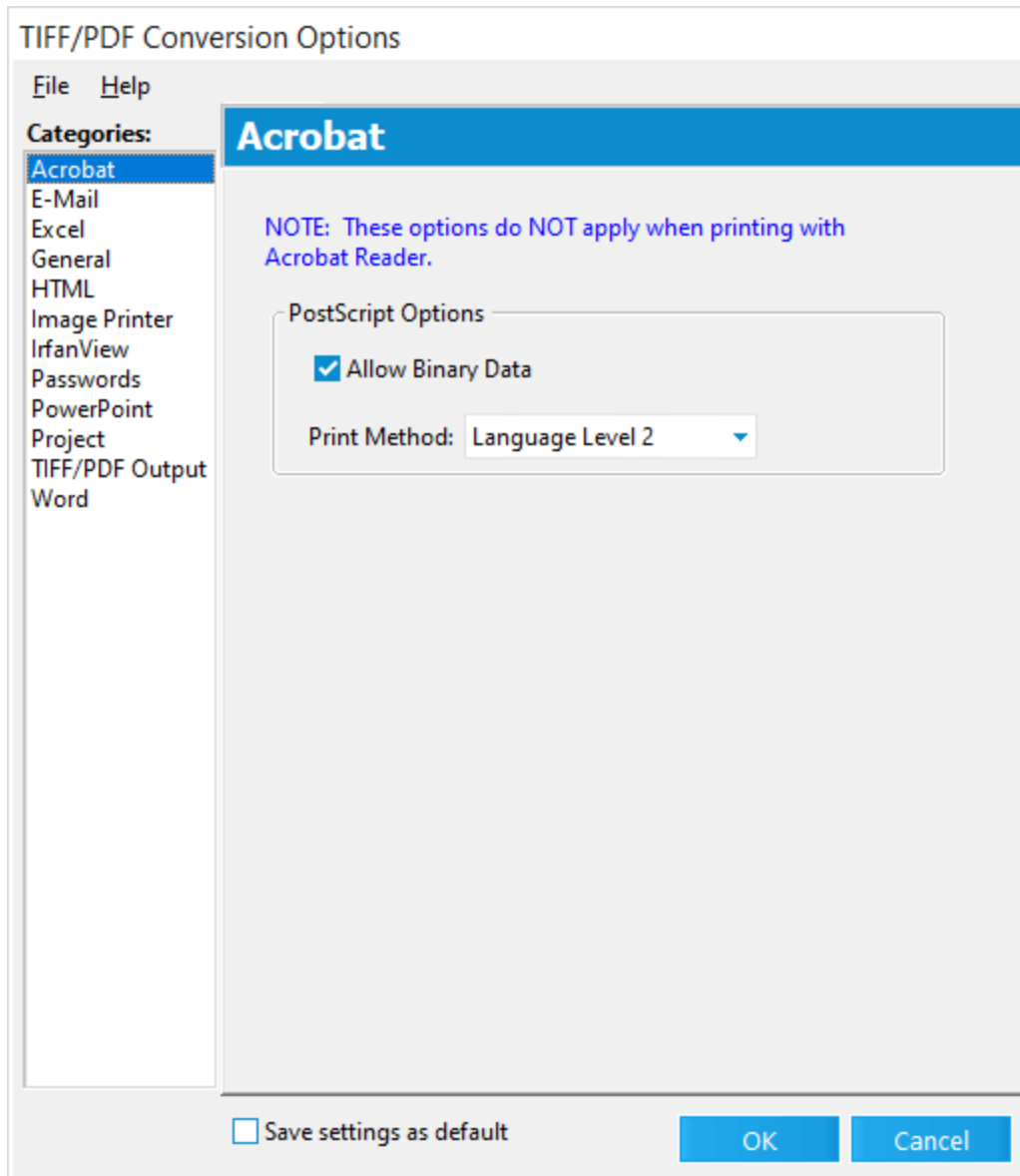
Email

The Print Lotus Notes e-mails natively from Lotus check box, determines whether Lotus Notes email messages are printed natively from Lotus Notes. By default, the Print Lotus Notes e-mails natively from Lotus check box is not selected.

> If the Print Lotus Notes e-mails natively from Lotus check box is selected, Lotus notes must be installed locally, and the mail stores (*.nsf) containing the email messages to be printed, must be located in the same location where they were originally processed.
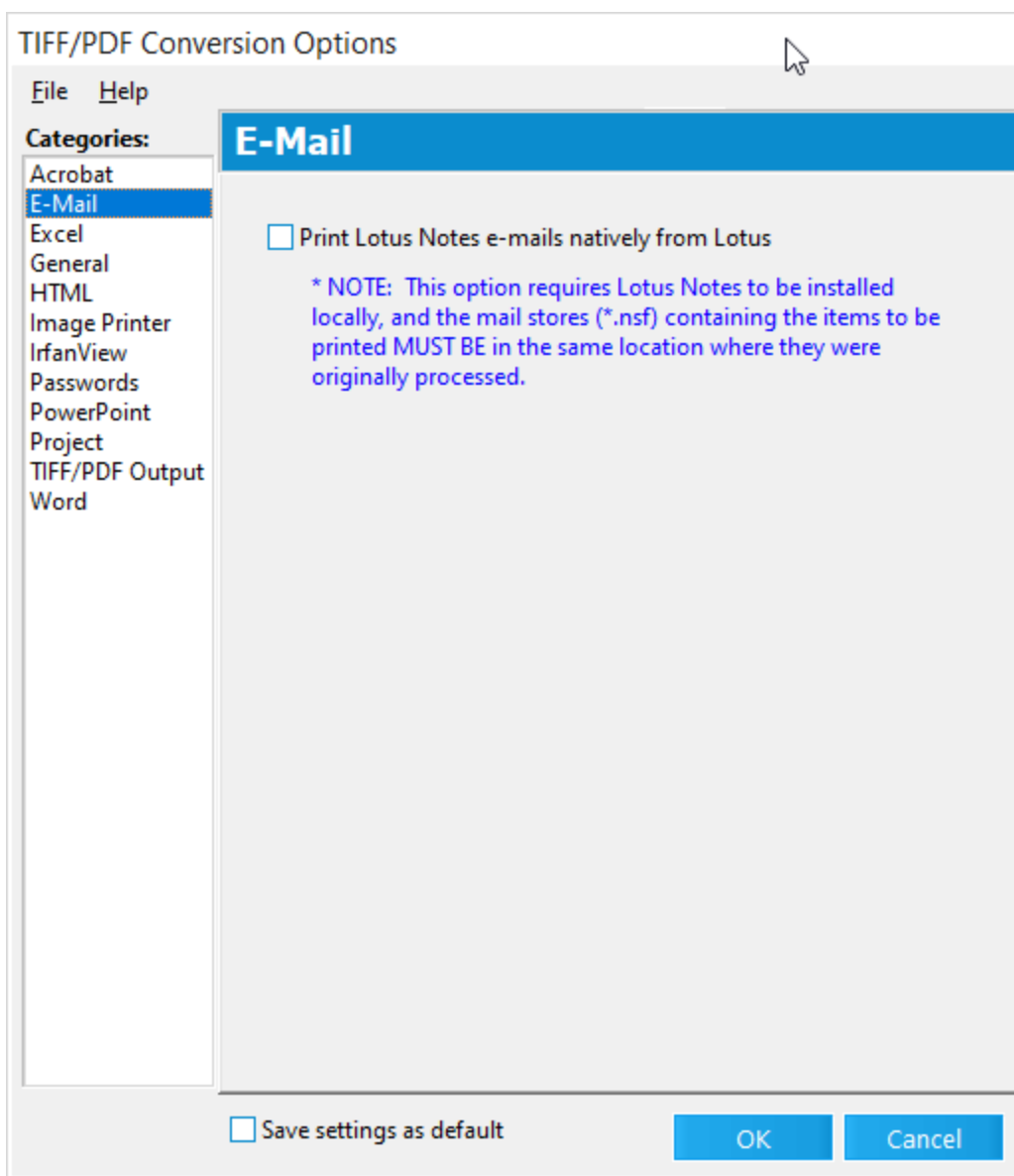
E-Print

The E-Print category in the e-Print Options dialog box contains the active printer and separator page settings for batch e-printing.
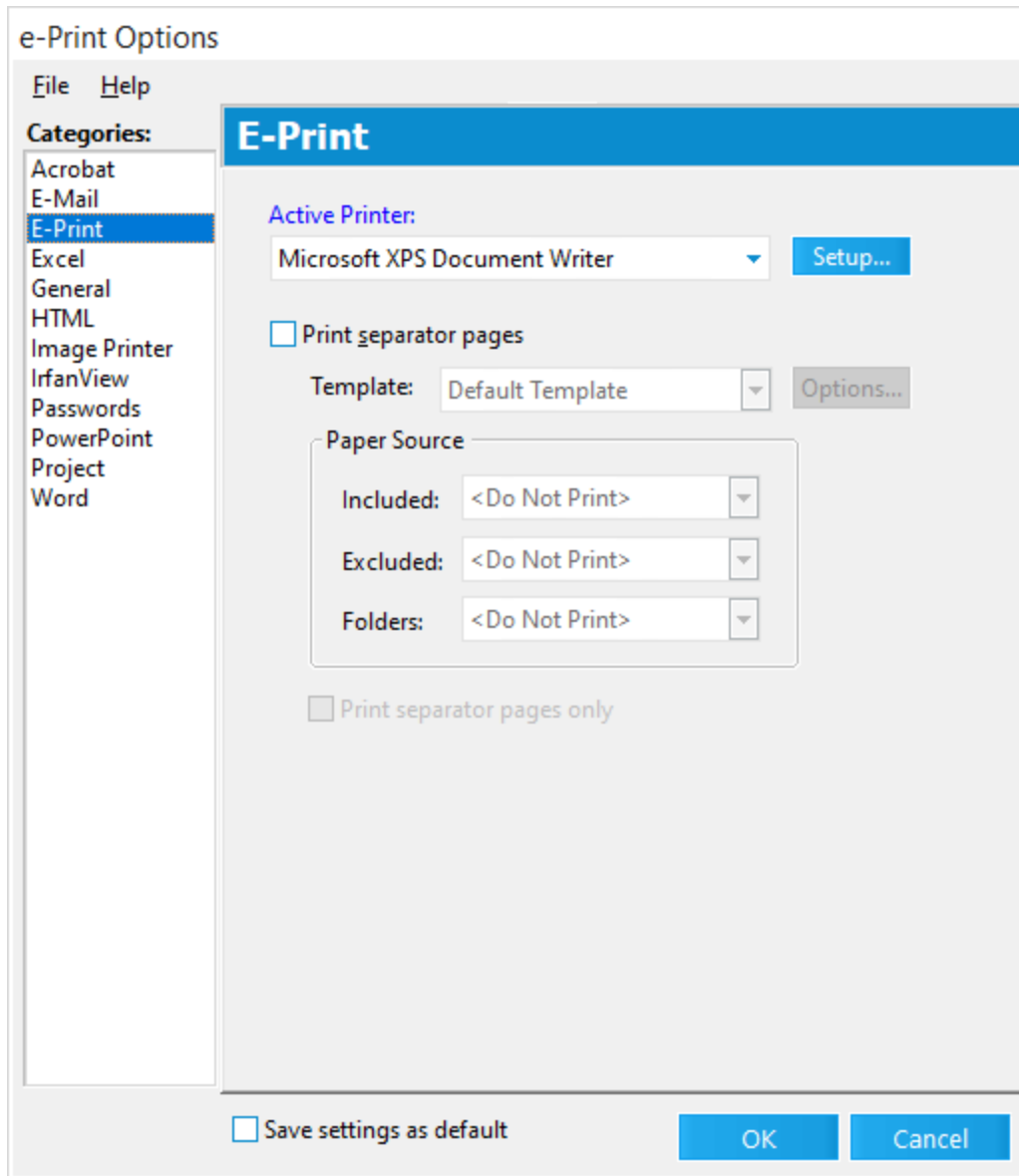
- **Active Printer.** Indicates the printer that will be used to print the native files to paper. Click the Setup button to configure any printer-specific settings, such as tray assignments.
- **Print Separator Pages.** When selected, this feature enables the printing of separator pages between documents and/or folders.

- **Template.** Contains a list of available separator page templates, and determines which template is used to generate the separator pages.

  If you want to use custom separator pages or map which separator pages to use for specific source applications, errors, or when no source application is found, in the **Template** list, click **<Custom>**, and then click the **Options** button. Clicking the **Options** button opens the **Map Placeholder Templates** dialog box. In the **Map Placeholder Templates** dialog box you can map predefined and custom separator page templates. If you need to create or edit an existing custom separator page template, you can click the **Manage Templates** button in the **Map Placeholder Templates** dialog box to open the **Separator Page Options** dialog box, where custom separator page templates are created, edited, and deleted. For more information, see Separator Pages.

📝 If a predefined template is selected from the **Template** list and there are separator page templates currently mapped in the **Map Placeholder Templates**, the predefined template selected in the **Template** list will be used to generate all separator pages for the batch e-print job. The predefined templates are: **Blank**, **Default Template**, **Folder and File (Centered)**, **Filename Only (Centered)**, and **Filename Only (Lower left)**. For more information about template priorities, see Separator Pages.

- **Included.** Select a printer tray from the drop-down to print separator pages in front of any "included" file types (supported for printing).
- **Excluded.** Select a printer tray from the drop-down to print separator pages in front of any "excluded" file types (files without a valid source application for printing).
- **Folders.** Select a printer tray from the drop-down to print separator pages at the beginning of each new folder when printing.
- **Print separator pages only.** When the check box is selected, only the separator pages for the selected documents are printed. The actual documents will not be printed.

Excel

Options for printing Microsoft Excel documents can be found in the Excel category in the e-Print and TIFF Options. These options help to standardize the format of the Excel files being processed.
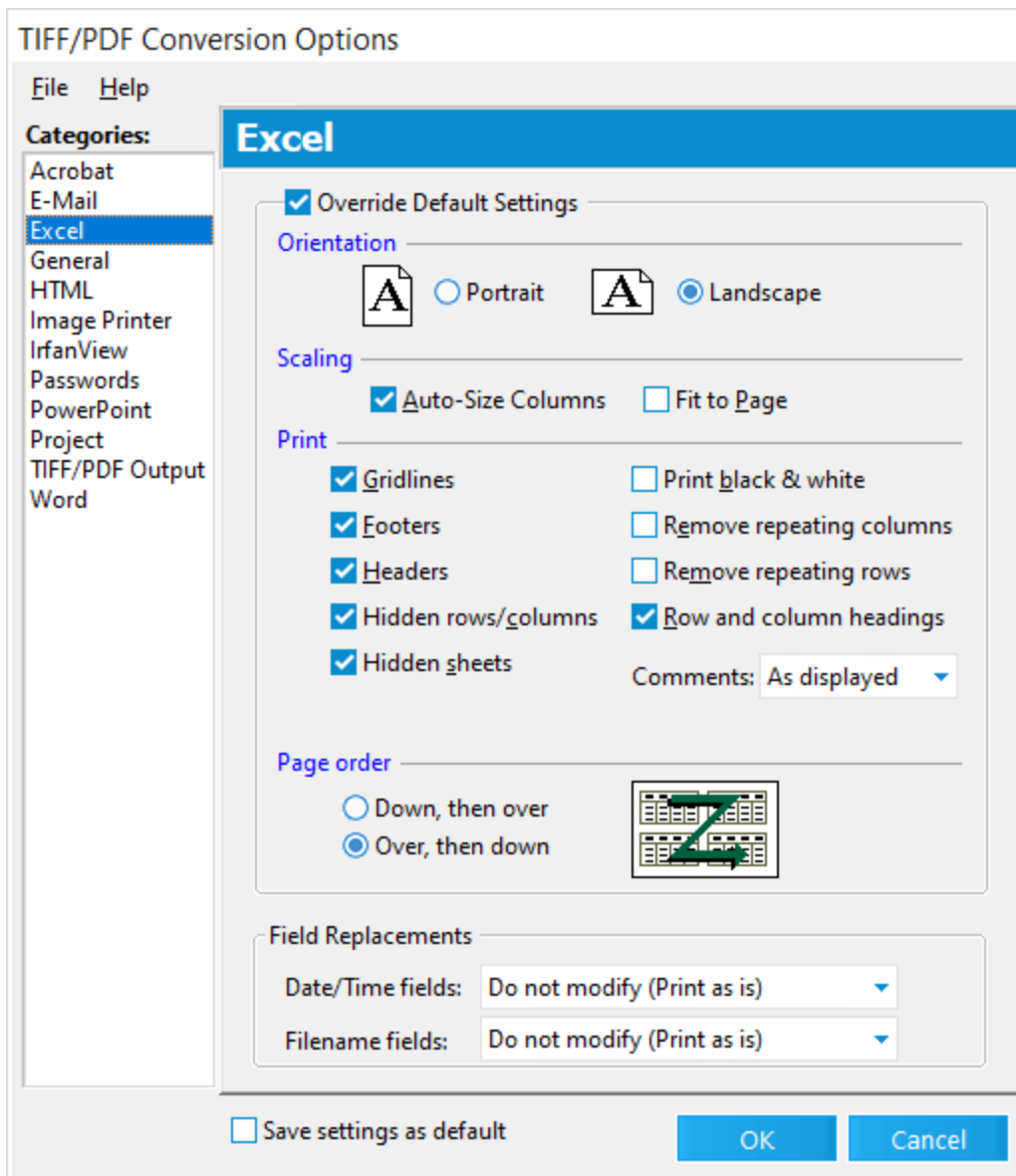
📝 Take extra care to perform quality control for readability and formatting when converting from Excel files. Page boundaries on spreadsheets can be difficult may require manual adjustment.

⊟ **Descriptions of conversion options**

Conversion options for Microsoft Excel are described in the following table:

Option	Description
Override Default Settings	Enables you to override the print settings saved in the native e with settings that you select. For example, select this option if the native file is saved with the option to hide gridlines and you want to print the spreadsheet with gridlines. With Override Default Settings" enabled, the options to override the gridlines and other options become available. When this option is enabled, Excel recalculates the printable area of a document. An Excel file can contain a very small amount of information (e.g., a space or formatting data) in row 10,000 column AAA, for example. If such data exists, Excel could print all pages up to the pages where print data is stored. This situation could result in hundreds of blank pages being printed. For this reason, it is important to check the quality of Excel files after printing.
Orientation	Use this option to select the orientation of the pages to be printed (portrait or landscape).
Scaling	• **Auto-Size Columns** - Adjusts the column sizes so the information contained within the cells is not "cropped" or hidden by an adjacent cell. • **Fit to Page** - Forces the entire spreadsheet to fit onto one page when printed. Caution: This option may cause unreadable or extremely small font sizes if the sheets are very large. This feature is not recommended if printing Excel files with unknown content or large amounts of data per sheet.
Print	• **Gridlines** - Displays the gridlines or cell outlines in the spreadsheet if selected. • **Footers** - Prevents sheets from including footers on processed documents when disabled. This can be helpful if a footer contains date information that the user does not want included in the output. • **Headers** - Prevents sheets from including headers on processed documents when disabled. This can be helpful if a header contains date information that the user does not want included in the output. • **Hidden columns/rows** - Prints any columns and rows that have been hidden when selected. • **Hidden sheets** - Prints any hidden sheets contained in the Excel file when selected. • **Print black & white** - Forces Excel documents to be printed as black and white only, removing all background colors and forcing all text to black. If this setting is enabled, all background fills and patterns are cleared, which can prevent unnecessary parts of a worksheet from being printed. • **Remove repeating columns** - Prevents any columns set to repeat from repeating in the TIFF output when selected. • **Remove repeating rows** - Prevents any rows set to repeat from repeating in the TIFF output when selected.

Option	Description
	• **Row and column headings** - Includes the headings in the printed spreadsheet when selected. • **Comments** - Prints any comments saved in the Excel files. Comments may be printed As Displayed -- as saved in the Excel file or at the 'End of the Sheet'. • **Limit output to <N> pages** - Limits the number of printed pages to the number specified in the text box. The minimum value for this setting is 0, which will act the same as disabling the setting (does not limit pages printed). The maximum value is 99999. When LAW limits the number of pages for a file, the following warning will be logged to the ErrorMsg field: [tiff]: Output limited by Excel page count threshold (ErrCode=-1, Line=3780). This warning will also be logged in the event the actual page count happens to match the limit specified in the options - LAW cannot filter out these occurrences.
Page Order	• **Down, then Over** - Causes the spreadsheet to be printed down the sheet, then over and back down, if selected. • **Over, then Down** - Causes the spreadsheet to be printed across first, then down the columns and back over, if selected.
Field Replacements	The following Field Replacement options allow users to specify the actions LAW should take when encountering these types of dynamic fields in a document. • **Date/Time Fields** - Allows the selection of one of five items: Do not modify (print as is), Do not print, Replace with date created, Replace with modified date, and Show field codes. • **Filename Fields** - Allows the selection of one of four items: Do not modify (print as is), Do not print, Replace path from filename, and Show field codes. Both of these settings are useful for preventing Excel documents from printing current date or file path information which may only apply to the production machine and not to the project being printed.

General

This category contains options for configuring the output page limit for printing Microsoft Excel, Adobe Acrobat PDF or Law PDF, and text files to paper or converting them to TIFF files.

When LAW limits the number of Excel, PDF, or text file pages printed or converted, the following warning will be logged to the ErrorMsg field:

[tiff]: Output limited by page count threshold (ErrCode=9955, Line=3170)

This warning will also be logged for Excel and TIFF files if the actual page count happens to match the page limit specified in the page limit configuration options — LAW cannot filter out these occurrences.

The HasPageLimit field will automatically be updated to Y (Yes) for a document when page limits are defined for the printed or converted Excel, PDF, or text files or when the number of pages output during printing or conversion matches the page limit defined for the Excel, PDF, or text file. So if the warning message above is displayed in the ErrorMsg field for a document, the HasPageLimit field will also be set to Y for the document.

The HasPageLimit field is only updated for Excel, PDF, or text files that are printed or converted using batch processing. The HasPageLimit field is not updated for Excel, PDF, or text files that are manually printed or converted .
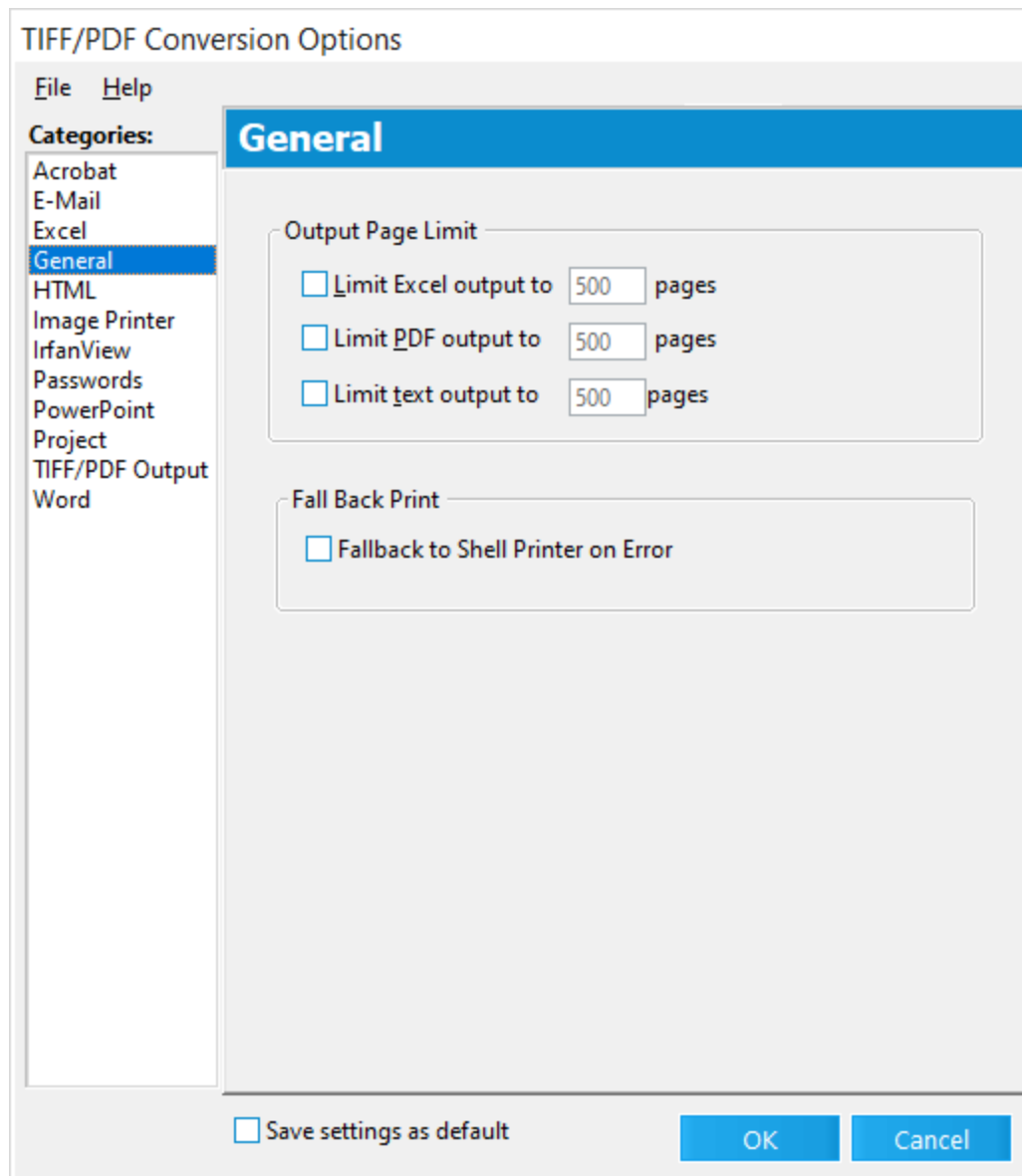
Descriptions of configuration options

Configuration options for the General category are described in the following table:

Option	Description
Limit Excel output to [number] pages	Limits the number of printed or converted pages for Microsoft Excel files to the number specified in the text box.

Option	Description
	The minimum value for this setting is **0** and the maximum value is **32767.** When the check box is not selected or the value is set to **0**, LAW does not limit the number of pages printed or converted.
Limit PDF output to [number] pages	Limits the number of printed or converted pages for Adobe Acrobat PDF or Law PDF files to the number specified in the text box. This check box only applies to documents that have their **SourceApp** field value set to **Adobe Acrobat** or **Law PDF**. The minimum value for this setting is **0** and the maximum value is **32767.** When the check box is not selected or the value is set to **0**, LAW does not limit the number of pages printed or converted.
Limit text output to [number] pages	Limits the number of printed or converted pages for text files to the number specified in the text box. This check box only applies to documents that have their **SourceApp** field value set to **Text/RTF Printer**. The minimum value for this setting is **0** and the maximum value is **32767.** When the check box is not selected or the value is set to **0**, LAW does not limit the number of pages printed or converted.
Fallback to Shell Printer on Error	Select this option if you want LAW to automatically try using the shell printer if the primary printer selected returns an error when attempting to TIFF a file.

HTML

This category contains options for printing HTML documents paper or converting HTML to TIFF or PDF.

TIFF/PDF Conversion Options

File   Help

Categories:
Acrobat
E-Mail
Excel
General
HTML
Image Printer
IrfanView
Passwords
PowerPoint
Project
TIFF/PDF Output
Word

HTML

☐ Remove indentation from presaved e-mails (HTML) when printing

☐ Use alternate HTML rendering engine for Internet Explorer

☐ Save settings as default   OK   Cancel
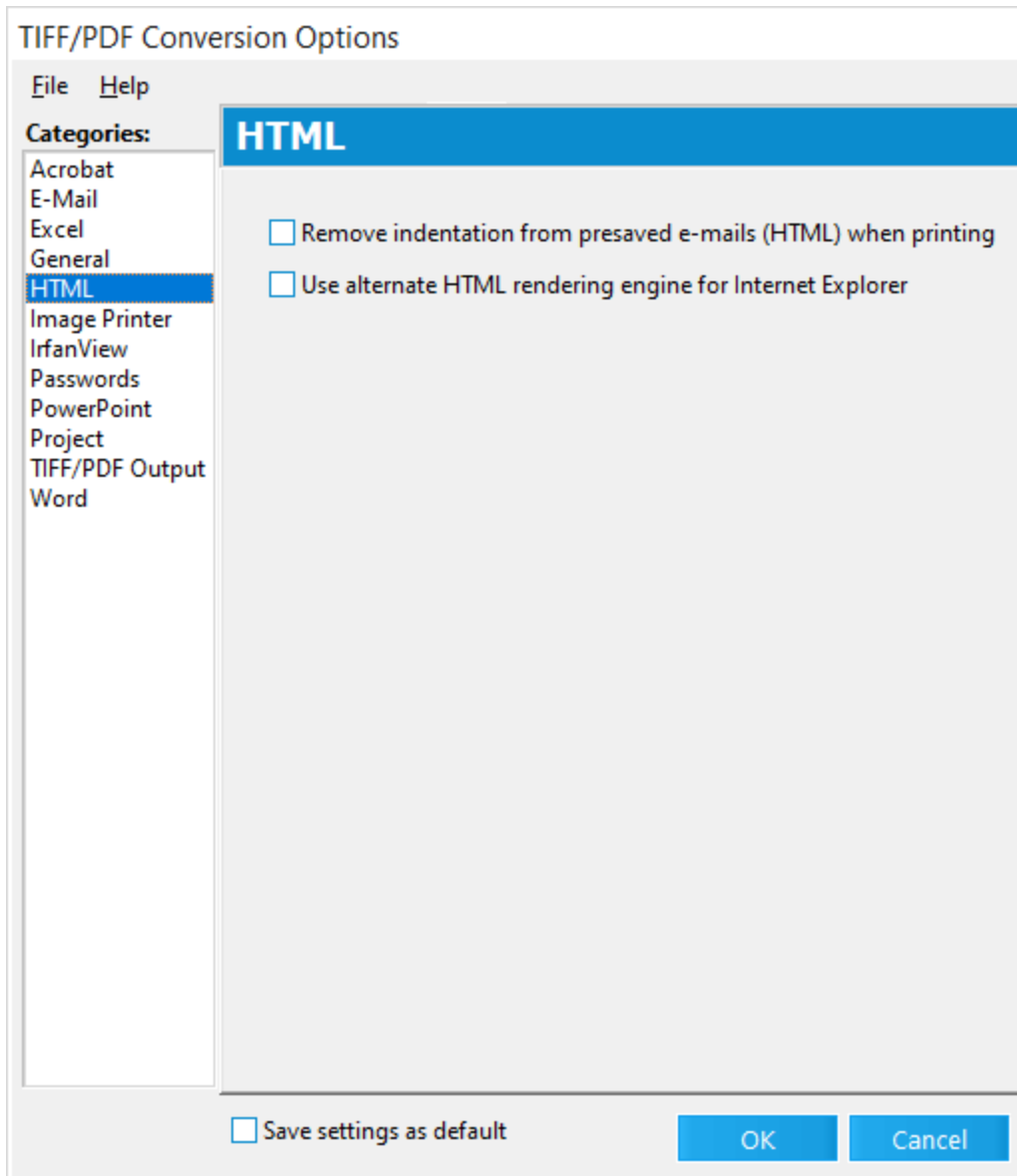
- **Remove indentation from presaved e-mails (HTML) when printing**

  Removes the indentation from e-mails converted to HTML for printing. If enabled, all indentation will be stripped when printing to prevent e-mail threads from being pushed so far to the right that the output ends up with very few characters per line. This setting affects only printed output and does not directly affect the native files.

- **Use alternate HTML rendering engine for Internet Explorer**

  This HTML engine will increase print speeds dramatically for HTML documents printed using Internet Explorer. However, it is not as mature and tested as Internet Explorer for handling extremely complex HTML and all the possibilities of malformed HTML that may occur. Although substantial effort has been taken to verify the output of a wide array of HTML documents printed using this engine, there is no way to test every

possibility and CloudNine cannot absolutely guarantee the quality of any third-party product.

Before using this alternate engine for large scale productions, CloudNine recommends that you test small samples and perform periodic QA on any output produced with this engine.

Image Printer

This category contains options for printing documents to paper or converting them to TIFF using the Image Printer source application.
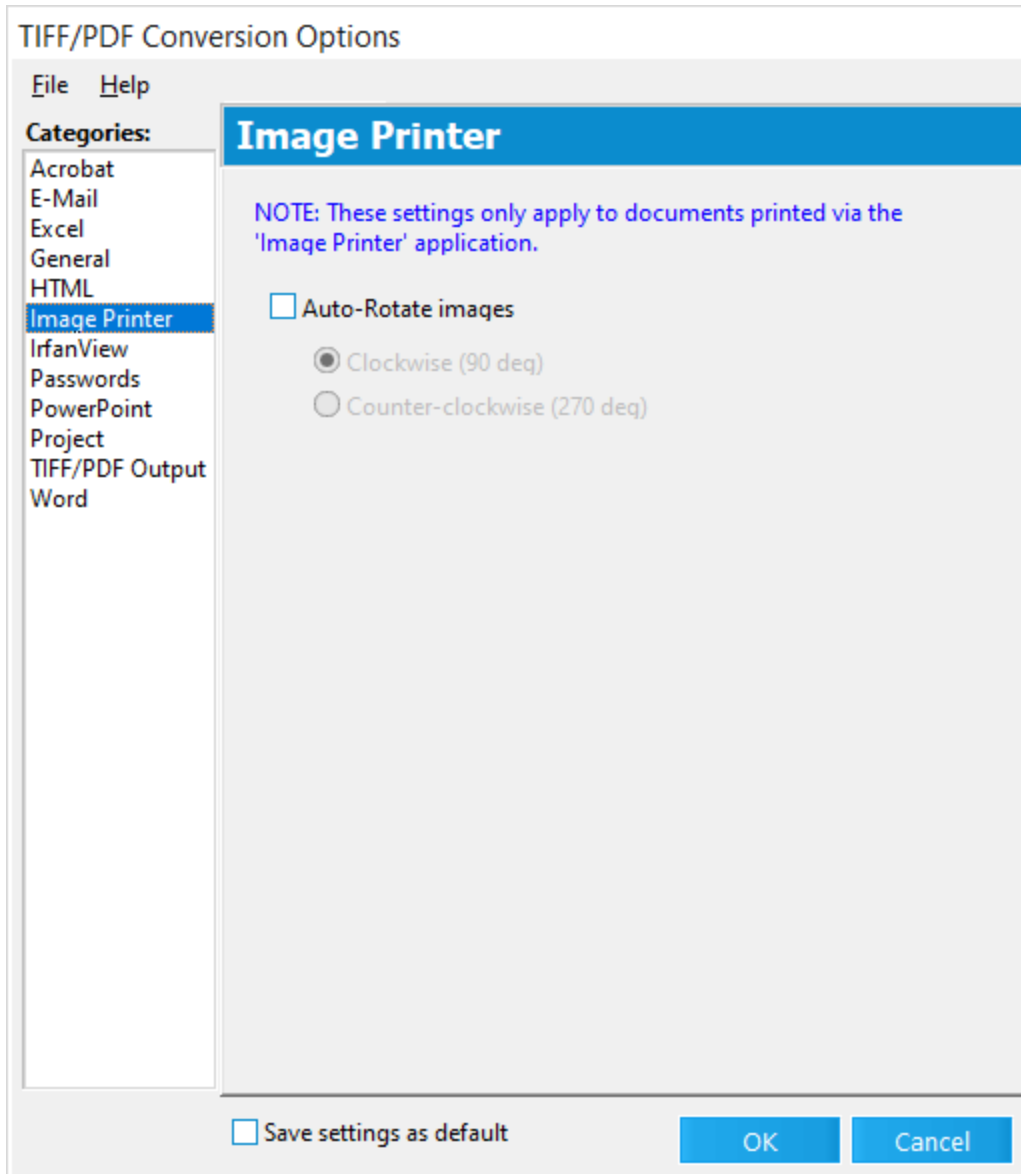
- **Auto-Rotate Images**

  Automatically rotates images that are printed through the image printer.

  This option is useful for images containing a mixture of landscape and portrait orientations. If printed directly to paper, some of the images would appear correctly in portrait, and others would appear as a landscape image printed on portrait paper.

IrfanView

This category contains options for printing IrfanView documents to paper or converting them to TIFF or PDF. Supported in LAW Version 6.17.96+
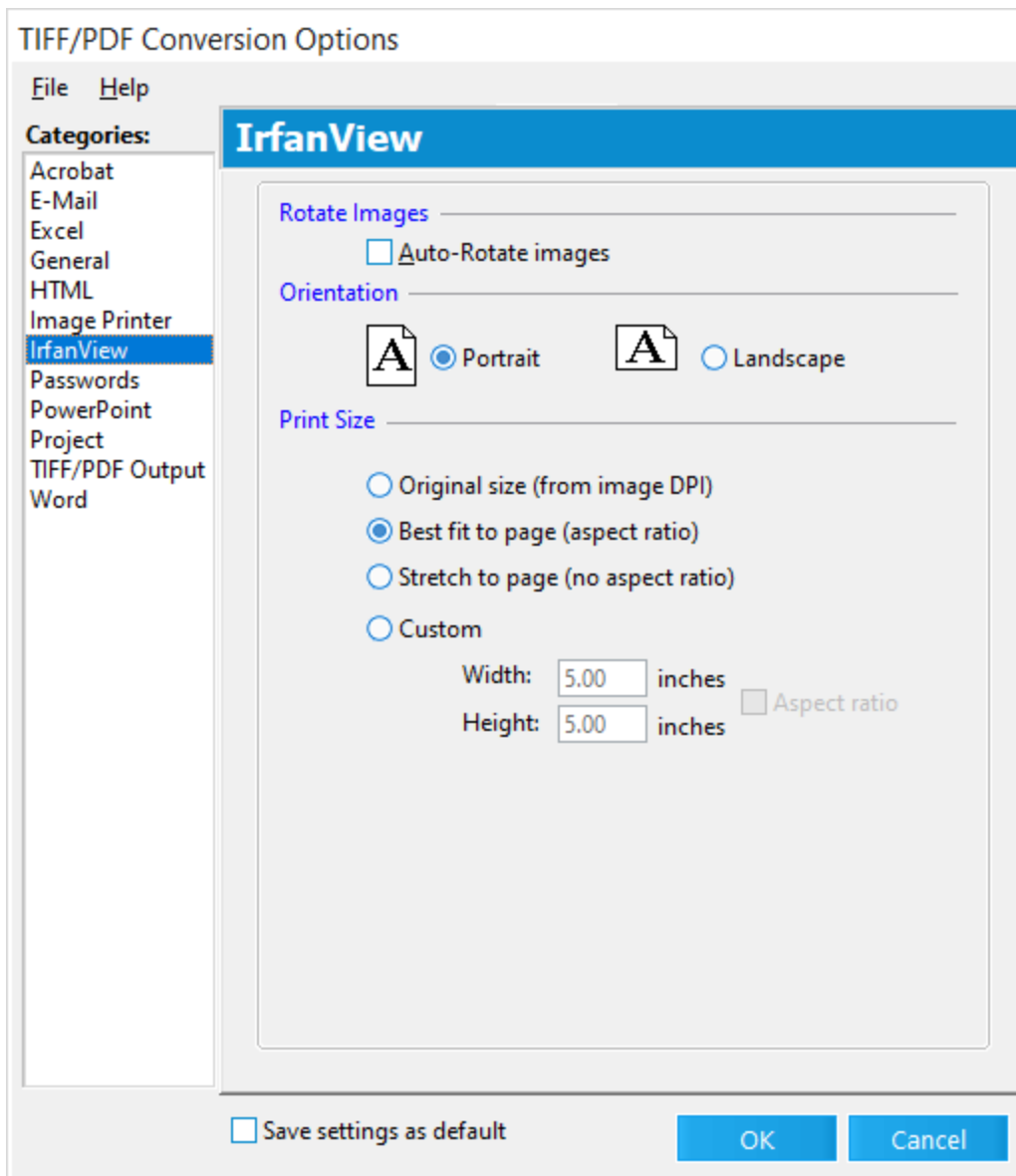
- **Auto-Rotate Images**

  Automatically rotates images that are printed through IrfanView.

  This option is useful for images containing a mixture of landscape and portrait orientations. If printed directly to paper, some of the images would appear correctly in portrait, and others would appear as a landscape image printed on portrait paper.

- **Orientation**

  Select Portrait or Landscape specifically. Portrait is selected by default.

- **Print Size**

  Original size (from image DPI)

Best fit to page (aspect ratio)

Stretch to page (no aspect ratio)

Custom - Set custom size in inches

Passwords

The Passwords area allows you to enter any known passwords for password-protected files contained within the collection. Up to three passwords may be specified at one time for Adobe Acrobat PDFs and LAW PDFs. An unlimited number of passwords may be entered for Microsoft Office applications. All passwords in the passwords section are case-sensitive. If the password for a file is Abc123, then Abc123 would need to be entered; abc123 will not unlock the file.
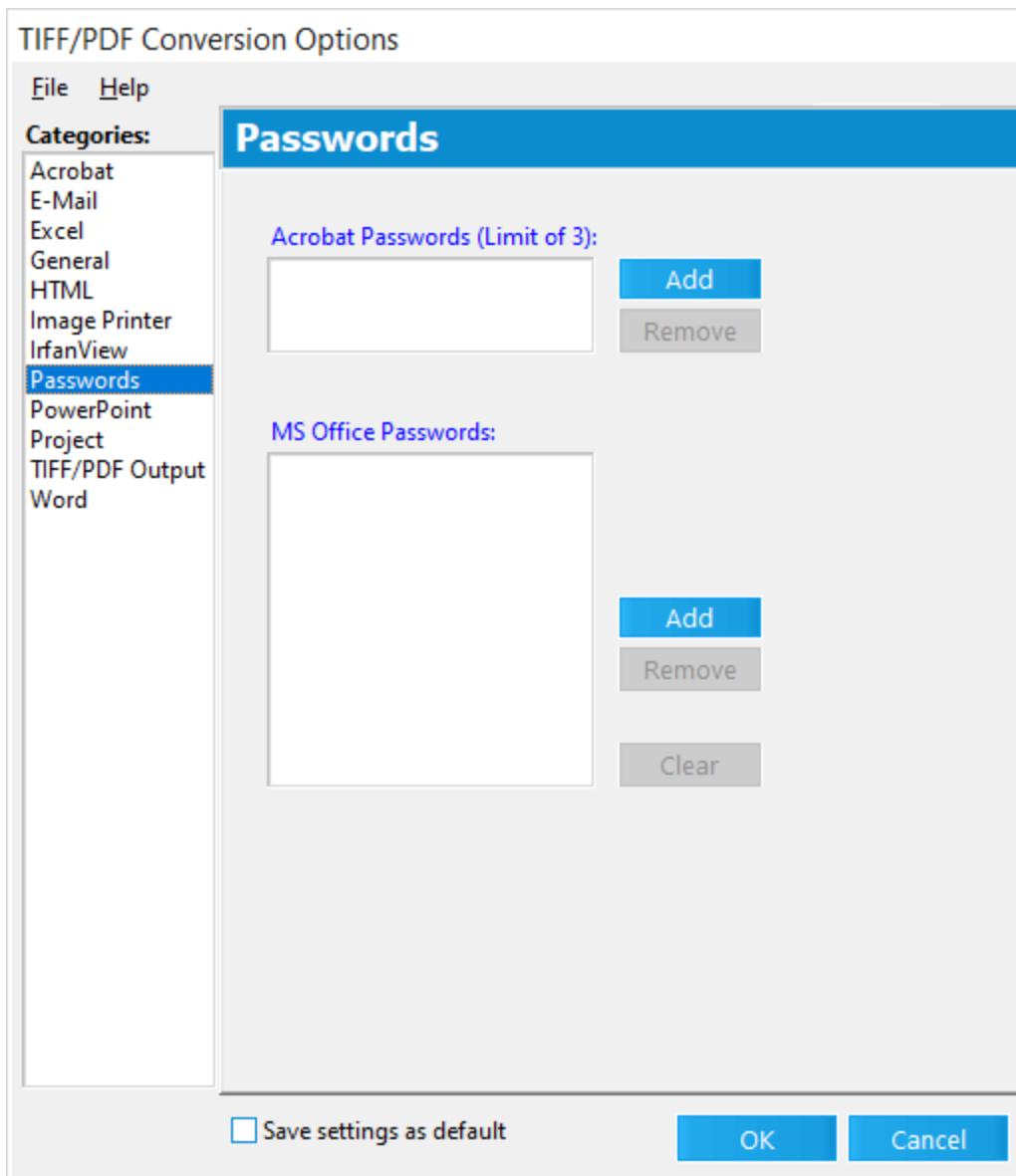
- To add a password, click **Add** and then follow the prompts to add a password.

PowerPoint

This category contains options for printing Microsoft PowerPoint documents to paper or converting them to TIFF or PDF.
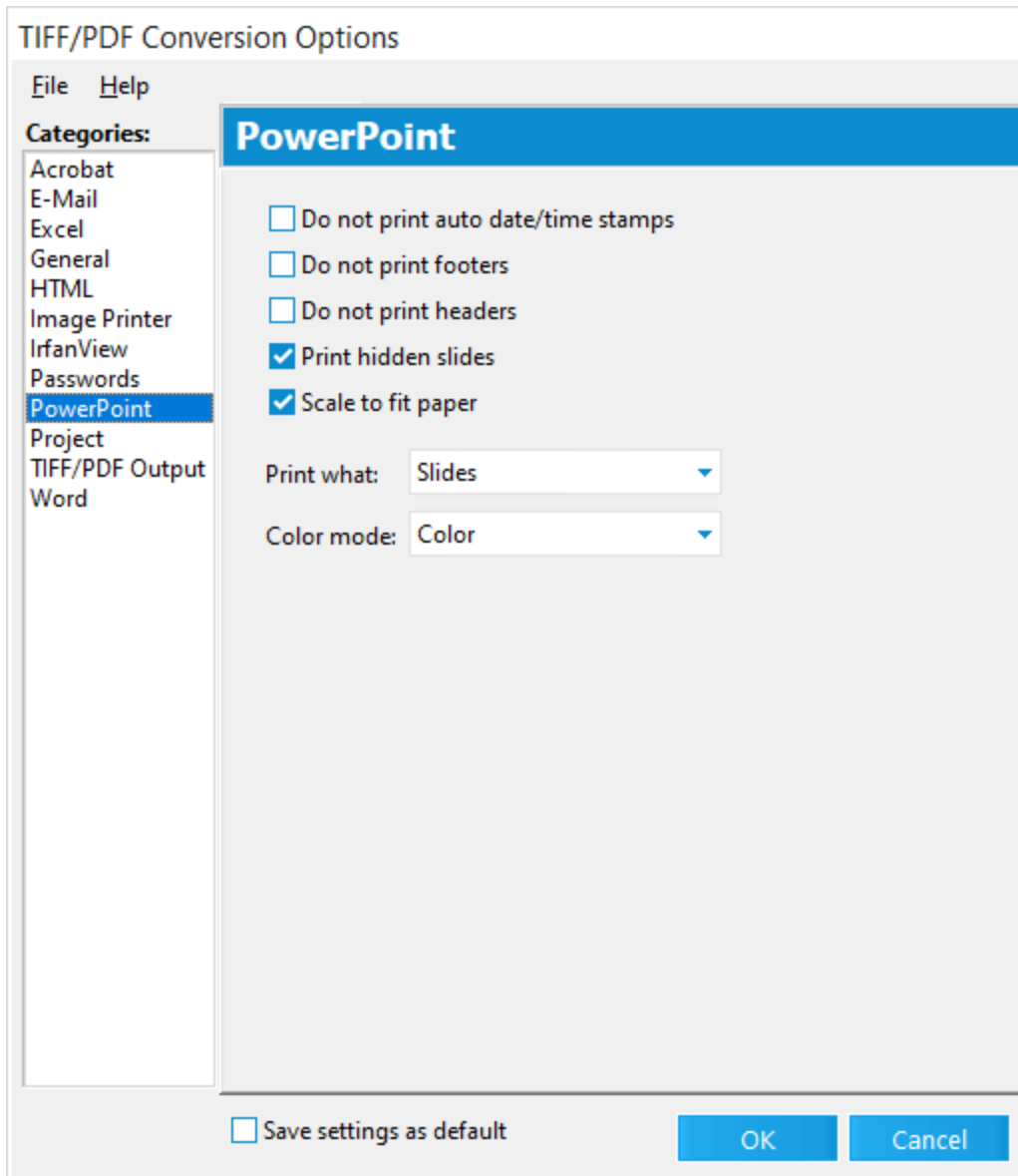
Descriptions of configuration options

Configuration options for Microsoft PowerPoint are described in the following table:

Option	Description
Do not print date/time stamps	Removes any auto-date and auto-time fields from a slide and prevents them from printing.
Do not print headers/footers	Prevents printing of the header and footer sections of slides.

Option	Description
Print hidden slides	Prints any hidden slides that exist in the presentation.
Scale to fit paper	Scales the printing of the PowerPoint slide to the current page size.
Print What	• **Slides** - Prints just the slides and not the notes. • **Slides and Notes** - Prints both the slides and notes. • **Slides and Notes (Full Page)** - Prints both the slides and notes. Notes are printed on a separate full page following the corresponding slide, with the slide number referenced on the note page. For multi-page notes, all of the note contents will be added to the note page. If necessary, the note text font will be reduced to ensure all of the note contents are added to the note page.
Color mode	Adjusts the color settings of the printed slide to either **Pure black and white**, **Grayscale**, or **Color**. • This setting only affects how PowerPoint will send the file to the printer, not the actual printed output. • Setting the mode to **Color** will not necessarily print in color. To help ensure color output, check that the printer supports color printing and is set to print color. • If printing to TIFF, set color reduction to **None** or **Reduce to optimal palette**.

Project

This category contains options for printing Microsoft Project documents to paper or converting them to TIFF or PDF.
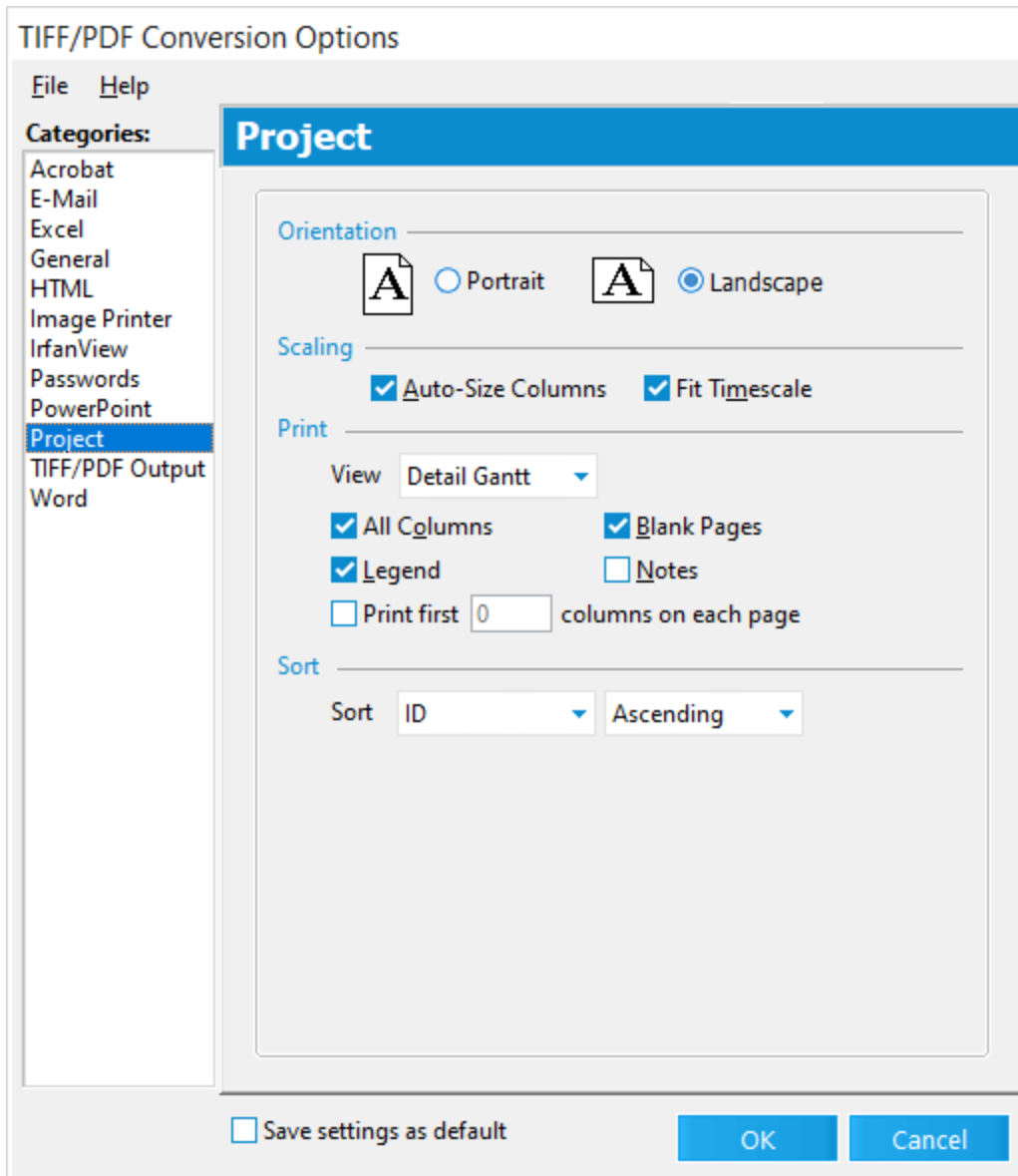
Descriptions of configuration options

Configuration options for Microsoft Project are described in the following table:

Option	Description
Orientation	Use this option to select the orientation of the pages to be printed (portrait or landscape).

Option	Description
Scaling	• **Auto-Size Columns** - Adjusts the sheet column sizes so the information contained within the columns is not "cropped" or hidden by an adjacent column. • **Fit to Timescale** - Forces the entire project for the selected timescale to fit onto one page when printed. Caution: This option may cause unreadable or extremely small font sizes if the timescale is long. This feature is not recommended if printing Project files with unknown content or large amounts of data.
Print	• **View** - Determines which project view is printed. When you are printing a Project document, you can print the Detail Gantt, Gantt Chart, or Task Sheet. If Task Sheet is selected in the View list, only the Notes check box is available for selection in the Print section, and the Fit Timescale check box is disabled in the Scaling section. When a check box is selected in the Print section, the corresponding feature will be included in the output. When a check box is not selected in the Print section, the feature is not included in the output. • **All Columns** - Determines whether all sheet columns in the project are printed. • **Legend** - Determines whether the project legend is printed. • **Print first \<n\> columns on each page** - Determines whether the first columns in the project, such as the project line numbers and % Complete, are printed on each page. The text box determines how many of the first columns in the project are printed on each page. For example, if you type 3, the first 3 columns will be printed on each page. The minimum value for this setting is 0, which will act the same as disabling the setting (does not limit columns printed). The maximum value is 99. • **Blank Pages** - Determines whether blank pages are printed. • **Notes** - Determines whether the project notes are printed.
Sort	• **Sort [field name]** - Determines the field used to sort the project data that is printed. The project data can be sorted by: ID, Priority, Start Date, or Finish Date. • **Sort [direction]** - Determines the order the project data is sorted when printed. The project data can be sorted in Ascending or Descending order.

TIFF Output

The TIFF Output category in the TIFF Conversion Options dialog box provides options specific to the TIFF formats.
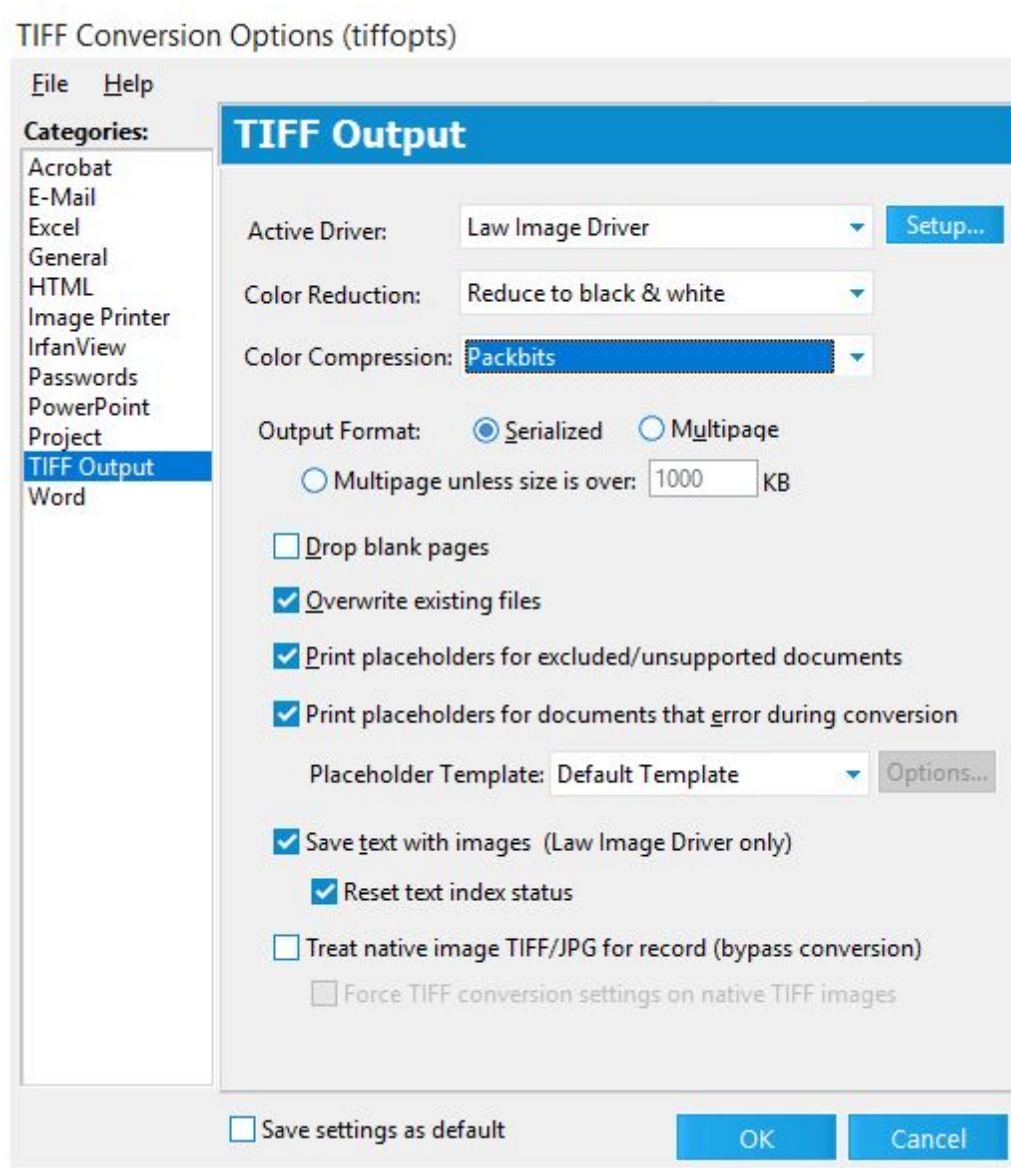
- **Active Driver**. Stores the active TIFF printer driver. LAW currently supports the LAW Image Driver, and LAW Image Driver 300 DPI for TIFF files.

✎ The LAW Image Driver is renamed LAW Image Driver and LAW Image Driver 300 DPI is renamed LAW Image Driver 300 DPI in Version 6.18+.

✎ If you click the **Setup** button and configure the printer-specific settings for a print driver, the settings may not be retained for the TIFF batch process, regardless of

whether the **Save settings as default** check box is selected in the **TIFF Conversion Options** dialog box. Prior to printing, the printer-specific settings are reverted to defaults based on the TIFF Output options provided by CloudNine™ LAW.

- The Informatik Image Driver is no longer included in LAW full installs for versions 5.2 and higher, but can still be used for batch and single document TIFF conversions. The Informatik Image Driver version 4.0 is not officially supported on Windows Vista. Limited technical support will be provided for this driver; the LAW Image Driver is the supported printer for TIFF conversions.

- The Law Image Driver, based on the Zan Image Printer, is included in LAW full installs and can be used for batch TIFF conversion and single document TIFF conversions.

- Unlike other supported drivers, the LAW Image Driver supports text extraction during conversions. Also included with the LAW full installer is the LAW Image Driver 300 DPI printer. The images created by this printer will always be forced to 300 DPI.

- **Color Reduction.** If you are converting native files to TIFF images, the 'Reduce to Optimal Palette' setting will cause the image to be saved as a color image or a black and white image based on the image color properties. If the image contains any color, then the TIFF image will be saved in a color TIFF format; if no color is found, the image will be saved as black and white. The 'Reduce to grayscale' setting will reduce color images or text to a grayscale format. If you are converting native files to PDF files, only the 'None' and 'Reduce to grayscale' selections are available in the Color Reduction list.

- **Color Compression.** The Color Compression setting allows users to specify the compression type of the produced images or PDF files. The most widely supported and more commonly used format is the JPEG or JPEG 2K (PDF only) compression format. This format will also produce the smallest file sizes compared to the other three formats. The Packbits (TIFF only), LZW (TIFF only), ZIP (PDF only) and no compression settings may also be used, but the file sizes will be larger than the JPEG formats and may not be viewable in the destination application.

- **Output Format.** LAW can produce output TIFF images in either single-page (serialized) or multi-page format. LAW stores the output TIFF images in the <case root>\$Image Archive folder.

- **Multipage unless size is over.** (only available for TIFF conversion) Used for printing large files where documents may contain thousands of pages per document (text files for example). Use this feature to force those documents over a certain file size (in kilobytes) to be converted serialized instead of multi-paged.

- **Drop blank pages.** (only available for TIFF conversion) When the check box is selected, LAW will detect any blank pages created during the TIFF conversion and remove them from the output TIFF image.

- **Overwrite Existing Files.** When the check box is selected, during the TIFF conversion, LAW will overwrite any existing images that were created as a result of the TIFF Conversion batch process.

- **Print placeholders for unsupported/excluded documents.** When the check box is selected, LAW will print a placeholder image for any documents that were included for printing but did not have a source application assigned. See the "Placeholder Template" bullet below for more information.

- **Print placeholders for documents that error during conversion.** When the check box is selected, LAW will produce a placeholder image for any documents that received errors and could not be converted to TIFF files.

- **Placeholder Template.** The Placeholder Template list is only enabled when the **Print placeholders for unsupported/excluded docs** and/or **Print placeholders for documents that error during conversion** check boxes are selected. The **Placeholder Template** list contains a list of available document placeholder templates, and determines which template is used to generate document placeholders when the batch TIFF conversion process encounters a document that is excluded, has not been assigned a source application, and/or a document that receives an error.

  If you want to use custom document placeholders or map which document placeholders to use for specific source applications, errors, or when no source application is found, in the **Placeholder Template** list, click **<Custom>**, and then click the **Options** button. Clicking the **Options** button opens the **Map Placeholder Templates** dialog box. In the **Map Placeholder Templates** dialog box you can map predefined and custom document placeholder templates. If you need to create or edit an existing custom document placeholder template, you can click the **Manage Templates** button in the **Map Placeholder Templates** dialog box to open the **Separator Page Options** dialog box, where custom document placeholder templates are created, edited, and deleted. For more information, see Separator Pages.

  ✎ If a predefined template is selected from the **Placeholder Template** list and there are document placeholder templates currently mapped in the **Map Placeholder Templates**, the predefined template selected in the **Placeholder Template** list will be used to generate all document placeholders for the batch TIFF conversion job. The predefined templates are: **Blank**, **Default Template**, **Folder and File (Centered)**, **Filename Only (Centered)**, and **Filename Only (Lower left)**. For more information about template priorities, see Separator Pages.

- **Save text with images.** (only available for TIFF conversion with the LAW Image Driver) When the check box is selected, the LAW Image Driver will extract text from documents during the TIFF conversion process. This text can be viewed from the main LAW window. Select the document and then select the **Text** tab. Right-click the text and select **Open Text (Printed)**.

  ✎ Adobe PDF files are not supported for text extraction during TIFF Conversion.

  ✎ When the Save text with images check box is selected, printed text extraction will fail with the following warning when using Microsoft Internet Explorer version 9 as a source application for batch TIFF conversions: *No text was extracted during the print operation (ErrCode=9504, Line=3750)*. The text can no longer get captured by the printer due to a change in version 9 of Internet Explorer by Microsoft. Using a previous version of Internet Explorer or Microsoft Word to print HTML, or performing OCR after printing, are possible workarounds.

Microsoft article that describes the issue:
http://answers.microsoft.com/en-us/ie/forum/ie9-windows_7/how-to-get-ie9-not-to-render-web-pages-but-pass/46217d97-8729-42a2-9dcc-a83a9bf63480

- **Reset text index status.** (only available for TIFF conversion with the LAW Image Driver) Clearing the Reset text index status check box under the Save text with images check box will prevent LAW from re-flagging the document for indexing after the TIFF conversion and printed text is created. This means the printed text for affected records will not be searchable in CloudNine™ LAW. See the Full Text Indexing topic for more information.

- **Treat native TIFF/JPEG as image for record (bypass conversion).** When the check box is selected, LAW will copy the native TIFF image, or JPEG from the $EDD\$NativeFiles folder and place it in the $Image Archive folder. This feature saves time during TIFF conversion because it skips the printing process by making a copy of the native TIFF image, or JPEG instead of creating a new image using the LAW Image Driver.

  By default, this feature applies to the following TIFF image file type IDs: 321, 298, and 146. These file type ID numbers correspond to the ID numbers stored in the file type database used by the ED Loader.

- **Force TIFF conversion settings on native TIFF images.** When the check box is selected, for TIFF conversion, LAW will apply the active color reduction, color compression, output format (multi-page or serialized), and drop blank pages settings to a copy of the native image. The modified image is then saved and moved into the $Image Archive folder. This setting is useful for matching the image format of previously printed TIFFs which maintains the format consistency of the images throughout the case while using the treat native as image feature.

📝 If you are converting a large Adobe Acrobat PDF file (50 pages or more) to a TIFF file, during the PDF conversion process the "multiple jobs detected" warning may appear. Even if the warning appears, the PDF file will continue to be converted to a TIFF file.

Word

This category contains options for printing Microsoft Word documents to paper or converting them to TIFF or PDF.

In addition to the options you set in LAW for printing Word documents, their final appearance will also depend on the print settings as they are configured in the Microsoft Word application on the processing station.
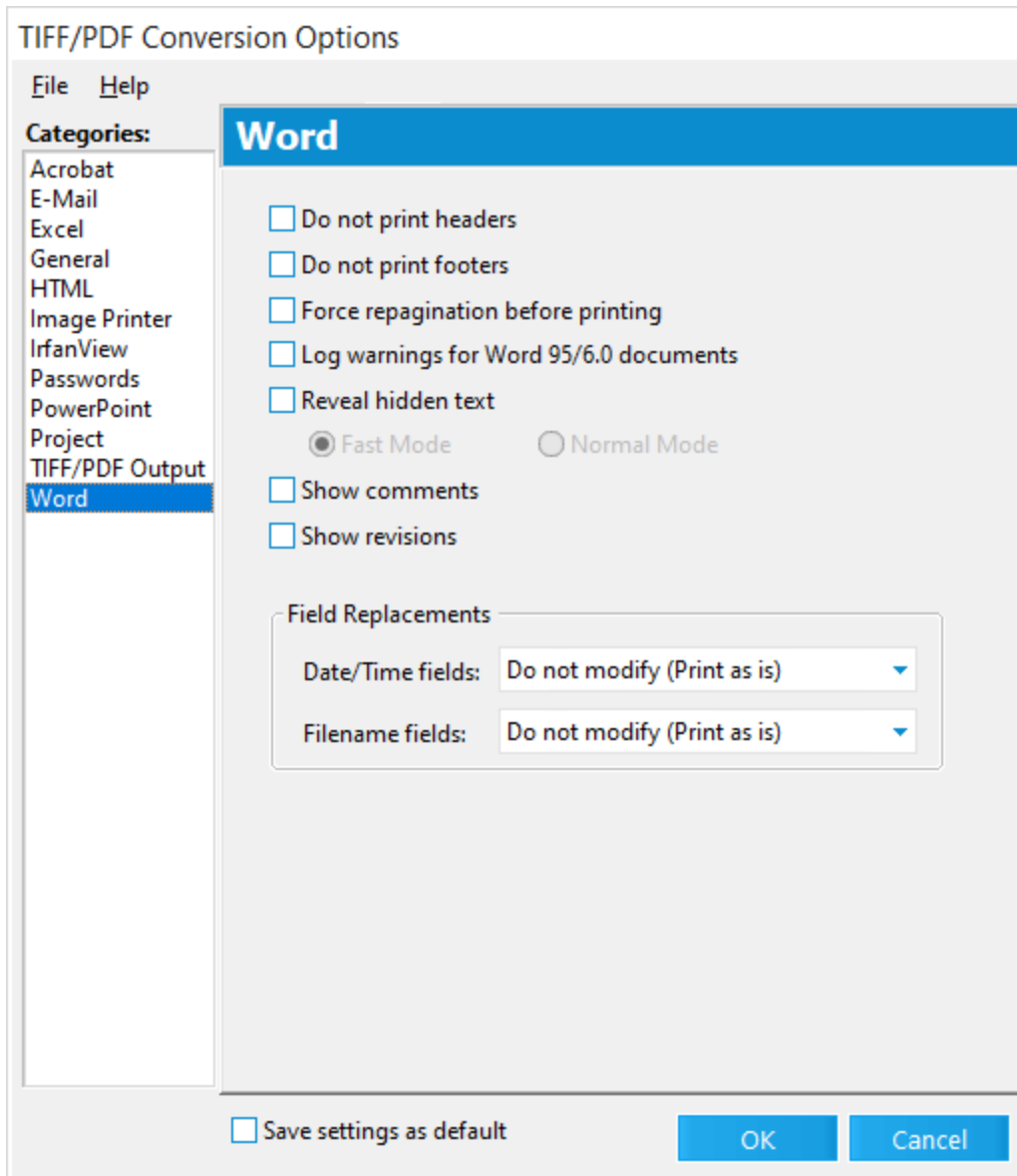
Settings

- **Do not print headers** - Disables printing of headers contained within the Word document. This can be useful if the original document contains information in the header which is not desired in the printed output.

- **Do not print footers** - Disables printing of footers contained within the Word document. This can be useful if the original document contains information in the footer which is not desired in the printed output.

- **Force manual repagination before printing** - This option causes Word to repaginate itself before printing which can prevent the last line from running onto the next page in certain conditions.

- **Log warnings for Word 95/6.0 documents** - This option is used to log a warning message for the purpose of reviewing these documents for possible formatting issues that can occur with some older Word documents. This makes it easier to isolate, QC, and optionally reprint all Word 95 documents if needed.

- **Reveal hidden text** - This option will reveal text in the output TIFF, PDF, or hard copy that is not otherwise visible due to the text matching the background color (i.e., white text on a white background) or text matching the highlight color in the source document.

The setting to reveal hidden text can increase the time required to complete printing of Word documents.

When the Reveal hidden text check box is selected, there are two options for running the Reveal hidden text feature:

- **Fast Mode.** By default, the Fast Mode is selected. Fast Mode is optimized for speed, and will force all text to black and background color to white to reveal hidden text. When Fast Mode is selected, a document is not tagged when hidden text is detected in the document.

- **Normal Mode.** Compares text color to background color for each word in a document to detect hidden text. This mode is slower than Fast Mode, but when Normal Mode is selected, a tag is applied to a document when hidden text is detected in the document.

- **Show comments** - This option enables the printing of comments included in the Word document if present.

Printing of comments on the actual page where they occur is only available in Word XP and higher. In prior versions, the notes will be printed after the last page of the document.

- **Show revisions** - Some Word documents may also contain tracked changes which can be printed through LAW by selecting this option. LAW will only print the changes that have been made to the document if Track Changes has been enabled for the document.

Field Replacements

The Field Replacement options allow users to specify the actions LAW should take when encountering these types of dynamic fields in a document.

- **Date/Time Fields** - This option allows selection of one of five actions: Do not modify (print as is), Do not print, Replace with date created, Replace with modified date, and Show field codes.

- **Filename Fields** - This option allows selection of one of four actions: Do not modify (print as is), Do not print, Replace path from filename, and Show field codes.

Both of these settings are useful for preventing Word documents from printing current date or file path information which may only apply to the production machine and not to the project being printed.

Tiffing Profiles

Function in Batch Processing for Tiff allows a user to create, edit, and delete imaging profiles with specific tiff settings.

Profiles created can customize options from these categories:

- Basic imaging engine options

- For each of the applications: Acrobat, E-Mail, Excel, General, HTML, Image Printer, PowerPoint, Project, and Word

- General and Passwords can also stored in a saved profile.

- Text Extraction options

- Placeholder options

⊟ **Creating a Tiffing Profile**

1. From the main window, in the Tools menu, click **Batch Process**. The Batch Processing dialog box opens.

2. In the Options menu, click **TIFF Options**. The TIFF Conversion Options dialog box opens.

3. Click the **File** menu

TIFF Conversion Options (tiffopts)

| File | Help |

- New
- Open
- Save   F2
- Save As ...
- 1. tiffops
- Cancel

TIFF Output

PowerPoint
Project
TIFF Output
Word

Active Driver: Law Image Driver   Setup...

Color Reduction: Reduce to black & white

Color Compression: Packbits

Output Format: ● Serialized   ○ Multipage
                    ○ Multipage unless size is over: 1000   KB

☐ Drop blank pages

☑ Overwrite existing files

☑ Print placeholders for excluded/unsupported documents

☑ Print placeholders for documents that error during conversion

Placeholder Template: Default Template   Options...

☑ Save text with images (Law Image Driver only)

☑ Reset text index status

☐ Treat native image TIFF/JPG for record (bypass conversion)

☐ Force TIFF conversion settings on native TIFF images

☐ Save settings as default   OK   Cancel

4. Then select **New** to create a new profile based on the default tiff settings.

5. Edit your settings as appropriate.

6. When settings are complete, click **File**, then **Save**. A Save As dialog opens. Select your profile filename and location and select **Save**.

Separator Pages

When you are using batch processing for printing or e-printing, you can have LAW generate separator pages. Separator pages can help to organize paper copies of documents and folders. You can choose whether to have separator pages generated whenever a new folder is encountered during printing, acting as a folder break, or to have

separator pages printed instead of printing actual documents. For more information about the printing and e-printing options, see: Batch Printing or Output Settings for E-Print, TIFF Conversion.

When you are using batch processing for TIFF conversions, you can have LAW generate document placeholders. You can choose whether to have document placeholders generated for unsupported and excluded documents, and/or generated for the documents that could not be converted to TIFF and received an error during processing. For more information about the TIFF conversion options, see: Output Settings for E-Print, TIFF Conversion.

LAW comes with some predefined separator page and placeholder templates for the E-Print and TIFF Conversion processes. The predefined LAW templates are: Blank, Default Template, Folder and File (Centered), Filename Only (Centered), and Filename Only (Lower left). The predefined templates cannot be modified. You can also create and use custom separator page and placeholder templates for the E-Print, Print, and TIFF Conversion batch processes. You can map which separator page or document placeholder template is used for each source application, and which one is used when the batch process encounters errors or no source application.

For e-printing and TIFF conversion, you can also assign document placeholder templates to individual documents from the grid view and the Index tab on the main form using the Placeholder_Name field. When a document placeholder template is assigned to a document in the grid view or on the Index tab, during the e-print or TIFF conversion process, the assigned document placeholder will automatically be generated instead of printing or converting the document to a TIFF file. For TIFF conversions in this scenario, after the TIFF conversion, the TiffStatus field for the document is set to P.

⊟ Placeholder template hierarchy for e-print and TIFF conversion

In LAW there are multiple places you can select the separator page or document placeholder templates you want to use for e-printing and TIFF conversion. If a separator page or document placeholder template is selected in multiple locations for a document, the following template hierarchy will be used by CloudNine™ LAW:

1. Template is selected in the Placeholder_Name field

   A document placeholder template is selected for a document in the Placeholder_Name field from either the grid view or Index tab on the main form. During e-print or TIFF conversion, the selected template will automatically be used to generate the document placeholder for the document instead of printing or converting the actual document to a TIFF or file.

2. A predefined LAW template is selected in the Template list for batch e-printing or the Placeholder Template list for batch TIFF conversion.

The Template list located under the E-Print options in the e-Print Options dialog box. The Placeholder Template list is located under the TIFF Output options in the TIFF Conversion Options dialog box.

3. <Custom> is selected in the Template list for batch e-printing or in the Placeholder Template list for batch TIFF conversion, and there are document placeholder or separator page templates mapped in the Map Placeholder Templates dialog box.

    The mapped templates will be used to generate separator pages for e-print or document placeholders for TIFF conversion. If there is no template mapped to a row in the Map Placeholder Templates dialog, the predefined Default Template will be used for that row.

4. No template is assigned.

    The predefined Default Template is used to generate separator pages and document placeholders.

If a separator page or document placeholder template is not mapped for a document or batch process, the predefined Default Template template is used to generate the separator pages or document placeholders for the E-Print, Print, and TIFF Conversion batch processes.

Custom separator page and placeholder templates are created and managed in the Separator Page Options dialog box, and can be created for individual LAW cases or all LAW cases. Separator page and document placeholder templates are mapped in the Map Placeholder Templates dialog box. The Separator Page Options dialog box is accessed by clicking the Manage Templates button in the Map Placeholder Templates dialog box.

To access the Separator Page Options dialog box

Custom separator pages and placeholders are created in the Separator Page Options dialog box. You can access the Separator Page Options dialog box from three places in CloudNine™ LAW: the E-Print options in the e-Print Options dialog box, Batch Print Options dialog box, or TIFF Output options in the TIFF Conversion Options dialog box.

From the e-Print Options dialog box:

1. In the **Batch Processing** dialog box, click the **Options** menu.

2. In the **Options** menu, click **E-Print Options**.

   Clicking **E-Print Options** opens the **e-Print Options** dialog box.

3. In the **Categories** list, click **E-Print**.

4. Select the **Print separator pages** check box.

5. In the **Template** list, click **<Custom>**.

   Clicking **<Custom>** enables the **Options** button.

6. Click the **Options** button.

   Clicking the **Options** button opens the **Map Placeholder Templates** dialog box.

7. Click the **Manage Templates** button.

   Clicking the **Manage Templates** button opens the **Separator Page Options** dialog box.

From the Batch Print Options dialog box:

1. In the **Batch Processing** dialog box, click the **Options** menu.

2. In the **Options** menu, click **Print Options**.

   Clicking **Print Options** opens the **Batch Print Options** dialog box.

3. Select the **Include separator pages** check box.

   Clicking the **Include separator pages** check box enables the **Options** button.

4. Click the **Options** button.

   Clicking the **Options** button opens the **Map Placeholder Templates** dialog box.

5. Click the **Manage Templates** button.

   Clicking the **Manage Templates** button opens the **Separator Page Options** dialog box.

From the TIFF Conversion Options dialog box:

1. In the **Batch Processing** dialog box, click the **Options** menu.

2. In the **Options** menu, click **TIFF Options**.

   Clicking **TIFF Options** opens the **TIFF Conversion Options** dialog box.
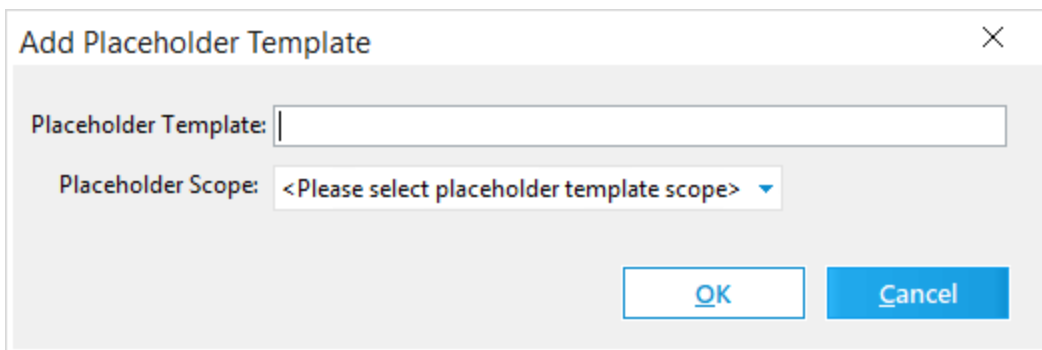
3. In the **Categories** list, click **TIFF Output**.

4. Select the **Print placeholders for excluded/unsupported documents** and/or **Print placeholders for documents that error during conversion** check box.

5. In the **Placeholder Template** list, click **<Custom>**.

   Clicking **<Custom>** enables the **Options** button.

6. Click the **Options** button.

   Clicking the **Options** button opens the **Map Placeholder Templates** dialog box.

7. Click the **Manage Templates** button.

   Clicking the **Manage Templates** button opens the **Separator Page Options** dialog box.

Both separator page and document placeholder templates are created in the Separator Page Options dialog box. In the Separator Page Options dialog box there is no distinction between creating custom separator page or custom placeholder templates. What determines if a template is a separator page or document placeholder template are the settings defined for the template and where the template is used. If a template is used for the batch printing or e-printing process, the template is used for generating separator pages. If a template is used for the batch TIFF conversion process, the template is used for generating document placeholders.

1. In the **Separator Page Options** dialog box, click the **Add New** button.

   Clicking the **Add New** button opens the **Add Placeholder Template** dialog box.

Add Placeholder Template	✕
Placeholder Template:	
Placeholder Scope:	<Please select placeholder template scope> ▾
	OK Cancel

2. In the **Placeholder Template** field, type the template name.

   The following special characters are not allowed in template names: **\ / : * ? < > |**

3. In the **Placeholder Scope** list, click one of the following:

   • **All Cases.** The custom template is available for selection in all LAW cases.

- **Current Case.** The custom template is only available for selection in the current LAW case.

4. Click **OK**.

   Clicking **OK** closes the **Add Placeholder Template** dialog box and adds the new template to the **Placeholder** list in the **Separator Page Options** dialog box.

5. Make sure your new template is selected in the **Placeholder** list.

6. **Configure the template header.**

   1. To add text to the header of the separator page or placeholder header, enter text in the section you want the text to appear in the header.

      - **Left section.** Text is displayed on the left side of the header.

      - **Center section.** Text is displayed in the center of the header.

      - **Right section.** Text is displayed on the right side of the header.

   2. To customize the header text font, click the **A** button below the header fields.

      Clicking the **A** button opens the **Font** dialog box.

   3. Select the font options you want to use.

   4. Click **OK** to save the font settings.

      The font settings apply to all header text, regardless of which section the header text is located.

7. **Configure the template options.**

   The Options section of the Separator Page Options dialog box contains a number of features to allow further customization of the separator page or document placeholder template.

   - **Placeholder Type** - The Placeholder Type list determines the type of separator page and document placeholder.
     - **File.** Separator pages will print in front of e-documents imported via ED Loader, Turbo Import, or XML load file.
     - **Folder.** Separator pages will be printed each time a new folder is encountered and will apply to the E-Print and Print batch processes. The field selection will not apply to folder pages as the fields are only document-level or page-level. The folder path, in addition to the specified header and footer text, will be printed on each folder separator page.

- **E-Mail.** Separator pages will be printed in front of e-mail records and other store-based items including calendar items, contacts, tasks, journal entries, and notes.

- **Attachment.** Separator pages will be printed in front of any attachment records loaded into the case using ED Loader or Turbo Import and is based on the Attachment value found in the _DocCat field.

The File, E-Mail, and Attachment placeholder types will also be used as placeholders for excluded/unsupported records or as an error placeholder during the TIFF conversion process.

The currently selected placeholder type is displayed in parentheses beside the Fields section heading just above the Selected Fields list for the e-print and TIFF conversion processes.

- **Synchronize field settings for all types** - When enabled, the fields selected for the placeholder type currently selected in the **Placeholder type** list will be applied to the File, E-Mail, and Attachment separator pages and placeholders. Also applied with this setting are the following: field fonts, **Do not print field names for blank values** and **Show comments field** check box and text field settings.

- **Synchronize Header/Footer options for all types -** When enabled, the header and footer information you enter in the Header and Footer sections of the Separator Page Options dialog box are applied to the separator page headers and footers across all files types.

- **Margins** - The separator and placeholder margins can be modified by entering the desired values in the **Top**, **Bottom**, **Left**, and **Right** fields. The values should be entered as twips as indicated in the interface (1440 twips = 1 inch). The margin settings are unique to each placeholder type.

- **Vertical field spacing (in twips) -** Use this setting to configure the amount of white space between fields on the separator pages and placeholders. The values should be entered as twips as indicated in the interface (1440 twips = 1 inch). This setting is unique to each placeholder type.

- **Print Delays (in ms)** - The print delay settings can be configured to cause a delay before (**Pre-print delay** field) and after (**Post-print delay** field) pages print in an attempt to prevent a separator page from printing before a file and vice versa (i.e. separator, separator, file, separator). Certain printers rearrange jobs in the spooler causing the printing of smaller files first while larger files are still spooling. LAW cannot always prevent every occurrence of this behavior, but specifying a print delay can reduce the chances of this occurring. Enter values in milliseconds (1000ms=1 second) and test various values to determine what works best in your environment. The print delay values are unique to each placeholder type. The values will be forced to zero and grayed out when configuring placeholders for TIFF conversion.

8. <u>**Configure the template field information.**</u>

The Fields section of the Separator Page Options dialog is used to determine which fields appear on the separator page or placeholder. The value selected in the Placeholder Type list in the Options section determines which fields are currently listed in the Selected fields list. The value currently selected in the Placeholder Type list is displayed in parenthesis next to Fields title in the Fields section. For example, if File is selected, the Fields section heading is displayed as Fields (File).

The **Fields** section is disabled when **Folder** is selected in the **Placeholder Type** list. This is because field information does not exist at the folder level.

Most system fields and all user-defined fields are available for selection in the Selected Fields list. The fields enclosed in chevrons < > are those derived from the Default Template for each placeholder type. Some of these fields display calculated or formatted values on the separator page or document placeholder to match the output displayed on the Default Template.

1. To add a field to the separator page or document placeholder template, select the **Include** check box for the field.

   Any field with the **Include** check box selected is included in the template, any field with the **Include** check box not selected is excluded from the template.

   The **Field Name** column displays the actual field name. The **Display As** field displays how the field name is displayed on the separator page or document placeholder. If the **Display As** field is blank, the name in the **Field Name** column is displayed on the separator page or document placeholder.

2. If you want to change the field name displayed on the separator page or document placeholder, in the **Display As** column, double-click in the applicable field row, and enter the field names as you want it to be displayed.

   To help you locate a field, you can sort the Selected Fields columns in ascending and descending order by clicking a column header.

   To move a field in the list, click the field you want to, and then click the **Move up** button to move the field up one level or click the **Move down** button to move the field down one level.

   Clicking the **Group button** groups all of the selected fields at the top of the field list.

   Clicking the **Sort List** button sorts the fields in the list in alphabetical order in ascending order (A-Z).

3. During the batch printing, e-printing, or TIFF conversion process, if one of the fields selected in the **Selected Fields** list does not contain any data for a document, you can prevent the field name from being displayed on the separator

page or document placeholder by selecting the **Do not print field names for blank values** check box.

To have a selected field's name displayed on the separator page or document placeholder even if the field's value is blank, clear the **Do not print field names for blank values** check box.

The **Show comments field** check box determines whether a message is displayed in the **Comments** field on a document placeholder in the following scenarios:

- During the batch e-printing or TIFF conversion process, when the batch process encounters an unsupported or excluded file type, and document placeholders are generated for unsupported or excluded file types.

- When a placeholder template is selected for a document from the **Placeholder_Name** field in the grid view or on the **Index** tab and the document is being e-printed or converted to a TIFF file.

4. In both scenarios, to have a message displayed on a document placeholder, select the **Show comments field** check box.

    When the **Show comments field** check box is selected, the text in the **Show comments field** text field is displayed on the document placeholder in the **Comments** field. By default, **UNSUPPORTED OR EXCLUDED FILE TYPE** is displayed.

5. To change this text, click in the **Show comments field** text field, and enter the message you want to display on the document placeholders.

    If you do not want the message to display on document placeholders in either scenario, clear the **Show comments field** check box.

6. To customize the field text font, click the **A** button below the **Show comments field** text field.

    Clicking the **A** button opens the **Font** dialog box.

7. Select the font options you want to use.

8. Click **OK** to save the font settings.

    The font settings apply to all selected field names and values and the **Show comments field** field text.

9. **Configure the template footer.**

1. To add text to the footer of the separator page or placeholder header, enter text in the section you want the text to appear in the footer.

   - **Left section.** Text is displayed on the left side of the footer.

   - **Center section.** Text is displayed in the center of the footer.

   - **Right section.** Text is displayed on the right side of the footer.

2. To customize the footer text font, click the **A** button below the footer fields.

   Clicking the **A** button opens the **Font** dialog box.

3. Select the font options you want to use.

4. Click **OK** to save the font settings.

   The font settings apply to all footer text, regardless of which section the footer text is located.

10. Click **OK** to save the template settings.

⊟ To map separator pages and document placeholders

For the batch print you can map with separator page template is used to generator separator pages during a batch print job. For e-print and TIFF conversion processes you can map which separator page or document placeholder template is used when the batch process encounters errors, no source specified (for excluded or unsupported files), or a specific source application. Templates are mapped in the Map Placeholder Templates dialog box.

The batch e-print and batch TIFF conversion processes use the same template mappings in the Map Placeholder Templates dialog box. It does not matter whether you performed the template mappings in in the Map Placeholder Templates dialog box from the e-Print Options dialog box or the TIFF Conversion Options dialog box, the mappings apply to both processes. For example, if you create a template for the Adobe Acrobat source application, and map it to the Adobe Acrobat source application, the Adobe Acrobat template will be used for generating separator pages or document placeholders for the Adobe Acrobat source application in the batch e-print and TIFF conversion processes, depending on which process is running and which settings were selected.

For batch print, the template mapping in the Map Placeholder Templates dialog box only applies to batch printing, and you can only access the batch print mappings in the Map Placeholder Templates dialog box from the Batch Print Options dialog box.

If a custom separator page or document placeholder templates is not mapped for errors, no source found, or a source application, the Default Template is used to generate separator pages and document placeholders.

To map templates for batch e-print and TIFF conversion:

1. Open the **Map Placeholder Templates** dialog box from the **e-Print Options** or **TIFF Conversion Options** dialog box.

    To access the **Map Placeholder Templates** dialog box, see [To access the Separator Page Options dialog box](#) in this topic.

2. In the **Template** column, click the row associated with the **<Error>**, **<No Source Specified>**, or source application row to which you want to assign a custom template.

    Clicking the **Template** column displays a dropdown list of available templates, including custom and the predefined LAW templates. In the template list, the predefined LAW templates names are displayed with the **<>** symbols. For example **<Filename Only (Centered)>**. At the top of the template list is a blank option. When the blank option is selected, the **Default Template** is assigned. Also, when a blank value is displayed for a row in the **Template** column, the **Default Template** will be used to generate separator pages or document placeholders for that row.

3. Click the template you want to use to generate separator pages or document placeholders for the associated **<Error>**, **<No Source Specified>**, or source application.

   To apply a specific template to all rows, in the **Select Template** list, click the applicable template, and then click the **Apply To All** button. Clicking the **Apply to All button** adds the selected template to all rows in the **Map Placeholder Templates** dialog box.

   Once you've applied a template to all rows, you can modify the template selection for individual rows, if needed.

4. When you are done assigning templates, click the **Save** button.

   To create new or edit existing templates, click the **Manage Templates** button to open the **Separator Page Options** dialog box.

To map a template for batch print:

1. Open the **Map Placeholder Templates** dialog box from the **Batch Print Options** dialog box.

   To access the **Map Placeholder Templates** dialog box, see To access the Separator Page Options dialog box in this topic.

2. In the **Template** column, click the **Print** row.

   Clicking in the **Template** column displays the list of available custom templates. At the top of the template list is a blank option. When the blank option is selected, the **Default Template** is assigned. Also, when a blank value is displayed for the **Print** row in the **Template** column, the **Default Template** will be used to generate separator pages or document placeholders.

3. Click the template you want to use for generating separator pages.

4. Click the **Save** button.

   To create new or edit existing templates, click the **Manage Templates** button to open the **Separator Page Options** dialog box.

⊟ **To edit a separator page or document placeholder template**

Only custom templates created in the Separator Page Options dialog box can be edited. The predefined separator page and placeholder templates that come with LAW cannot be edited or deleted.

1. Open the **Separator Page Options** dialog box.

2. In the **Placeholder** list, click the template you want to edit.

   The template's information is displayed in the **Separator Page Options** dialog box.

3. If you want to edit the template's name or scope, click the **Edit** button.

   Clicking the **Edit** button opens the **Edit Placeholder Template** dialog box.

4. Make the applicable edits, and then click **OK**.

   If you renamed a template with the **All Cases** scope, clicking **OK** opens the following message:

   [template name] is a shared placeholder, renaming will make it unavailable to the other cases until it is remapped. Would you like to proceed anyway?

5. Click **Yes** to save the name change.

If you changed the template scope from **All Cases** to **Current Case** the following message is displayed:

[template name] is a shared placeholder, changing the scope will make it unavailable to other cases. Would you like to proceed anyway?

6. Click **Yes** to save the scope change.

    After changing the template scope from **All Cases** to **Current Case**, the template name is removed from the **Placeholder** list in the **Separator Page Options** dialog box and the template list in the **Map Placeholder Template** dialog box for other cases. If the template was mapped in the **Map Placeholder Template** dialog box for other cases, the template will be removed from the mappings and current mappings to the removed template will need to be remapped.

7. In the **Separator Page Options** dialog box, make the applicable edits, and then click the **OK** button or **Apply** button.

    Clicking **OK** saves your changes to the selected template and closes the **Separator Page Options** dialog box. Clicking the **Apply** button saves your changes without closing the **Separator Page Options** dialog box.

8. If you edited the template name and the template has been selected for mapping in the **Map Placeholder Template** dialog box, after clicking **OK** in the **Separator Page Options** dialog box, in the **Map Placeholder Templates** dialog box, remap the renamed template to the applicable row, and then click the **Save** button.

    If you edited the template name and the template has been selected in the **Placeholder_Name** field for documents in the grid view or main form, you will need to remap the renamed template to the applicable documents in the grid view or main form.

    If the template scope is **All Cases** and the renamed template is mapped in other cases, you will also need to select the renamed template for the applicable source application, **<Error>**, and **<No Source Specified>** in the other cases.

    If you forget to remap the template, when you click the **Save** button, the following message is displayed:

    The placeholder template [template name] is either renamed or deleted. Please select a valid one from the list and proceed.

    Click **OK**, and in the **Map Placeholder Template** dialog box, select the renamed template for the applicable source application, **<Error>**, or **<No Source Specified>**, and then click the **Save** button.

⊟ **To delete a separator page or document placeholder template**

Only custom templates created in the Separator Page Options dialog box can be deleted. The predefined separator page and placeholder templates that come with LAW cannot be edited or deleted.

If you delete a mapped template, you will need to remap the <Error>, <No source specified>, or source application previously mapped to the deleted template to blank or another template. If the deleted template was used for all cases, you will need to do this for all cases where the deleted template was mapped.

If you delete a template that was mapped to the Placeholder_Name field for a document in the grid view or on the Index tab in the main form in CloudNine™ LAW, when the template is deleted, the template will be removed from the Placeholder_Name field in the grid view, but the template will not be deleted from the Placeholder_Name field on the Index tab.

You will need to either remap the Placeholder_Name field to another template in the grid view or main form or select the blank option at the top of the Placeholder_Name list in the grid view or main form to clear the template selection from the Placeholder_Name field on the Index tab in the main form.

1. Open the **Separator Page Options** dialog box.

2. In the **Placeholder** list, click the template you want to delete.

   The template's information is displayed in the **Separator Page Options** dialog box.

3. Click the **Delete** button.

   If the scope of the template is Current Case, clicking the **Delete** button opens the following message:

   You are about to delete the [template name] placeholder. Would you like to proceed?

   If the scope of the template is All Cases, the following message is displayed:

   You are about to delete the [template name] placeholder. This is a shared placeholder, deleting it will make it unavailable to other cases. Would you like to proceed anyway?

4. Click **Yes** to delete the template.

5. In the **Separator Page Options** dialog box, click **OK**.

   Clicking **OK** closes the Separator Page Options dialog box and returns you to the Map Placeholder Template dialog box.

6. If the deleted placeholder was mapped to a source application, **<Error>**, or <**No Source Specified>**, select blank or another template for the applicable source application, **<Error>**, or **<No Source Specified>**.

If the template scope was **All Cases** and the deleted template was mapped in other cases, you will also need to select blank or another template for the applicable source application, **<Error>**, and **<No Source Specified>** in the other cases.

7. Click the **Save** button.

    If you forget to remap to blank or another template, when you click the **Save** button, the following message is displayed:

    The placeholder template [template name] is either renamed or deleted. Please select a valid one from the list and proceed.

    Click **OK**, and in the **Map Placeholder Template** dialog box, select blank or another template for the applicable source application, **<Error>**, or **<No Source Specified>**, and then click the **Save** button.

⊟ **To configure separator pages for batch e-printing**

1. In the main window, on the **Tools** menu click **Batch Process**.

    Clicking **Batch Process** opens the **Batch Processing** dialog box.

2. In the **Options** menu, click **E-Print Options.**

    Clicking **E-Print Options** opens the **e-Print Options** dialog box.

3. In the **Categories** list, click **E-Print**.

4. Select the **Print separator pages** check box.

5. In the **Template** list select the template you want to use for the batch e-print job.

6. If you want to use custom or mapped separator page templates, click **<Custom>**, and then click the **Options** button.

    Clicking the **Options** button opens the **Map Placeholder Templates** dialog box.

7. [Map the separator page templates](#) you want to use for batch e-printing.

    To [create new](#) or [edit existing templates](#), click the **Manage Templates** button to open the **Separator Page Options** dialog box.

8. After configuring separator pages for the e-print process, configure the tray settings in the Paper Source section.

9. If you only want to print separator pages, select the **Print separator pages only** check box.

    When this check box is selected, only the separator pages for the selected documents are printed. The actual documents will not be printed.

For more information about the E-Print settings, see the Output Settings for E-Print, TIFF Conversion topic.

⊟ **To configure separator pages for batch printing**

1. In the main window, on the **Tools** menu click **Batch Process**.

   Clicking **Batch Process** opens the **Batch Processing** dialog box.

2. In the **Options** menu, click **Print Options**.

   Clicking **Print Options** opens the **Batch Print Options** dialog box.

3. Select the **Include separator pages** check box and then click the **Options** button.

   Clicking the **Options** button opens the **Map Placeholder Templates** dialog box.

4. Map the separator page template you want to use for batch printing.

   To create new or edit existing templates, click the **Manage Templates** button to open the **Separator Page Options** dialog box.

5. If you only want to print separator pages, select the **Print separator pages only** check box.

   When this check box is selected, only the separator pages for the selected documents are printed. The actual documents will not be printed.

6. If you want to print separator pages for folder breaks, select the **Print folder break separator pages** check box.

   When this check box is selected, a separator page is printed each time a new folder is encountered while printing the selected documents. Folder breaks can be configured for a separator page template in the **Separator Page Options** dialog box. For more information, see To create a custom separator page or document placeholder template in this topic.

   For more information about the Batch Print Options settings, see the Batch Printing topic.

⊟ **To configure placeholders for batch TIFF conversion**

These procedures apply to configuring placeholders for excluded/unsupported documents or documents that received errors during the TIFF Conversion process.

1. In the main window, on the **Tools** menu click **Batch Process**.

   Clicking **Batch Process** opens the **Batch Processing** dialog box.

2. In the **Options** menu, click **TIFF Options**.

    Clicking **TIFF Options** opens the **TIFF Conversion Options** dialog box.

3. In the **Categories** list, click **TIFF Output**.

4. Select one or both of the following check boxes:

    *   **Print placeholders for excluded/unsupported documents**
    *   **Print placeholders for documents that error during conversion**

5. In the **Placeholder template** list select **<Custom>** and then click **Options**.

    The **Placeholder Template** list is enabled once the **Print placeholders for excluded/unsupported documents** and/or **Print placeholders for documents that error during conversion** check boxes are selected.

6. In the **Template** list select the template you want to use for the batch TIFF conversion job.

7. If you want to use custom or mapped separator page templates, click **<Custom>**, and then click the **Options** button.

    Clicking the **Options** button opens the **Map Placeholder Templates** dialog box.

8. Map the separator page templates you want to use for batch e-printing

    To create new or edit existing templates, click the **Manage Templates** button to open the **Separator Page Options** dialog box.

    For more information about the TIFF Output settings, see the Output Settings for E-Print, TIFF Conversion topic.

☐ **To select placeholder templates from the grid view and main form**

For e-print and TIFF conversion, document placeholder templates can be selected for individual documents in the grid view and on the Index tab on the main form in LAW using the Placeholder_Name field. When a document placeholder template is selected for a document in the Placeholder_Name field, if the document is being e-printed or converted to a TIFF file, a document placeholder will automatically be generated for the document. The document itself will not be e-printed or converted to a TIFF file. For TIFF conversions, the TiffStatus field for the document will be set to P, which indicates a placeholder was printed for the document.

To select a placeholder template from the grid view:

1. Open the grid view.

2. Add the **Placeholder_Name** field to the grid view.

For more information about adding fields to the grid view, see the "To show or hide fields" section in the Customizing the Grid View topic.

3. In the **Placeholder_Name** field, select the template you want to use for generating the document placeholder.

If you want to use the same template for multiple document in the grid view, you can use the batch update process to populate the **Placeholder_Name** field for all the applicable documents.

For more information about the batch update process, see the "To batch update grid data" section in the Grid Functions topic.

To select a placeholder template from the main form:

1. In the main form, navigate to the document for which you want to select a document placeholder template.

2. On the **Index** tab, scroll to the **Placeholder_Name** field.

If the **Placeholder_Name** field is not displayed on the **Index** tab, in the **Modify Fields** dialog box, select the **Visible** check box for the **Placeholder_Name** field to add the field to the **Index** tab on the main form.

For more information about adding fields to the **Index** tab, see the "To show or hide fields" section in the Customizing the Grid View topic.

3. In the **Placeholder_Name** field, select the template you want to use for generating the document placeholder.

Turbo Imager

You can use the Turbo Imager batch process to convert native files to TIFF images or PDF files, or to reprocess files that are already in TIFF or PDF format. Turbo Imager generates near-native files (not true native). Since each file does not have to be opened and processed by the associated source application, Turbo Imager can generate images faster. This allows you to move into downstream workflows more quickly.

A Turbo Imager job can be run on Turbo Import, ED Loader, and Scan cases. It cannot be used on an Access case.

Turbo Imager jobs can be created in the following ways:

- From the Batch Processing window (Tools>Batch Process menu from the LAW Main window or Tools>Batch Process menu from the Grid View - see below)

- From the LAW Management Console (see Creating Batch Jobs from the LMC)

Turbo Imager processes files in this manner:

- For source PDF files, if TIFF output is desired, the file is loaded into VintaSoft and converted.
- For source email files, they are first converted to MHTML and then to PDF using Aspose. If TIFF output is desired, the PDF is then converted using VintaSoft.
- For all other file types, they are opened using Aspose and saved to PDF. If TIFF output is desired, the PDF is then converted using VintaSoft.

All metadata fields that the batch TIFF/PDF Conversion process updates are also updated by running Turbo Imager.

For a list of Turbo Imager supported file types, see Supported File Types.

⊟ **To run a Turbo Imager batch process**

1. From the main form on the **Tools** menu, click **Batch Process**. The **Batch Processing** tool opens.
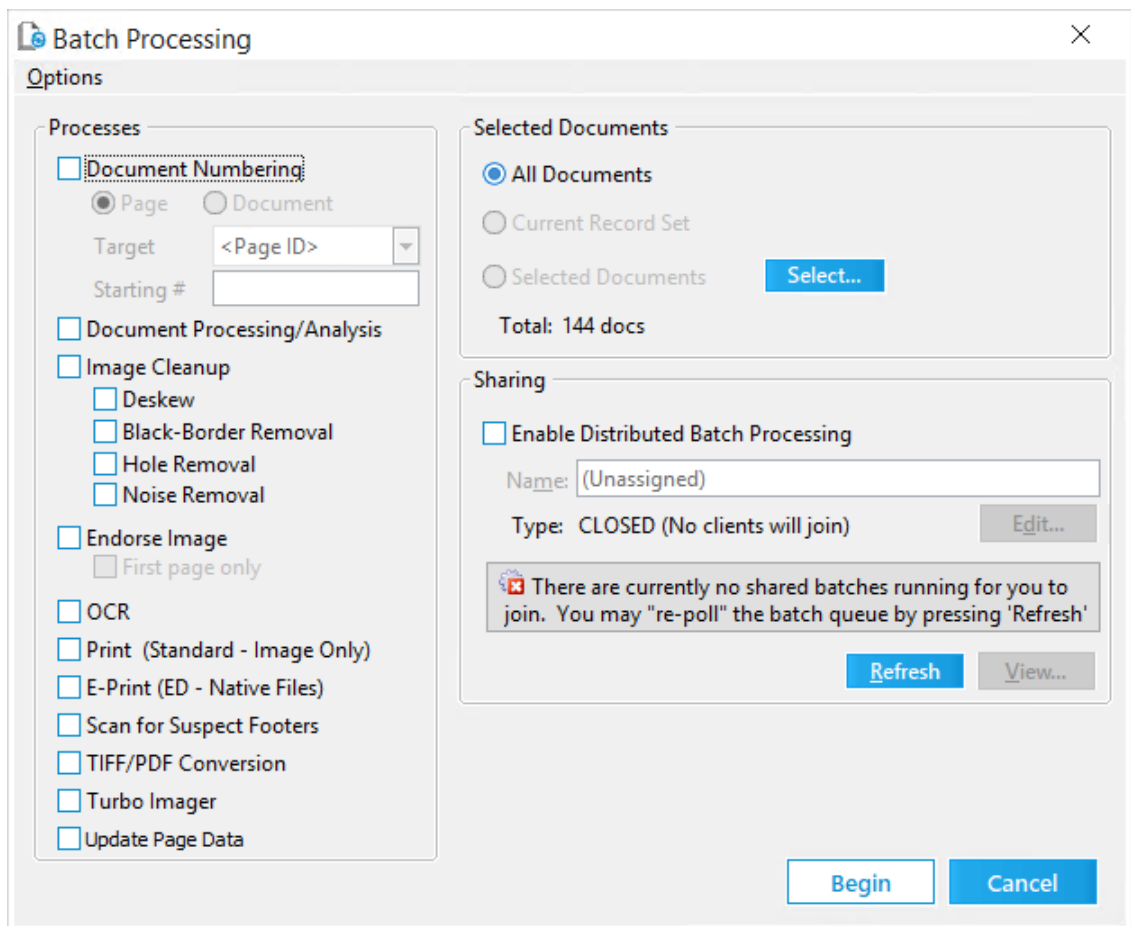
⚠ If **Turbo Imager** is disabled, please verify that you have a Turbo Imaging License, and that you are not working with an Access case.

2. Verify the Turbo Imager options you want. See [Turbo Imager Options](#) for more details.

3. Select the documents to run through Turbo Imager. For more information on selecting documents for batch processing, see [Selecting Documents for Processing](#).

4. Click **Turbo Imager**.

5. Click **Begin**.

6. A message displays letting you know your batch job will be executed. Click OK.

Turbo Imager batch job created   ✕

ℹ   The specified Turbo Imager batch job will be executed in the backend by LAW service.

The batch dialog will close and you can continue working in LAW. You can view progress in LMC and errors in Log Viewer.

OK
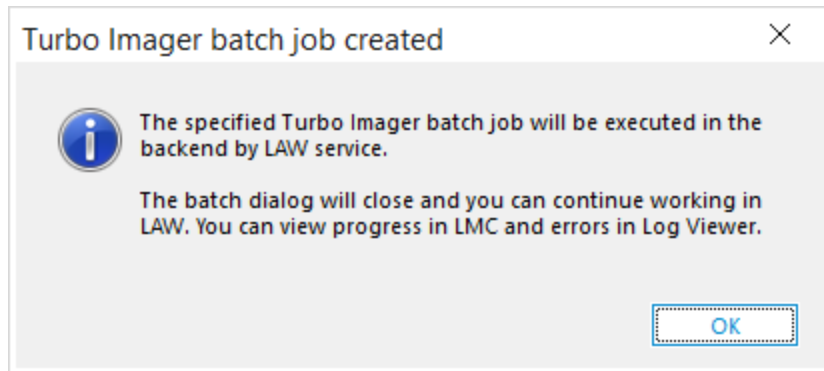
Once your Turbo Imager job has been scheduled, you can continue working in LAW. Agents will pick up and perform conversion in the background. The number of agents that can process a Turbo Imager job is based on the number of licenses, CPU cores, and the MaxNearNativeImagingAgents case property.

You can monitor progress of a Turbo Imager job using the LAW Management Console. You can also cancel a Turbo Imaging job in the LMC. See [Using the LMC](#) for more details.

You can review any errors that may have occurred for your Turbo Imager job using the Log Viewer. See Reviewing Errors for more details. Turbo Imager Logs appear in the right-most tab of the Log Viewer. If Turbo Imager was unable to create a TIFF or PDF image, a placeholder image is generated instead.

Once your Turbo Imager job is complete, your images will be available in the **$Image Archive** folder underneath the case folder.

💡 TIF files processed with Turbo Imager cannot be larger than 4GB.

📝 Turbo Imager will use a maximum of 10 agents. This will be limited to less based on the number of available cores in your environment and/or the number of licenses. If you have more than 10 licenses you will be able to run multiple Turbo Imager jobs in different cases at the same time.

Supported File Types

The following table lists the file types supported by Turbo Imager.

📝 Turbo Imager will only print visible content for Excel files. It is recommended that Excel files be imaged natively.

File Extension	Type of File
.pdf	Adobe Acrobat/Reader
.bmp	Bitmap Image
.emf	Enhanced MetaFile
.gif	Graphics Interchange Format
.ico	Icon
.jbig2	Joint Bi-level Image Group 2
.jpeg, .jpg	Joint Photographic Experts Group Format
.jp2, .jpc, .j2k, .j2c	JPEG 2000
.pcx	ZSoft Picture Exchange Format
.png	Portable Graphics Format
.tif	Tagged Image Format
.wmf	Windows Metafile
.xls?, .xlt?	Microsoft Excel
.ods	Apache OpenOffice Calc
.ppt?, .pps?, .pot?	Microsoft PowerPoint
.doc?, .dot?	Microsoft Word
.rtf	Microsoft Rich Text Format
.txt	Text File
.htm?	Hypertext Markup Language
.mht?	MIME HTML

File Extension	Type of File
.msg, .eml?	Microsoft Outlook
.csv	Comma Separated Value
.tsv	Tab Separated Value
.log	log file
.vsx, .vdx, .vtx, .vs?x, .vs?m, .vdw, .vsd, .vss	Microsoft Visio
.vst	Visual Studio Technology
.dwg	binary drawing
.dxf	Autodesk Drawing Exchange Format
.dwf	Autdesk Design Web Format
.svg	Scalable Vector Graphic

Turbo Imager Options

From the Batch Processing dialog, select **Turbo Imager Options** from the **Options** menu to see the **Turbo Imager Options** dialog.
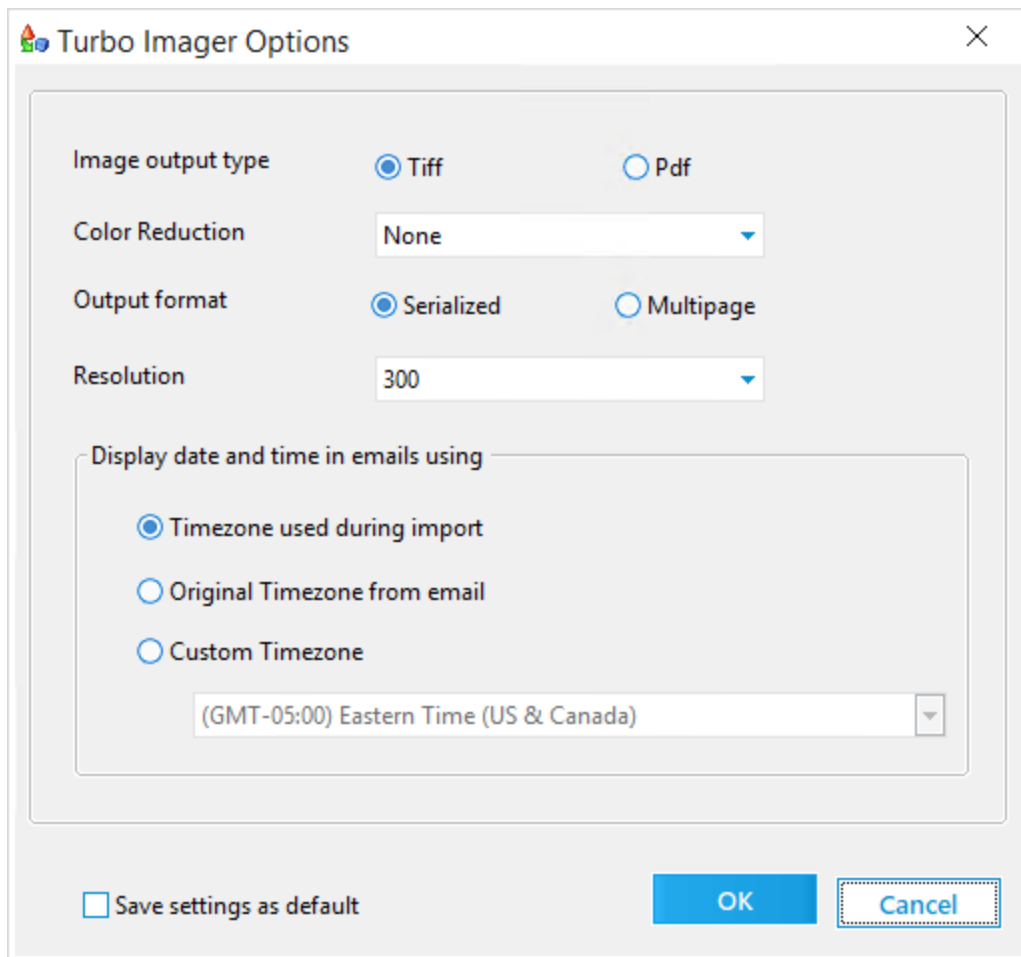
- **Image output type.** You can select either **Tiff** or **Pdf** as your output type.

- **Color Reduction.** Select **None** if you do not want to do any color reduction, or select **Reduce to black & white** to save the image as black and white only.

- **Output format.** Turbo Imager can produce output **Tiff** images in either **Serialized** (single-page) or **Multipage** format. For **Pdf** conversion, Turbo Imager only produces PDF files in the **Multipage** format. When **Multipage** format is selected, each document will have its own TIFF or PDF file containing all the pages of the document in the single TIFF or PDF file. LAW stores the output TIFF and PDF files in the <case root>\$Image Archive folder.

- **Resolution.** For **Tiff Image output type** you can select **300**, **400**, **500**, or **600** DPI resolution.

- **Display date and time in emails using.** This option is only for email files, and is specific to an imaging batch. This option allows you to choose the time zone to use when imaging email files. You can select **Timezone used during import**, **Original Timezone from email**, or **Custom Timezone**. If you select **Custom Timezone** you must pick the timezone to use in the dropdown. The ability to customize the timezone is an exclusive feature available only for Turbo Imager jobs.

Color images will use LZW compression and Black & White images will use CCITTGroup 4 compression.

Before closing the **Turbo Imager Options** dialog you can click the **Save settings as default** checkbox to save the selected settings for future Turbo Imager batches.

Updating Page Data

There are some situations when Page level image information is missing:

- Ingesting via a load file that doesn't have generic image information

- Manipulating images in your case via operations like splitting or merging.

The Update Page Data batch process populates the PageColor, PageSize, PageWidth, and PageHeight fields for any images in the selected record set that are missing this information. Values held in the PageSource field are locked when images are acquired and are not affected by this process.

⊟ **To update page data**

1. From the main form on the **Tools** menu, click **Batch Process**. The **Batch Processing** tool opens.

2. Select the documents to update. For more information on selecting documents, see Selecting Documents for Processing.

3. Select **Update Page Data**.

4. Optionally, select **Enable Distributed Batch Processing** and configure the session as needed. For more information on using distributed batch processing see Distributed Batch Processing.

5. Click **Begin**.

Distributed Batch Processing

Distributed processing is available for those batch types that do not require sequential execution. You can run distributed batch processes on these kinds of jobs:

- Image Cleanup
- Endorse

- OCR
- Scan for Suspect Footers
- TIFF Conversion
- Turbo Imager
- Update Page Data

For information on running these and other kinds of batch processes in a non-distributed manner, see: [Batch Processing](#).

💡 When performing distributed processes, it is best practice to have all machines participating in the distributed processes running the same version of CloudNine™ LAW. Running distributed processes on machines with different versions of LAW may cause unexpected results.

⊟ To start a distributed batch process

1. On the **Tools** menu click **Batch Process**. The **Batch Processing** dialog box opens.

💡 You can also run a query that will send results directly to a batch process. For more information see [Creating Queries](#).

2. In the **Batch Processing** dialog box select documents to be processed.

3. Choose one or more batch type that is supported for distributed processing.

4. In the **Sharing** section of the **Batch Processing** dialog, select **Enable Distributed Batch Processing**.

5. Type a name for the batch over the default of **(Unassigned)**. The batch name is visible to other workstations when they are prompted to join a distributed job. The batch name is also visible in the LAW Management Console (LMC).

6. Click **Edit** to modify the invitation type. The **Create/Modify Invitation Type** dialog box opens.

The invitation type determines how the job is handled by other stations when utilizing the LMC.

7. Select an invitation type.

    -   **Closed.** (Default) None of the LMC instances will be able to auto-join LAW to the shared batch. LAW workstations can still be joined to the job manually.

    -   **Open.** All LMC instances automatically join LAW to the shared batch.

    -   **Restricted.** Only selected LMC instances will automatically join the process.

    If you choose **Restricted**, select computers that can participate in the batch process from among available computers in the **Clients** area of the dialog box.

8. In the **Limit no. of stations for the job** field, enter the maximum number of work stations that can process data for the batch process job at any given time.

The **Limit no. of stations for the job** field defaults to **0**. When the **Limit no. of stations for the job** field is set to **0**, all available work stations will process data for the job.

9. Configure a scheduling restriction as needed. This option prevents the job from starting until after the date and time that you specify.

10. Click **Accept**.

    After the shared batch is initialized on a machine, the job appears below the **Jobs** node in the LMC, and other LAW workstations can join the job.

11. Click **Begin** to start processing.

□ **To join a distributed batch**

1. After a distributed batch is started on a computer, open the case on a second computer.

2. On the **Tools** menu click **Batch Process**.

    The **Running Batches** dialog appears. All active batches created in this case are listed. The batch may also be started by clicking View in the Batch Processing dialog in the Sharing section. This will launch the Running Batches dialog as well and allow users to choose a batch to join.
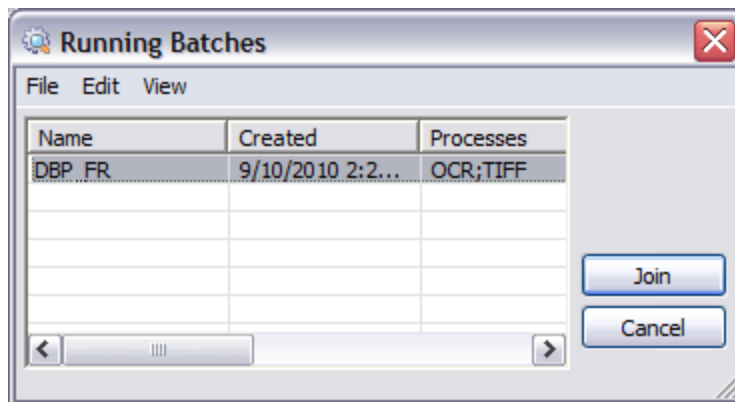
    ☑ If the **Running Batches** dialog does not immediately appear, click the **Refresh** button in the **Sharing** section of the **Batch Processing** dialog box. If a batch becomes available, click the **View** button to view the running batch.

3. Select a batch and then click **Join**.

    LAW opens the next unprocessed document in the batch for processing using the same settings that were used on the computer that started the batch process.

    When the batch completes it is removed from the Running Batches list.

If you cancel a batch process running on one computer, the batch will not be canceled on other stations.

To join a distributed batch using LAW

You can join a computer to a distributed batch process from within CloudNine™ LAW.

1. Start CloudNine™ LAW.

2. Opening the case that the distributed process is running on.

3. On the **Tools** menu, click **Batch Process**. The **Running Batches** dialog box appears.
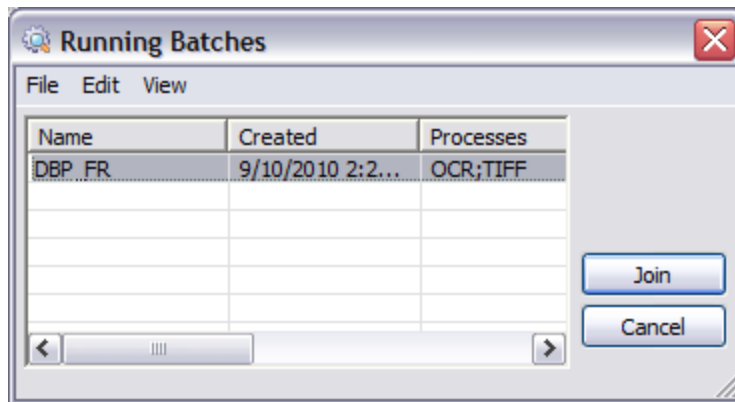
4. Select a batch and then click **Join**.

To delete a shared batch

1. Start CloudNine™ LAW.

2. Opening the case that the distributed process is running on.

3. On the **Tools** menu, click **Batch Process**. The **Running Batches** dialog box appears.
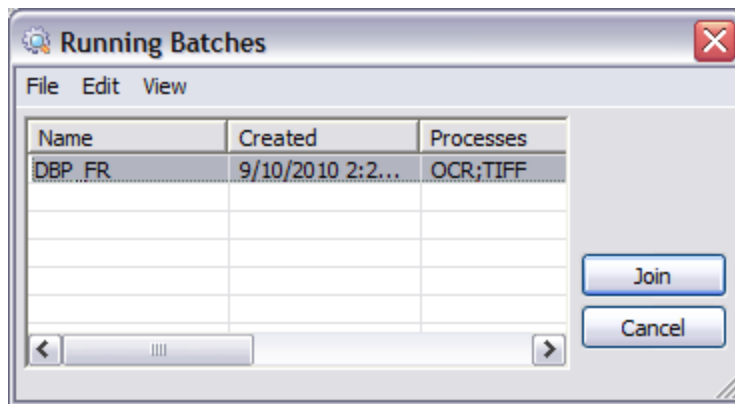
4. Select the batch in the **Running Batches** dialog box.

5. On the **Edit** menu click **Delete**.

   The shared batch will be deleted from the list.

Determining the computer that ran a batch process

You can review individual documents to determine which workstation executed the batch process.

1. From the main form in CloudNine™ LAW, on the **Index** menu, click **Modify Fields**.

2. Scroll to **BatchStation**.

3. Select **Visible**.

4. Click **Save As**, name the profile, and then click **Accept**.

5. Click **Close**.

6. In the main form in CloudNine™ LAW, select a document from the folder list.

7. Scroll to the **BatchStation** field.

   The name of the computer that performed the batch process is listed.

OCR

Optical character recognition (OCR) refers to the process of converting the printed text that can be found on a physical page or image file to machine-readable text. The text extracted from documents can then be indexed and queried.

The OCR batch process performs OCR on documents that are flagged as ready for OCR. The first step in performing OCR is to set the OCR flag status to ready for OCR.

OCR Overview

Take into account the following considerations before performing OCR on documents:

- OCR does not offer perfect recognition of text. Accuracy can be reduced by many conditions, including:
  - Text appears skewed or uneven on the page.
  - Pages are dusty, folded, or torn.
  - Letters are faded, blurry or otherwise distorted.
  - Non-standard typefaces are used in documents.

- OCR is a CPU-intensive activity and can require significant time and computing resources to carry out large jobs. OCR processing speed is typically between 1 to 2 pages per second. However the actual processing rate depends on many factors, including:
  - Processing power and memory of computer performing OCR.
  - The number of computers involved in OCR processing. You can configure OCR processing to be distributed among multiple computers. For more information see [Distributed Batch Processing](#).
  - The amount of text and other information on pages.
  - The quality of the original documents. Before you perform OCR on a batch of documents, consider applying filters to deskew, remove dust and lines, and clean up images in other ways.

> With the assistance of CloudNine Technical Support, you can use a run command to make searchable text obtained by the TIFF and/or OCR processes within LAW available in CloudNine™ Explore. Please contact CloudNine Technical Support for instructions and assistance with this process.

Determining if a document contains text

The Text display in the main interface will indicate the presence of text for the current document, which may be OCR text, text extracted during an import using ED Loader or Turbo Import, text imported with load file records or raw images, text pulled during a TIFF conversion, or text from the text file linked to the current document.

To choose the type of text to display

- In the **Text** display, right-click and then select a source type from the context menu.

   When an image is selected, the **Text** button has a small "page" icon on it if there is text for that image, with the actual text displayed below the button.

📝 WordPerfect and HTML formats cannot be displayed in this viewer. The Text display is for viewing purposes only. If a user needs to edit the OCR, simply double-click the text to launch the text in the editor registered for that file format. If there are multiple OCR formats for the same image, users can right-click on the OCR text and specifically select the format to open from a pop-up menu.

Determining OCR status

CloudNine™ LAW displays a green flag, yellow flag, or red flag, or no icon at all to the selected record, depending on the OCR status for that image. You can flag all, none, or selected pages only for the OCR process. (See the Flagging Documents/Pages for OCR topic for more details.) The OCR indicator gives users a quick visual representation of the OCR status for the current document. One of the following icons will be displayed on the **Text** button when a document is selected:
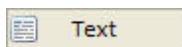
[📄 Text] - Page icon, the OCR has been completed for the document (or text has been extracted using ED Loader or Turbo Import)
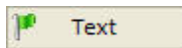
[🚩 Text] - Green flag, the document has one or more pages flagged for OCR
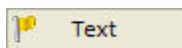
[🚩 Text] - Yellow flag, OCR process was cancelled while processing a document
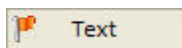
[🚩 Text] - Red flag, error occurred during OCR

If no icon is displayed, no pages for the current document have been flagged for OCR.

Performing OCR on documents containing redactions

When a redaction has been applied and saved to a document in CloudNine™ LAW, the HasRedactions field is set to Y for the document, and the IsRedacted field is set to Y after merging the annotation for each page in the document containing a redaction. When you perform OCR on a document containing redacted text, the OCR process automatically omits the redacted text from the extracted text. Redactions do not have

to be manually merged with a document in order for the OCR process to omit redacted text.

The document-level HasRedaction field has 3 values:

- Y = Has a redaction (merged or unmerged)
- N = Does not have a redaction
- " "(empty or blank) = Unknown (Documents will default to the blank value when added or when opening an existing case.)

The page-level field IsRedacted is only updated when a redaction is merged.

Redacted text can also be omitted from documents during export without having to manually merge redactions with a document, by selecting the Enforce protection of redacted documents check box on the Advanced tab in the Export Utility dialog box. For more information, see Advanced Tab.

For more information about the HasRedaction and IsRedacted fields, see Field Descriptions - LAW.

For more information about redactions and other annotations, see Annotating Documents and Pages.

Flagging Documents/Pages for OCR

OCR functionality in LAW is controlled by values that are assigned to two special OCR system fields. This topic describes these fields, the values each can assume, and how to view or re-assign values to these fields in order to review and control OCR operations. LAW also has a third OCR system field for tracking the document-level OCR accuracy for each case document.

⊟ OCR fields

LAW maintains two fields in the database to track the status of pages with regard to OCR: OcrStatus and OcrFlag, and one field for tracking OCR accuracy: OcrAccuracy. These fields and their possible values are described in the following table:

Field and description	Possible values
OcrAccurancy	example: 10, 99, 100

Field and description	Possible values
The percentage of accuracy for the file's document-level OCR. This field will be blank for a document when the OCR was transferred from CloudNine™ Explore.	
OcrFlag A page-level field that tracks the OCR status of each page of a document.	**Y** = Page is flagged as ready for OCR **N** = Page is not flagged (will be skipped) **C** = Page is complete **E** = Error occurred OCRing page
OcrStatus A document-level field that indicates the OCR status of a document.	**Y** = One or more pages are flagged as ready for OCR **N** = No pages are flagged **C** = OCR is complete on the document **I** = OCR was cancelled **E** = Error occurred during the OCR process **P** = Processing (special flag used by LAW during the OCR process)

In many cases, LAW assigns values to OCR fields automatically. For example, if you use ED Loader to import electronic discovery with text extraction enabled, records with extracted text should have OcrStatus of N and records with no text extraction should have OcrStatus of Y. Because you may still want to access the text of a document whose text extraction operation failed, LAW automatically assigns a Y to the OcrStatus field.

LAW uses the processing flag (P) to mark a document in the process of being OCR'd. This allows multiple workstations to OCR the same set of documents simultaneously without having to worry about overlapping OCR. Using multiple stations to share the OCR process provides an extra layer of redundancy. If one machine locks up or crashes during the OCR process, one or more other stations can continue to OCR that set of documents.

□ To flag items manually

1. Select the pages to be flagged.

2. Do one of the following:

   • On the **Page** menu, click **Flag for OCR**.

   Or

- Right-click on a page thumbnail and then click **Flag for OCR**.
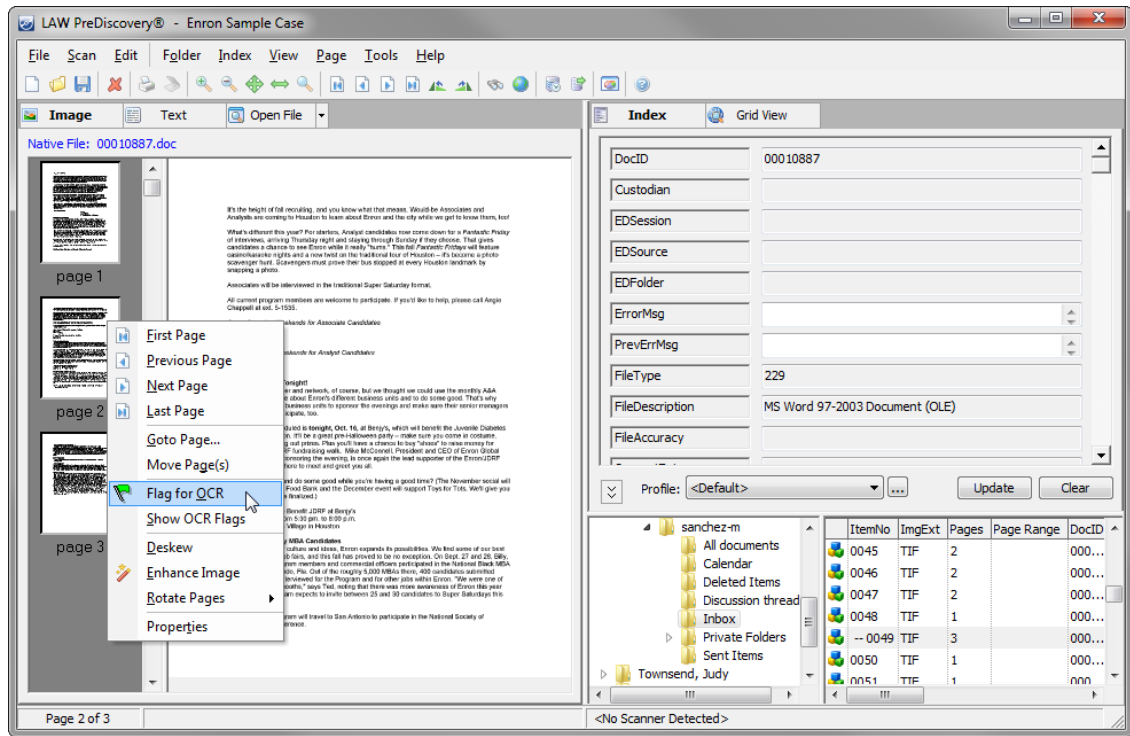
To flag multiple items

Resetting the OCR flags for multiple documents can be done in either of the following ways, depending on whether the documents are currently viewed in a folder or from a query.

If all of the documents are in the same folder	If the documents span multiple folders and can be logically grouped in a query
1. Select the documents in the document list. 2. On the **Edit** menu, select **Reset OCR Flags** and then click **ON** or **OFF**.	• In the grid display, on the **Tools** menu, click **Reset OCR Flags** and then click **ON** or **OFF**.

If you use the single-document OCR process, all pages are included regardless of the OcrFlag field value.

To set OCR flags at scan time

- On the **Scan** menu, select **Scan Options**, and then click **OCR All New Pages**.

Or

- In the status bar at the bottom of the main form, toggle the setting. Double-click **OCR(Y)** or **OCR(N)**.

Letter - 8.5 x 11 in | 300 dpi | Duplex | OCR(Y) | Rotation(90) | Drop Blanks(N) | Single-Page(N)

⊟ **To display flagged pages**

- On the **Page** menu, select **Show OCR Flags**.

  In the thumbnail display, all pages flagged for OCR are highlighted. If the thumbnail display is not active when this function is selected, it automatically becomes active so that the thumbnails are shown. This function only highlights pages that are flagged for OCR. It will not highlight pages that have already been completed.

OCR Options

You can specify various optical character recognition (OCR) options by doing one of the following:

- From the main window, on the **Tools** menu, click **Options** and then click the **OCR** tab.

Or

- From the Batch Processing utility, on the **Options** menu, click **OCR Settings**.

⊟ **OCR Engine**

CloudNine™ LAW supports two OCR engines:

- ExperVision OpenRTK
  - Is included with the LAW installer.
  - Is limited to one instance per machine.
- ABBYY FineReader
  - Installed separately from LAW and can be obtained by CloudNine when purchasing the ABBYY OCR license.
  - Supports Chinese, Japanese, and Korean (CJK) languages.
  - Can create PDF/A files.
  - Able to run multiple instances on a single PC, one instance per CPU core.
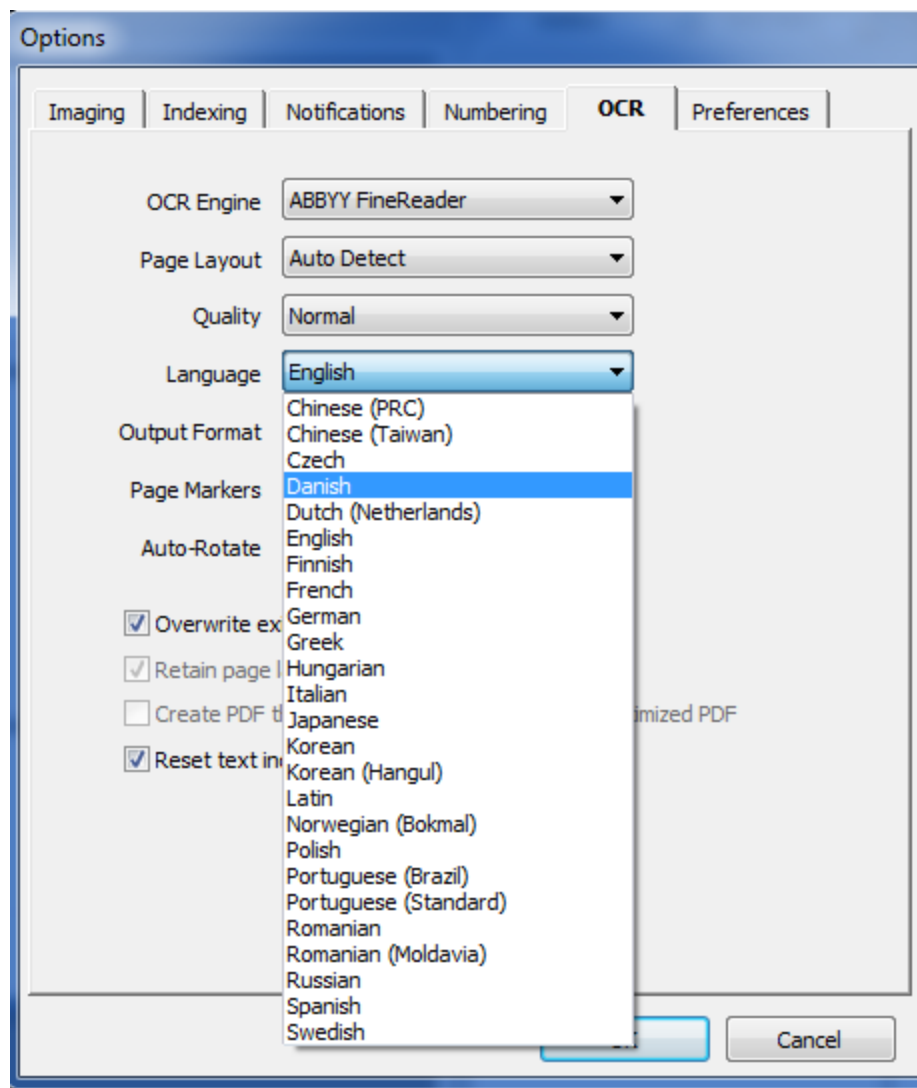
Version 6.18+

⚠ In version 6.18+, the ability to endorse in multiple colors was introduced. Endorsing in Silver, White, Lime, Aqua, Gray or Yellow colored fonts with a white background then OCRing with Expervision results with the endorsed text with the respective colors not extracted.
ABBYY is able to OCR all of these colors except for White and Yellow.

Both engines support the creation of searchable PDF files and are able to produce < image >.ocr files, which are used in the Storm and IPRO applications for highlighting search hits on images.

⊟ **Page Layout**

These options improve OCR accuracy by specifying the layout of the pages.

- **Auto Detect** - Automatically determines the layout of the page. This is the default option.
- **Single Column** - Specifies that one column of text exists on a page.

📝 If email thread analysis will be performed on the case, the Page Layout setting must be Single Column. For existing cases with Auto Detect already selected, change the Page Layout setting to Single Column, re-run the OCR process, and then re-run the Near-Duplicate & Email Thread Analysis to accurately capture the case's email thread information.

📝 For the unsupported Xerox TextBridge engine, two special page layouts are available that can be used to OCR pages that are broken into even quadrants: "Quadrants, left to right" and "Quadrants, top to bottom." Both settings will OCR the page as if it were 4 separate pages condensed onto a single page. The left to right setting will OCR the 4 quadrants in the following order: upper left, lower left, upper right, lower right. The top to bottom setting will process in the following order: upper left, upper right, lower left, lower right.

▣ Quality

Specifies the type of printing technology used to create the original documents and the print quality of the scanned pages.

- **Normal** - Use this for pages printed with inkjet printers, laser printers, or offset lithography. This is the default.
- **Normal (Degraded)** - The same as Normal, except that the print quality is known to contain some distortion or blemishes due to poorly printed originals, photocopying, heavy use, or aging.
- **Dot Matrix** - Use this for pages printed using dot matrix printers, which include many early printer models as well as many types of printed receipts, such as from cash registers and ATM machines.
- **Dot Matrix (Degraded)** - The same as Dot Matrix, except that except that the print quality is known to contain some distortion or blemishes due to poorly printed originals, photocopying, heavy use, or aging.

Note also the following when selecting a quality option:

- When a setting other than **Normal** is selected, OCR engine performance may be reduced.
- ABBYY FineReader engine supports a quality setting called Magnetic Ink Character Recognition (MICR). This is the technology used for the routing numbers on personal checks and for other documents designed to be machine readable.
- The Auto Detect setting with Xerox TextBridge OCR accommodates varying quality levels among originals.

☐ **Language**

The Language setting is used to specify the language dictionary the engine should use during the OCR process. If the correct language is not selected prior to the OCR process, the characters may not be recognized properly.

If ABBYY FineReader is the selected engine, English will automatically be used as a second language if a non-English language is selected. For example, if Greek is selected and both Greek and English exist in the source image, ABBYY FineReader differentiates the languages and performs recognition for both. However, if a document contains Greek, and English is selected as the language, Greek characters will not be interpreted or rendered correctly in the text. This only pertains to documents containing Unicode characters, such as Chinese, Japanese, Korean, Greek, or Russian. Languages that share many common characters in their alphabet, for example, English, Spanish, French, German, Dutch, and Portuguese will be interpreted correctly when existing in the same document if any of these languages are selected.

📝 The current ABBYY installer is available for download at
http://www.imagecap.com/installs/ABBYYEngine11.rev1.exe.

Languages added to LAW will be available for selection from the Language list under the OCR settings dialogue. LAW will be able to recognize the OCR language during the OCR process and provide the ability to accurately search for the language characters in the OCR text.

For the unsupported Xerox TextBridge engine, the System Default setting uses whichever language is specified by Windows as the default.

☐ **Output Format**

This feature is used to select the output format produced by the selected OCR engine. The available output formats and licensing requirements are in the following table:

Output format	License required
Smart Text Document	OCR (ExperVision OpenRTK)
Standard Text Document	OCR (ExperVision OpenRTK) -OR- OCR (ABBYY FineReader)
HTML	OCR (ExperVision OpenRTK)

Output format	License required
	-OR- OCR (ABBYY FineReader)
Word for Windows	OCR (ExperVision OpenRTK) -OR- OCR (ABBYY FineReader)
Word for Windows (2007)	OCR (ABBYY FineReader)
WordPerfect	OCR (ExperVision OpenRTK)
Adobe PDF (Normal)	OCR (ExperVision OpenRTK) + OCR (ExperVision PDF add-on) -OR- OCR (ABBYY FineReader
Adobe PDF (w/ Hidden Text)	OCR (ExperVision OpenRTK) + OCR (ExperVision PDF add-on) -OR- OCR (ABBYY FineReader)
Adobe PDF/A (Normal)	OCR (ABBYY FineReader)
Adobe PDF/A (w/ Hidden Text)	OCR (ABBYY FineReader)

⚠ If planning to export OCR results for searching functionality, using one of the text settings is recommended as most export formats do not support non-text OCR.

The Smart Text and Standard Text are essentially the same, both producing standard ANSI text output. See Creating Searchable PDFs for more information when using the Adobe output options to create searchable PDF files.

⊟ **Page Markers**

This option allows LAW to "stamp" the resulting OCR with a Bates number or page value using information retrieved directly from the LAW database. This feature is useful for providing 100% accurate Bates values in the OCR text to aid searching in certain applications.

Page Markers can be customized via the `law50.ini` file located in the C:\Program Files (x86)\Law50 directory. By placing the PageStampText= section under the [OCR] key, the text stamped by the Page Marker feature can be customized. Currently supported fields are:

&[Page] - Current page

&[Pages] - Page count

&[Page ID] - Bates number

&[BegDoc#] - Beginning document number

<CR> - Carriage return (new line)

Example

The following page marker: `PageStampText=###&[Page]|||Page &[Page ID]^^^`

Results in a stamp of: **###1|||Page ABC0001^^^**

This value increments for each OCR page stamped.

⊟ Auto-Rotate

This option specifies if the OCR engine should automatically rotate images for the OCR output. The three options are:

- **Always ON**
- **Always OFF**
- **Binary Images Only -** Auto-rotates monochrome (black and white) images. This option can help to prevent color and grayscale images that have little or no text from being improperly rotated. This setting is available with the ExperVision engine.

⊟ Overwrite existing files

Use this setting to prevent or allow the replacing of existing OCR text. This feature is useful if some documents already contain usable OCR text files and the only the files that do not contain an existing text file should be included for processing. If an existing text file is detected for the current document, the OCR engine will skip the document and move onto the next, thus saving processing time. It may also be necessary at times to replace all existing text files; checking this option will replace the OCR for each document.

⊟ Retain page layout

This setting determines whether the layout of the page (columns, etc.) will be preserved in the OCR results (non-text output formats only).

⊟ Create PDF thumbnails

The OCR engines automatically create thumbnails during the Searchable PDF creation process. Use this setting to set the "visible" property of the thumbnails when opening

the PDF file in Adobe Acrobat. If this setting is checked, the thumbnails will be viewable automatically in Adobe Acrobat; otherwise, the thumbnails will be hidden under the Pages tab in Adobe Acrobat.

⊟ **Reset text index status**

Clearing the Reset text index status check box will prevent LAW from re-flagging the document for indexing after the OCR process is performed. This means the OCR text for affected records will not be searchable in CloudNine™ LAW. See the Full Text Indexing topic for more information.

⊟ **Auto deskew**

Enable this option to force the OCR engine to deskew the image before OCRing the document. This can often lead to more accurate OCR (depending on the type of document). However, if the document contains graphics or angled vertical lines, the deskew feature may align to these graphics and cause unexpected results. Disabling this option will OCR the document with its current orientation. This feature is only available if the ExperVision OCR engine is selected.

⊟ **Retain pictures**

This setting determines whether pictures in the original will be preserved in the OCR results. This setting does not affect the results if the output format is set to text. Pictures are not retained in text files.

⊟ **Create web optimized PDF**

This setting only applies to the ExperVision OpenRTK OCR engine and the Adobe PDF (Normal) and Adobe PDF (w/ Hidden Text) output format options. When the Create web optimized PDF check box is selected, the output PDF files will have the Fast Web View setting enabled in the PDF files. The Fast Web View setting provides page-at-a-time downloading from web servers, instead of downloading the entire PDF from web servers.

Performing OCR

The OCR process can be performed at the document level, page level, or by region.

Before performing OCR on any documents in CloudNine™ LAW, verify that the OCR Options have been set to ensure the proper output format. For example, if planning to export documents into a retrieval application that uses OCR text for searching, select standard or smart text as the output format.

OCR should be performed after document boundaries are fixed. For any non-text format, LAW may not be able to merge or split the OCR files if document boundaries change after the OCR has been created. If the OCR files cannot be modified, the OCR process will need to be run again on the document(s) in the modified range.

Single document OCR

To OCR a single document or pages of a single document

1. Open the document to OCR.

2. Press CTRL+O.

3. If the **File Already Exists** dialog box opens, click **Yes** to rescan the file and overwrite previously extracted text, or press **No** to cancel the OCR operation.

To OCR only certain pages of a document

1. Select the pages to OCR in the thumbnails display.

2. Select a page.

3. On the **Tools** menu, click **OCR**, and then click **Document**.

4. If pages of the document have already been flagged for OCR, select **Page** and then click **Show OCR Flags**.

5. The flagged pages are selected.

   See Flagging Documents/Pages for OCR for more details.

6. On the **Tools** menu, click **OCR** and then click **Selected Pages**.

Multiple document OCR

To OCR multiple documents, run the OCR process from the Batch Processing utility. During batch processing, only documents and pages flagged for OCR will be included in the OCR results. For more information flagging documents for OCR, see Flagging Documents/Pages for OCR.

1. From the main window, on the **Tools** menu, click **Batch Processing**.

2. In the **Processes** area, select **OCR**.

3. On the **Options** menu, click **OCR Settings**.

4. Configure OCR options as needed. For more information on OCR settings see OCR Options.

5. Click **OK** and then click **Begin**.

⊟ **To OCR a page region**

Another available option is to OCR a specified region of an image. This feature is useful for coding information directly from a document to a field without having to retype it.

1. With a page open in the **Image** tab, press and hold the CTRL key.

2. Drag the mouse over the image to create a resizable rectangle.

3. Release the mouse.

4. Resize and move the rectangle selection tool as needed. To remove the highlight, press ESC or open a different document.
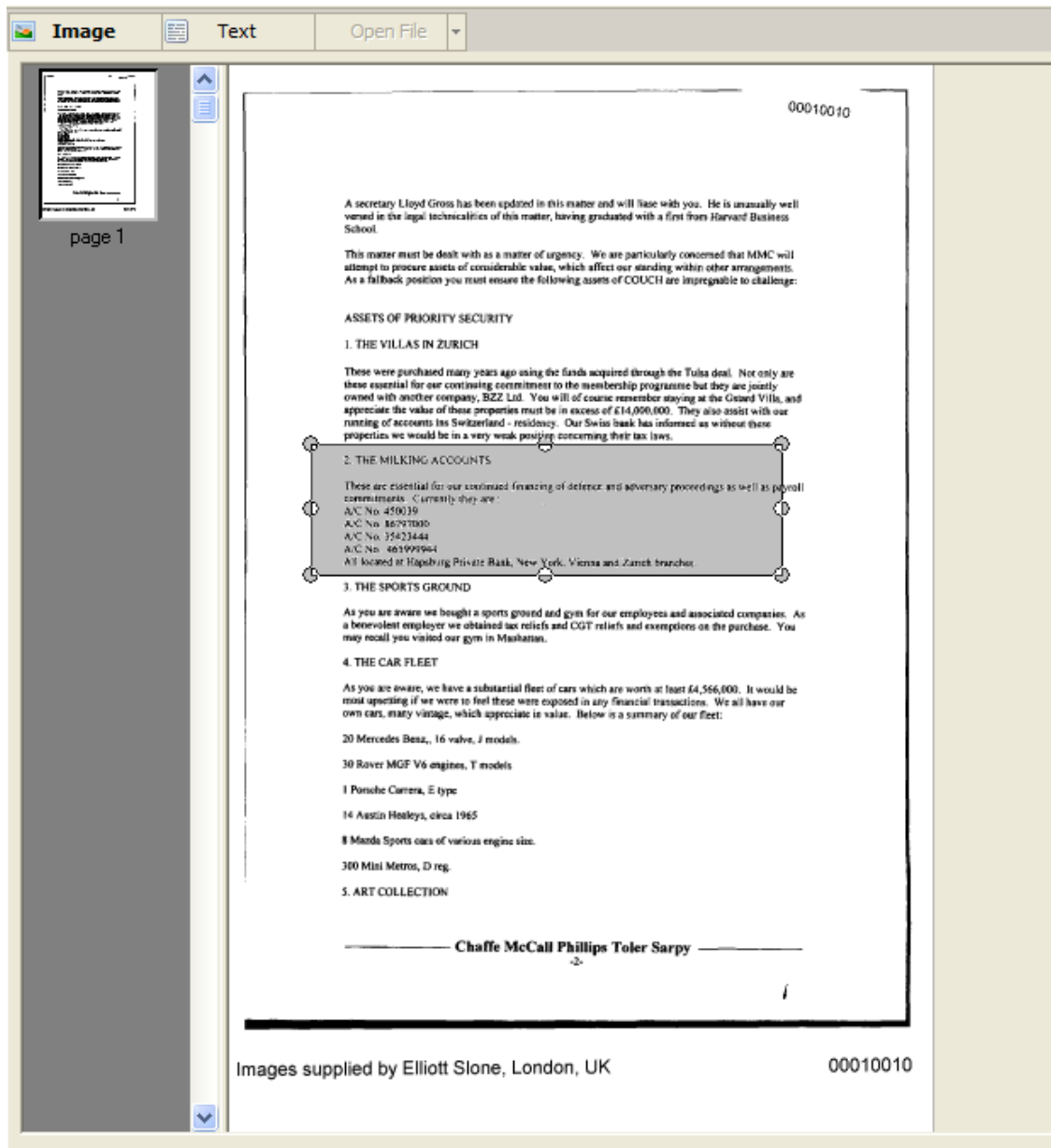
5. Right click the rectangle selection and then click **OCR Region**.
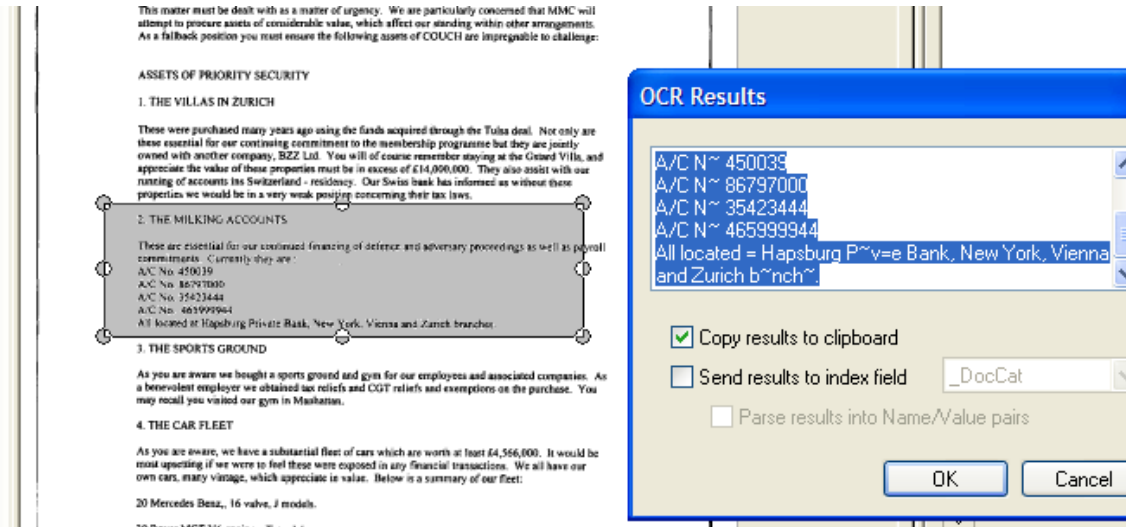
6. In the **OCR Results** dialog box, select options for working with the text:

- **Copy results to the clipboard** - Copies the text to the system clipboard. Use this option if you want to paste the text into a different program.

- **Send results to an index field** - Copies the text to an index field of your choosing.

- **Parse results into Name/Value pairs** - Extracts name/value pairs from the selected area.

7. Click **OK**.

⊟ **Where OCR files are stored**

During the OCR process, LAW generates and saves an OCR and OCR TXT file for each document OCR is created for. The LAW version a case is created in determines where the OCR and OCR TXT files are stored for a case, including OCR text files that are imported into a case.

- For cases created in LAW 6.8.x or earlier, the files are stored in the case's document directory.

  For example:

  If a case has the following directory for an Inbox folder: **C:\Cases\[case name] \[PST folder name]\[mailbox folder name]\Inbox**, when you perform OCR on the files in the Inbox folder, the OCR files will be stored in the same Inbox folder directory for the case.

- For cases created in LAW 6.9.x or later, the files are stored in the case's $OCR directory.

    For example:

    C:\Cases\[case name]\$Text\$OCR

📝 Cases created in LAW version 6.9.x and later support OCR files located in long folder paths (paths exceeding 256 characters).

Cases created in LAW version 6.8.x or earlier do not support OCR files located in long folder paths.

The naming convention used for the OCR files is the same naming convention used for native files without the "ntv" in the file names.

An example of a native file name is 00003335.ntv.pdf. An example of the files names for the OCR files generated for a document: 1132.ocr and 1132.txt. The OCR and OCR TXT files generated for a document have the same file name, but different file extensions.

Creating Searchable PDFs

You can create searchable PDF files in the same process as performing OCR. This feature requires one of the following license configurations:

- **OCR (ExperVision OpenRTK) + OCR ExperVision PDF** add-on
- **ABBYY FineReader** license for CloudNine™ LAW

⚠ Version 6.18+ allows color endorsements. Some lighter colored fonts will not appear in the searchable pdf (for example white, yellow, silver, aqua, and lime.

After the searchable PDF files are created, those records will have:

- An associated image file.
- A text file containing the OCR text of the document.
- An .OCR file that contains coordinates for on-image hit highlighting in Storm and IPRO.
- A PDF+ file. The PDF+ file is the searchable PDF.

⊟ **To configure OCR for searchable PDF**

Prior to creating the searchable PDF files, verify that the required settings are selected.

1. In the main window, on the **Tools** menu, click **Options** and then click the **OCR** tab.

2. In the **OCR Engine** list select either **ExperVision OpenRTK** or **ABBYY FineReader**.

3. Set the **Output Format to Adobe PDF (w/Hidden Text)** or **Adobe PDF/A (w/ Hidden Text)**. PDF/A is only available if the ABBYY FineReader engine is selected.

4. If necessary, select **Create PDF thumbnails**. Use this setting to set the visibility property of the thumbnails when opening the PDF file in Adobe Acrobat. If this setting is checked, the thumbnails will be viewable automatically in Adobe Acrobat; otherwise, the thumbnails will be hidden under the **Pages** tab in Adobe Acrobat.

5. Click **OK**.

⊟ **To export searchable PDF files**

1. On the **Tools** menu, click **Export Utility** and then click the **Formats/Documents** tab.

2. In the **Formats** list, select **PDF Conversion**.

3. Select **Multi-Page**.
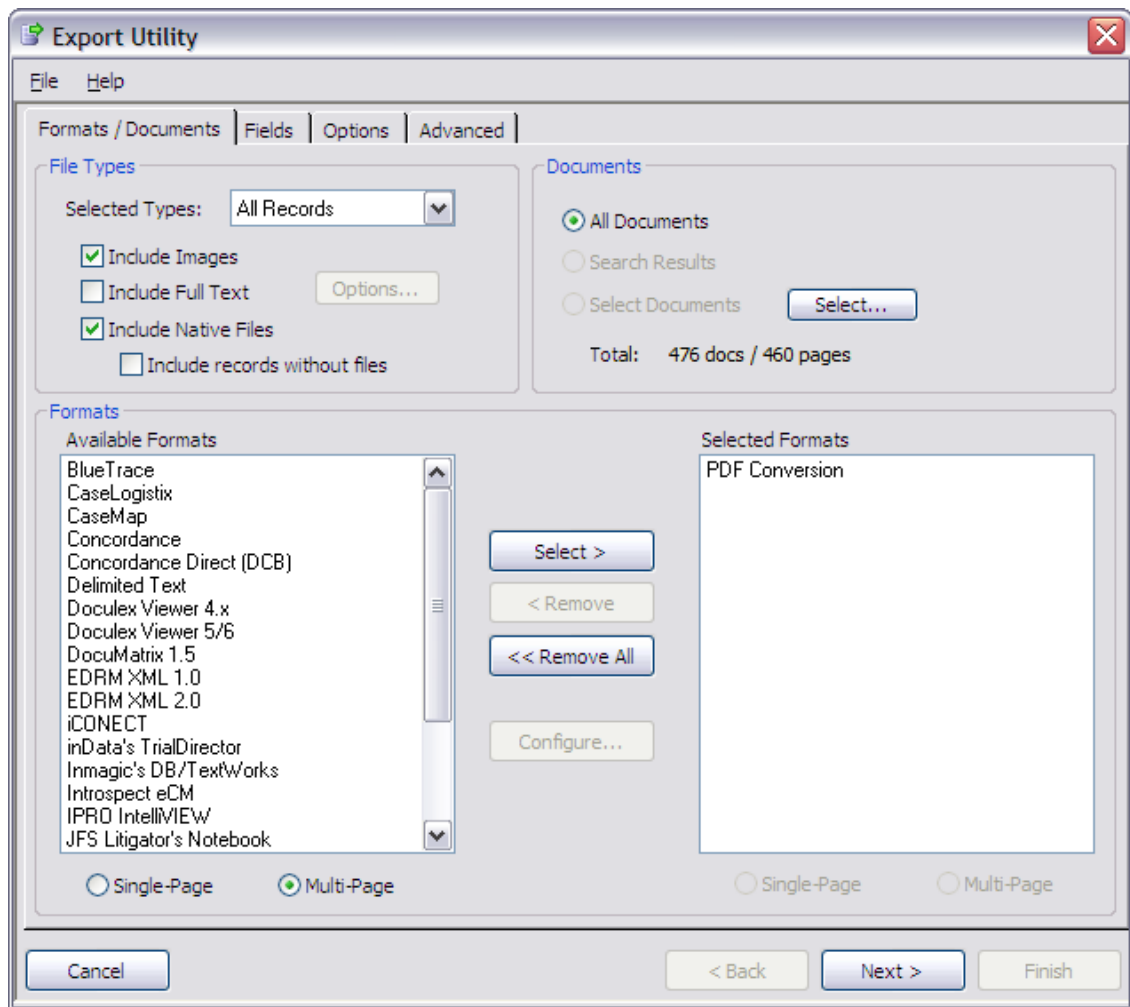
The single-page option creates single-page PDF files that are not searchable.
The "Include Full Text" option does not need to be selected.
Provided the previous instructions were followed and the Output Format on the
Options tab of the Export Utility is set to "PDF" (and not "PDF (Image Only)"), LAW
will export searchable PDF files.

4. Set the remaining export options according to the specifications for the project.
   See Export Utility Overview for additional information about the Export Utility.

For more information on PDF export options, see PDF Conversion.

Managing Distributed Processes

The LAW Management Console (LMC) is the utility you use to manage processing jobs that are distributed among multiple computers. You can enable distributed processing for ED Loader sessions as well as other kinds of batch processing jobs.

LMC Overview

The LAW Management Console (LMC) is a utility that you use to manage distributed processes for electronic discovery and for certain kinds of batch jobs. A distributed process pools the processing power of multiple computers to get large processing jobs done faster.

To start a distributed process you use ED Loader for distributed electronic discovery; you use the Batch Processing utility for batch processing. After starting a distributed process of either type, you use the LMC to manage participating computers and to monitor progress.

💡 When performing distributed processes, it is best practice to have all machines participating in the distributed processes running the same version of CloudNine™ LAW. Running distributed processes on machines with different versions of LAW may cause unexpected results.

📝 In this section of help topics, the term *client* represents a workstation that is running LMC.

LMC Capabilities

After a distributed process is started, you use the LMC to monitor and manage computers, processing jobs, and licenses. Specifically, you can use the LMC to perform the following tasks:

- **Running and managing jobs**
  - Start or end distributed processes.
  - Join computers to distributed processes.
  - Force unresponsive computers to leave jobs.

- **Monitoring**
  - Monitor overall progress of a job.
  - Detect whether a computer joined to a job is working normally or appears unresponsive.
  - Monitor jobs in queue or currently running.
  - View license keys in use by client computers involved in processing.

The LAW Management Console (LMC) does not show licenses are in use when OCR is being performed within CloudNine™ Explore. Licenses in use may be viewed in the LAW Profile Manager as an alternative.

- View connection state to SQL Server.

- **Logging**
  - Maintain logs for errors, messages, and debugging information.

Requirements

When planning to use the LMC, consider the following requirements:

- Each client that will participate must be running LAW and the LMC. LAW versions 5.3.14 and above include the LMC.
- The LMC runs with cases based on versions of SQL Server.
- Each client that will participate in a batch process must be able to connect to the same SQL Server instance that was used to create the case.

Starting the LMC

The steps required to start LAW Management Console (LMC) depend on whether LMC has been started before on a client, and if so, whether the LMC was configured to connect to a SQL Server instance. Independent of these factors, the steps to start the LMC also depend on whether LMC is currently running in the background and if you have already established a connection between LMC and SQL Server.

The LAW Management Console will use the SQL Server configured as the Management Database via the LAW Configuration Utility.

Starting LMC for the First Time

1. Use Windows Explorer to browse to the path that contains the LMC executable file. By default, file path is:

   C:\Program Files (x86)\Law50\Console

2. Double click **LAWConsole.exe**.

   The LAW Management Console screen appears.
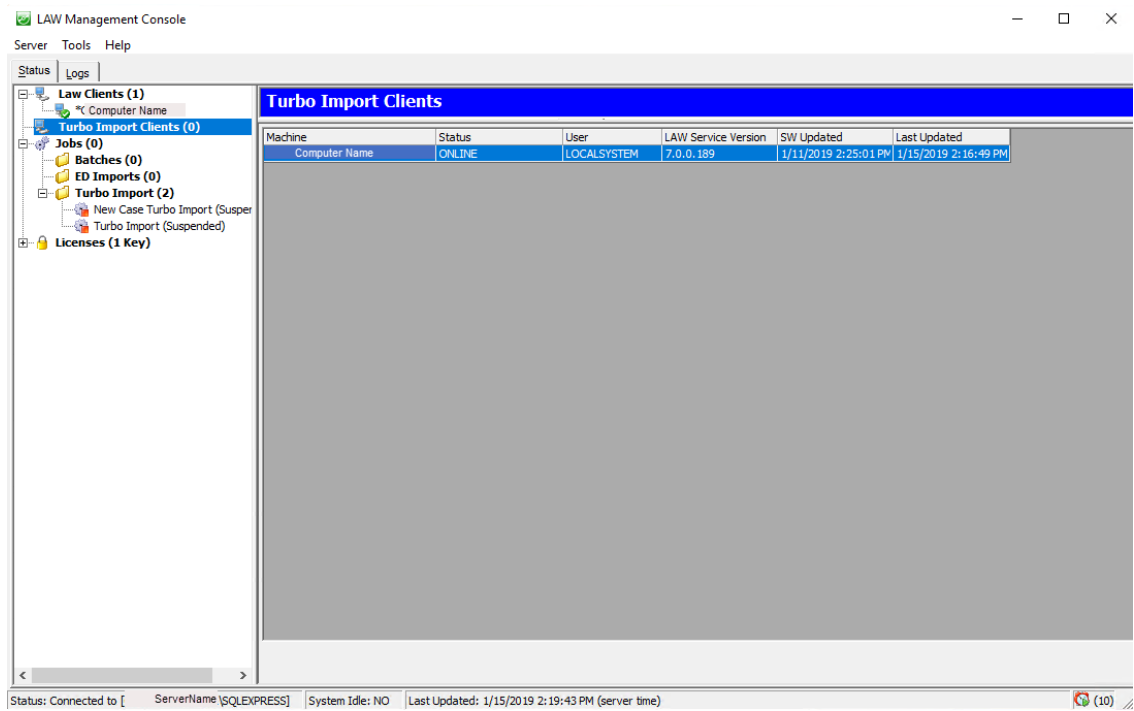
3. The LMC is configured through the LAW Configuration Utility. It will use the same SQL server that is configured as the Management Database.

To Open LMC

1. Mouse over the LMC icon located in the Windows notification area.

Windows 10/Windows Server
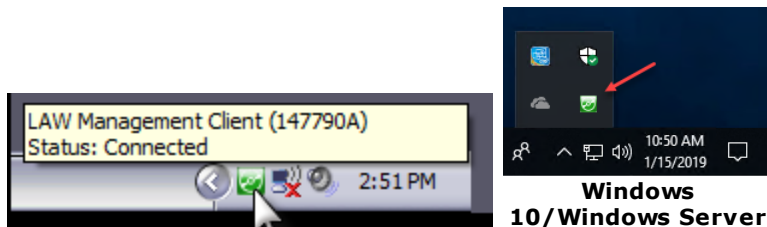
2. Click the LMC icon or right click the icon and then click Restore.

The LMC starts.

- If necessary, log on to an instance of SQL Server.
- If the LMC icon is not visible in the Windows notification area, see the previous section in this topic **To start the LMC for the first time**.

LMC in the Notification Area

You can use the LMC icon in the Windows notification area to restore the LMC, stop the LMC, or perform a quick check of its connection status to SQL Server.

1. Mouse over the LMC icon located in the Windows notification area.

Windows10/Windows Server
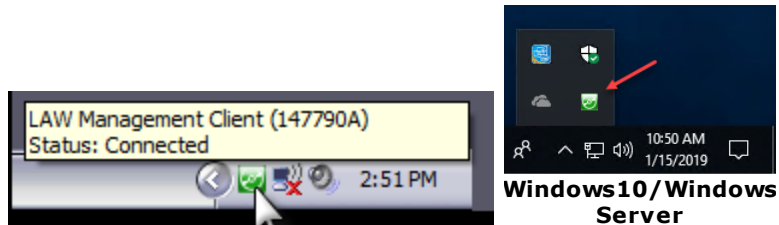
2. Perform the following tasks as needed:

Task	Steps
Restore the LMC.	• Click the LMC icon. Or • Right-click the LMC icon and then select **Restore**.
Stop the LMC.	• Right-click the LMC icon and then click **Quit**. Or • Press ALT+F4 while the LMC is in focus.
Check the connection status of the LMC to SQL Server.	• Mouse over the LMC icon to view the tool tip.

 To configure LMC to start with Windows

1. Start CloudNine™ LAW.

2. From the main window, on the **Tools** menu, click **Options**, and then click **Preferences**.

3. Select the **Start the Management Console on Windows Startup** check box.
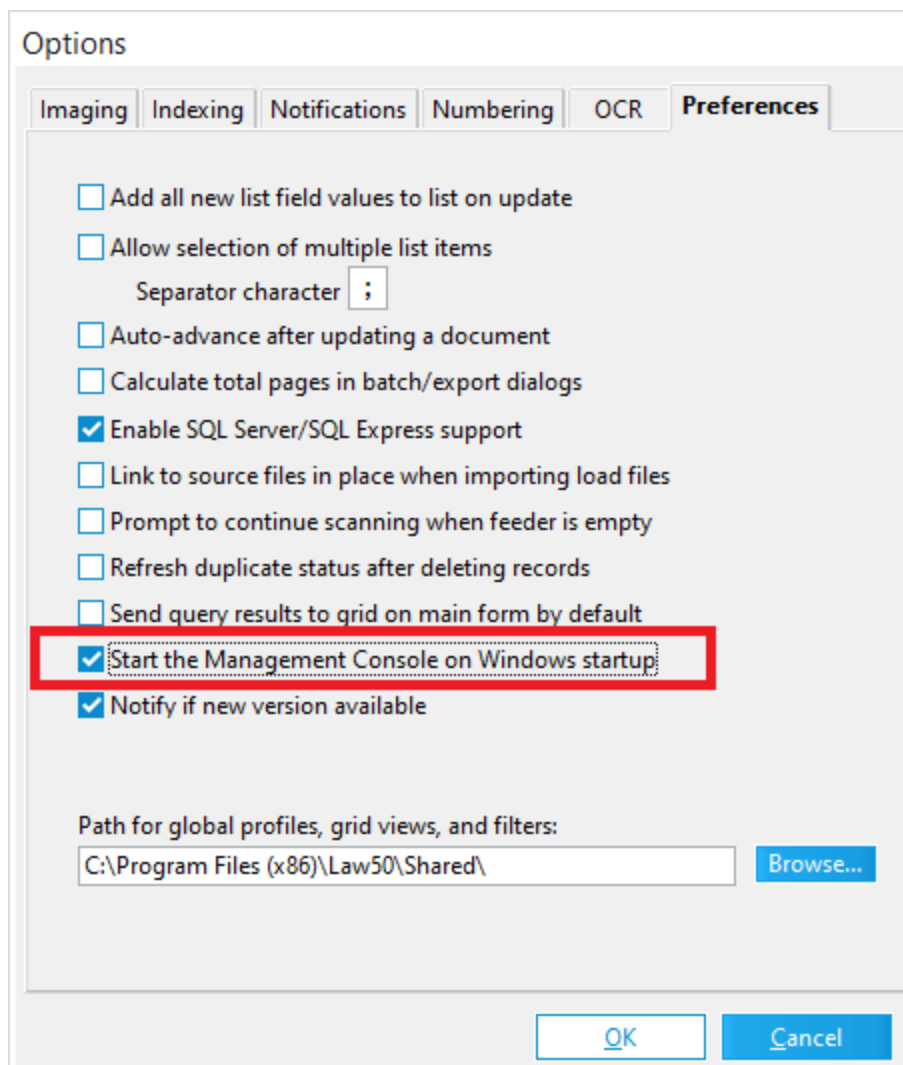
4. Click **OK**. Click **Yes** if you are prompted to start the LMC.

    The LMC starts. Every time you restart Windows, the LMC will also start automatically but run minimized. You can then restore the LMC by selecting its icon in the Windows notification area.

Using the LMC
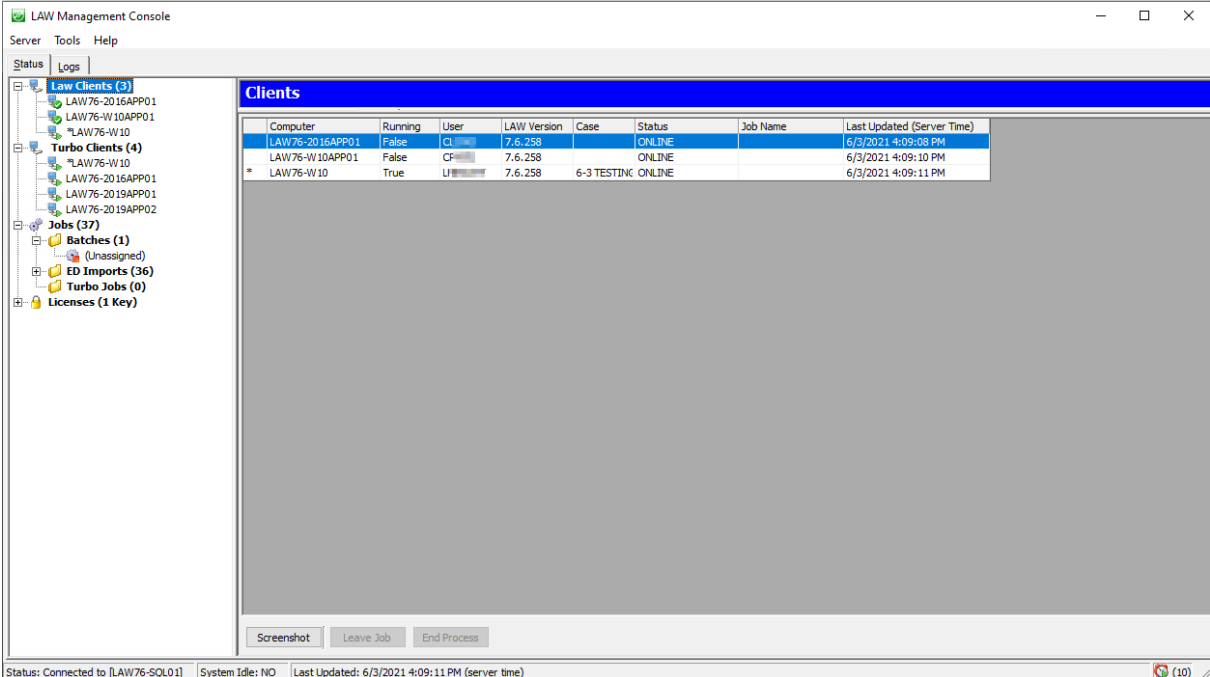
You use the LMC to monitor client computers, jobs, and licenses in use. You can also use the LMC to help manage clients and jobs.

Client management tasks:

- Force computers to leave a batch process or distributed electronic discovery loading session.
- End a batch process or distributed electronic discovery loading session.

Jobs management tasks:

- Cancel a job for all clients.
- Change the type of invitation for a job to control which computers will participate in a job.
- Prioritize Turbo Import cases for importing and Turbo Imaging jobs.

Preparing to join computers to a distributed process

The LMC can join computers to a shared job. LAW will launch, open the SQL case, and begin processing the job without user interaction. Jobs will be joined in the order in which they were created, but are sorted visibly by name under the **Jobs** node.

The following conditions apply when joining a client computer to a shared job:

- LAW must not be running on the client.
- The LMC must be running on the client.
- The LMC must be connected to the same SQL Server as all other computers participating in the process.
- The LMC only runs when the client computer is left in an idle state.

The idle state is how long the system has processed no keyboard or mouse movement for a specified number of seconds. You can set the number of seconds value in the LMC on the **Tools** menu. Click **Options**, and then **General**. In the **System Idle Timeout** field change the value to a number greater than 0, which represents the number of seconds. When the workstation is idle in the LMC, the second panel in the status bar changes to **System Idle: YES**. The LMC will attempt to join a job provided all other criteria have been met.

- The client must not be in the **Excluded Clients** list for a job.

- The job status must be **Active**.

<u>□ **To view client, job, and license details**</u>

1. Start the LMC and if necessary, connect to a SQL Server instance. For more information, see <u>Starting the LMC</u>.

2. Expand a node under **Law Clients**, **Turbo Clients, Jobs**, or **Licenses** and then click an item.

   The node expands and the right pane provides details for the client, job or license that you select.

<u>□ **To work with clients**</u>

1. Start the LMC and if necessary connect to a SQL Server instance. For more information, see <u>Starting the LMC</u>.

2. By default the **Law Clients** node is selected with a table listing of clients populating the right panel.

   - **Law Clients** is followed by a number in parentheses. This number represents the total number of clients (workstations running the LMC) connected to the same SQL Server and visible to the current instance of the LMC.

   - The computer name preceded by an asterisk (*****) is the computer on which you are running this instance of the LMC.

   - You can identify a client as unresponsive if the client name appears in **bold red** text. If you hover over the client name you will see a tooltip "**<Client Name> does not appear to be responding**".

3. In the **Clients** table located in the right hand part of the window, each computer currently connected to the SQL Server is listed in a row. Fields in the list are:

   - **Computer**. The name of the computer.

   - **Running**. **True** if CloudNine™ LAW is running or not, otherwise **False**.

   - **User**. The Windows user name currently logged into the computer.

   - **LAW Version**. The version of LAW running on the computer.

   - **Case**. The name of the case open. This field is blank if no case is open.

- **Status**. ONLINE if not running a job but available. WORKING if running a batch process. If a client status is listed as WORKING but the client is listed in the Clients list to the left in bold red font, this means the client has stopped responding and might need to be removed from the job and restarted. STARTING if starting a job. CANCELLING if leaving a job unfinished.

- **Job Name**. The name of the distributed batch process that the computer is running. This field is blank if the computer is not running a job.

- **Last Updated (Server Time)**. The last time the client status was checked by LMC. By default each client status is updated every 10 seconds.

4. Select a client from the list and then, if necessary, click one of the following buttons:

- **Screenshot -** Creates and opens a picture of the current Desktop of the client. This tool is useful for monitoring the state of the workstations when processing jobs or preparing to process jobs.

- **Leave Job** - Removes the client from the job that it is currently working on. When a workstation is forced to leave a job in this manner, the client is added to the Excluded Clients list for the job it was working on.

- **End Process** - Stops the job that the client is currently working on.

5. Expand the **Clients** node and then click a client name.

The node expands and the right pane provides details about the selected client.

- **Status** - Displays the status of the current workstation. Possible values are: ONLINE, STARTING, WORKING, or CANCELLING.

- **User** - Displays the user currently logged in on the workstation.

- **Workstation** - Displays the machine name of the selected workstation.

- **IP Address** - Displays the IP address of the workstation.

- **Console Version** - Displays the version of the LAW Management Console. Typically, this version should match the LAW version shown in the **Clients** section.

⊟ To work with Turbo Clients

1. Start the LMC, connecting to a SQL Server instance that has been configured in the LAW Configuration Utility.

2. By default the **Clients** node is selected with a table listing of clients populating the right panel.

3. Select the **Turbo Clients** node on the left. (This is a list of computers in the environment that have been configured with a Local LAW Service. The Turbo Import clients are configured in the LAW Configuration Utility under the Configure Local Machine.)

- **Turbo Clients** is followed by a number in parentheses. This number represents the total number of LAW Services (workstations configured for Turbo Import and

Turbo Imager processing as LAW Services) connected to the same SQL Server and visible to the current instance of the LMC.

⚠ The LAW Service needs to be configured as a network Log On (User Account) to be used over the network. If the service is configured as a Local Service then it won't be able to access all sources needed for processing.   To enable a workstation as a User Account, it would need to be configured in the LAW Configuration Utility under Local Machine. If you configured it previously as a Local Service and need to change it to a User Account then either launch the LAW Configuration Utility again or go to Services.msc to change the LAW Service. If you plan to create cases on a network share or import data from a network share, then you need to run the LAW Service using a network account that has read, write and modify access to those shares.

- The computer name preceded by an asterisk (*****) is the computer on which you are running this instance of the LMC.
- You can identify a client as unresponsive if the client name appears in **bold red** text. If you hover over the client name you will see a tooltip "**<Client Name> does not appear to be responding**".

4. In the **Turbo Clients** table located in the right hand part of the window, each computer currently connected to the SQL Server is listed in a row. Fields in the list are:
   - **Machine**. The name of the workstation running the LAW Service.
   - **Status.** The status of the LAW Service.
   - **User**. The Windows user name currently logged into the computer.
   - **LAW Service Version**. The version of LAW running on the computer.
   - **SW Updated.** The date and time the software was updated.
   - **Last Updated**. The last time the Turbo Import Client status was checked by the LAW Management Console. By default each client status is updated every 10 seconds.

5. Expand the **Turbo Clients** node and then click a Turbo Import client name.

   The node expands and the right pane provides details about the selected client.

   <u>**Service Details:**</u>

   - **Status** - Displays the status of the selected Turbo Import LAW Service. Possible values are: ONLINE, STARTING, WORKING, or CANCELLING.
   - **User** - Displays the account currently logged in on the LAW Service.
   - **Last Active** - The date and time that the Turbo Import service last communicated with the SQL server.
   - **LAW Service Version** - Displays the version of the installation of LAW Service. Typically, this version should match the LAW version shown in the Clients section.
   - **SW Updates** - The date and time the software was last updated.

Service Activity:

- **Agent** - The name of the agent on the LAW Service running the process.
- **Case** - The name of the case that the agent is processing.
- **Activity –** The activity that the agent is currently processing.
- **Start Time –** The time that the process started (displayed in local time).
- **File Name –** The name of the file being processed (displayed during Analysis only).
- **Size** - The size of the file being processed (displayed during Analysis only).
- **Attempts** - The number of attempts for the current activity.

🔲 **To work with jobs**

1. Start the LMC and if necessary connect to a SQL Server instance. For more information, see Starting the LMC.

2. Select **Jobs**.
   - The node expands and the jobs overview panel is visible to the right.
   - **Jobs** is followed by a number in parentheses. This is the total number of jobs on workstations running the LMC, connected to the same SQL Server, and visible to the current instance of the LMC.

3. The right pane updates to show a table of information for all known jobs. You can also Start or Cancel a Job.
   - **Name** - The job name as entered in the Name field when creating the batch.
   - **Case** - The name of the case currently open on the workstation.
   - **Status** - Displays the status of the Job.
   - **# Clients** - The number of clients working on the job.
   - **% Comp.** - Displays the percentage completed thus far for this job.
   - **Errors** - The number of errors that have occurred so far in this batch job.
   - **Invite** - The invitation type for the job.
   - **Processes** - The processes selected when the batch was created.

4. See additional details for a specific job by selecting it in the list in the left pane.
   The **Job Details** section displays:
   - **Job Name**
   - **Status**
   - **Case Name**
   - **Created** - Displays the date and time the batch was created and the user who created the batch.
   - **Processes** - The processes selected when the batch was created, such as TIFF, OCR, or Endorse.

- **Req. Lic.** - Lists the license modules required in order to work on the batch.
- **Invitation** - Displays the invitation type for the current job.

The **Job Progress** area displays:

- **Complete** - Displays the total number of documents completed thus far in the batch.
- **Remaining** - Displays the estimated amount of time remaining in the batch.
- **Total** - Displays the total number of documents included in the batch.
- **Expanded**
- **Errors** - Displays the number of errors that have occurred thus far in the batch.
- **View Errors** - Opens the batch process log. It displays errors that occurred during a batch.
- **Speed**

The bottom of the job information pane shows three additional tabs:

- **Clients** - Displays each client working on the job, the process currently taking place on the machine (i.e., OCR), and the document currently being processed.
- **Client Activity** - Shows client activity specific to the selected job. Entries will appear when a client attempts to join a job, successfully joins a job, fails to join a job, is excluded from a job, etc.
- **Excluded Clients** - Lists clients excluded from a job. The computer name and reason for the exclusion are listed.

5. Change the invitation type, cancel the job, or remove the job from the **Jobs** area as needed.

- To change the invitation type, select the specific job in the list on the left, then click the ellipsis button to the right of the Invitation field. You can then configure the new invitation type.
- To cancel the job, click **Cancel** Job. This action cancels the batch for all clients but does not delete the job from CloudNine™ LAW.
- To remove the job from the Jobs area of the LMC, right-click the job and then click **Remove Job**.

⊟ **Turbo Job prioritization**

You can use the LMC to prioritize the processing for Turbo Jobs (Turbo Import processing and Turbo Imaging jobs). If you have multiple Turbo Jobs that have been started, you can change the priority of those jobs by need. The job with the highest priority and will have the most agents for processing and start processing first.

1. Start the LMC, connecting to a SQL Server instance that has been configured in the LAW Configuration Utility.

2. By default the **Clients** node is selected with a table listing of clients populating the right panel.

3. Expand the Jobs section by selecting the plus symbol.

4. Select **Turbo Jobs**
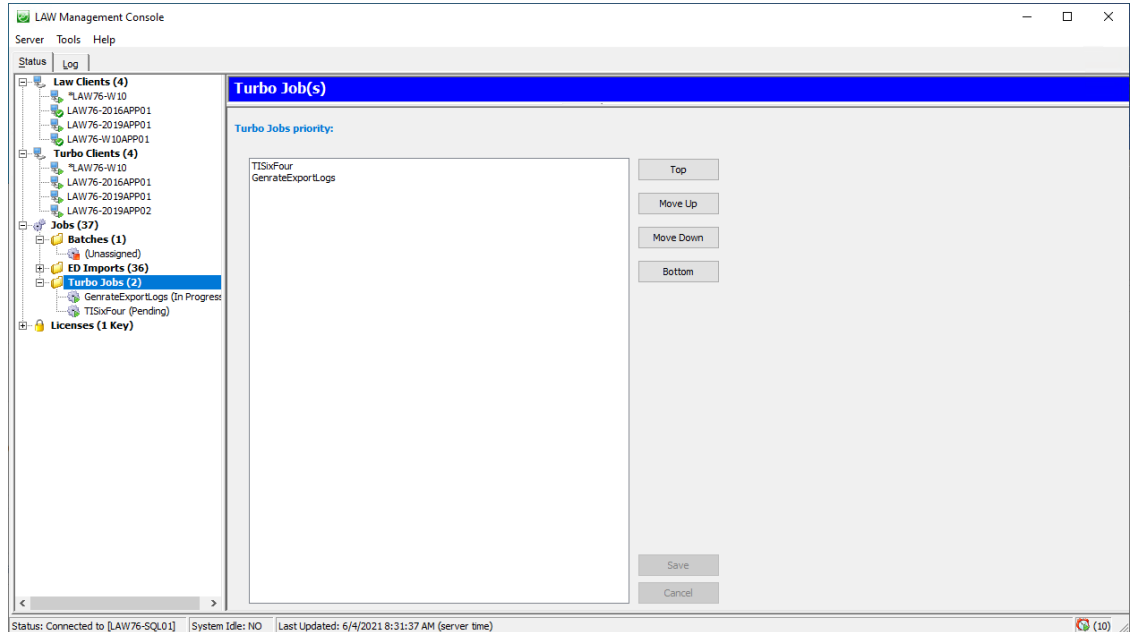
5. The Turbo Jobs panel is visible to the right.

6. A list of Turbo Jobs in process are displayed under **Turbo Jobs Priority:**

7. The job that is at the top of the list is the first priority for processing.

To Change a case's priority:

Select the case from the **Turbo Jobs Priority** list and one of the following:

- **Top** - to move the selected job to the absolute top of the list.

- **Move Up** - Move the selected job one level up in the list.

- **Move Down** - Move the selected job one level down in the list.

- **Bottom** - Move the selected job to the absolute bottom of the list.

Committing the job priority – Select one of two options for committing priority level changes.

- **SAVE** - When user clicks Save the new priority level is committed. No job prioritization changes are made unless Save is selected to commit the new priority level.

- **CANCEL** - When user clicks Cancel, the new priority level is NOT committed. All changes made to job priority revert to the original position in the list.

⊟ Turbo Job details

You can use the LMC to view details for Turbo Jobs - both Turbo Import and Turbo Imaging. From the **LAW Management Console**, expand **Turbo Jobs** in the left pane, then select the specific Turbo Job you want to see. The job name will be the name of the case that ran a Turbo Import or Turbo Imaging job. The right pane updates to show **Agent Activity** and **Turbo Imaging Job Details**.

This shows an example of what is displayed for a Turbo Import job.
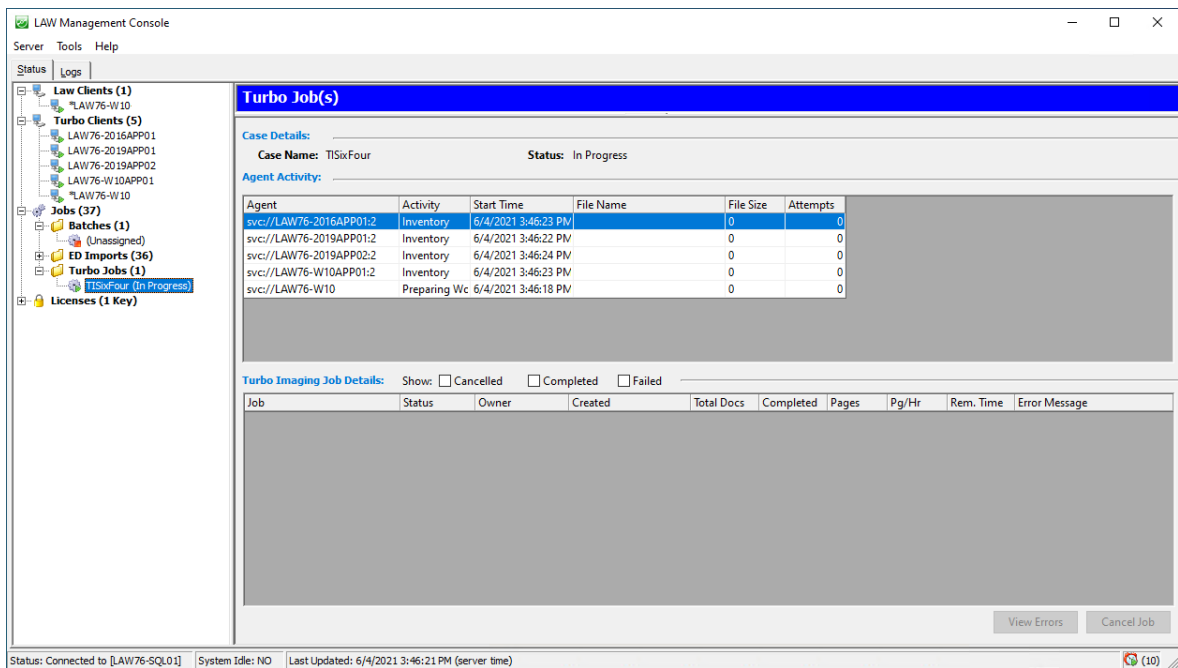
This shows an example of details for a Turbo Imaging job. Turbo Import jobs will not display a File Size.

To work with licenses

1. Start the LMC and if necessary connect to a SQL Server instance. For more information, see Starting the LMC.

2. Select **Licenses** in the left panel. **Licenses** is followed by a number of keys in parentheses. This is the total number of license keys on workstations running the LMC, connected to the same SQL Server, and visible to the current instance of the LMC.

3. The **Licenses** overview panel opens on the right.
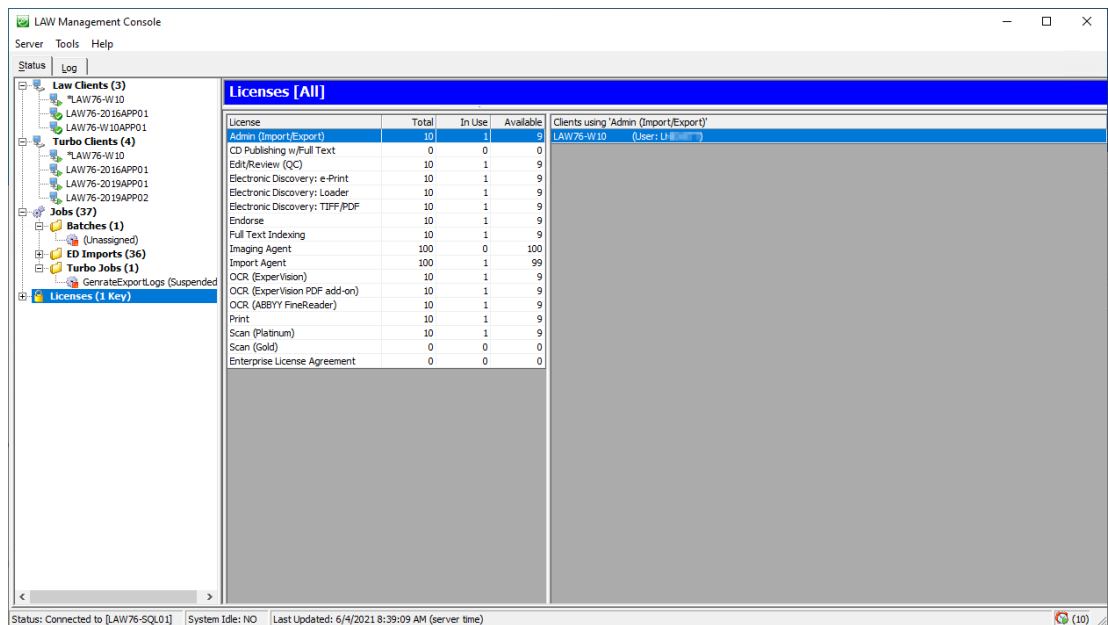
- **License** column - Lists all license modules found on the keys listed below the Licenses node.

- **Total** column- The total of each license module found on the collection of keys listed below the Licenses node.

- **In Use** column- The total of license modules in use on workstations running the LMC and connected to the same SQL Server (for all keys listed below the License node).

- **Available** column - The total of available licenses for each module for all keys listed below the Licenses node.

- **Clients using '<license module>'** - Lists the clients that are using the module selected in the license module list. The machine names and user names are shown.

✎ The LAW Management Console (LMC) does not show licenses are in use when OCR is being performed within CloudNine™ Explore. Licenses in use may be viewed in the LAW Profile Manager as an alternative.

4. If you have multiple license keys, you can view information for that particular key by expanding the **Licenses** node on the left and selecting the specific license key underneath.

5. Selecting a license in the middle pane updates the right pane to show which client machine and user is currently using that license.

⊟ **To cancel a distributed batch process**

You can cancel a job for all clients.

1. In the LMC, expand the **Jobs** node and then select a job.

2. Click **Cancel Job**.

To remove a client from a distributed batch process

You can remove a client from a distributed batch process.

1. In the LMC, expand the **Clients** node and then select a client.

2. Click **Leave Job**.

To manage unresponsive clients

1. Within the LMC connected to SQL Server, identify a client as unresponsive if the client name appears in **bold red** text.
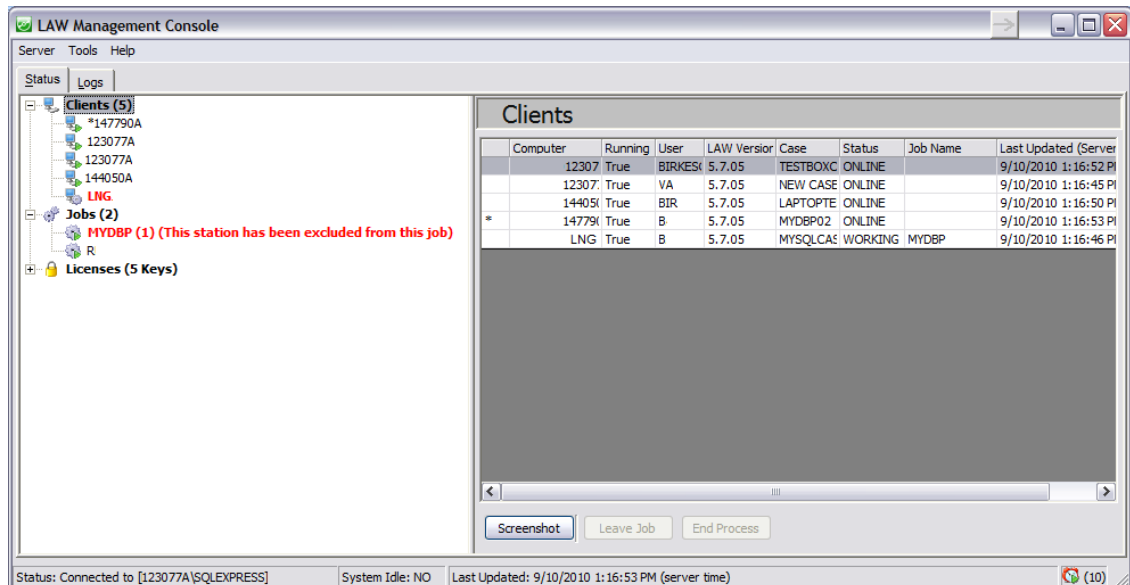
2. Hover your mouse over the client to see the following tool tip: **<Client Name> does not appear to be responding**. This condition can be caused by the client being either hung or by it simply having paused the job.
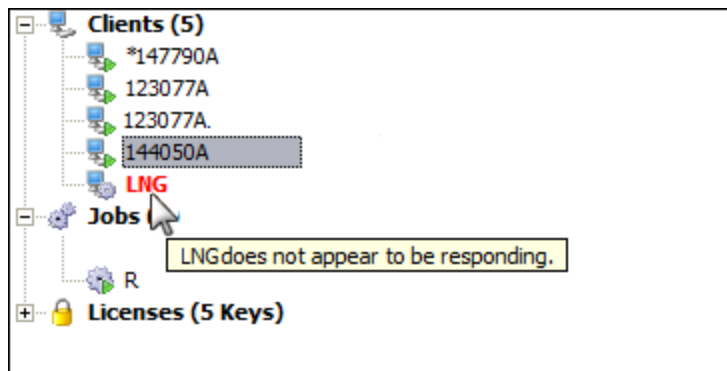
3. Select the unresponsive client. Details for the client are shown in the panel to the right.

4. Click **Screenshot**. An image viewer appears showing a screen capture of the client Desktop.

5. Take corrective action based on what you see in the screen shot:

   • If a viewer appears showing the client Desktop, look in the screen shot for the **Batch Process Status** dialog box. If this is visible, check the status in the title bar of the dialog box. If it is **(Paused)**, you can go to the client computer and then click **Resume**. The client will continue processing the batch and its status in the LMC will return to normal.

   • If the viewer does not appear, or opens showing only black: click **Leave Job** to remove the client from the job. This action adds the client to the **Excluded Clients** list for that job. Or click **End Process**, to stop the job entirely. Use the Batch Process utility to restart a stopped job. For more information, see Batch Processing.

To view LMC logs

The LMC provides a listing of errors, messages, and debug information pertaining to LMC operation. The LMC also provides direct access to batch process error log.

To view logs of LMC errors, messages, and debug information

1. Start the LMC. For more information, see Starting the LMC.

2. Click the **Log** tab. The last 500 entries that were logged during the application session are visible. The log is composed of data from multiple application sessions and has a maximum size of 5MB. This log is written to: %APPDATA% \LAWConsole\LAWConsole.log.
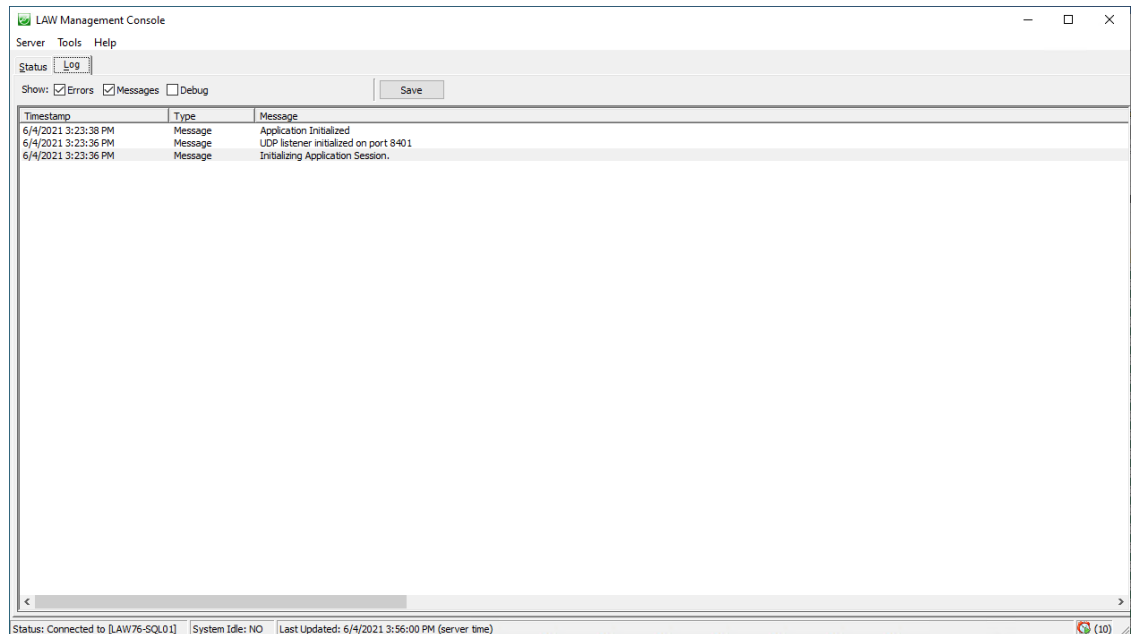
3. Select or unselect **Errors**, **Messages**, or **Debug** as necessary to filter the view.

4. To save a copy of the log, click **Save** and then choose a folder and a file name. The saved copy of the log will contain all errors, messages, and debug information regardless of the filter applied to the view.

To view the batch process error log

1. Start the LMC. For more information, see Starting the LMC.

2. Expand the **Jobs** node.

3. Select a job.

4. Click **View Errors**. The batch processing error log opens.

Managing LMC Operation

You can configure LMC settings that control system timeout, polling interval, whether unresponsive clients are restarted, the executable instance of CloudNine™ LAW to use, and how remote refresh requests are handled.

☐ **To manage LMC operational settings**

1. In the LMC, on the **Tools** menu click **Options**.

    The **Application Options** dialog box appears.

2. Configure the LMC as needed using the settings provided in the **Options** dialog box.

Category	Option and Description
General	

System Idle Timeout

Allows a client not in use for this number of seconds to join a shared batch.

The default value is **30** seconds.

A client is determined as in use if mouse or keyboard activity occurs during the timeout interval. For example, if this is set to **60**, the LMC cannot join the client until the client is idle for one minute.

- To prevent the client from ever automatically joining a shared batch set the value to **0**.

- If the system idle timeout value is reached, the LMC reads as **System Idle: YES**.

- If the value is never reached, the LMC reads as **System Idle: NO**.

- To determine whether the idle timer status, look at the second panel in the task bar.

Polling Interval

Determines the frequency by which the LMC updates its status and retrieves data about clients.

The default value is **10** seconds. The maximum value is **65**.

Category	Option and Description
	It is important to note that the LMC is a single threaded application and therefore user-interaction with the interface incurs a small delay while it is updating the interface. Under normal conditions this is extremely negligible and almost cannot be noticed. This delay can be mitigated somewhat by reducing the polling interval. The lower the value, the less latency experienced in the interface, but the trade-off is network and database traffic. The default value is 10 seconds.
	Auto Restart Client The number of minutes to wait before restarting the client with a status of **Not Responding**. The default value is **3** minutes. • To prevent the client from restarting automatically set the value to 0. • All unattended restart actions are executed by the local LMC instance relative to LAW instance that is not responding. • Unattended restarts are logged into the applications main log and are visible in the log interface. An entry in the Job Log indicates whether an LMC instance executed an unattended restart of its Local LAW instance. • Unattended restart activity is visible in the LMC Jobs panel in the client activity area. • If the LAW client is restarted automatically then the following message is registered in the application log: `System[<LMC Local Computer Name>] is forcing automatic res`
LAW	
	LAW50.exe
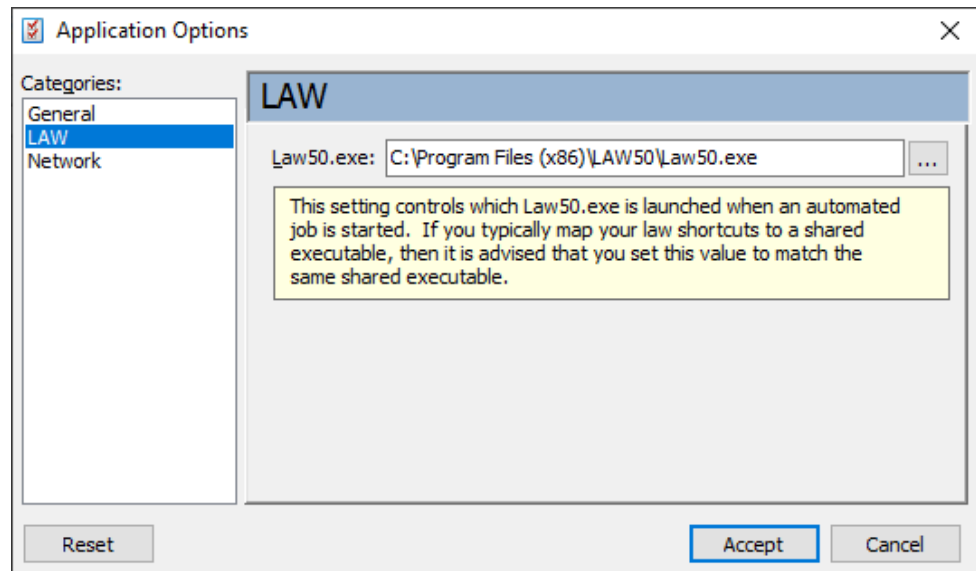
Category	Option and Description
	Determines which instance of LAW is started.
	Typically, if you run a shared Law50.exe from a network drive mapped to a server instance of LAW, then it is recommended that you use that mapped instance of Law50.exe for processing.
Network	 **Application Options** Categories: General LAW Network **Network** ☑ Enable Remote Refresh Requests This option increases responsiveness for client to client actions such as screenshots. To function correctly, it requires UDP communication on the specified port. UDP Port # 8401 Reset Accept Cancel
	Enable Remote Refresh Requests Enables client-to-client operations, such as screenshots and requests to leave jobs. This setting defaults to **enabled**. The LMC communicates actions between clients by using a central message store. When a client requests an action from another client, the message is placed into the store, and the recipient client gets the message the next time it refreshes. Since clients refresh at an unsynchronized interval, there could be a delay in retrieving the message by the recipient client. This option sends a UDP packet to the recipient client requesting that it refresh immediately, thereby reducing the time it takes to retrieve and process the message.
	UDP Port # Specifies the port for the current client to use as UDP listener. The default value is **8401**. This port enables the client to determine whether other clients are connected.
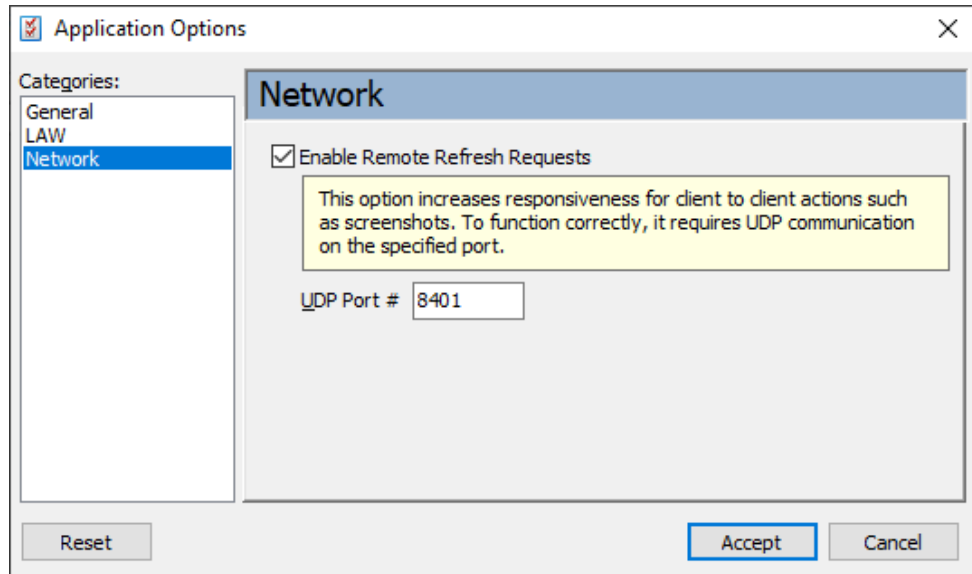
Category	Option and Description
	It is not necessary that this value be the same for all clients. However, for ease of configuration using the default port for all clients is recommended.
	When the LMC starts, or if changes are made to this setting, an entry is placed into the application log.

3. When finished configuring click **Accept**.

Creating Batch Jobs from the LMC

Users can create distributive batch processes through the LAW Management Console without launching CloudNine™ LAW.

Databases need to be created in SQL to create a batch processing job through the LAW Management Console. If running a batch process that requires flag reset prior to processing, then it is recommended to set up the distributed batch through the database where you can reset the flags prior to OCRing etc.

⊟ **When should I create a Distributed Batch process through the LMC vs through the Database?**

Use the LMC - If you need to start a large process and are not a regular user of CloudNine™ LAW, then the LMC is quick and easy to get to a large number of documents for batch processing started.   Creating jobs does not use any licenses - when the job starts, each client will pull required licenses to join the process.

Use Distributed Batch Processing through the database, if you need to query/filter for specific documents, or reset OCR flags first.

✎ The case list should be in SQL. If you have an Access case list then you will need to migrate it to a SQL case list first. See migrating case list for more information.

⊟ **Creating a Distributed Batch Process through the LMC**

1. Close LAW on the workstation that you are using.
2. Launch the LAW Management Console
3. In the LAW Management Console, select **Tools** from the tool bar.
4. Select **Create batch job**. Create Batch opens in a new window.
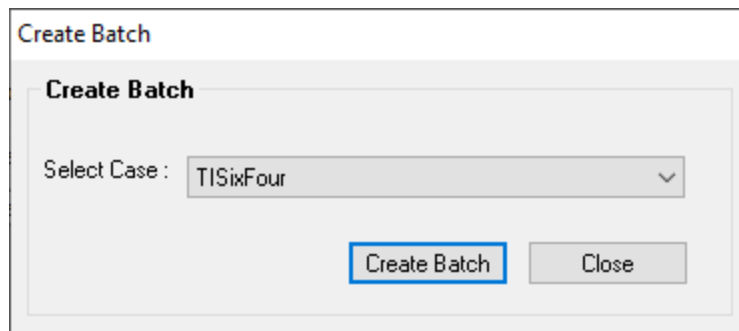
5. Select the database from the list of SQL Databases in the **Select Case** dropdown.

6. Click **Create Batch**. **Batch Processing** opens in a new window.
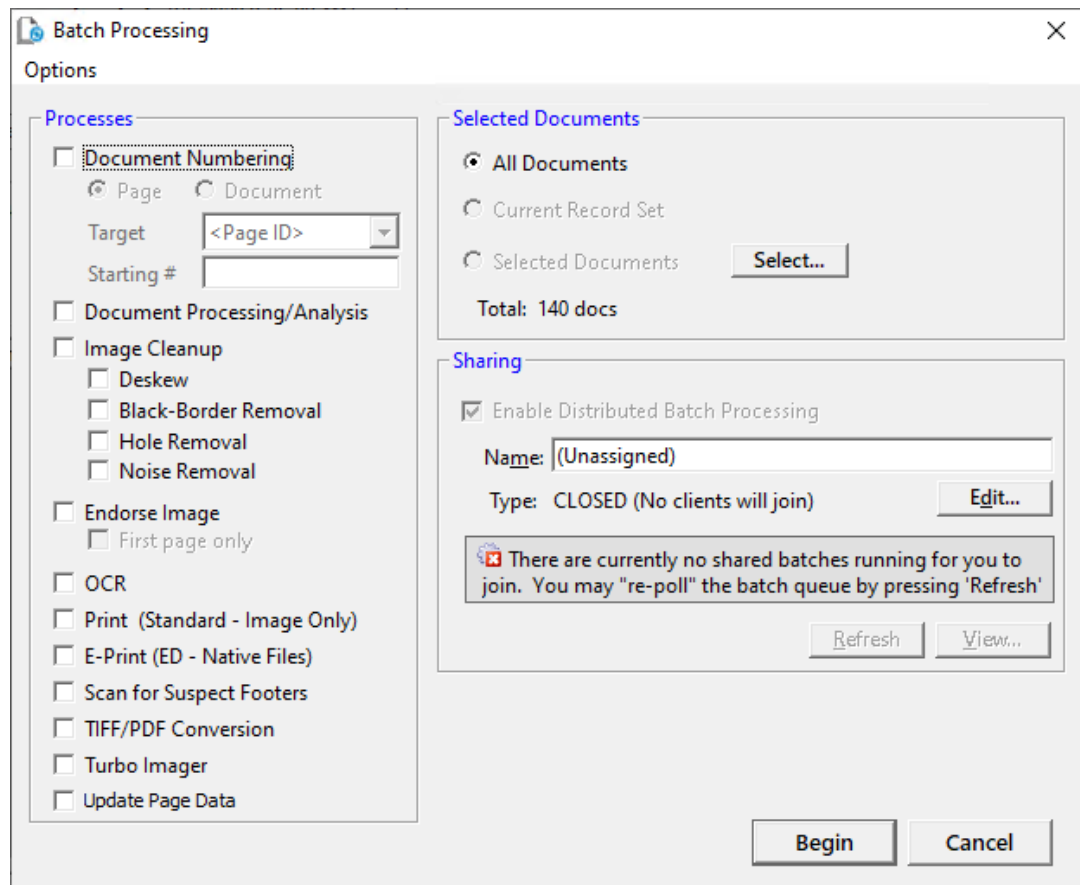
7. In the **Batch Processing** dialog box select the documents to be processed on the right. You can select **All Documents**, **Current Record Set** (all documents), or click **Select** to choose specific folders.

8. Select the batch **Processes** that you wish to run.

Distributed processing is available for those batch processes that do not require sequential execution. You can not run distributed batch processes on these kinds of jobs:

- Document Numbering
- E-Print
- Print

9. Type a name for the batch over the default of **(Unassigned)**. The batch name is visible to other workstations when they are prompted to join a distributed job. The batch name is also visible in the LAW Management Console (LMC).

10. Under Enable Distributed Batch Processing select **Edit**. The **Create/Modify Job Invitation** dialog will open.

11. Select the **Invitation Type**. The invitation type determines how the job is handled by other stations when utilizing the LMC.

- **Closed.** (Default) None of the LMC instances will be able to auto-join LAW to the shared batch. LAW workstations can still be joined to the job manually.

- **Open**. All LMC instances automatically join LAW to the shared batch.

- **Restricted.** Only selected LMC instances will automatically join the process. If you choose **Restricted**, select computers that can participate in the batch process from among available computers in the Clients area of the dialog box.

12. In the **Limit no. of stations for the job** field, enter the maximum number of work stations that can process data for the batch process job at any given time. The Limit no. of stations for the job field defaults to 0. When the Limit no. of stations for the job field is set to 0, all available work stations will process data for the job.

13. Configure **Scheduling** as needed. This option prevents the job from starting until after the date and time that you specify.

14. It is important to select the **Clients** that will be used for the distributed processes. If no clients are selected then you must manually join the batch process.

15. Once you are done updating the Job Invitation click **Accept**. The Create/Modify Job Invitation window will close leaving the Batch Processing window open with your settings.

16. Select **Begin**. The Batch Processing window closes and the job will be added to Batch Process Jobs list in the LMC and also under Jobs>Batches> (Job name) on the left side.

Deduplication

Deduplication is the process of identifying duplicate information sources and then removing them from further analysis. LAW provides several tools to perform deduplication: ED Loader Deduplication, Turbo Import Deduplication, Deduplication Utility, and Inter-Case Deduplication.

About Deduplication

In CloudNine™ LAW deduplication can be accomplished at different stages of the discovery process using different tools. Deduplication requires an active connection to the case database. If the data connection is lost, deduplication can pause until the connection is restored.

⊟ **Deduplication stages**

These stages and tools are described as follows:

1. When importing documents into a case you can deduplicate using ED Loader. For more information about deduplication during import with ED Loader, see Deduplication.
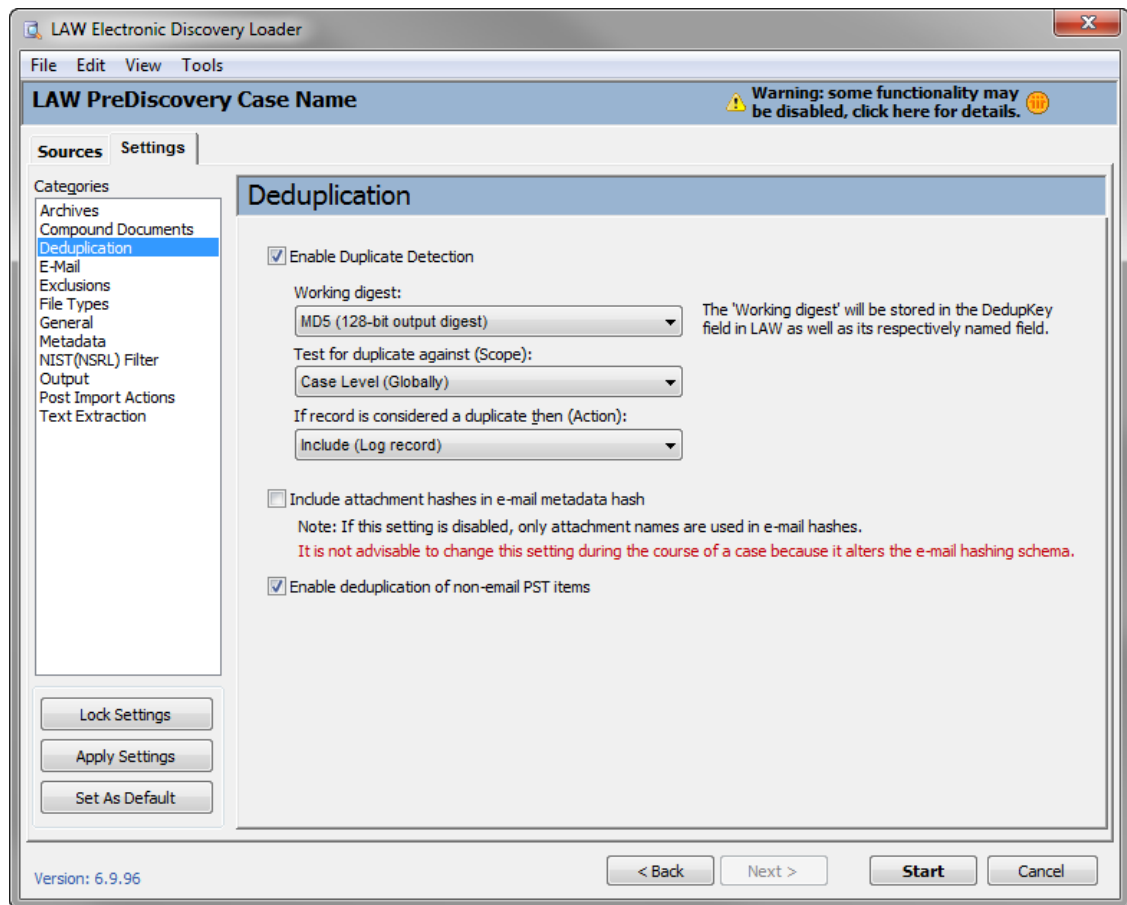
Or

When importing documents into a case you can deduplicate using the filters tab in the Turbo Import settings. For more information about deduplication with Turbo Import, see Turbo Import Deduplication. (Introduced in LAW 7.0+)

2. After importing documents into a case, you can use LAW Deduplication utility. This utility can help if you have already deduplicated a case, but later need to add more files and deduplicate them as well. For more information see Deduplication Utility.
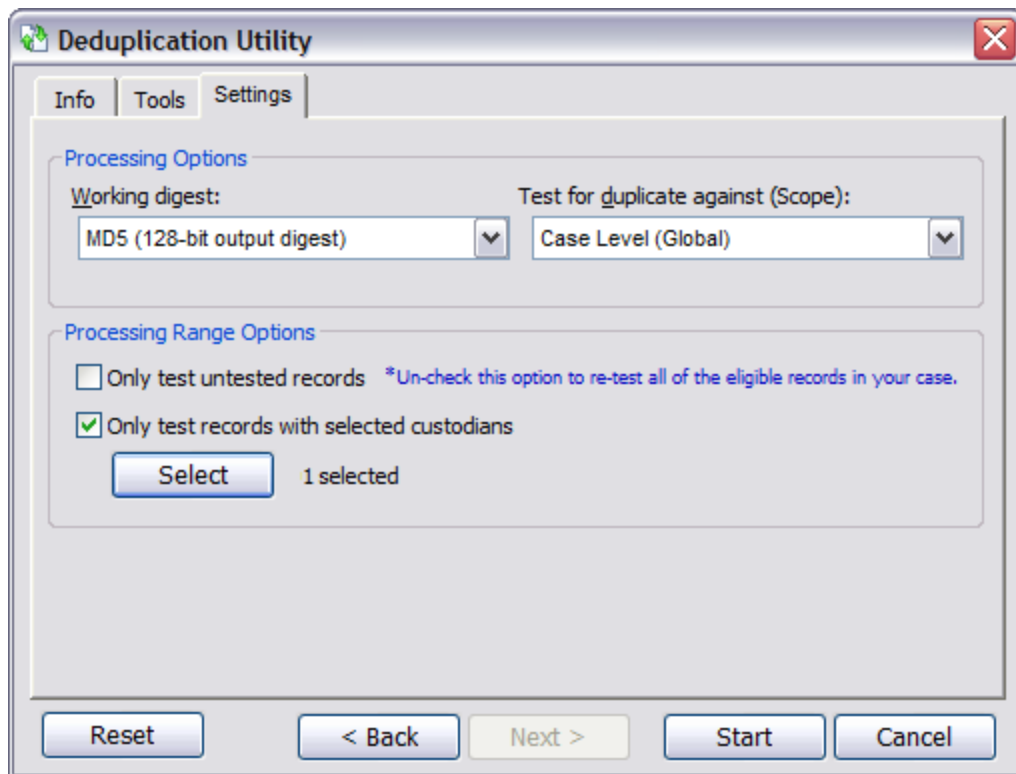
3. Prior to importing an existing LAW case into the current case, you can use the Inter-Case Deduplication utility. For more information, see Inter-Case Deduplication.

⚠ Turbo Import cases are not designed for deduplication in the Inter-Case Deduplication utility. Electronic Discovery and Turbo Import cases use a different hashing algorithms and should not be deduped against each other.
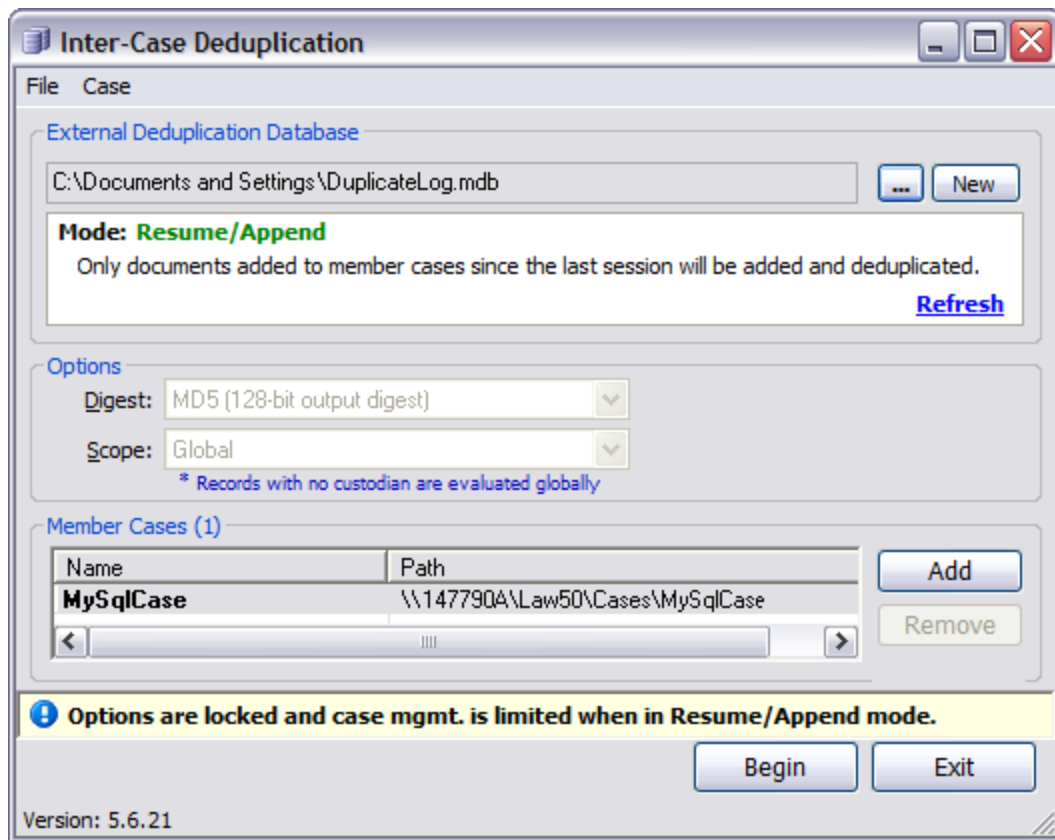
4. LAW also provides a viewer as well as reporting options for you to quality assure and otherwise manage the deduplication process. For more information, see Duplicate Viewer and Deduplication Reports.
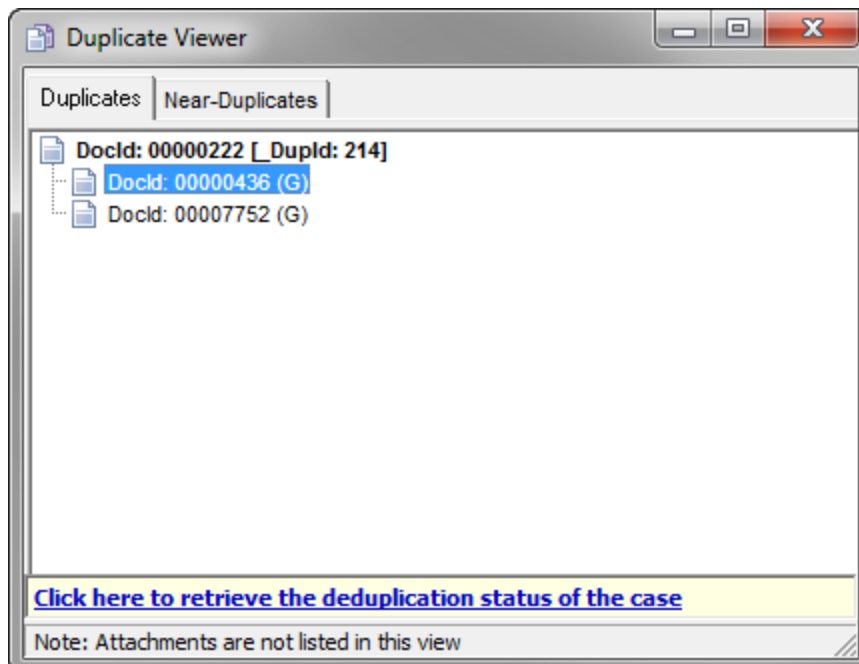
5. Once the files in a case have been imported and deduplicated, you can assign duplicate relationships to the original files associated with duplicate files using the Apply Duplicate Relationships command in CloudNine™ LAW. For more information, see Applying Duplicate Relationships.

⊟ Re-establishing the database connection

Deduplication processes require an active connection to the case database. During deduplication, if the connection is lost, LAW will attempt to re-establish the lost connection. You can allow the re-connection process to continue indefinitely until the connection is restored, or you can cancel the deduplication process altogether.
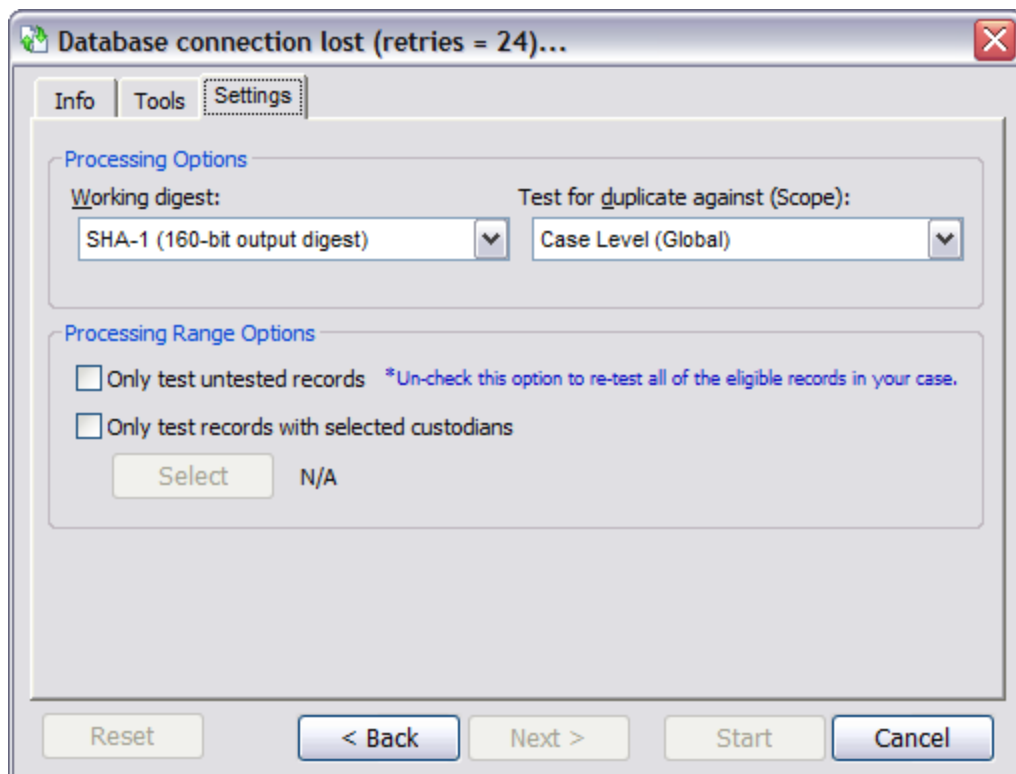
Deduplication Utility

You use the Deduplication Utility to help identify and flag duplicate items after they have been imported into a case. Using it can help you to significantly reduce the time it takes to analyze and process documents.

This utility may be used if deduplication was not performed by ED Loader or Turbo Import during the import process, or if deduplication was not done by using the Inter-Case Deduplication utility. See the Deduplication Information topic for more information.

⚠ Note the following important considerations before you deduplicate records:

- If you use the internal Deduplication Utility after the case has been deduplicated against other cases using the Inter-Case Deduplication, a combination of internal and external duplicates could result. Combining internal and external duplicates can cause problems when purging, filtering, or reviewing duplicate records.

- Proceeding with the internal deduplication after clicking the **Yes I understand and wish to continue** button will result in the external deduplication database being placed in Rebuild/Flush mode. At this point, the current case should be removed from the external database.

- Before you run the internal deduplication, it is recommended that you reset deduplication flags. See **To reset deduplication log status** section below. Run this procedure to prevent the mixture of internal and external duplicates.

For more information, see [Inter-Case Deduplication](#).

⊟ **To load records for deduplication**

1. In the main window, on the **Tools** menu, click **Deduplication Utility**.

   The **Info** tab of the **Deduplication Utility** dialog box opens.
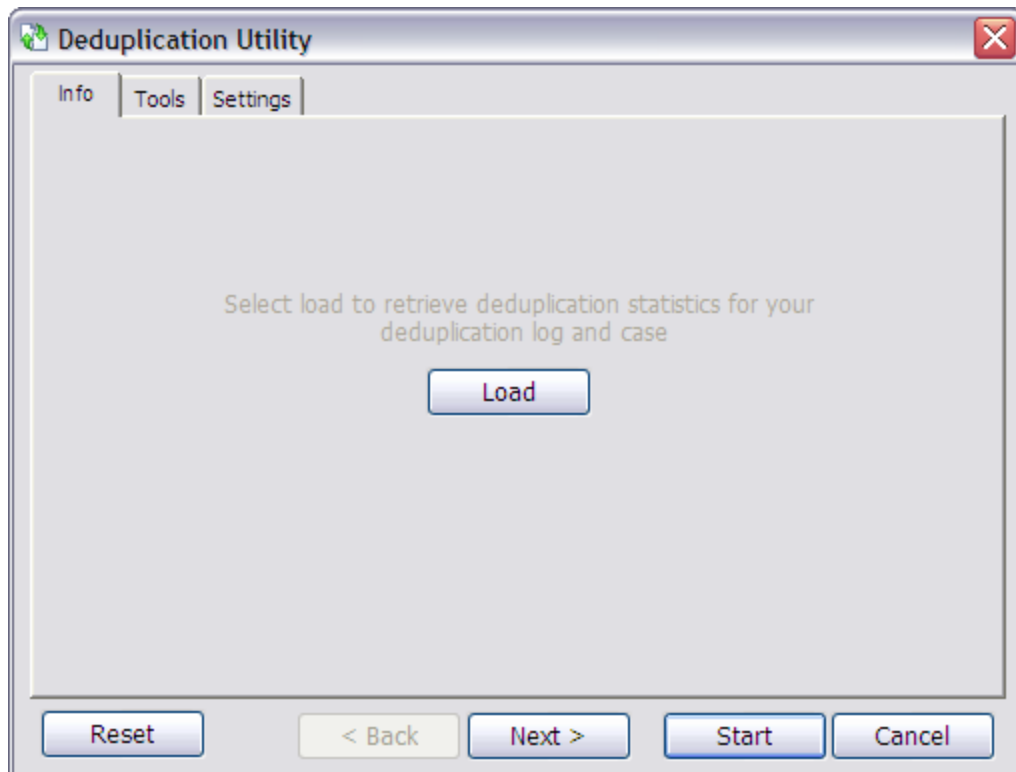
2. If the case has not been already deduplicated using the Inter-Case Deduplication utility, then click the **Load** button.

⚠ Before you run the Deduplication Utility a second time for a case, reset flags for logs and records. You can determine if the Deduplication Utility has already been run by viewing the Info tab. If the statistics on this tab are set to any other value than 0 then reset flags for logs and records before you run the Deduplication Utility.

Deduplication statistics for the LAW case are displayed, including the number of duplicates at the global- or custodian-level and the number of root duplicate records.
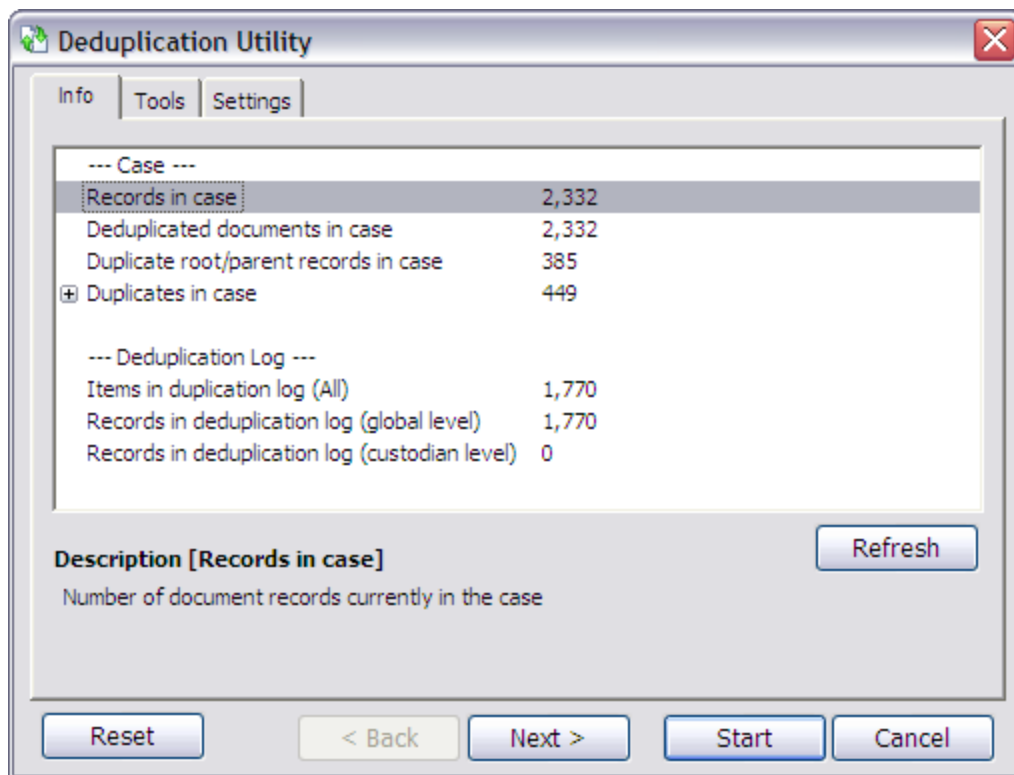
- If deduplication has not yet been performed on the records, the values for each displayed item will be zero.
- If records had been deduplicated externally, two additional rows show the number of records deduplicated externally and the name and location of the external deduplication database.

To reset deduplication status

1. In the main window, on the **Tools** menu, click **Deduplication Utility**.

2. Click the **Tools** tab.
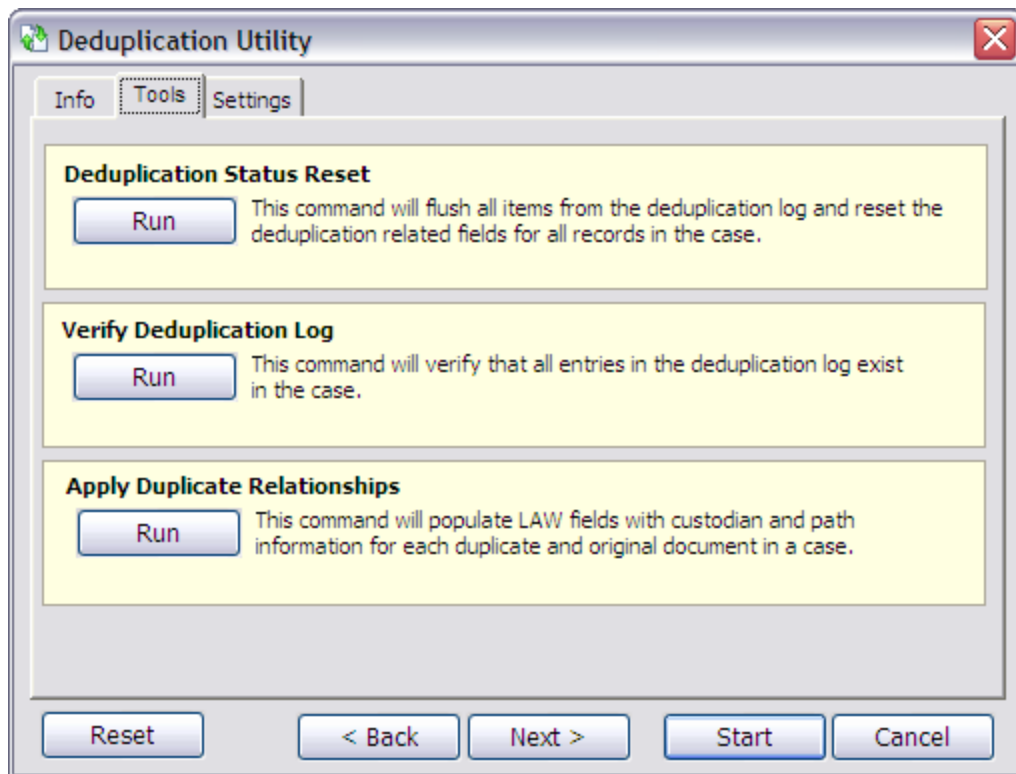
3. In the **Deduplication Status Reset** area, click **Run**.

    The deduplication log and deduplication-related fields for all the case records are reset. The case returns to a state as if deduplication has never been performed.

To verify deduplication log against case entries

1. In the main window, on the **Tools** menu, click **Deduplication Utility**.

2. Click the **Tools** tab.
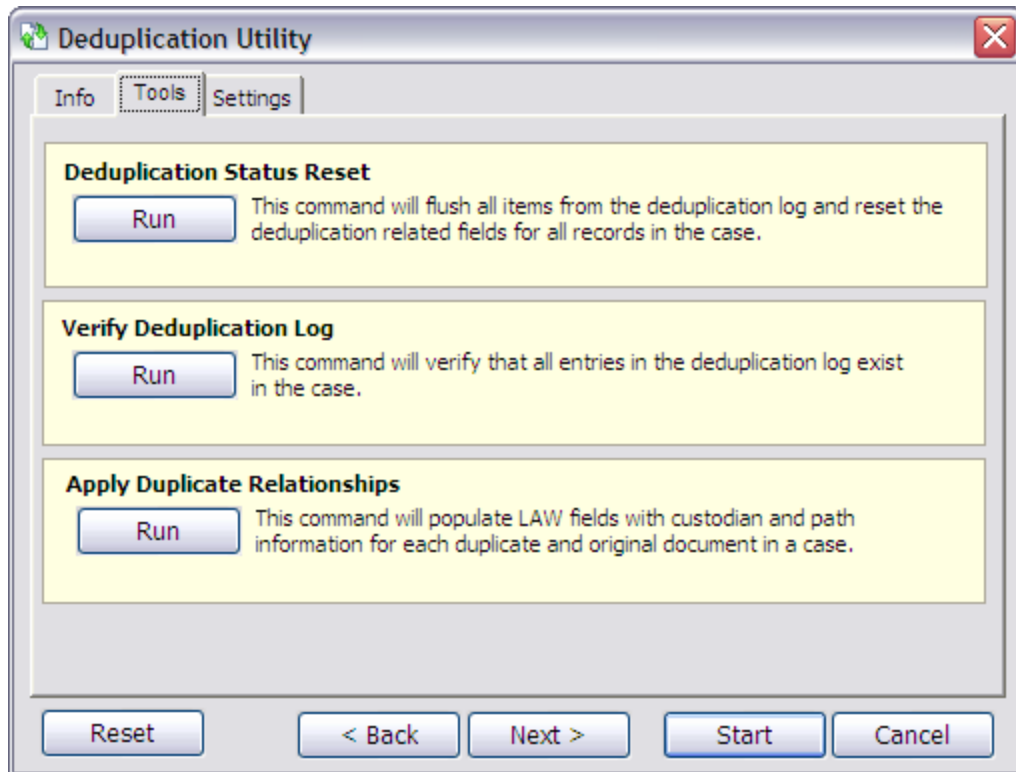
3. In the **Verify Duplication Log** area, click **Run**.

    The CloudNine™ LAW deduplication fields that were updated as a result of inter-case deduplication are reset.

    See Inter-Case Deduplication for more information. However, iitems from external deduplication databases are not reset. As mentioned above, it is recommended to run this command on a case before running the deduplication process via the Deduplication Utility if a case has already been deduplicated using the Inter-Case Deduplication utility.

    The Verify Deduplication Log tool will verify that all entries in the log exist in the LAW case. This tool is included for troubleshooting purposes and does not check external deduplication databases.

⊟ **To apply duplicate relationships to original files**

The Apply Duplicate Relationships command populates the following fields for the original files that have duplicate files in a case:

- DupCustNames
- DupCustPaths
- DupParentName
- DupParentPath

The fields indicate the custodian name and location of the duplicate files and the parents of the duplicate files. For more information about these fields, see Field Descriptions.

📝 The **Apply Duplicate Relationships** command is also available on the **Tools** menu (**Tools menu > Apply Duplicate Relationships**) in CloudNine™ LAW. For more information, see Applying Duplicate Relationships.

1. In the main window, on the **Tools** menu, click **Deduplication Utility**.

2. Click the **Tools** tab.
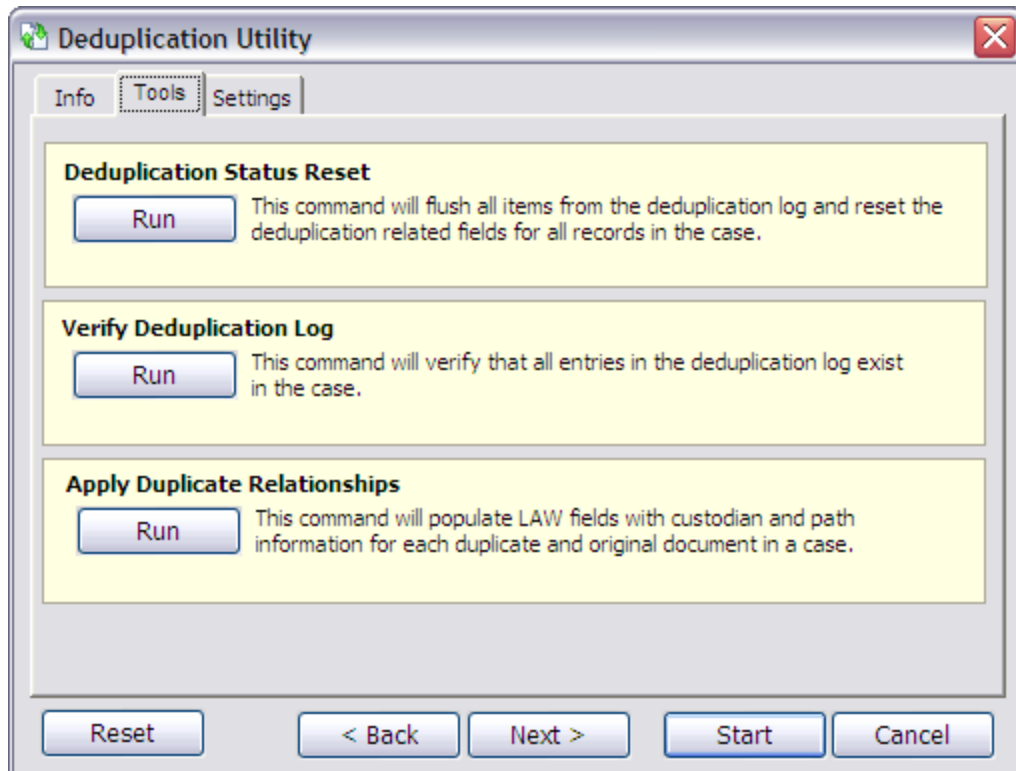
3. In the **Apply Duplicate Relationships** area, click **Run**.

   Clicking **Run** starts the command. When the process is completed the **Duplicate Relationship Update Status** dialog box opens.

Duplicate Relationship Update Status

> Duplicate custodian and path relationships were successfully updated.
>
> Families Updated: 297
> Total Updates: 834
> Elapsed Time: 00:00:02
>
> OK
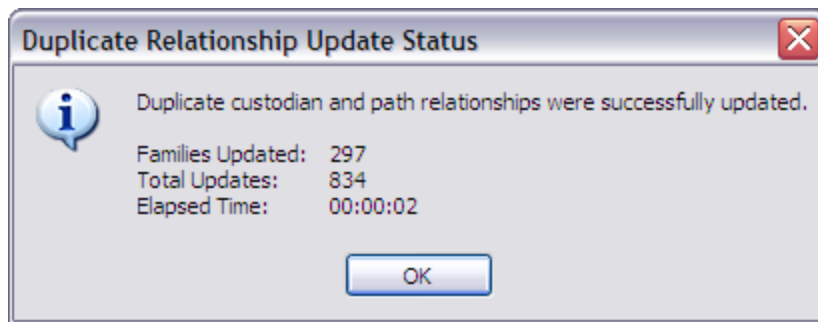
The **Duplicate Relationship Update Status** dialog box indicates whether duplicate custodian and path relationships were successfully updated, and indicates the total number of document families that were updated, the total number of files updated, and the amount of time it took for the process to complete.

4. Click **OK** to close the **Duplicate Relationship Update Status** dialog box.

To configure settings

The **Settings** tab contains processing and processing range options.

Deduplication Utility

Info | Tools | Settings

Processing Options

Working digest:
SHA-1 (160-bit output digest)

Test for duplicate against (Scope):
Case Level (Global)

Processing Range Options

☐ Only test untested records   *Un-check this option to re-test all of the eligible records in your case.

☐ Only test records with selected custodians

Select   N/A

Reset | < Back | Next > | Start | Cancel
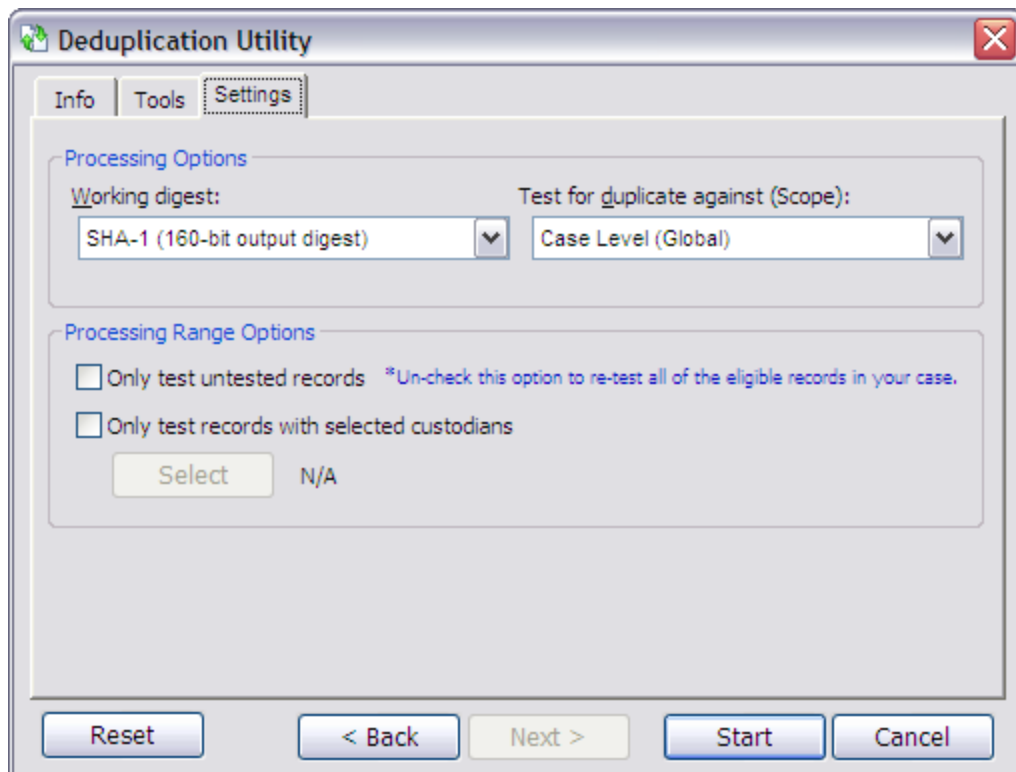
- **Working digest -** This setting is used to select the hash key to be used for determining duplicates. The hash values are obtained through metadata fields (e-

mail) or by hashing the entire file (e-docs). CloudNine™ LAW provides two hash keys to choose from: MD5 (128-bit output) and SHA-1 (160-bit output).

- **Test for duplicate against (Scope) -** This setting pertains to the scope in which duplicates are tested. Deduplication can be performed at one of two levels: Case Level (globally deduplicates against all records in the database) or Custodian Level (deduplicates against records with the same custodian value).

- **Only test untested records -** When enabled, this option will force LAW to only process records that have not been tested previously in the deduplication process. This feature may be useful when a case has been deduplicated previously and then new records are added (and deduplication was not enabled during the import). If the "Only test records with selected custodians" option is also enabled, only untested records with the specified custodian values will be tested.

- **Only test records with selected custodians -** When enabled, this option allows the specification of one or more custodians and forces LAW to process only records with those custodians during deduplication.

  - Click the **Select** button to launch the **Custom Value Selection [Custodian]** dialog.

  - Check the boxes beside the custodians to include them in the deduplication process.

- The **Reset** button can be used to reset any options that were modified in the current session. Click Start to initialize the deduplication process.

Deduplication Information

This topic explains the deduplication process implemented in CloudNine™ LAW and the related Inter-Case Deduplication utility. Items discussed include:

- Key generation and how it relates to the deduplication of e-mail compared to electronic documents.

- A list of deduplication-related fields and possible values.

- Brief explanations of deduplication options and their resulting output.

⊟ **What is key generation?**

Deduplication technologies do not directly compare file contents. Instead, the encryption signatures, also known as the hash values, of files are compared. If the hash values for two different items are identical, the content of the two files is assumed to also be identical. Key generation then, refers to the process of creating an encryption signature for a file so that files can be easily compared. File hashing and metadata hashing are the two primary methods used by the ED Loader and Turbo Import for generating keys.

Currently, the ED Loader and Turbo Import generate two output hashes in parallel: MD5 and SHA-1. In the ED Loader and Turbo Import options you can choose which of these is used in the deduplication process.

- **E-docs.** The key value is generated using the entire file as the input.

- **E-mail.** The key value is generated using an input value of certain metadata after processing of the metadata fields has been executed. The purpose of using the post-processed metadata is to match the metadata that is stored in CloudNine™ LAW; therefore, if the key is regenerated in the future, the value would match the original. E-mail includes both e-mail messages contained in mail stores and loose e-mail messages. The term "loose e-mail" refers to a file that is identified as a mail item and successfully converted to a mail item by Outlook. These include .msg files, .eml files, and other RFC822-format e-mails.

  For Microsoft Outlook PST files, e-mail also includes non-email items — calendar items, contacts, journal entries, notes, and tasks.

Electronic Discovery in LAW uses the fields shown in the following table to generate the hash values for e-mail, loose e-mail items, and Outlook PST non-email items in CloudNine™ LAW:

E-mail fields used by deduplication keys in CloudNine™ LAW's Electronic Discovery Loader
Base Email
BCC
Body
CC
From
IntMsgID
Email_Subject
To
Attach -- These are first-level attachments in the e-mail. The strings are delimited by semi-colons (;).   - OR -   AttachmentContentHash -- If **Include attachment hashes in e-mail metadata hash** is enabled in the **ED Loader or Turbo Import Deduplication** setting, the hashes of the attached files are included in the parent e-mail's metadata hash, as opposed to the above Attach field.
Calendars
IsPrivate
IsAllDayEvent

E-mail fields used by deduplication keys in CloudNine™ LAW's Electronic Discovery Loader

IsRecurring

RecurrencePattern

Organizer

Required

Optional

Location

MeetingStatus

Label

Contacts

DisplayName

BusinessAddress

BusinessPhone

BusinessPhone2

HomeAddress

CellularPhone

GovernmentID

CustomerID

DepartmentName

ManagerName

ContactEmail

ContactEmail2

Company

Journal

IsPrivate

IsAllDayEvent

IsRecurring

RecurrencePattern

JournalType

JournalDesc

E-mail fields used by deduplication keys in CloudNine™ LAW's Electronic Discovery Loader
Notes
NotesBody
Tasks
IsPrivate
IsAllDayEvent
IsRecurring
RecurrencePattern
TeamTask
TaskCompleted
TaskDelegator
TaskOwner
TaskStatus

📝 Due to the different technologies used in CloudNine LAW's Electronic Discovery Loader verses CloudNine™ Explore and LAW's Turbo Import, the hash values generated for files in ED Loader cases versus Explore and Turbo Import cases will not always match.

CloudNine™ Explore uses the fields shown in the following table to generate the hash values for e-mail items in CloudNine™ Explore:

E-mail fields used by deduplication keys in CloudNine™ Explore and LAW's Turbo Import
// Base Email
From
To
Subject
Body
CC
BCC

E-mail fields used by deduplication keys in CloudNine™ Explore and LAW's Turbo Import
IntMsgId
AttNames
AttContent
// Elements shared with appointments and tasks
IsPrivate
IsAllDayEvent
IsRecurring
RecurrencePattern
// Appointment
Organizer
Required
Optional
Location
MeetingStatus
Label
// Journal
JournalType
JournalTypeDescription
// Task
IsTeamTask
IsCompleted
TaskDelegator
TaskOwner
TaskStatus
// Contact
DisplayName
BusinessAddress
BusinessPhone
BusinessPhone2

E-mail fields used by deduplication keys in CloudNine™ Explore and LAW's Turbo Import
HomeAddress
CellularPhone
GovernmentId
CustomerId
DepartmentName
ManagerName
ContactEmailAddress
ContactEmailAddress2
Company

⊟ Fields

LAW stores information regarding deduplication test results and other deduplication-related data in the following nine fields:

- **DupStatus**: Indicates the duplicate state of the document. This is the primary field used for differentiating duplicate items from non-duplicate items. DupStatus is a single character field and will contain one of the following values:

  - **U** - Indicates the record was not tested (not deduplicated).

  - **N** - Indicates the record was tested and was not determined to be a duplicate at the selected scope (Global/Custodian-level).

  - **G** - Indicates the record is a global-level duplicate.

  - **C** - Indicates the record is a custodian-level duplicate.

  - **P** - Indicates the "parent" duplicate. This value is set when a duplicate has been identified. The record that was assigned the "G" or "C" status will have the same _DupID value as this parent record (see _DupID field, explained below).

- **_DupID**: This field is designed to provide a mechanism for grouping duplicate records with their "parent" duplicates. A document determined to be a duplicate in ED Loader enabled cases will contain the same LAW ID field value as any other records that were determined duplicates of that particular document. The parent duplicate will store its own ID in this field. Drag and drop this field into the grouping area in one of the grid displays to view the parent and "child" duplicates together.

  A document determined to be a duplicate in a Turbo Import enabled case will contain the same LAW ID field value as any other records that were determined duplicates of that particular document. The parent duplicate will store its own ID in

this field. Drag and drop this field into the grouping area in one of the grid displays to view the parent and "child" duplicates together.

Records deduplicated via inter-case deduplication are slightly different. Parents and their duplicate records will still have matching _DupID field values; however, the value will not be pulled from the ID field in CloudNine™ LAW. This value will instead come from an ID assigned to records in the external deduplication database. The ID for each parent and duplicate will be the ID of the parent, as assigned in the tblDupLog table's DupID field.

- **_DupMethod**: Indicates which hash type was used in testing the duplicate state of the record. Possible values are:
  - 1 - MD5 hash
  - 2 - SHA-1 hash
  - 129 - MD5 hash and record was included in an inter-case deduplication process
  - 130 - SHA-1 hash and record was included in an inter-case deduplication process

- **DupCustNames**: Indicates the names of the custodians containing duplicate versions of the original record. Populated for parent/original records only (DupStatus=P) after running Tools > Apply Duplicate Relationships.

- **DupCustPaths**: Indicates the source path to each duplicate version of the original record. Populated for parent/original records only (DupStatus=P) after running Tools > Apply Duplicate Relationships.

- **DupParentName**: Indicates the custodian name of the original record. Populated for duplicate records only (DupStatus=G or C) after running Tools > Apply Duplicate Relationships.

- **DupParentPath**: Indicates the name of the custodian containing the original record. Populated for duplicate records only (DupStatus=G or C) after running Tools > Apply Duplicate Relationships.

- **MD5Hash**: Stores the MD5 hash value of the record. If a file is considered to be a duplicate, this value will be equal to the deduplication key.

- **Sha1Hash**: Stores the SHA-1 hash value of the record. If a file is considered to be a duplicate, this value will be equal to the dedup key.

⊟ Scope

Scope refers to the range of deduplication keys that will be tested to determine the record's duplicate state. The scope may be specified by the user in the ED Loader or

Turbo Import Deduplication settings, the LAW Deduplication Utility, and Inter-Case Deduplication utility.

Two kinds of scope are available:

- **Global:** The Global scope will result in the deduplication keys of incoming records being tested against ALL other keys, regardless of how the scope of other records were logged.
- **Custodian:** The Custodian scope will result in the incoming records' deduplication keys being tested against all other keys that have the same CustodianID value.

⊟ Actions

The Action options are used to limit or exclude the data stored for a record that is considered to be a duplicate. Options include:

- **(Include) Log record**: Duplicate records are added to the LAW case normally, including the native file, and all associated duplicate fields are set.
- **(Partially Exclude) Log record but do not copy file**: Duplicate records are added to the LAW case normally and all associated duplicate fields are set, but the native file is not copied to the case folder.
- **(Exclude) Do not log record or copy file**: Duplicate records are completely excluded from the case. The record is not added to LAW and the native file is not copied.

⊟ Attachments

Deduplication is only performed at the parent level, so attachments will always inherit the DupStatus of their parent item. This includes all types of attachments, such as e-mail attachments, attachments to an archive file (i.e. zip), and loose e-mail message attachments.

⊟ Filtering by file type

When the following action is selected, and **File Type Filtering** is enabled, duplicate checking is executed normally.

(Partially Exclude) File Type Filter Action and Deduplicating

Records without native files can still be flagged as duplicate parents or children.

⊟ Deleting duplicate documents

After running the deduplication process, if you delete a the parent document of a duplicate or a duplicate document itself, you can have LAW automatically update the DupStatus field and other deduplication fields for the remaining case document(s) associated with the deleted duplicate document. The Refresh duplicate status after deleting records check box on the Preferences tab in the Options dialog box controls whether the DupStatus field is updated for documents when duplicate documents are deleted from CloudNine™ LAW. By default, the check box is not selected. When the check box is selected, LAW automatically updates the DupStatus field and other fields when duplicate documents are deleted from the case.

The following fields are updated when the Refresh duplicate status after deleting records check box is selected and duplicate documents are deleted:

- _DupID
- DupStatus

The Refresh duplicate status after deleting records check box is only available for SQL LAW cases. The check box is disabled for Access cases.

The Refresh duplicate status after deleting records check box setting does not apply to any records that were deduplicated using the Inter-Case Deduplication utility.

For more information about deleting documents, see Deleting Documents, Pages and Folders.
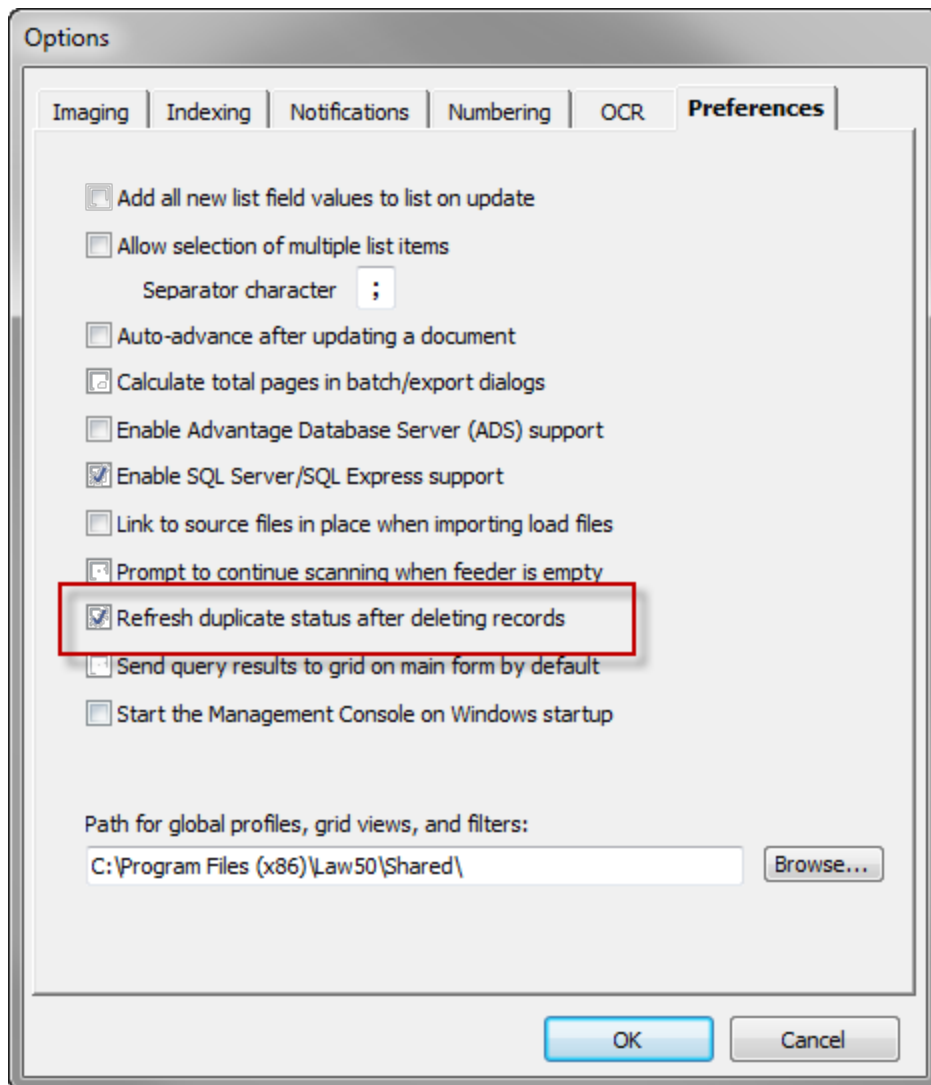
Inter-Case Deduplication

The Inter-Case Deduplication utility installs with CloudNine™ LAW but is run externally from CloudNine™ LAW. You use it to deduplicate cases against other cases. This type of deduplication is intended for cases that are already populated with documents imported via ED Loader or Turbo Import. If documents are added to the cases after the inter-case deduplication process, they can be deduplicated against the other records as well.

⚠ Inter-Case Deduplication is not designed for a combination of Turbo Import cases and Electronic Discovery cases. Turbo Import cases are hashed differently than

Electronic Discovery.   Turbo Import cases can be deduplicated against other Turbo Import cases. ED Loader cases can be deduplicated against other Ed Loader cases.

Note the following facts when considering using the Inter-Case Deduplication Utility:

- After a case is deduplicated using the Inter-Case Deduplication utility, the case should not be deduplicated using the internal Deduplication Utility, and incoming documents should not be deduplicated using ED loader.

  Doing so can lead to issues with purging, reviewing, and filtering duplicate records caused by a mixture of internal and external duplicates existing in the case. See the Deduplication and/or Deduplication Utility topics for more information about these risks and associated warnings.

- In addition to creating a database for each case, LAW also creates a database external to the case database. The external deduplication database can be created as a Microsoft SQL Server or Access database (*.MDB file).

  The purpose of this database is to maintain deduplication information. When you use the Inter-Case Deduplication Utility, the database registers each case added. Cases are ready for inter-case deduplication after they have been populated with records via the ED Loader or Turbo Import. Records added to these cases during subsequent imports can also be deduplicated.

💡 It is best practice to use SQL Server databases for deduplication due to the 2 GB limitation of Access databases. When working with large cases, the 2 GB limit can quickly be reached and exceeded.

- Member cases are LAW cases that are added to the external deduplication database with the intention of deduplicating them against each other.
  - All member cases must be ED-enabled.
  - Both SQL and Access cases are supported.

To start Inter-Case Deduplication utility

1. Click **Start**, point to **All Programs**, and then click **CloudNine™ LAW**.

2. Click **Inter-Case Deduplication Utility**. The Inter-Case Deduplication dialog box will appear.
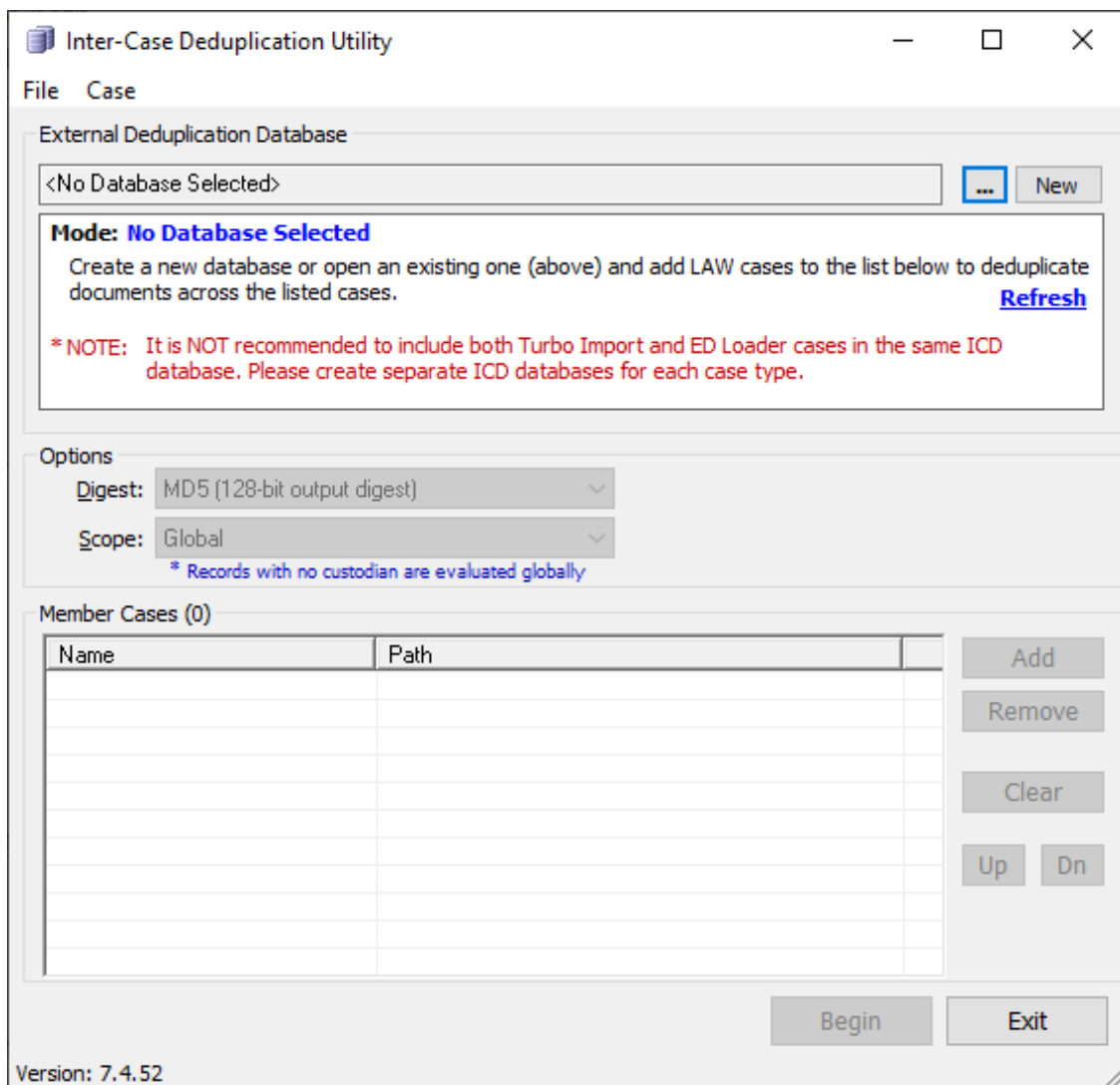
☐ **To create the external deduplication database**

> When you are creating an external deduplication database, you can create the database as a Microsoft SQL Server (.icd file) or Access (.mdb) database.

> 💡 It is best practice to use SQL Server databases for deduplication due to the 2 GB limitation of Access databases. When working with large cases, the 2 GB limit can quickly be reached and exceeded.

> **To create an external SQL deduplication database** (recommended)**:**

1. On the **File** menu click **New**. The **Select Database Type** dialog box opens. By default, the **SQL Server** option is selected.
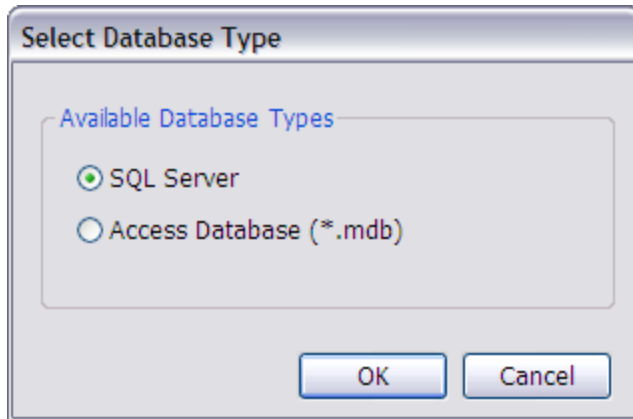
2. Make sure the **SQL Server** option is selected, and then click **OK**.

   Clicking **Accept** opens the **Server Connection Information** dialog box.
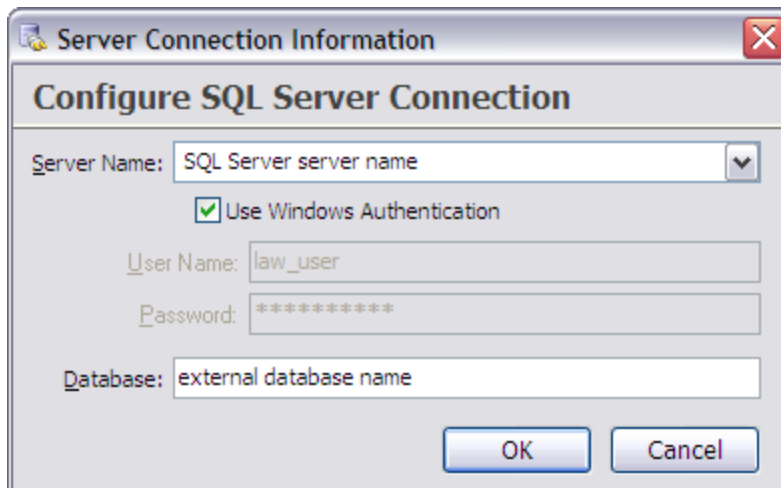
3. In the **Server Name** list, click or type the name of the server where SQL Server is installed.

   By default, the **Use Windows Authentication** check box is selected, and the **User Name** and **Password** fields are disabled.

4. If you do not want to use Windows authentication, clear the **Use Windows Authentication** check box, and in the **User Name** and **Password** fields, type the applicable SQL Server user name and password.

5. In the **Database** field, type the name of the new external deduplication database, and then click **OK**.

   Clicking **OK** opens the **Save Deduplication Project Configuration** dialog box.

6. In the **Save Deduplication Project Configuration** dialog box, browse to a location accessible to all member cases.

    The **File name** field defaults to the database name you entered in the **Database** field in the **Server Connection Information** dialog box. The **Save as type** field defaults to **Deduplication Projects (*.icd)**.

7. Click **Save**.

    Clicking **Save** closes the **Save Deduplication Project Configuration** dialog box, and in the **Inter-Case Deduplication Utility** dialog box, the path to the database is now displayed with **Mode** set to **New**. When the **Mode** is set to **New** all documents in the member cases are deduplicated against each other.

8. Set the deduplication options:

    Digest - The digest refers to the type of hash that will be used to determine duplicates. The hash values are obtained through metadata fields (e-mail) or by hashing the entire file (e-docs) during the ED Loader or Turbo Import process. Two options are available:

    - **MD5 (128-bit output digest) -** This hash value is stored in the MD5Hash field in LAW for each document.
    - **SHA-1 (160-bit output digest) -** This hash value is stored in the Sha1Hash field in LAW for each document.

    Scope - This option refers to the scope in which duplicates are tested. Two options are available:

    - **Global -** Records will be deduplicated against all records in all member cases.
    - **Custodian Level -** Records will only be deduplicated against others records with the same custodian assigned. Records with no custodian value set will be evaluated globally.

9. Move to the **Member Cases** area to add LAW cases. These cases will be deduplicated against each other in the inter-case deduplication process. See the "Member Cases" section for details.

To create an external Access deduplication database:

1. On the **File** menu click **New**. The **Select Database Type** dialog box opens. By default, the **SQL Server** option is selected.
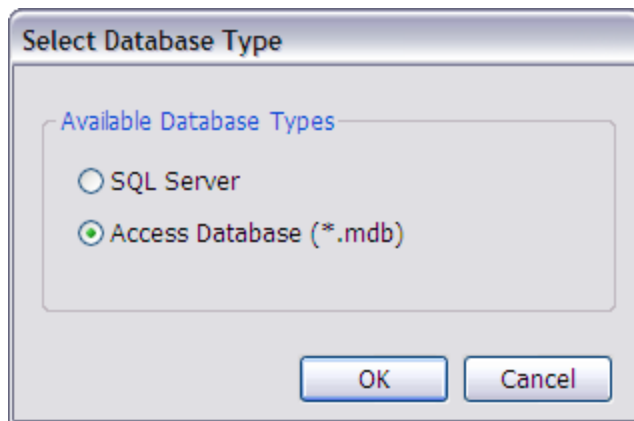
2. In the **Select Database Type** dialog box, click the **Access Database (*.mdb)** option, and then click **OK**.

   Clicking **OK** opens the **Create Deduplication Database** dialog box.

3. In the **Create Deduplication Database** dialog box, browse to a location accessible to all member cases.

   The **File name** field defaults to **DuplicateLog**, and the **Save as type** field defaults to **Deduplication Database (*.mdb)**.

4. If you want to change the database name, in the **File name** field, type the new name.

5. Click **Save**.

   Clicking **Save** closes the **Create Deduplication Database** dialog box, and in the **Inter-Case Deduplication Utility** dialog box, the path to the database is now displayed with **Mode** set to **New**. When the **Mode** is set to **New** all documents in the member cases are deduplicated against each other.

6. Set the deduplication options:

   Digest - The digest refers to the type of hash that will be used to determine duplicates. The hash values are obtained through metadata fields (e-mail) or by hashing the entire file (e-docs) during the ED Loader or Turbo Import process. Two options are available:

   - **MD5 (128-bit output digest) -** This hash value is stored in the MD5Hash field in LAW for each document.
   - **SHA-1 (160-bit output digest) -** This hash value is stored in the Sha1Hash field in LAW for each document.

   Scope - This option refers to the scope in which duplicates are tested. Two options are available:

   - **Global -** Records will be deduplicated against all records in all member cases.
   - **Custodian Level -** Records will only be deduplicated against others records with the same custodian assigned. Records with no custodian value set will be evaluated globally.

7. Move to the **Member Cases** area to add LAW cases. These cases will be deduplicated against each other in the inter-case deduplication process. See the "Member Cases" section for details.

 To open an existing database

You can open an existing database from a previous deduplication session.

1. Click the ellipsis button that is located to the left of the **New** button.

   Or on the **File** menu click **Open**.

2. Browse to and select the external Access deduplication database (*.mdb) or project configuration file for SQL (*.icd), and then click **Open**.

   If the database has already been used in the inter-case deduplication process, the Mode will change to **Resume/Append**.

 To add cases

1. Click the **Add** button.

   Or on the **Case** menu click **Add**.

2. Browse to and select the project.ini file for the case, located in the root of the LAW case folder.

3. Click **Open**.

   Cases can also be added to the list by dragging and dropping one or more root case folders (folder containing the project.ini) or the project.ini file itself into the Member Cases grid. Once added, the case names and paths will be listed in the grid and the number in parentheses beside Member Cases will increment by one for each added case. Since the cases are validated at the time they are added to the grid, an error will occur at this time if the case does not meet the requirements for inter-case deduplication, such as the case not being ED-enabled.

   Once the member cases have been added, the Up and Dn keys (or Case > Move Up | Move Down) may be used to specify the order in which records are deduplicated. The first case shown in the grid will be processed first, the second case is next, and so on. These buttons can only be used in New or Rebuild/Flush mode.

   The Remove button (or Case > Remove) can be used to remove the selected LAW case from the Member Cases grid. The Clear button (or Case > Clear) will remove all cases from the grid. These buttons can only be used in New or Rebuild/Flush mode.

 To determine deduplication status

Once the external database has been specified, the options have been set, and the member cases have been added, click **Begin** to start the inter-case deduplication process. Note the following facts about the Inter-Case Deduplication Progress screen:

- The **Progress** area provides both visual (progress bar) and textual indicators of how much work is remaining and what has been done thus far.

- The **Errors** value is a count of all errors that occurred during processing. The total error count will be displayed in a summary screen once processing has been completed.

- The **Summary** screen will appear once the deduplication process has been completed, canceled, or aborted due to some sort of error condition. For a successful process, the summary will show the Digest and Scope options that were selected and the total number of member cases included in the process. The summary will also list total counts for documents loaded, duplicate records, and errors at a case level. The "Documents Loaded In This Session" value is the total number documents, not including any attachment records, that were loaded in the current deduplication session. The "Duplicates" value will show the total number of duplicates in each listed case and also does not include any attachment records in the count.

- If errors occurred during processing, a **View Errors** button will be included at the bottom of the Summary screen. Click this button to view the error details. The log file that appears is stored in <drive>\Documents and Settings\<user>\Application Data\Law50\LawInterCaseDedup\LawInterCaseDedup.ErrorLog.txt. The Elapsed field displays the amount of time that has passed during the process.

- If an error occurs during processing that aborts the deduplication process completely, the **Summary** screen will appear with a message stating the process was aborted. Similar behavior will occur if the process is cancelled by the user. The Summary screen will appear with a message stating the process was cancelled.

- **To save the contents of the summary to a text file:**

  1. On the **File** menu, click **Save As** from the **Summary** screen.

  2. Browse to the desired location, type a file name, and then click **Save**.

📝 Errors that halt processing or cancelling the deduplication process will both result in the database entering Rebuild/Flush mode.

⊟ Deduplication fields

LAW contains a number of system fields to store deduplication-related information about each document in a case. The Inter-Case Deduplication utility writes to two of those fields (_DupID and _DupMethod) differently than the ED Loader or Turbo Import deduplication and Deduplication Utility in CloudNine™ LAW. Please see the Deduplication Information topic for a list of these fields, their descriptions, and possible values. Field information for all LAW fields can also be found in the Field Descriptions topic.

⊟ **Deduplication mode values**

The Mode indicator shown below the External Deduplication Database path will display one of four possible mode values:

- **No Database Selected** - This mode will be set when no external deduplication database is selected. See the "External Deduplication Database" section above for information on creating and opening existing databases.

- **New** - This mode will be set when the selected external deduplication database has not yet been involved in the inter-case deduplication process. The New mode will occur when a new database is created or when an existing database is selected but has not yet been through the deduplication process.

- **Resume/Append** - This mode will be set when the selected external deduplication database has already been through the deduplication process. When the external database is in this mode, only documents added to member cases since the database's previous deduplication session will be added and deduplicated against each other and the existing documents in the database. When the process is run again on this existing database, the Summary screen will show the total number of documents added in the session (documents loaded in member cases after previous deduplication session) and the total number of duplicates in the cases.

- **Rebuild/Flush** - This mode indicates that the external database was previously in Resume/Append mode, but a change was made to one of the member cases that requires that the external database be rebuilt. Functionally, this mode is the same as the New mode, as the cases will need to be re-deduplicated once this mode has been assigned. A "Click here for 'Rebuild/Flush' details" link will become available beside the mode value. Clicking this link will launch a message box that lists the reasons why the deduplication database was placed in Rebuild/Flush mode. The following actions are possible reasons for this mode or occur:
  - Cancelling the inter-case deduplication process
  - Deleting a document from a member case
  - Renaming, removing, or adding a custodian in a member case when the Custodian Level scope was used
  - Deduplicating a member case using ED Loader or Turbo Import Deduplication or the internal Deduplication Utility

The **Refresh** button can be used to inspect member cases for changes that may the mode. If changes are detected, the mode will be updated to the correct state.

⊟ **To review duplicates**

The Duplicate Viewer is a tool that can be used to review records in a case or multiple cases that have been flagged as duplicates by one of LAW's deduplication methods (ED Loader Deduplication, Turbo Import Deduplication, Deduplication Utility, or Inter-Case Deduplication).

Please see the Duplicate Viewer topic for details.

⊟ **To apply duplicate relationships to original files (Version 6.17+)**

Once the files in a case have been imported and deduplicated, you can apply duplicate relationships to the original files associated with duplicate files using the Apply Duplicate Relationships command in CloudNine™ LAW.

The Apply Duplicate Relationships command populates the following fields for the original files that have duplicate files in a case:

- DupCustNames
- DupCustPaths
- DupParentName
- DupParentPath

The fields indicate the custodian name and location of the duplicate files and the parents of the duplicate files. For more information about these fields, see Field Descriptions.

For more information, see Applying Duplicate Relationships.

Duplicate Viewer

The Duplicate Viewer is a tool that can be used when reviewing records in an ED-enabled or Turbo Import enabled case that were flagged as duplicates or near duplicates. Records are flagged as duplicates by one of the deduplication methods: ED Loader Deduplication, Turbo Import Deduplication, Deduplication Utility, or Inter-Case Deduplication. And records are flagged as near duplicates by the Near-Duplicate Analysis. This viewer contains two tabs: Duplicates and Near-Duplicates, and presents a tree view of documents identified as duplicates or near duplicates. On the Duplicates tab, you can select documents to see whether or not the record is a duplicate, and then navigate to any duplicates that exist in the current case or other LAW case. On the Near Duplicates tab you can select documents to see whether or not the record is a near duplicate, and then navigate to any near duplicates that exist in the current case.

The Duplicate Viewer displays on top of the main LAW form. When you navigate documents in the main document list or in one of the grid displays the viewer updates, ensuring the duplicate or near-duplicate information matches the current record.

For more information about using the Duplicate Viewer for near duplicates, see Viewing Near Duplicates.

✎ Attachment records are not listed in the Duplicate Viewer.

To start the Duplicate Viewer

1. In the main window, in the folder tree, select a file.

2. On the **Tools** menu, click **Duplicate Viewer**.

   Clicking Duplicate Viewer opens the Duplicates tab in the Duplicate Viewer dialog box. The file that you selected is listed either as a duplicate or not. The following graphic shows a file determined not to be a duplicate:
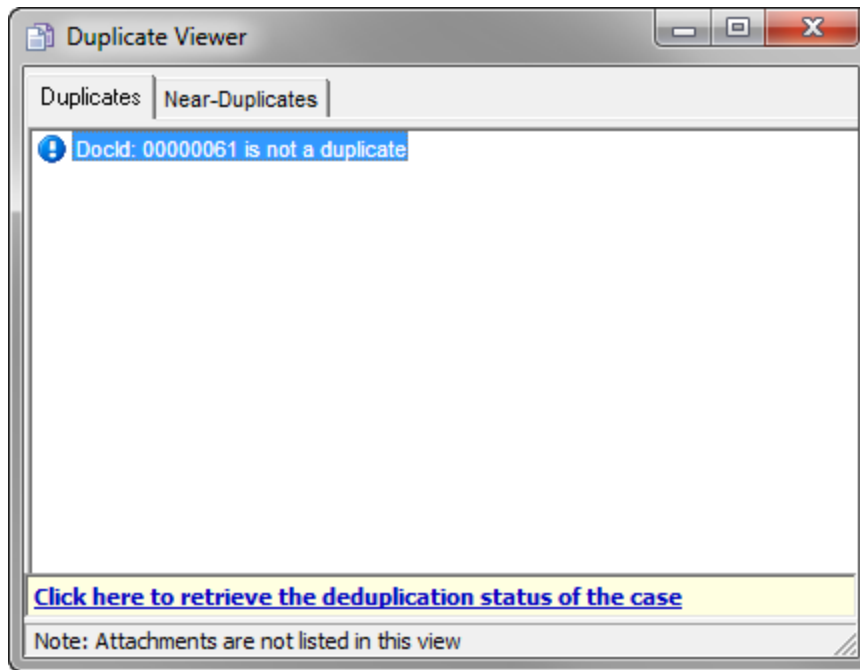
    The next graphic shows three files determined to be duplicates.
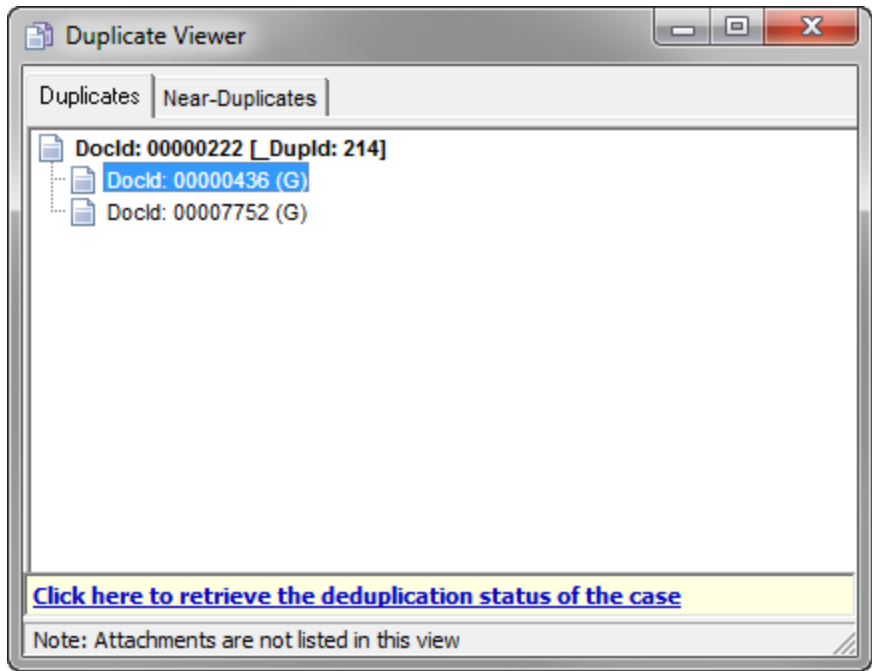
- If the file is determined to be a duplicate, it appears in the context of a tree control connected to its duplicates.
- The top-level duplicate file is assigned a duplicate ID, which is visible after the record ID,

3. Navigate to any file in the tree control by clicking on it.

⊟ To interpret duplicate status of a file

The possible statuses the Duplicate Viewer provides are described in the following table:

Status	Description
There is currently no document selected.	When Duplicate Viewer was started, no document was selected. Close the viewer, select a file from the folder tree, and then restart the viewer.
Document does not appear to be ED (native) document.	The document selected is a TIFF or other non-native file type. Close the viewer, select a different file, and then restart the viewer.

⊟ To retrieve the duplicate status of a case

1. In the main window, on the **Tools** menu, click **Duplicate Viewer**.
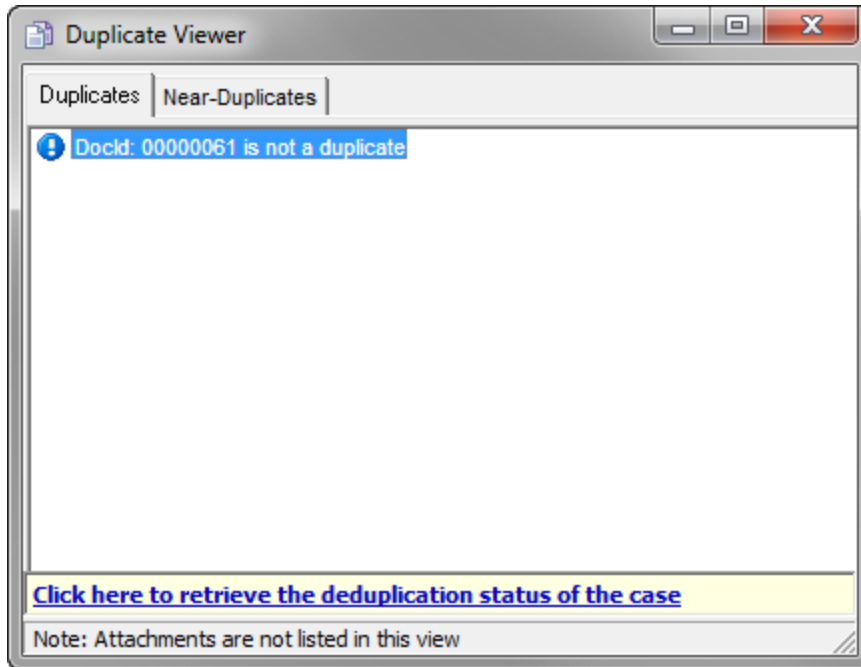
2. On the **Duplicates** tab, select the **Click here to retrieve the deduplication status of the case** link.

3. The deduplication status for the case appears in the lower-left area of the window.
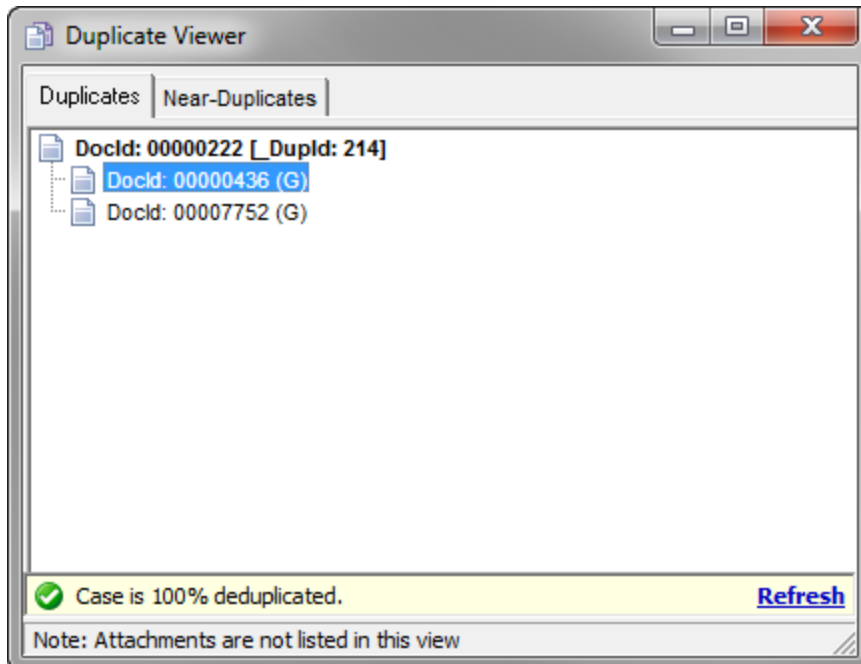
The possible statuses the Duplicate Viewer provides are described in the following table:

Status	Description
Case is 100% deduplicated.	The number of deduplicated records in the case matches the number of records in the case.
<ERROR> Could not determine the case level deduplication status.	The number of deduplicated records in the case is less than the number of documents in the case. This result could be caused, for example, if new files were added to a case after the case was deduplicated.

Applying Duplicate Relationships

Once the files in a case have been imported and deduplicated using ED Loader, Turbo Import, or the Duplication Utility in CloudNine™ LAW, you can apply duplicate relationships to the original files associated with duplicate files using the Apply Duplicate Relationships command in CloudNine™ LAW. The Apply Duplicate Relationship command is available on the Tools menu (Tools menu > Apply Duplicate Relationships) and on the Tools tab in the Deduplication Utility.

📝 The Apply Duplicate Relationship command cannot be used on files deduplicated using the Inter-Case Deduplication Utility.

The Apply Duplicate Relationships command populates the following fields for the original files that have duplicate files in a case:

- DupCustNames
- DupCustPaths
- DupParentName
- DupParentPath

The fields indicate the custodian name and location of the duplicate files and the parents of the duplicate files. For more information about these fields, see Field Descriptions.

For more information about running the Apply Duplicate Relationships command from the Deduplication Utility, see Deduplication Utility.

⊟ **To apply duplicate relationships from the Tools menu**

1. In the main LAW window, on the **Tools** menu, click **Apply Duplicate Relationships**.

   Clicking **Apply Duplicate Relationships** starts the command. When the process is completed the **Duplicate Relationship Update Status** dialog box opens.
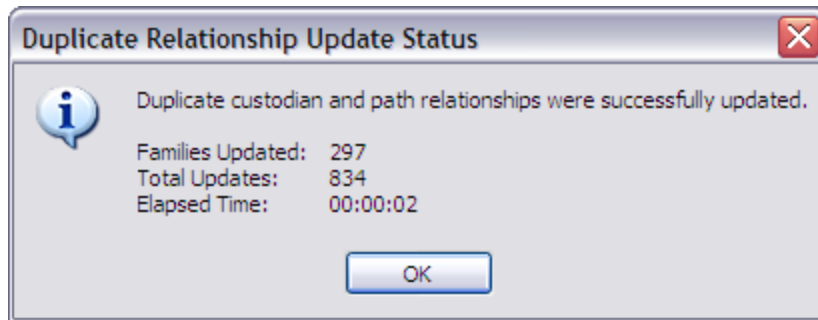
The **Duplicate Relationship Update Status** dialog box indicates whether duplicate custodian and path relationships were successfully updated, and indicates the total number of document families that were updated, the total number of files updated, and the amount of time it took for the process to complete.

2. Click **OK** to close the **Duplicate Relationship Update Status** dialog box.

Near-Duplicate & Email Thread Analysis

About Near-Duplicate & Email Thread Analysis

Near duplicates are documents that have duplicate content, but are not necessarily exact duplicates of each other. Email threads are email messages belonging to the same email conversation thread. An email thread includes the original email message, all of the subsequent replies pertaining to the original email, and any attachments to the email messages. In CloudNine™ LAW, you can run the Near-Duplicate & Email Thread Analysis utility to identify the near-duplicate documents and email threads within a case. The Near-Duplicate & Email Thread Analysis utility uses the CloudNine Near Dupe and CloudNine Email Thread engines.

📝 The Near-Duplicate & Email Thread Analysis utility can only run on SQL LAW cases that have been enabled for electronic discovery. The utility is not supported for Access cases.

📝 The Near-Duplicate & Email Thread Analysis utility can only run on one machine at a time.

In order to use the Near-Duplicate & Email Thread Analysis utility, you will need the Near-Duplicate/Email Thread license. You will also need the license to see the near-duplicate results, status, and compare near-duplicate documents from the Duplicate Viewer. The Near-Duplicate & Email Thread license is only used by LAW on an as-needed basis, so the license is only displayed in the in the LAW Profile Manager (Administration Mode). The license is not displayed in the license list in the LAW Management Console (LMC) or License Information dialog box (Help > About LAW > Licenses).

⊟ **Near-Duplicate Analysis**

After running the near-duplicate analysis, you can view the near-duplicate results and compare near-duplicate documents from the Near-Duplicates tab in the Duplicate Viewer dialog box.

The Duplicate Viewer indicates the case's near duplication status, the number of near-duplicate documents associated with the selected document, and the percentage of similarity between the near-duplicate documents and the original "master" document. Near-Duplicate & Email Thread Analysis identifies documents with redundant text to help ensure you are only processing documents essential to the case. The Near-Duplicate & Email Thread Analysis results include near-duplicate documents without text. For email messages, the Near-Duplicate & Email Thread Analysis only compares the email message body content between email messages. It does not compare email headers or quoted prior messages.

In near duplication, a family is a collection of one or more near-duplicate documents. The near-duplication process assigns a master document to each family. The master document is the document most representative of the document family. Within a family, the master document is the one with the greatest overall similarity to all the other documents in the family. It has to be a near-duplicate of every other document in the family. The Family Threshold setting in the Near-Duplicate & Email Thread Analysis utility determines the percentage of similarity between the master document and the documents within its document family.

A document cluster contains documents more loosely related to each other than a document family. The documents in a cluster contain similar content. How similarly the documents are related is determined by the Cluster Threshold setting. Documents assigned to a document cluster will have a percentage of similarity at or above the current Cluster Threshold setting in the Near-Duplicate & Email Thread Analysis utility. Documents which have no direct relationship to each other might still belong to the same cluster, as long as there is some chain of relationships at or above the Cluster Threshold setting that connects them. There is no limit on how long this chain can be, so two documents in the same cluster may be very distant cousins with no apparent similarity.

You can also view near-duplicate information for the case by reviewing the data in the near-duplicate fields created and populated by the utility. You can review the near-duplicate fields for individual case documents on the Index tab in the main LAW window or review near-duplicate fields for multiple documents in the grid view.

For more information, see Viewing Near Duplicates.

⊟ **Near-Duplicate Fields**

After running the near-duplicate analysis, 7 near-duplicate fields are automatically added to the case's field list and populated with the applicable near-duplicate data for the case's documents.

Near-Duplicate Fields:

- ND_ClusterID
- ND_ContentHash
- ND_FamilyID
- ND_IsMaster
- ND_ResultSet
- ND_Similarity
- ND_Sort

For more information about these and other LAW fields, see Field Descriptions.

⊟ **Email Thread Analysis**

After running the email thread analysis, you can view email thread information for the case by reviewing the data in the email thread fields created and populated by the utility. You can review the email thread fields for individuals case documents on the Index tab in the main LAW window or review email thread fields for multiple documents in the grid view.

For more information, see Viewing Email Threads.

⊟ **Email Thread Fields**

After running the email thread analysis, 13 email thread fields are automatically added to the case's field list and populated with the applicable email thread data for the case's documents.

Email Thread Fields:

- ET_Conversants
- ET_Inclusive
- ET_InclusiveReason
- ET_Indent

- ET_IsMessage
- ET_MessageId
- ET_MetaUpdate
- ET_ParentId
- ET_ThreadId
- ET_ThreadIndex
- ET_ThreadModified
- ET_ThreadSize
- ET_ThreadSort

For more information about these and other LAW fields, see Field Descriptions.

Running Near-Duplicate & Email Thread Analysis

Before you can view near duplicates and email threads in a case, you will need to run the near-duplicate analysis and email thread analysis using the Near-Duplicate & Email Thread Analysis utility. Once you run the near-duplicate analysis and email thread analysis, you can view near-duplication information and view and compare duplicates for the case, and view the email threads in the case. In the Near-Duplicate and Email Thread Analysis utility, you can choose whether to run just the near-duplicate analysis or email thread analysis, or run both analyses for a case.

⊟ **To run the Near-Duplicate & Email Thread Analysis**

The Near-Duplicate/Email Thread license is required to run the Near-Duplicate & Email Thread Analysis utility.

1. On the **Tools** menu, click **Near-Duplicate & Email Thread Analysis**.

   Clicking **Near-Duplicate & Email Thread Analysis** opens the **Near-Duplicate & Email Thread Analysis** dialog box, and the Near-Duplicate & Email Thread Analysis utility automatically runs, examining the case and displaying the case's current near-duplication and email thread status. The **Refreshing** status is displayed while the utility examines the case. After the utility finishes examining the case, the **Up to date** or **Out of date** status is displayed for **Near Duplicate** and **Email Threading**.

📝 If you import a LAW case using the File menu > Import menu > Law Case feature,

and the case's documents have already been analyzed by the Near Duplicate & Email Thread Analysis utility, the status will be displayed as Out of Date until you re-run the utility against the imported case.
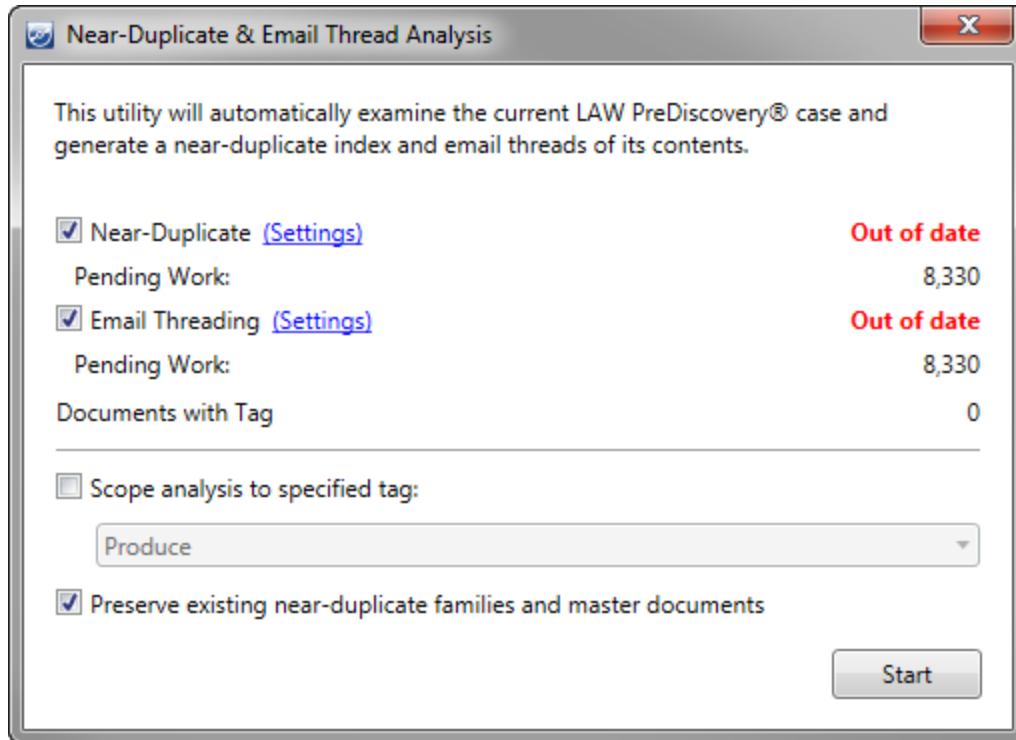
The following near-duplicate information is displayed for the current case:

- **Near-Duplicate.** The near-duplicate analysis status for the current case.
- **Pending Work.** Total number of documents to be analyzed for near-duplicates in the current case.
- **Email Threading.** The email thread analysis status for the current case.
- **Pending Work.** Total number of documents to be analyzed for email threads in the current case.
- **Documents with Tag.** Total number of documents in the current case assigned the tag currently selected in the Scope analysis to specified tag list. If the **Scope analysis to specified tag** check box is not selected, the **Documents with Tag** field is set to **0**.

2. To run the near-duplicate analysis, select the **Near-Duplicate** check box.

   To disable the near-duplicate analysis, clear the **Near-Duplicate** check box.

   If the near-duplicate analysis status is **Out of date**, the **Near-Duplicate** check box will automatically be selected. If the near-duplicate analysis status is **Up to date**, the **Near-Duplicate** check box is not selected.

3. To run the email thread analysis, select the **Email Threading** check box.

    To disable the email thread analysis, clear the **Email Threading** check box.

    If the email thread analysis status is **Out of date**, the **Email Threading** check box will automatically be selected. If the email thread analysis status is **Up to date**, the **Email Threading** check box is not selected.

    Each time the **Near-Duplicate & Email Thread Analysis** dialog box is opened, it will retain the last settings for the **Near-Duplicate** and **Email Threading** check boxes.

4. If you want to modify the near-duplicate analysis settings, click the **Settings** link next to **Near Duplicate**.

    Clicking the **Settings** link opens the **Near-Duplicate Settings** dialog box.
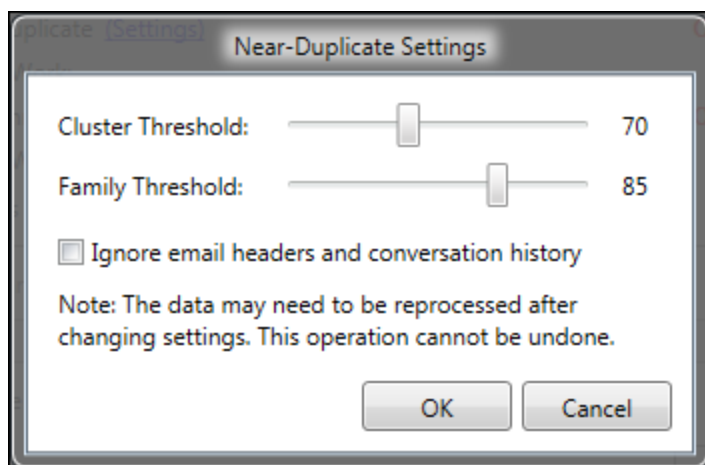
If you modify any of the settings in the **Near-Duplicate Settings** or **Email Threading Settings dialog box**, you may need to rerun the Near-Duplicate & Email Thread Analysis utility to apply the new near duplicate and email threading settings to the case.

If you need to rerun the utility to reanalyze the case documents after changing the settings, the **Near-Duplicate** and/or **Email Threading** status change from **Up to date** to **Out of date**.

5. The **Cluster Threshold** setting determines the minimum similarity to be considered when assigning clusters of related documents. The **Family Threshold** setting determines the minimum similarity to be considered when assigning documents to near-duplicate families. By default, the **Cluster Threshold** is set to **70** and the **Family Threshold** is set to **85**. Once you run the Near-Duplicate & Email Thread Analysis utility, the utility retains the last cluster and family threshold settings. If you want to change the cluster and/or family threshold for analyzing the new case documents, adjust the **Cluster Threshold** and/or **Family Threshold** settings.

To adjust the **Cluster Threshold** and **Family Threshold** settings, click and move the slider to the left or right to change the threshold. Moving the slider to the right increases the threshold, and moving the slider to the left decreases the threshold.

The **Ignore email headers and conversation history** check box determines whether the Near-Duplicate & Email Thread Analysis utility performs the near-duplicate analysis on all text within an email message or only the top-level message body of an email message. By default, the check box is not selected. When the check box is not selected, the near-duplicate analysis is performed on all text within an email message.

6. To limit the near-duplicate analysis to only the top-level message body for email messages, select the **Ignore email headers and conversation history** check box. To have the near-duplicate analysis review all text within an email message, make sure the **Ignore email headers and conversation history** check box is not selected.

7. Click **OK**.

   Clicking **OK** saves the near-duplicate settings and closes the **Near Duplicate Settings** dialog box.

8. If you want to modify the email threading analysis settings, click the **Settings** link next to **Email Threading**.

   Clicking the **Settings** link opens the **Email Threading Settings** dialog box.
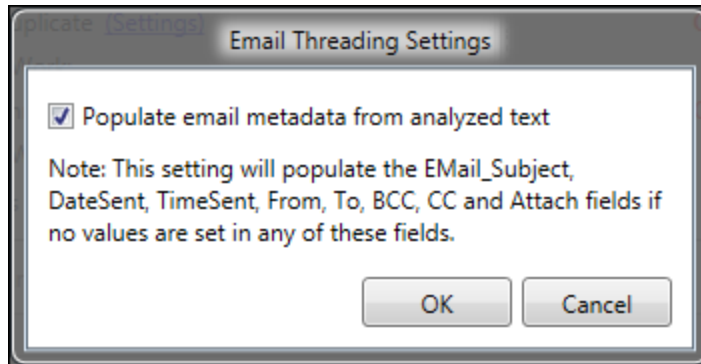
📝 If you modify any of the settings in the **Near-Duplicate Settings** or **Email Threading Settings dialog box**, you may need to rerun the Near-Duplicate & Email Thread Analysis utility to apply the new near duplicate and email threading settings to the case.

   If you need to rerun the utility to reanalyze the case documents after changing the settings, the **Near-Duplicate** and/or **Email Threading** statuses change from **Up to date** to **Out of date**.

   The **Populate email metadata from analyzed text** check box determines whether the Near-Duplicate & Email Thread Analysis utility will populate the following fields from the text analyzed in the email messages:

⚠ Please note that if there are values in the following fields from extracted metadata and **Populate email metadata from analyzed text** is enabled, then the values will be overwritten with the information from the text. In some cases the values may be overwritten with blank values, if LAW had extracted the metadata during import for the field and there is not a value showing in the text.

This feature is best utilized when performed on emails that were previously converted to PDF format and do not have any metadata for the following fields.

EMail_Subject

DateSent

TimeSent

From

To

BCC

CC

Attach

The Near-Duplicate & Email Thread Analysis utility also populates the ET_MetaUpdate field. If the check box is selected, then ET_MetaUpdate field is populated with a Y for yes. If the check box is not selected, the ET_MetaUpdate field is populated with an N for no.

For more information about these fields see, Field Descriptions.

By default, the **Populate email metadata from analyzed text** check box is not selected. Once you run the Near-Duplicate & Email Thread Analysis utility, the utility retains the last **Populate email metadata from analyzed text** check box setting.

9. If you want the utility to populate the fields if they do not contain any values, select the **Populate email metadata from analyzed text** check box.

Clear the check box if you do not want the utility to populate the fields.

10. Click **OK**.

Clicking **OK** saves the email threading settings and closes the **Email Threading Settings** dialog box.

By default, the **Scope analysis to specified tag** check box is not selected and the **Preserve existing near-duplicate families and master documents** check box is selected. Once you run the utility the check boxes retain the last settings for the check boxes. So if a check box was selected, the next time you open the Near-Duplicate & Email Thread Analysis utility, the check box will be selected.

11. If you want the Near-Duplicate & Email Thread Analysis utility to only analyze documents containing a specific tag, select the **Scope analysis to specified tag** check box and in the tag list, click the applicable tag.

When the **Scope analysis to specified tag** check box is selected, the **Document with Tag** field displays the number of documents in the case the selected tag is currently applied to.

When the **Preserve existing near-duplicate families and master documents** check box is selected, the Near-Duplicate & Email Thread Analysis utility will retain the existing near-duplicate family and master document IDs already assigned to the documents in the ND_IsMaster and ND_FamilyhID fields when the utility previously ran. Any new documents identified in an existing near-duplicate family will be added into the existing near-duplicate family.

When the **Preserve existing near-duplicate families and master documents** check box is not selected any existing near-duplicate family and master document data, such as IDs, is deleted and new near-duplicate data is assigned to all master documents and documents within a near-duplicate family.

12. If you want to retain existing near-duplicate family and master document data, select the **Preserve existing near-duplicate families and master documents** check box.

Clear the check box if you want to delete existing near-duplicate family and master document data and have the utility reassign new near-duplicate data.

13. Click the **Start** button.

Clicking the **Start** button saves all the near-duplicate and email threading settings and starts the Near-Duplicate & Email Thread Analysis utility. The **Near Duplicate & Email Thread Analysis** status dialog box is displayed while the utility runs.
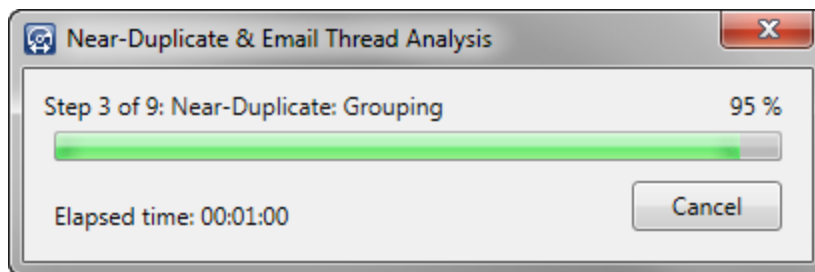
If the Near-Duplicate & Email Thread Analysis utility encounters any errors during the process, an error log is generated and saved as a .log file in the LAW case directory. By default, the near-duplicate and email thread analysis error logs are stored in the **...Program Files (x86)\Law50\Cases\[case name folder]\$Logs\NearDup** directory.

During the near-duplicate and email thread analysis process, the utility generates a near-duplicate and email threading index of every case file, unless the **Scope analysis to specified tag** check box is selected. In that scenario, the utility generates a near-duplicate and email threading index of the case files tagged with the selected tag. Once the Near-Duplicate & Email Thread Analysis utility

successfully finishes running, the *Analytics Processing Complete* message is displayed.
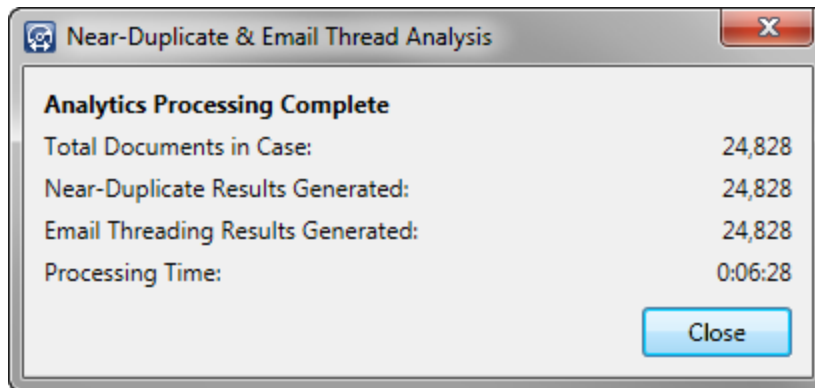
14. Click **Close**.

If you ran the near-duplicate analysis, you can now view and compare the case's near-duplicate documents in the **Duplicate Viewer** dialog box. If you ran the email thread analysis, you can now view the email threading information for the case's documents in the grid view.

For more information, see Viewing Near Duplicates and Viewing Email Threads.

Viewing Near Duplicates

Before you can view near duplicates in a case, you will need to run the near-duplicate analysis in the Near-Duplicate & Email Thread Analysis utility. Once you run the analysis, you can view a case's near-duplication status in the Near-Duplicate & Email Thread Analysis dialog box and view and compare near duplicates from the Near-Duplicates tab in the Duplicate Viewer dialog box. Document clusters are not displayed in the Duplicate Viewer dialog box.

You can also view a case's near-duplicate information in the near-duplicate fields generated by the Near-Duplicate & Email Thread Analysis utility. You can view near-duplicate information for individual documents on the Index tab in the main LAW window, or view near-duplicate information for multiple documents at one time using the grid view. The same can be done for the email thread fields created and populated by the Near-Duplicate & Email Thread Analysis utility.

⊟ **To view a document's near duplicates**

1. In the main window, in the folder tree, select a file.

2. On the **Tools** menu, click **Duplicate Viewer**.

    Clicking **Duplicate Viewer**, opens the **Duplicates** tab in the **Duplicate Viewer** dialog box.

3. Click the **Near-Duplicates** tab.

    If there are no near duplicates associated with the selected file, *No Near-Duplicates found for document* is displayed next to the file's DocId.
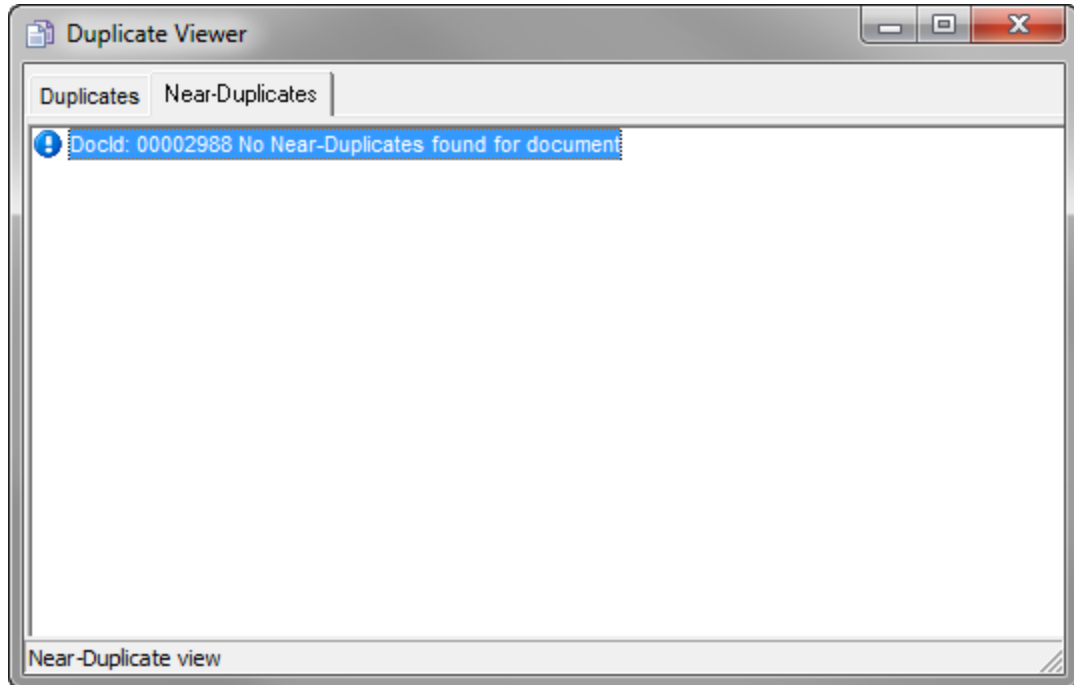
If there are near duplicates associated with the selected file, the near duplicates, their DocID, and the percentage of similarity between the near-duplicate documents and the master document are listed below the master document's DocId.

In the following example, there are five near duplicates associated with the selected file.
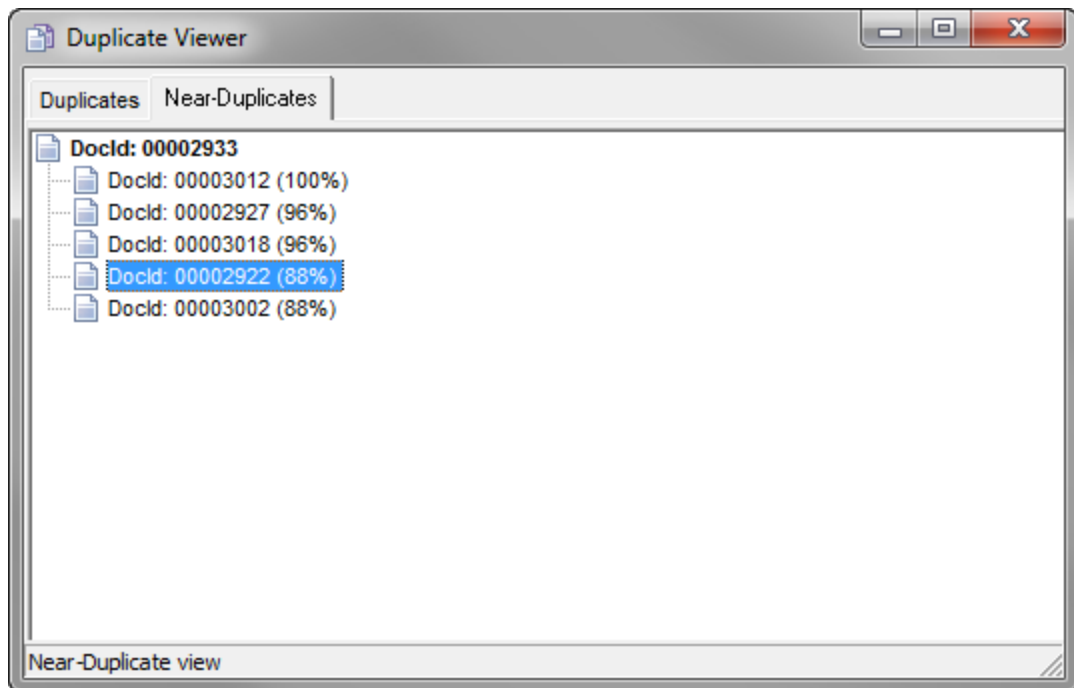
The Duplicate Viewer and and the main window in LAW are synchronized, so you can navigate to any file listed on the Near-Duplicates tab by clicking the file in the tree view. The selected file is automatically selected and displayed on the main window in CloudNine™ LAW.

☐ <u>**To compare a document to its master document**</u>

The near duplication process assigns a master document to each document family. The master document is the document most representative of the document family. A master document is usually the original document in an e-mail thread, or the document in a document family or document cluster with the earliest date.

In LAW you can compare a document with its master document or compare two related near-duplicate documents. Next to each document listed on the Near-Duplicates tab in the Duplicate Viewer dialog box is a percentage. The percentage indicates the similarity between the near-duplicate documents and the original "master" document.

1. In the main window, in the folder tree, select the file you want to compare with its master document.

2. On the **Tools** menu, click **Duplicate Viewer**.

   Clicking **Duplicate Viewer**, opens the **Duplicates** tab in the **Duplicate Viewer** dialog box.

3. Click the **Near-Duplicates** tab.

4. Right-click on the DocID for the document, and then click **Compare to Master**.
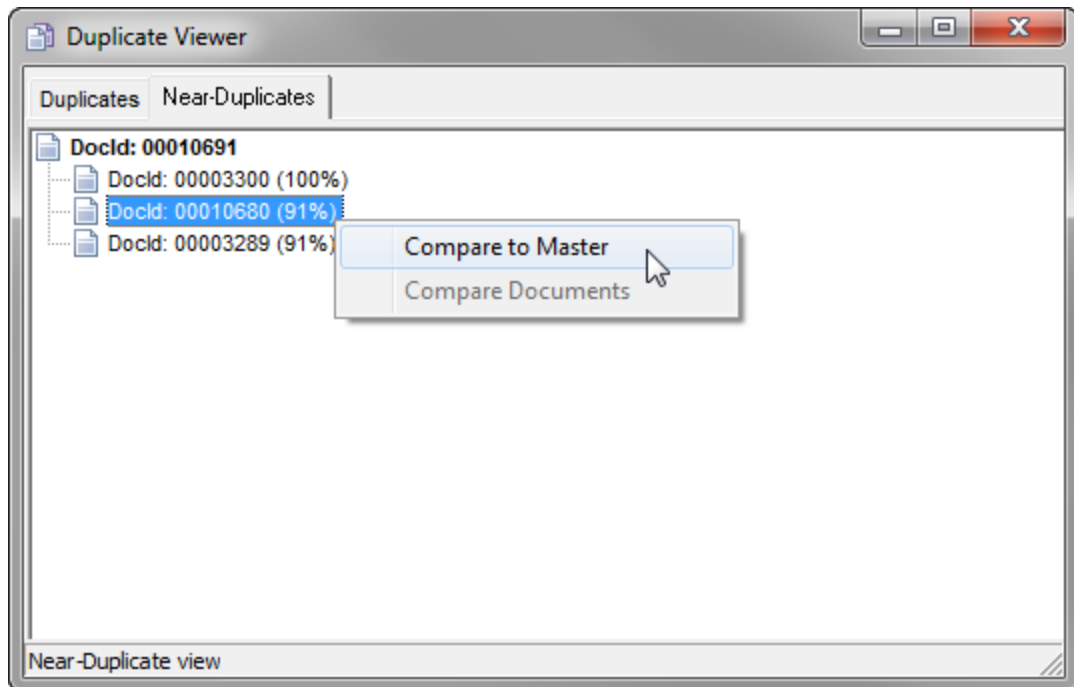
You can also right-click on any near-duplicate document associated with the selected document, and click **Compare to Master** to compare the near-duplicate document to the master document.

Clicking **Compare to Master** opens the **Near-Duplicate Viewer** dialog box for the selected document and the master document.
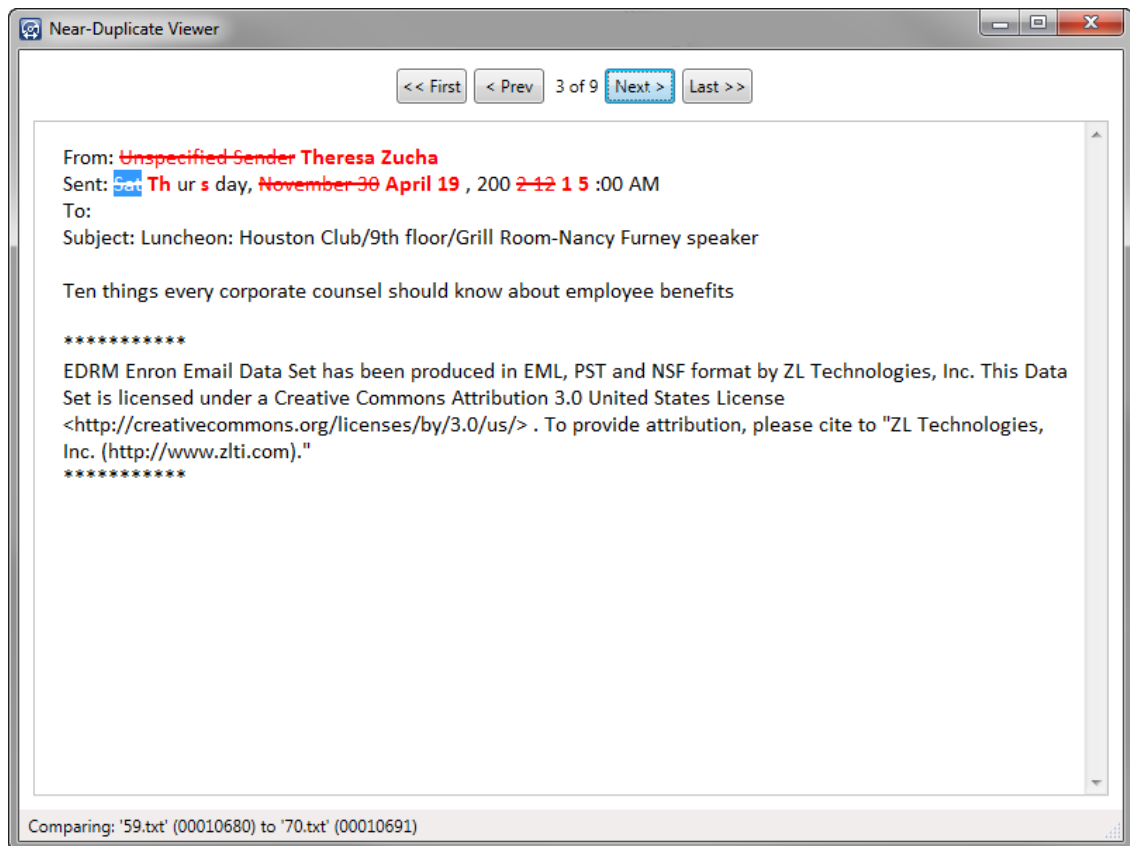
The differences between the selected document and the master are displayed in red text, with the original value struck out and the new value is displayed in bold next to the original value.

At the top of the **Near-Duplicate Viewer** dialog box are navigation buttons. Between the **First** and **Prev** buttons and the **Next** and **Last** navigation buttons, the number of the current difference out of the total number of differences between the selected document and its master are displayed. The difference currently selected is highlighted in blue. You can also navigate to the previous difference using the left arrow keyboard button, and navigate to the next difference using the right arrow keyboard button.

If the documents match 100%, the navigation buttons are disabled and **0 of 0** is displayed, and the document content is not marked up in the **Near-Duplicate Viewer** dialog box.

The name of the files being compared is displayed in the lower-left corner of the dialog box. You can have more than one **Near-Duplicate Viewer** dialog boxes open at one time.

To compare two near-duplicate documents

Besides comparing a document with its master document, you can also compare two near-duplicate documents that belong to the same near-duplicate family or cluster.

1. In the main window, in the folder tree, select the file you want to compare with another document.

2. On the **Tools** menu, click **Duplicate Viewer**.

   Clicking **Duplicate Viewer**, opens the **Duplicates** tab in the **Duplicate Viewer** dialog box.

3. Click the **Near-Duplicates** tab.

4. Select the two documents you want to compare.

   To select two documents, click the DocId for the first document, then press and hold down the **Ctrl** key, and then click the DocId for the second document.

5. Right-click on the selected documents, and then click **Compare Documents**.
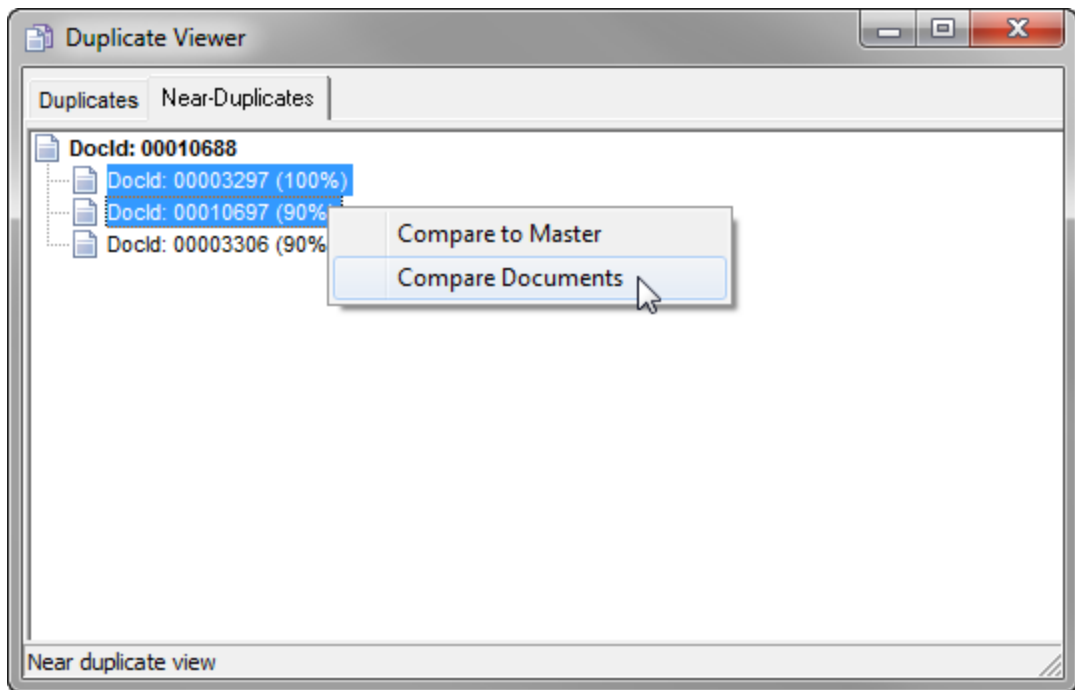
Clicking **Compare Documents** opens the **Near-Duplicate Viewer** dialog box for the selected documents.
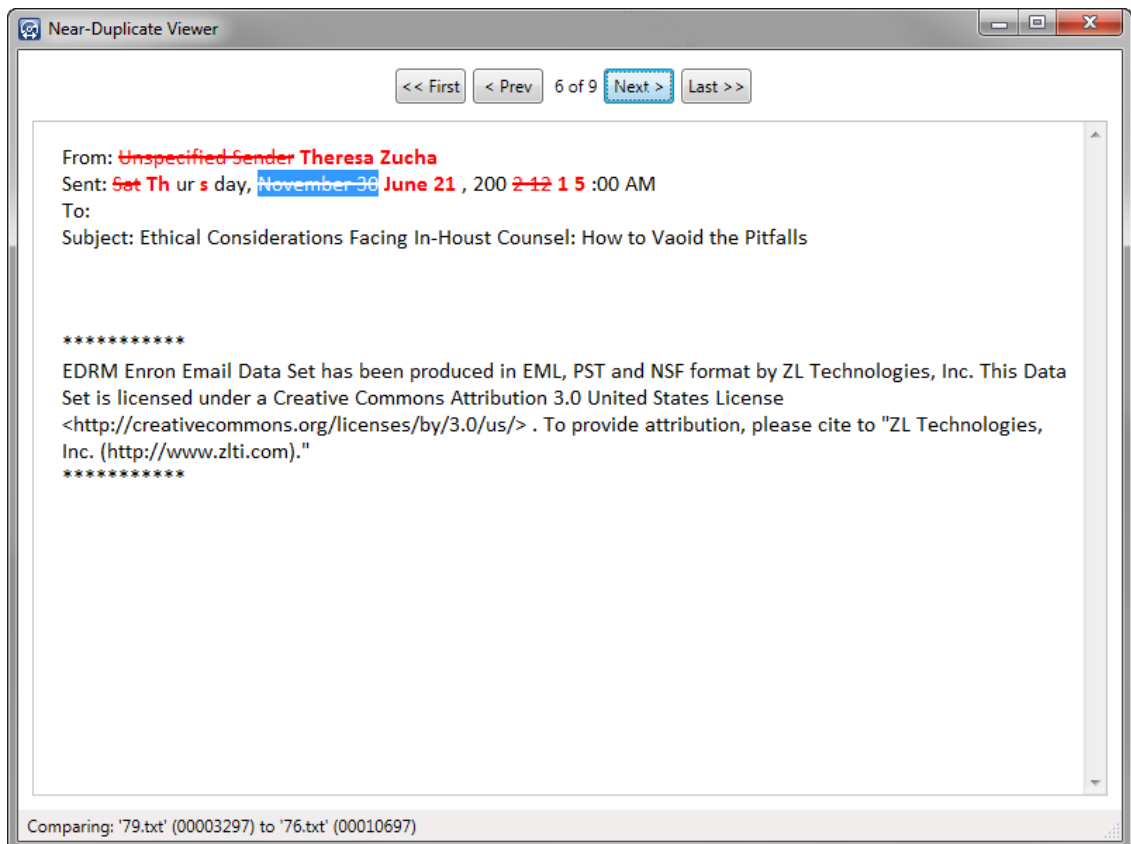
The differences between the selected documents are displayed in red text, with the original value struck out and the new value is displayed in bold next to the original value.

At the top of the **Near-Duplicate Viewer** dialog box are navigation buttons. Between the **First** and **Prev** buttons and the **Next** and **Last** navigation buttons, the number of the current difference out of the total number of differences between the selected document and its master are displayed. The difference currently selected is highlighted in blue. You can also navigate to the previous difference using the left arrow keyboard button, and navigate to the next difference using the right arrow keyboard button.

If the documents match 100%, the navigation buttons are disabled and **0 of 0** is displayed, and the document content is not marked up in the **Near-Duplicate Viewer dialog** box.

The name of the files being compared is displayed in the lower-left corner of the dialog box. You can have more than one **Near-Duplicate Viewer** dialog boxes open at one time.

1. On the **Index** tab, click the ellipsis button, [⋯], next to the **Profile** list.

Clicking the ellipsis button opens the **Modify Fields** dialog box.

2. Select the **Visible** check box next to each near-duplicate field you want to be displayed.

3. Click **Save** to save the changes to the current profile or click **Save As** to create a new grid profile.

4. Click the **Close** button.

   Clicking the **Close** button closes the **Modify Fields** dialog box, and the near-duplicate fields you selected the **Visible** check box for are now displayed on the **Index** tab.

   For more information about showing and hiding fields, see Customizing the Grid View.

5. In the document list, click the document for which you want to view near-duplicate information.
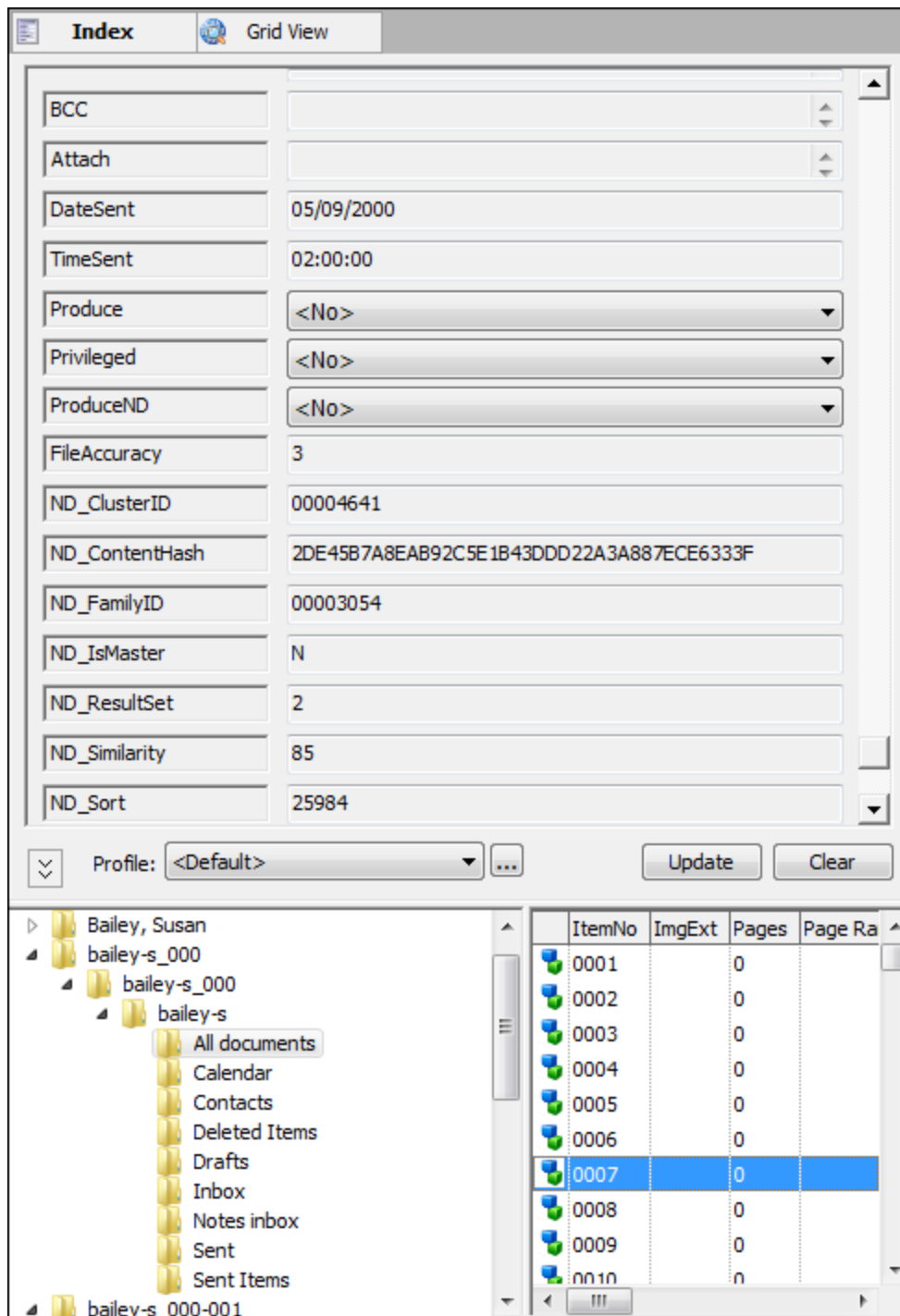
The near-duplicate information for the selected document is displayed in the near-duplicate fields.

⊟ **To view near-duplicate information for multiple documents**

1. Search for the documents for which you want to view near-duplicate information.

    For more information about searching, see [Creating Queries](#) and [Full Text Searching](#).

2. Open the search results in the embedded or standalone grid view.

3. Right-click any column header.

    Right-clicking a column header opens the **Field List** dialog box.

4. Select the check box next to each near-duplicate field you want to be displayed in the grid view.

5. Close the **Field List** dialog box.

    The near-duplicate fields are now displayed in the grid view.
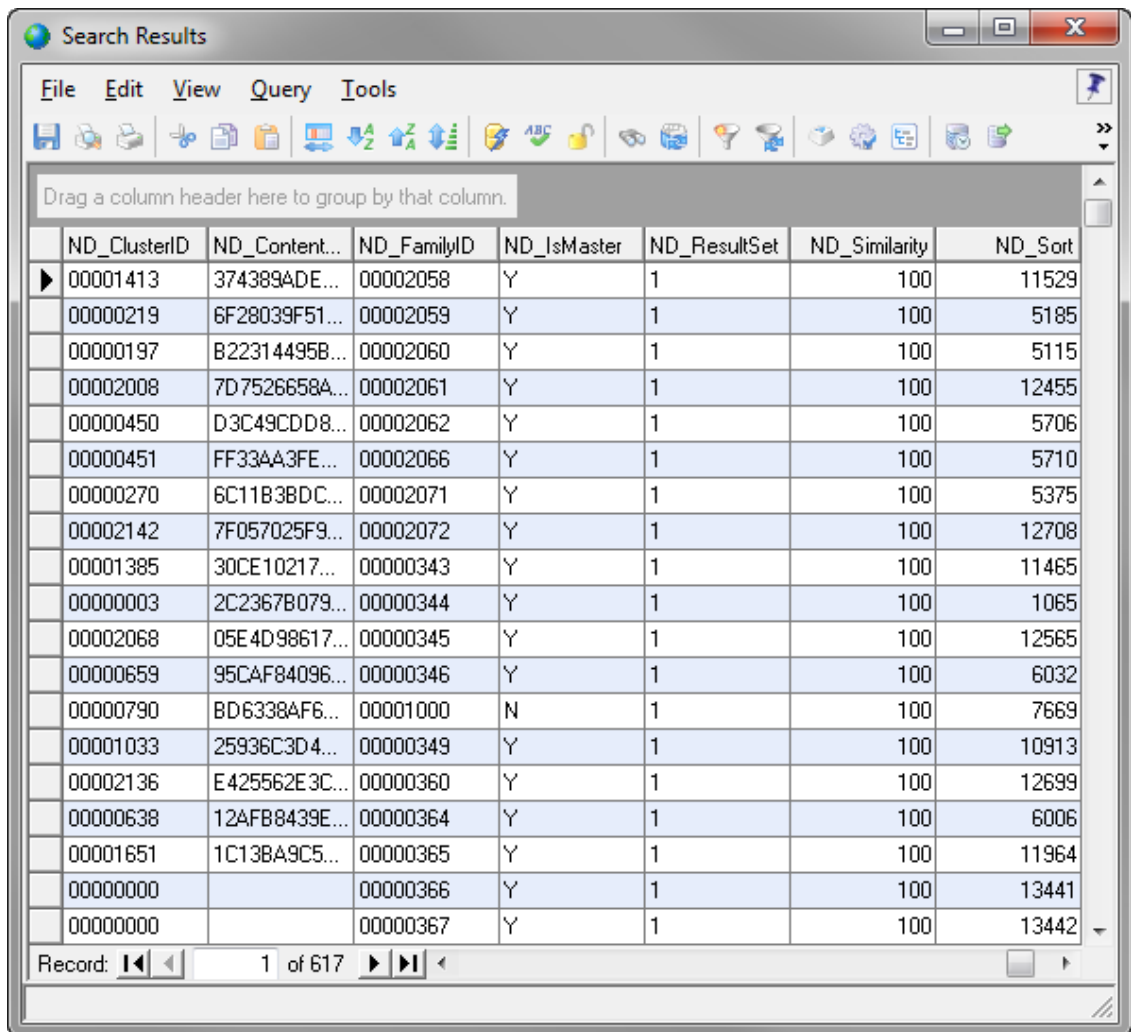
For more information about showing and hiding fields and sorting records in the grid view, see Customizing the Grid View.

Promoting Tags to Near Duplicates

When applying a tag to documents in a search result set, some near-duplicate documents may not match the search criteria and be excluded from the result set. The Promote Tag to Near-Duplicate feature allows you to tag near-duplicate documents, ensuring the same tag is applied to all applicable near-duplicate documents associated with the tagged search result set. You have the option of applying the tag to only the near-duplicate documents in the case identified by the Near-Duplicate & Email Thread Analysis utility, or to tag the entire document family associated with each near-duplicate document.

Before tags can be promoted to near-duplicate documents, the near-duplicate analysis in the Near-Duplicate & Email Thread Analysis utility must be run on the case, and the tag you want to apply to near-duplicate documents must be applied to the applicable search query.

<u>⊟ **To promote an existing tag to near duplicates**</u>

1. On the **Tools** menu, click **Promote Tag to Near-Duplicates**. The **Promote Tag to Near-Duplicates** dialog box opens.

   Promote Tag to Near-Duplicates

   Source Tag: Produce ▼

   Destination Tag: ProduceND ▼

   ☑ Promote tag to parent/attachment families

   ☑ View results in grid when operation is complete

   [OK]   [Cancel]
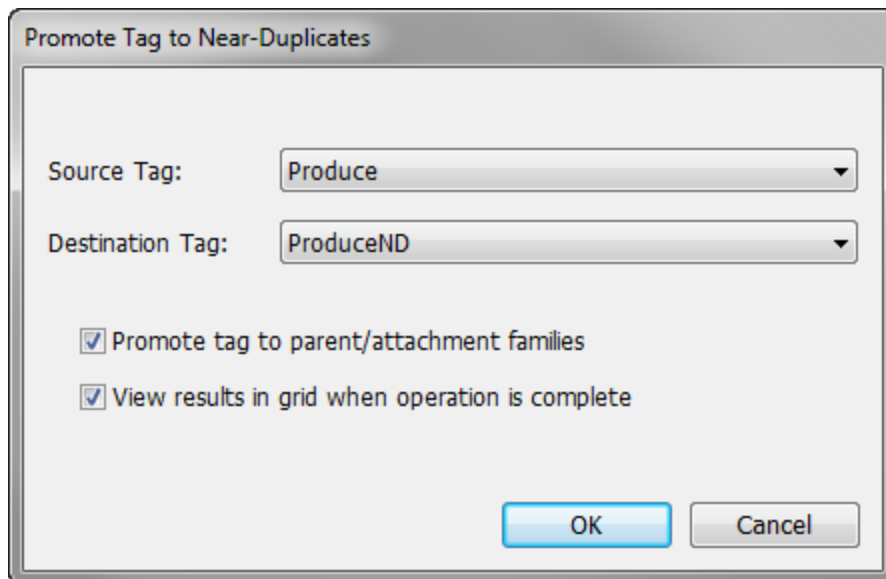
2. In the **Source Tag** field, click the tag applied to the documents in the search query that you want to apply to the near-duplicate documents identified by the Near-Duplicate & Email Thread Analysis utility.

3. In the **Destination Tag** list, click the tag you want to apply to the near-duplicate documents.

   By default the **Promote tag to parent/attachment families** and **View results in grid when operation is complete** check boxes are selected.

   When the **Promote tag to parent/attachment families** check box is selected, the tag selected in the **Destination Tag** list is applied to all near-duplicate documents identified by the Near-Duplicate & Email Thread Analysis utility, and all documents in the document families associated with each near-duplicate document.

   When the **Promote tag to parent/attachment families** check box is not selected, the tag selected in the **Destination Tag** list is only applied to all near-duplicate documents identified by the Near-Duplicate & Email Thread Analysis utility. It is not applied to the document families associated with the near-duplicate documents.

When the **View results in grid when operation is complete** check box is selected, after the Promote Tag to Near-Duplicates process is completed, all of the documents the tag has been applied to are displayed in the **Search Results** grid view dialog box. When the check box is not selected, the **Search Results** grid view dialog box is not displayed after the process is completed.

4. If you want to apply the tag to the near-duplicate documents and document families, make sure the **Promote tag to parent/attachment families** check box is selected.

    If you only want to apply the tag to the near-duplicate documents, clear the **Promote tag to parent/attachment families** check box.

5. If you want to see the tagging results in the **Search Results** dialog box after the process is completed, makes sure the **View results in grid when operation is complete** check box is selected.

    If you do not want to view the **Search Results** dialog box after the process is completed, clear the **View results in grid when operation is complete** check box.

6. Click **OK**.

    After the process is completed, the following message is displayed:

7. Click **OK** to close the message.

    If the **Promote tag to parent/attachment families** check box was selected, the **Search Results** dialog box opens.

To promote a new tag to near duplicates

1. On the **Tools** menu, click **Promote Tag to Near-Duplicates**. The **Promote Tag to Near-Duplicates** dialog box opens.

2. In the **Source Tag** field, click the tag applied to the documents in the search query that you want to apply to the near-duplicate documents identified by the Near-Duplicate & Email Thread Analysis utility.

3. In the **Destination Tag** list, make sure **<Create New Tag...>** is selected.

By default the **Promote tag to parent/attachment families** and **View results in grid when operation is complete** check boxes are selected.

When the **Promote tag to parent/attachment families** check box is selected, the tag created from the **Destination Tag** list is applied to all near-duplicate documents identified by the Near-Duplicate & Email Thread Analysis utility, and all documents in the document families associated with each near-duplicate document.

When the **Promote tag to parent/attachment families** check box is not selected, the tag created from the **Destination Tag** list is only applied to all near-duplicate documents identified by the Near-Duplicate & Email Thread Analysis utility. It is not applied to the document families associated with the near-duplicate documents.

When the **View results in grid when operation is complete** check box is selected, after the Promote Tag to Near-Duplicates process is completed, all of the documents the tag has been applied to are displayed in the **Search Results** grid view dialog box. When the check box is not selected, the **Search Results** grid view dialog box is not displayed after the process is completed.

4. If you want to apply the new tag to the near-duplicate documents and document families, make sure the **Promote tag to parent/attachment families** check box is selected.

    If you only want to apply the new tag to the near-duplicate documents, clear the **Promote tag to parent/attachment families** check box.

5. If you want to see the tagging results in the **Search Results** dialog box after the process is completed, makes sure the **View results in grid when operation is complete** check box is selected.

    If you do not want to view the **Search Results** dialog box after the process is completed, clear the **View results in grid when operation is complete** check box.

6. Click **OK**. The **Add Field** dialog box opens.
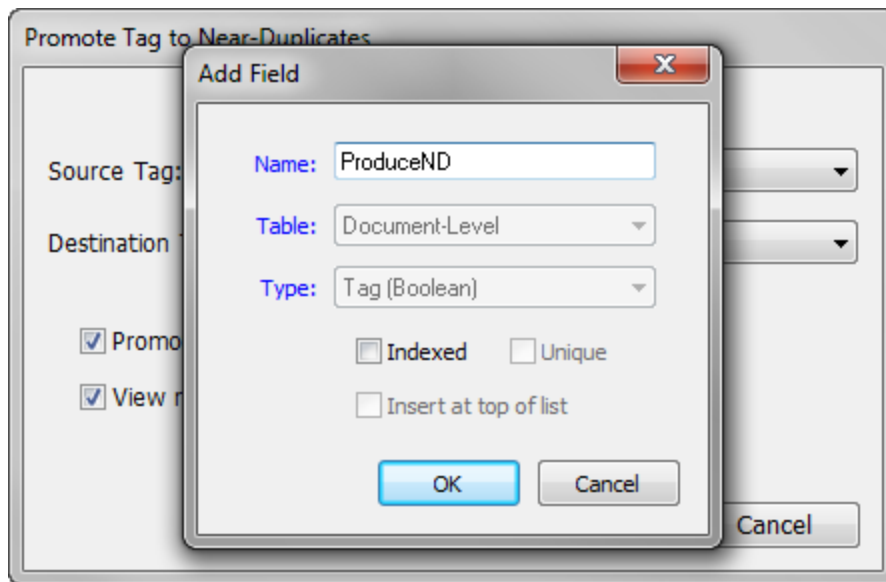
7. Create the tag you want to apply to the near-duplicate documents, and then click **OK**.

   After the process is completed, the following message is displayed:

8. Click **OK** to close the message.

   If the **Promote tag to parent/attachment families** check box was selected, the **Search Results** dialog box opens.

Viewing Email Threads

Before you can view email thread information for documents in a case, you will need to run the email thread analysis in the Near-Duplicate & Email Thread Analysis utility. Once you run the analysis, you can view a case's email thread information in the email thread fields generated by the Near-Duplicate & Email Thread Analysis utility. You can view email thread information for individual documents on the Index tab in the main LAW window, or view email thread information for multiple documents at one time using the grid view. The same can be done for the near-duplicate fields created and populated by the Near-Duplicate & Email Thread Analysis utility.

⊟ **To view email thread information for individual documents**

1. On the **Index** tab, click the ellipsis button, [...], next to the **Profile** list.

Clicking the ellipsis button opens the **Modify Fields** dialog box.

2. Select the **Visible** check box next to each email thread field you want to be displayed.

3. Click **Save** to save the changes to the current profile or click **Save As** to create a new grid profile.

4. Click the **Close** button.

   Clicking the **Close** button closes the **Modify Fields** dialog box, and the email thread fields you selected the **Visible** check box for are now displayed on the **Index** tab.

   For more information about showing and hiding fields, see Customizing the Grid View.

5. In the document list, click the document for which you want to view email thread information.

The email thread information for the selected document is displayed in the email thread fields.

⊟ **To view email thread information for multiple documents**

1. Search for the documents for which you want to view email thread information.

   For more information about searching, see Creating Queries and Full Text Searching.

2. Open the search results in the embedded or standalone grid view.

3. Right-click any column header.

   Right-clicking a column header opens the **Field List** dialog box.
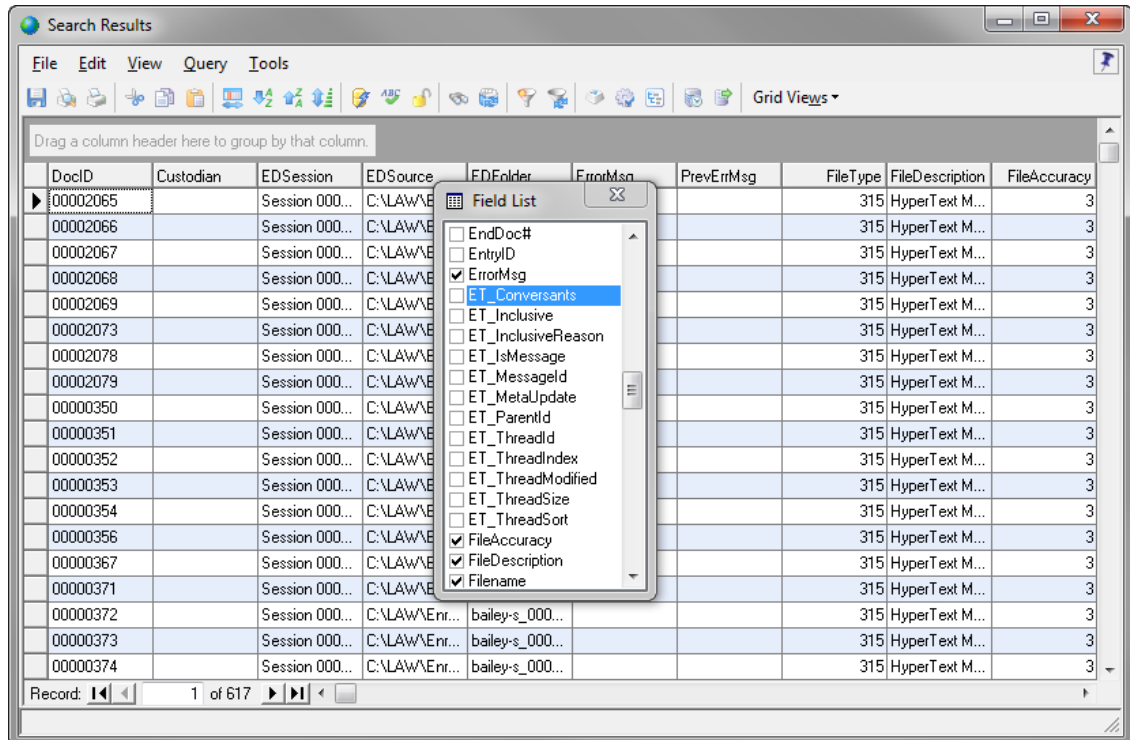
4. Select the check box next to each email thread field you want to be displayed in the grid view.

5. Close the **Field List** dialog box.

   The email thread fields are now displayed in the grid view.

For more information about showing and hiding fields and sorting records in the grid view, see [Customizing the Grid View](#).

Exporting

The Export Utility allows you to export data for use by CloudNine Concordance and other litigation support applications.

Export Utility Overview

The first step in using the Export Utility is to start it. Next comes deciding upon the data type or format you need to export. You can export to multiple formats in a single export session. To this end, LAW allows you to export critical data used by litigation support applications and provides a wide ranging list of possible export formats. Some of the export formats allow for advanced configuration, which are covered in the [Format-Specific Settings](#) section.

Considerations when planning an export session include: deciding how to handle native applications, selecting image file formats, and configuring formats and fields for load files.

For a complete list of export formats, including details regarding file extensions assigned to exported items and many other details, see the quick reference in this topic.

⊟ **To start the Export Utility**

- From the main form or a standalone grid, on the **Tools** menu click **Export Utility**.

Or

- Click the Export Utility button ( ) located both on the main form, and in the toolbars of standalone and embedded grids.

⊟ **Export data types and formats**

The following kinds of data may be exported:

- Scanned data
- Electronic discovery
- Image files
- Full text
- Native files
- Field data, for example, DocID and file metadata
- Extended property metadata for certain types of files, including PDF, Office documents, and EXIF (TIFF and JPEG) files. Extended properties can be recognized by their "EP" prefix, for example, "EPTypist."

The following kinds of items can be exported:

- Native files
- Load files formatted for compatibility with litigation support programs
- Image files of various formats
- XML

The types of load files that are supported are listed as follows. Links in the following list provide additional information and additional configuration options where available:

- BlueTrace
- CaseLogistix
- CaseMap
- Concordance
- Concordance Desktop
- Concordance Direct (DCB)
- Delimited Text
- Doculex Viewer 4.x
- Doculex Viewer 5/6

- [DocuMatrix 1.5](#)
- [EDRM XML 1.0](#)
- [EDRM XML 2.0](#)
- [iCONECT](#)
- [inData's TrialDirector](#)
- Inmagic's DB/TextWorks
- [Introspect eCM](#)
- [IPRO IntelliVIEW](#)
- [JFS Litigator's Notebook](#)
- LaserFiche
- OmniDox (Custom)
- [PDF Conversion](#)
- [Ringtail CaseBook](#)
- [Sanction](#)
- [Storm Viewer](#)
- Summation Blaze
- TotalVzn

⊟ Selecting external applications

Note the following considerations about external applications when using the Export Utility:

- Because the requirements for working with each export format are unique, LAW provides application-specific settings to better handle each format.
- Many of the applications for working with supported formats are only viewers and do not support index or OCR information. Consult the documentation for the intended target applications before doing any coding or OCR to avoid wasting time performing unnecessary steps in CloudNine™ LAW. LAW supports many litigation support packages.

⊟ Image format considerations

The image format required is a result of the target application and its image viewer.

Some applications use one multi-page image file to represent a multi-page document. Other applications use a series of single-page image files (logically grouped) to represent a multi-page document.

If images created via TIFF Conversion in LAW were stored in multi-page format and a single-page export format was chosen, the images would need to be split upon exporting, which can significantly slow the process. Therefore, converting to single-page TIFF files is recommended whenever possible.

⊟ **Load file extensions**

Note the following facts about load file extensions:

- The load file extensions indicate the extensions of the load files that are created for each of the supported formats.
- With the exception of Doculex (which uses a FoxPro database) and the Concordance DCB export, all of the load files created are text files that conform to the specifications defined by the target application.
- In the case of Concordance and JFS, the export produces two export files, one with index data and one with image information.
- The load files can be found in the export path after the export is complete.
- The load files are named (with the appropriate extensions) according to the last folder in the export path (e.g., "Vol001.dat", "Vol001.dii", etc., for an export path of "D:\Exports\Case1\Vol001"), because LAW assumes this is the volume label for the export.

⊟ **Supported Formats Quick Reference**

The following table lists supported export formats, image file formats (single or multi-page images), load file extensions, formats that support importing of index information, native file support, and support for (single- or multi-page) OCR.

Format	Output Files	Single / Multi Page	Meta Data Support	16-Bit Naming Required (8.3 chars)	Full Text Support	Single Pg Text Support	Native File Support
BlueTrace	[VolName].dat [VolName].opt ImportText.cpt	Single / Multi Page	Predefined	No	Yes	No	Yes
CaseLogistix	[VolName].xml	Single / Multi Page	Yes	No	Yes	No	Yes
CaseMap	[VolName].csv	Single / Multi Page	Yes	Yes	Yes	Yes	No
Concordance	[VolName].dat [VolName].opt	Single / Multi Page	Yes	No -- unless using Opticon versions	Yes	No	Yes

Format	Output Files	Single / Multi Page	Meta Data Support	16-Bit Naming Required (8.3 chars)	Full Text Support	Single Pg Text Support	Native File Support
	ImportText.cpt			earlier than 2.0			
Concordance Desktop	[VolName].CIB [VolName].CNSDB [VolName].DCB [VolName].Editlayout [VolName].Ini [VolName].Key [VolName].Layout [VolName].Ndx [VolName].Sec [VolName].SortLayout [VolName].Tex [VolName].TRK [VolName].txt [VolName]_Persistent.txt [VolName]-	Single / Multi Page	Yes	No	Yes	No	Yes

Format	Output Files	Single / Multi Page	Meta Data Support	16-Bit Naming Required (8.3 chars)	Full Text Support	Single Pg Text Support	Native File Support
	Notes.Dcb [VolName]-NOTES.INI [VolName]-Notes.Key [VolName]-Notes.Ndx [VolName]-Notes.Tex [VolName]-NOTES.TRK [VolName]-Settings.INI						
Concordance Direct (DCB)	[VolName].dcb [VolName].ini [VolName].key [VolName].ndx [VolName].opt [VolName].tex	Single / Multi Page	Yes	No	Yes	No	Yes

Format	Output Files	Single / Multi Page	Meta Data Support	16-Bit Naming Required (8.3 chars)	Full Text Support	Single Pg Text Support	Native File Support
	ImportText.cpt						
Delimited Text	[VolName].csv	Single / Multi Page	Yes	No	Yes	No	Yes
Doculex Viewer 4.x	Doculex3.dbf	Single	No	Yes	No	No	No
Doculex Viewer 5/6	Doculex5.dbf	Single	No	No	No	No	No
DocuMatrix 1.5	[VolName].xml	Single / Multi Page	Yes	No	Yes	No	No
dtSearch	N/A	Multi	Yes	No	Yes	No	No
EDRM XML 1.0	[VolName]_v1.xml	Single / Multi Page	Yes	No	Yes	No	Yes
EDRM XML 2.0	[VolName]_v2.xml	Single / Multi Page	Yes	No	Yes	No	Yes
iCONECT	[VolName].xml	Single / Multi Page	Yes	No	Yes	No	Yes
inData's TrialDirector	[VolName].oll	Single / Multi Page	Yes	No	No	No	No
Inmagic's DB/TextWorks	[VolName].add	Single / Multi Page	Yes	No	Yes (embedded)	No	No
Introspect eCM	[VolName].idx	Multi	Yes	No	Yes	No	No
IPRO IntelliVIEW	[VolName].lfp	Single / Multi Page	Yes	No	Yes (embedded)	No	No
JFS Litigator's Notebook	[VolName].jfs [VolName].log	Single	Yes	Yes	No	No	No

Format	Output Files	Single / Multi Page	Meta Data Support	16-Bit Naming Required (8.3 chars)	Full Text Support	Single Pg Text Support	Native File Support
	jfs.col						
LaserFiche	[VolName].lst	Single	Yes	No	No	No	No
OmniDox (Custom)	[VolName].ID	Single	Yes	No	Yes	No	No
PDF Conversion	Straight PDFs	Single / Multi Page	No	No	No	No	
PDF Hidden Text	Searchable PDFs	Multi	Yes (embedded)	No	Yes (embedded)	No	No
Ringtail CaseBook	Ringtail.mdb (Access DB)	Single / Multi Page	Yes	No	Yes (embedded)	No	Yes
Sanction	[VolName].oll	Single	Yes	No	Yes \ No (external)	Yes	No
Storm Viewer	ImageBase.add + Supporter Tables	Single / Multi Page	Yes	No	Yes (external) + Indexing	No	No
Summation Blaze	[VolName].dii [VolName].txt (Metadata if exported field count is 6 or more)	Single / Multi Page	Yes	No	Yes (external)	Yes	Yes
TotalVzn	[VolName].opt	Single / Multi Page	No	No	No	No	No

Formats/Documents Tab

You use the **Formats/Documents** tab to specify the following:

- Export type
- Files to be included for exporting
- Type of files (e.g., native files)
- Target application name
- Target application configuration settings
- Image format

1. From the main window, on the **Tools** menu click **Export Utility**.

   - Or click the [icon] button from the main or from the embedded grid toolbar.

   The **Export Utility** dialog appears.
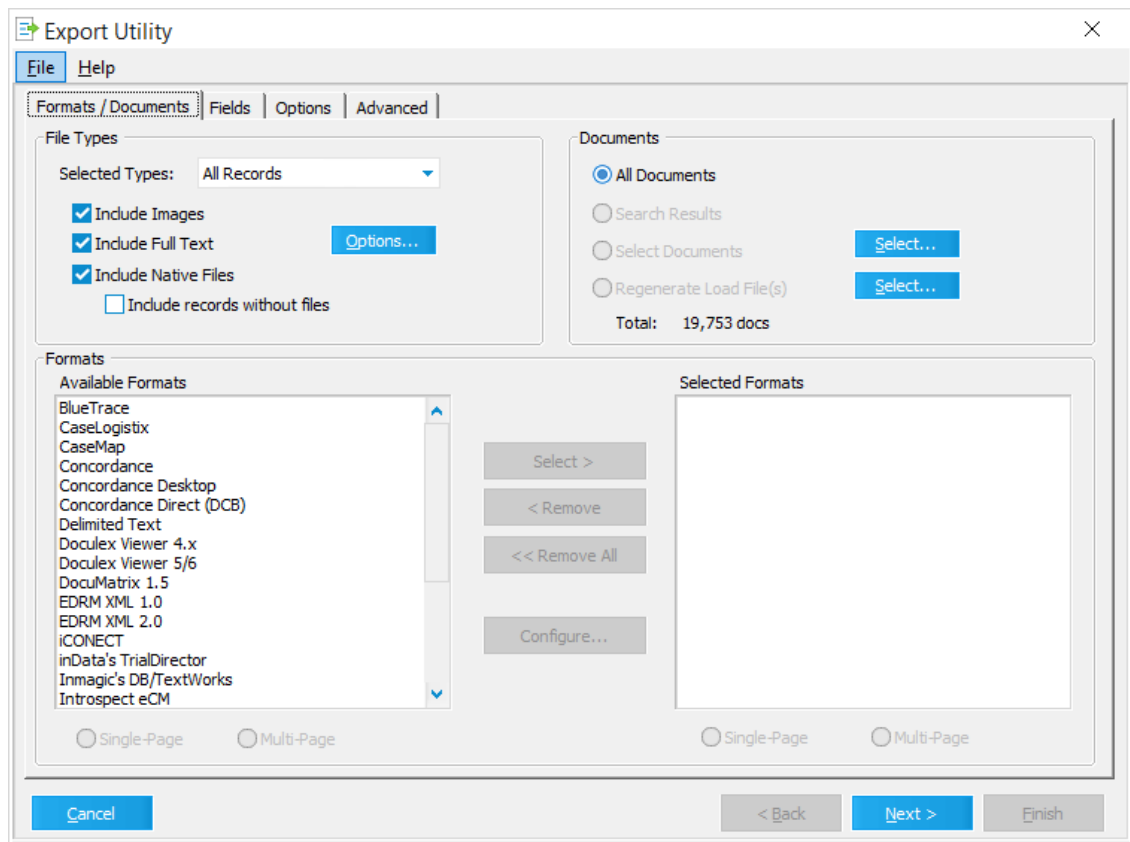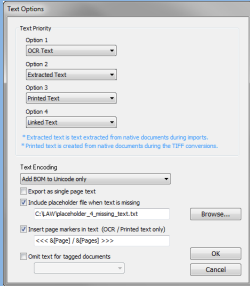
Because LAW is both a scanning and an electronic discovery application, the Export Utility allows users to choose which type of data should be included in the export.

The options available in the File Types area of the Export Utility are described in the following table:

Option	Description
Selected Types	The Selected Types drop-down contains three options:
	• All Records — This option may be used when a LAW case contains both scanned (or imported) images and native files, and the user wishes to include both types in the export. This option may also be used if the case is all e-discovery or all scanned data.
	• Scanned Data — Use this option when exporting only scanned images or images imported using a feature other than the ED Loader (such as Import Raw Images).
	• Electronic Discovery — This option will be used to export files that were imported as e-discovery only. This may include native files and/or the TIFF images or PDF files for each ED record (if files were converted to TIFF or PDF).
	Note: Keep in mind, not all target applications support native file review. Currently, native file exports apply only to Blue Trace, CaseLogistix, Concordance, Concordance Desktop, Concordance Direct (DCB), Delimited Text, EDRM XML 1.0, EDRM XML 2.0, iCONECT, Introspect eCM, Ringtail, and Summation.
Include Images	Includes scanned images, images imported via Import Raw Images or Import Load File, and images created during the TIFF Conversion batch process or single document tiffing.
Include Full Text	Includes text files for any documents that contain text. This text may have been extracted during the pre-save or created during the OCR process. The type of text included in the export will depend on the option selected in the Text Options dialog (see below).
Include Native Files	Includes the native files imported during the e-discovery import process. Again, not all export formats support native file review. If Include Native is the only option selected, only Blue Trace, CaseLogistix, iCONECT, Concordance, Concordance Desktop, Concordance Direct (DCB), Ringtail, and Summation will be displayed in the Formats section.
	This option is disabled if the Scanned Data export type is selected.
Include records without files	When enabled, includes a record in the export load file or database for all LAW records that do not have a native file associated with them.
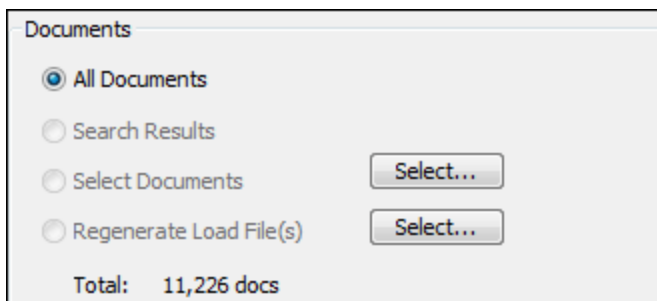
Option	Description
	For example, if a duplicate file was detected during an inport from ED Loader or Turbo Import, and the action was set to log a record but exclude the native file, then the record in LAW would not have a native file. If this export setting is disabled, this record would not be included in the export output and a warning would be logged.
Options... button Opens the **Text Options** dialog box.	Set four conditions to determine precedence of text types for export: • Option 1: Extracted Text, Linked Text, OCR Text (default), or Printed Text • Option 2: <None>, Extracted Text (default), Linked Text, OCR Text, or Printed Text • Option 3: <None>, Extracted Text, Linked Text, OCR Text, or Printed Text (default) • Option 4: <None>, Extracted Text, Linked Text (default), OCR Text, or Printed Text **Text priority example configuration:** If the following text priorities are selected: Option 1: OCR Text Option 2: Extracted Text Option 3: Printed Text Option 4: Linked Text • When the export runs, LAW will export the OCR text for any documents that have associated OCR. • If no OCR text is found, LAW will export the extracted text for any documents that have extracted text. • If no extracted text is found, LAW will export printed text if it has been created from the native documents during the TIFF conversion process. • If no printed text is found, LAW will export the text from linked text files for any documents that are linked to a text file. Documents are linked to a text file if the "Link to source files in place when importing load files" check box was selected on the Preferences tab in the Options dialog box (Tools menu >

Option	Description
	Options), and the document was imported into LAW using a load file.

- **Text Encoding —** Determines what type of text encoding is used for extracted text files during the export.
  - **Use existing encoding —** LAW exports the extracted text files in their current format without modifying their text encoding during the export.
  - **Add BOM to Unicode only —** LAW includes any Unicode® characters in the exported text if present. If a text file contains Unicode characters, the file is encoded as UTF-8 and a byte order mark (BOM) is added at the beginning of the text file. If the text file already contains a BOM and Unicode, both are retained. If the file does not contain Unicode, it is exported without a BOM. This feature should be used with caution as many export formats do not support Unicode characters.
  - **ANSI —** LAW converts the default UTF-8 extracted text files to ANSI during the export. Any Unicode content is lost.
  - **UTF-8 with BOM —** LAW converts all files to UTF-8 encoding and adds a UTF-8 byte order mark (BOM) at the beginning of all files.

==The Allow Unicode data in Concordance load file setting does not have any impact on exported text files. Note that this setting only affects the *.dat load file.==

- **Export as single page text —** Single-page text files for each document will be exported if this option is enabled. Only two formats, Summation and Sanction, support single-page text.

- **Include placeholder file when text is missing —** Export includes the placeholder text .txt file for documents without text content during the export. If the Include Full Text check box is selected on the Formats/Documents tab in the Export Utility dialog box, when the text files are being copied during the export, the placeholder .txt file will be copied for each document without text content.

  When this option is selected, click Browse to add the placeholder .txt file you want to use. The placeholder .txt file can be any .txt file containing the text you want to include in the placeholder file.

Option	Description
	• **Insert page markers in text (OCR / Printed text only)** — Exports specified field replacements and stamps the page markers on the exported text. By default this option is disabled, which means no page markers would be added to the exported text. When enabled, you can type your own page marker or use the following default page marker: `<<< &[PageID] / &[Pages] >>>` • **Omit text for tagged documents** — Removes OCR, printed, or extracted text from the export for certain records. Use this option to help avoid creating overly large text files. A tag field must be created and records tagged prior to launching the Export Utility. The tag field will appear in the drop-down list below this option. To help filter large text files from export, you can use the **Capture Text File Sizes** run command along with the **Omit text for tagged documents** option. The command stores the file size of the extracted text associated with a document in an index field. The option prevents text of tagged files from being exported. Note that the **Capture Text File Sizes** command has not been fully tested and cannot be supported in the event of a problem.

⊟ **To configure document export options**

Use the **Documents** section to specify the documents to include in the export.

• **All Documents** — Includes all documents in the case, depending on the selected Export Type. For example, if this option is selected, and Electronic Discovery is chosen in the File Types section, LAW will only export records imported as e-discovery. Non-electronic discovery data will not be included in the export.

- **Search Results —** Includes all records currently displayed in the grid. This option will only be enabled if the Export Utility is launched while a grid display is active or if it is launched directly from a grid.

- **Select Documents** - Use this option to specify the folders and/or ranges of documents within folders to include in the export.

  ⊟ **To specify folders and/or document ranges in folders**

   1. Click the **Select** button next to the **Select Documents** option.

      Clicking the **Select** button opens the **Select Folders** dialog box.

      Select Folders

      ☐ SQL Exp 2012
      ▷ ☐ Bailey, Susan
      ▷ ☑ bailey-s_000
      ▷ ☐ Dickson, Stacy
      ▷ ☐ dickson-s_000
      ▷ ☐ Hendrickson, Scott
      ▷ ☐ hendrickson-s_000
      ▷ ☐ King, Jeff
      ▷ ☑ king-j_000
      ▷ ☐ Meyers, Bert
      ▷ ☐ meyers-a_000
      ▷ ☐ Panus, Stephanie
      ▷ ☐ panus-s_000
      ▷ ☐ RDS NIST Demo files
      ▷ ☐ Sanchez, Monique
      ▷ ☐ sanchez-m_000
      ▷ ☐ Townsend, Judy

      [Clear All]
      [Select All]

      [Set Range...]

      [OK]
      [Cancel]

      ☑ Calculate total documents (required to preview total pages)
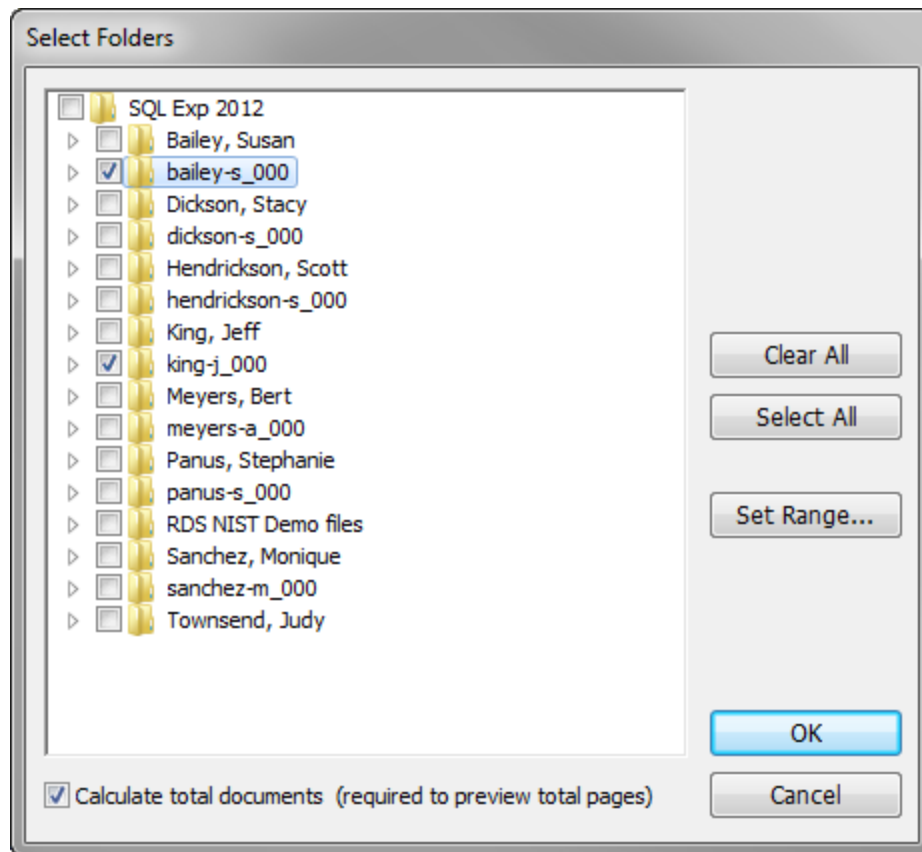
   2. Select the check box next to the folders you want to to export.

   3. To select a range of documents, click the check box for folder containing the desired records, then click **Set Range**.

      Clicking the **Set Range** button opens the **Select Document Range** dialog box.
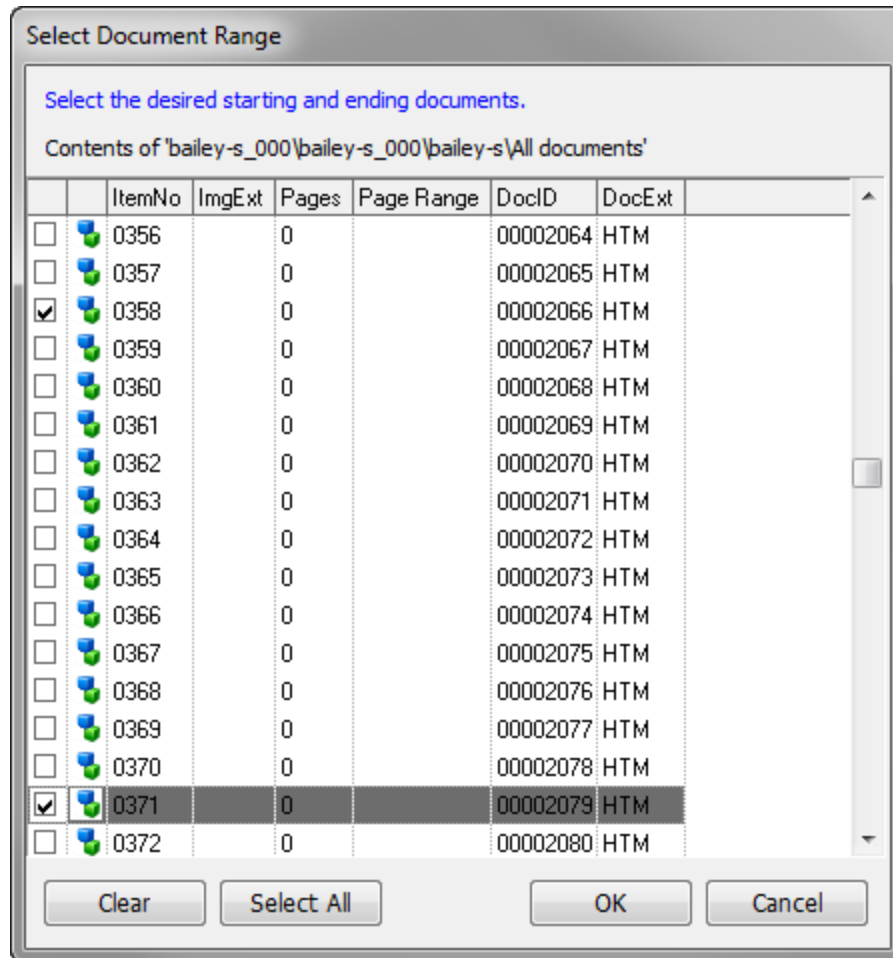
4. Select the check box next to the starting and ending documents, and then click **OK**.

   Clicking **OK** saves the document ranges and closes the **Select Folders** dialog box.

   By default, the **Calculate total documents** check box is selected. When the check box is selected, the export includes document counts in addition to the total number of folders selected. For large cases, selecting the **Calculate total documents** check box can cause a delay when returning to the **Formats / Documents** tab.

In cases with a large number of documents and/or pages, a delay may be experienced when launching the Batch Process or Export Utility dialog boxes while LAW calculates the total number of pages to display.

To avoid the potential delay, disable page counting.

1. On the **Tools** menu, click **Options**, and then click the **Preferences** tab.

2. Clear the **Calculate total pages in batch/export dialogs** setting before you launching the Export Utility.

   The number of pages will no longer appear beside the number of documents.

5. Click **OK**.

   Clicking **OK** saves your folder and document selections and closes the **Select Folders** dialog box. The **Select Documents** option on the **Formats / Documents** tab is now selected.

- **Regenerate Load File(s) —** Use this option to regenerate a load file for one of the case's existing exports. The **Regenerate Load File(s)** option is only available for SQL cases.

  ⊟ **To select an existing export**

  1. Click the **Select** button next to the **Regenerate Load File(s)** option.

     Clicking the **Select** button opens the **Select Existing Export** dialog box.

Name	Status	Count	Created
Export_20140313_151626	Complete	326	3/13/2014 3:16:27 PM
Export_20140313_151509	Complete	10	3/13/2014 3:15:09 PM
Export_20140313_151103	Complete	39	3/13/2014 3:11:04 PM
Export_20140311_153442	Complete	375	3/11/2014 3:34:42 PM
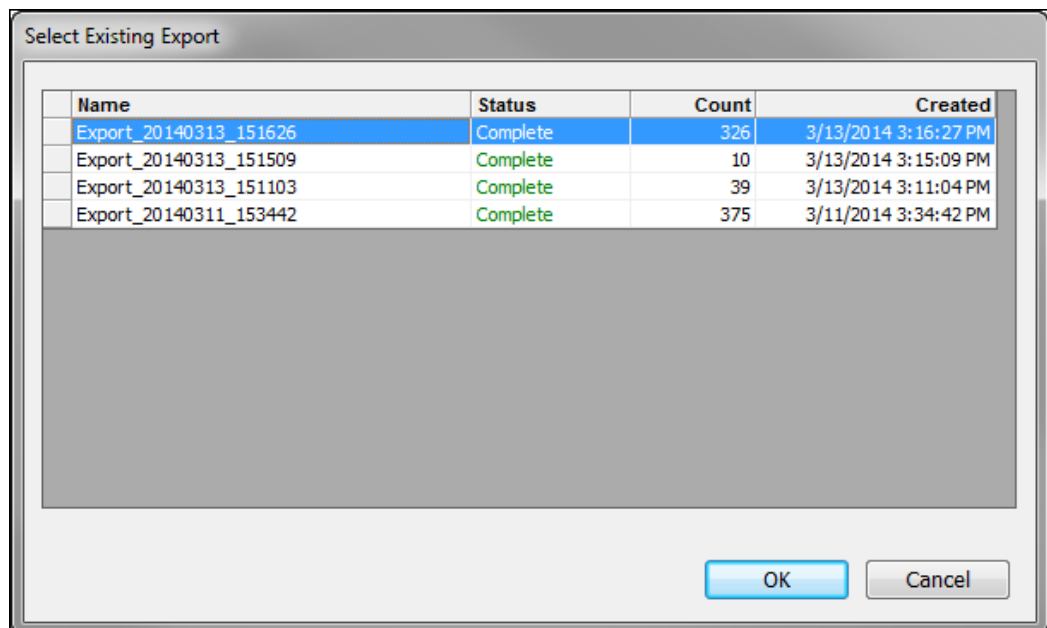
     LAW generates an export session for each SQL case export. The **Select Existing Export** dialog box contains the list of exports already run for the case. For each export, the export session name, export status, total number of documents exported, and the export creation date and time are displayed.

2. Select the row for the export for which you want to regenerate the load file.

3. Click **OK**.

   Clicking **OK** closes the **Select Existing Export** dialog box and populates the **Export Utility** tabs with the export settings from the export you selected. Also, the **Regenerate Load File(s)** option on the **Formats / Documents** tab is now selected. Some of the export settings for the selected export cannot be edited.

⊟ **To select export formats**

Use the **Formats** section to specify the target application(s) as well as the load file/image format. Although you may select multiple applications, not all export formats support the same options. Also, certain applications will have special configuration settings available in the Export Utility.

To select a format

1. Select an application title from the **Available Formats** list.

2. Select either **Single-Page** or **Multi-Page**.

   Note: The image format must be selected before moving the application format to the **Selected Formats** list.

3. Click **Select**.

4. To determine if a format has additional configuration options, select the application title in the **Selected Formats** list. If the **Configure** button becomes enabled, this indicates additional settings exist and can be viewed by clicking **Configure**.

📝 Note the following when configuring output formats:

   - When exporting PDFs to any single-page format other than PDF Conversion, if <Default> is selected as the output format, the PDFs will be converted to image-only. If PDF is the output format, the PDFs will be searchable.

   - If exporting multi-page color or grayscale TIFF images to a single page format with the Output Format set to Default, LAW will automatically export these files as JPEG images. This is done for better compatibility with older image viewers that may not support TIFF w/JPEG compression and to minimize the file sizes of the color images. B&W TIFF images will not be affected by this process.

Format-Specific Settings

For some of the supported export formats, LAW provides advanced configuration options.

BlueTrace

BlueTrace uses GMT time and has the following predefined fields:

- ControlNumberBegin
- ControlNumberEnd
- Custodian
- RecordType
- FileType
- Filename
- NativeFilePath
- AttachmentRangeBegin
- AttachmentRangeEnd
- AttachmentCount
- InternetMessageID
- InReplyToID
- ConversationTopic
- ConversationIndex
- EMailClient
- EMailFolder
- EMailSubject
- EMailFromAddress
- EMailFromName
- EMailTo
- EMailCc
- EMailBcc
- EMailDate
- EMailTime
- EMailHeader
- EMailMessageSize
- EFileFolder
- EFileLastModDate
- EFileLastModTime

- EFileSubject
- EFileAuthor
- EFileHashValue
- EMailEntryID
- ExtractedTextFile

CaseLogistix

To configure export to CaseLogistix

1. In the main window, on the **Tools** menu, click **Export Utility**.

2. In the Export Utility, click the **Formats/Documents** tab.

3. In the **Available Formats** list, click **CaseLogistix** and then click the **Select >** button.

4. In the **Selected Formats** list, click **CaseLogistix** and then click **Configure**.

   The **CaseLogistix Settings** dialog box appears.
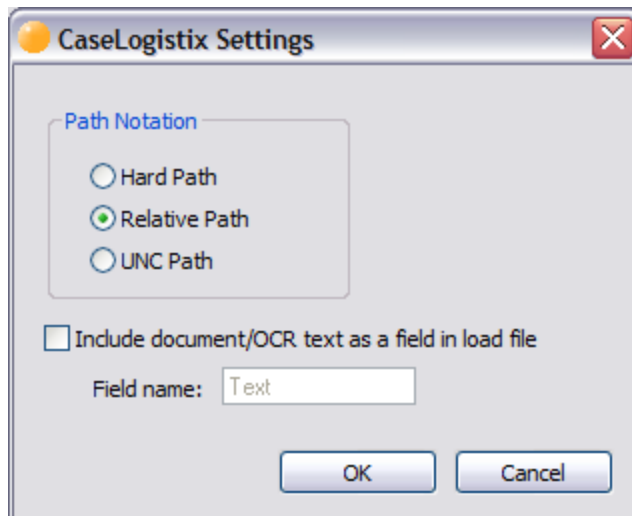
5. Specify the options that control how image paths are written to the load files during the export process:

Use this option	When you want to
Hard Path	Display in the load file a full path to each output file. For example, C:\Exports\TestCase\Vol001\image.tif.

Use this option	When you want to
Relative Path	Use a relative path to the images from the export path instead of the entire path (minus the drive letter).
UNC Path	Indicate that export path is a mapped network drive; the image paths are written using an UNC notation, for example, \\MyServerName\MyFolder\.
Include document/OCR text as a field in load file	Include the text for each document (if available) as a field in the CaseLogistix XML file.
Field Name	Specify the name of the field to which the text will be exported.

📝 In CloudNine™ LAW 5.2 and higher, any Unicode data included in exported fields is automatically included in CaseLogistix load files.

CaseMap

To configure export to CaseMap

1. In the main window, on the **Tools** menu, click **Export Utility**.

2. In the Export Utility, click the **Formats/Documents** tab.

3. In the **Available Formats** list, click **CaseMap** and then click the **Select >** button.

4. In the **Selected Formats** list, click **CaseMap** and then click **Configure**.

    The **CaseMap Settings** dialog box appears.
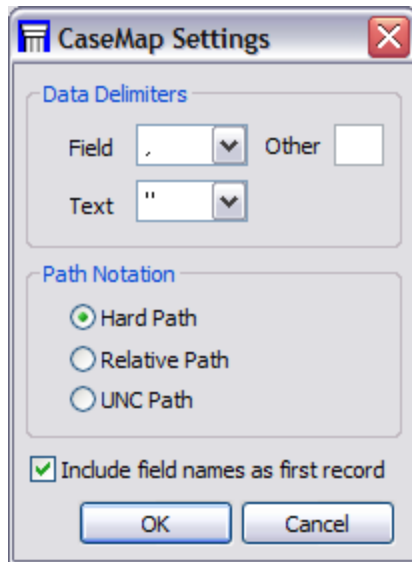
5. Select options according to the following guidelines:

-   Choose the desired delimiters to surround each field and/or field value in the load file.

-   To specify a delimiter not in the **Field** drop-down list, choose **<other>** and type the delimiter into the **Other** text box.

-   To specify how image paths are written to the load files during the export process, edit the path notation.

    -   With **Hard Path** selected, the load file will display a full path to each output file, such as `C:\Exports\TestCase\Vol001\image.tif`.

    -   The **Relative Path** setting uses a relative path to the images from the export path instead of the entire path (minus the drive letter).

    -   If the **UNC Path** option is selected, and the export path is a mapped network drive, the image paths are written using an UNC notation for example, `\\my-server-name\my-folder-name`.

-   To force CloudNine™ LAW to place the names of any included index fields in the first row of the load file, enable **Include field names as first record** setting.

Concordance

To configure export to Concordance

1. In the main window, on the **Tools** menu, click **Export Utility**.

2. In the Export Utility, click the **Formats/Documents** tab.

3. In the **Available Formats** list, click **Concordance** and then click the **Select >** button.

4. In the **Selected Formats** list, click **Concordance** and then click **Configure**.

The **Concordance Settings** dialog box appears.

5. Configure options according to the information in the following table:

Option	Description
Data Delimiters	These options allow users to specify which data delimiters to use in the Concordance .dat file. The data delimiters used when exporting will also need to be used when importing the .dat file into Concordance. The default values Concordance uses by default can be applied by clicking the Restore Defaults button.
Path Notation	The path notation allows users to specify how image paths are written to the load files during the export process. With Hard Path selected, the load file will display a full path to each output file, such as C:\Exports\TestCase\Vol001\image.tif. The Relative Path setting uses a relative path to the images from the export path instead of the entire path (minus the drive letter). If the UNC Path option is selected and the export path is a mapped network drive, the image paths are written using an UNC notation (\ \computername\sharename\...).
Allow Unicode data (UCS-2	Allows Unicode field data to be included in the load file if any exists in the records selected for export. Prior to exporting, please ensure the

Option	Description
format)	version of Concordance being used will support the Unicode data.
Create Opticon load file only	With this option selected, LAW will only create an Opticon load file (.OPT) and not the .DAT file.
Enable support for Concordance Native Viewer	When enabled, configures the load file created during export to be opened with Concordance Native Viewer 1.0.
	Sets the default priority to export: image files, if they exist; and then native files. This priority is only needed if exporting a combination of image files and native files. This setting is enabled by default.
	• If both native and image files exist for a record the image file should take precedence in the Opticon file.
	• If both native and image files exist for a record and if **include tagged documents** is also selected then the native file takes precedence in the Opticon file.
Include field names as first record	Inserts the field names for each field as the first record in the .dat file. This is useful when viewing the data manually or importing into other applications.
Include document/OCR text as a field in load file	The text for the selected documents will be included in the .dat file if this option is enabled. This setting also overwrites the Include Full Text setting on the Formats/Documents tab of the Export Utility.
	The Field Name is the name of the field in the .dat file which will contain the text. If the selected field contains more than ~8MB of text, LAW will automatically create sequential fields to adhere to Concordance's field size limitations.
	Do not use special characters in the Field Name box. Special characters are not compatible with the Concordance field naming conventions.
Link to images and native files in their current location	Leaves any images and native files included in the export in their location (LAW case directory). This feature greatly improves the speed of the export because no files are being copied and LAW must only generate the load files. Paths in the load file will reflect the current location of the files.

✎ The "Allow Unicode data" setting only applies to Concordance database versions 10 and above.

Concordance Desktop

Important notes on exporting to Concordance Desktop

⚠ Concordance Desktop can not append text at a later time, so Text will need to be enabled during the export if desired.

⚠ If you are exporting the database to a different computer/server than where LAW is located then the Concordance services need to be enabled as a network account instead of a local account.

⚠ Exporting from LAW to Concordance Desktop version 1.07 or earlier will not function properly if you are running on Windows Server 2019.

- If both images and native files are selected for export, images have priority over native files in the Concordance Desktop native viewer.
- Fields exported from LAW are created in Concordance Desktop if they do not already exist. Unicode field values are accepted, but field names with special characters are not permitted.
- When the exported text exceeds the Concordance Desktop allowable limit of 12 MB for a field, the excess text will be entered into the next incremental field up to a maximum of six fields. For example, if the first text field is LAW_OCR_01, the first 12 MB of text goes into that field. The next 12 MB of text goes into LAW_OCR_02 and so forth until LAW_OCR_06. If there is still text to be stored, an error message is logged indicating that the text size exceeded maximum space available and data was truncated.

> ☑ If LAW 7.2+ and Concordance Desktop 1.7+ are installed in the processing environment then configuring the export to Concordance Desktop with a remote server provides more flexibility and options. This option allows for various LAW processing stations to directly export to Concordance Desktop instead of only using the Concordance Desktop database server as the only workstation to directly export to Concordance Desktop.
>
> If the processing environment is using legacy versions of either LAW or Concordance Desktop then the only options are to make a Concordance export and manually build your database into Concordance Desktop or to configure export to Concordance Desktop.

To Configure export to Concordance Desktop with a remote server

This feature enables exports from a LAW workstation to build a Concordance Desktop database by entering the Concordance Desktop server's connection information. It does not require LAW to be installed or run the export from the Concordance Desktop Server. This export should only be started from a LAW machine that has LAW version 7.2+ and Concordance Desktop 1.07+ installed. If you are exporting the database to a different computer/server than where LAW is located then the Concordance services on the Concordance Desktop server need to be enabled as a network account instead of a local account.

Checklist for remote server export	
LAW Workstation	**Concordance Desktop Server**
Installation Concordance Desktop 1.07+ LAW 7.2+	**Installation** Concordance Desktop 1.07+
Concordance Desktop is closed when exporting from LAW.	Concordance Desktop is closed when exporting from LAW. *This is not required if multiple Administrator licenses are available; however the same user name can't be logged into both the workstation and the server.
Read write & modify access to shared folder of Concordance Desktop export	Read write & modify access to shared folder of Concordance Desktop export
	In Services for the Concordance Desktop database server, both **Concordance Admin Server** and **Concordance Server** need to configured with a Network Login.
Test connection in Concordance Desktop from LAW workstation to Admin Server	
The Export Path in LAW's Export Utility must be a UNC path.	

[How to Configure LAW exports for remote server exports to Concordance Desktop version 7.2+.](#)

1. In the main window, on the **Tools** menu, click **Export Utility**.

2. In the Export Utility, click the **Formats/Documents** tab.

3. In the **Available Formats** list, click **Concordance Desktop**, and then click **Select >**.

4. In the **Selected Formats** list, click **Concordance Desktop**, and then click **Configure**.

5. The **Concordance Desktop Settings** dialog box appears.
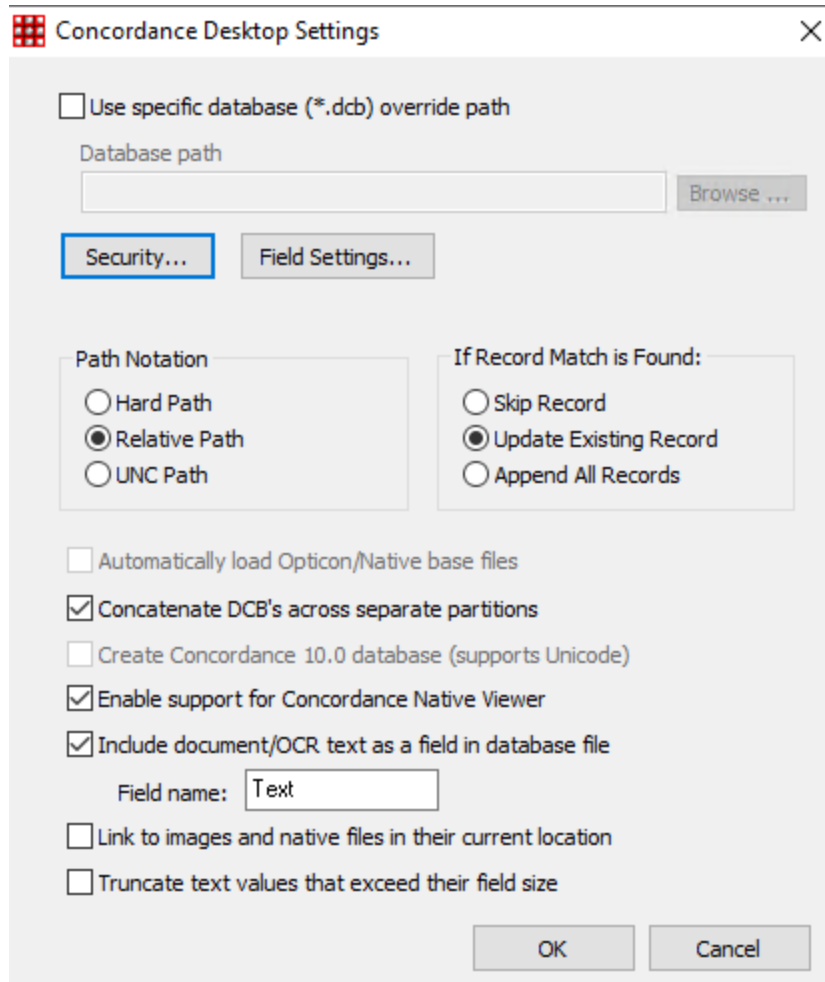
6. Click the **Security** button.

7. A new window opens for the Concordance Desktop Login.
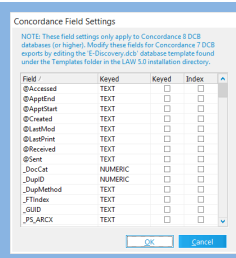
8. Enter the Concordance Desktop database server's login information based on the following:

LAW's Concordance Desktop Login fields	Concordance Desktop fields	Value Description	Value Example
User	Logon	Administrative user name	Administrator Login
Password	Password	Password used for the Logon used	******
Server	Host Name	Computer name of the Concordance Desktop database server	Concordance Desktop Server
Admin port	Port	Port listed when connecting to the Admin Console in Concordance Desktop	10001
Server port	Port	Port listed in Concordance Desktop when going to File>Connect	443

9. Configure options according to the information in the following table:

Option	Description
Use specific database	Allows users to append to the desired database.

Option	Description
(*.dcb) override path	
Database path	This option is used in conjunction with the "Use specific database (*.dcb) override path" option. Click Browse to locate a Concordance Desktop database. Exported records will be appended to the selected *.dcb file. If you are exporting the database to a different computer/server than where LAW is located then the Concordance services (Concordance Admin Server and Concordance Server services in services.msc) need to be enabled as a network account instead of local account.
Path Notation	The path notation is used to specify how image paths are written to the Opticon load file during the export process. With Hard Path selected, the load file will display a full path to each output file, such as C:\Exports\TestCase\Vol001\image.tif. The Relative Path setting uses a relative path to the images from the export path, instead of the entire path (minus the drive letter). If the UNC Path option is selected, and the export path is a mapped network drive, the image paths are written using an UNC notation, for example: \\computer name\share name\
If Record Match is Found	The selected option will determine the action LAW will take if a matching record is found in the Concordance database when utilizing the append feature. The three options are:
• **Skip Record**	Record will be omitted if it already exists.
• **Update Existing Record**	Any new information will be applied to the existing record, if one is located.
• **Append All Records**	All records will be appended to existing database.
Field Settings	Click this button to open the **Concordance Field Settings** dialog box, which lists the fields in the current LAW case. The fields can be selected as "Keyed" or "Indexed" fields before exporting the database to Concordance. When the Concordance database is opened, the selected key and indexed fields are listed in File > Modify.

Option	Description
	Note: These field settings only apply to Concordance 8 databases (or higher). To modify fields for earlier database versions, edit the **E-Discovery.dcb** database template located in the Template folder in the LAW installation directory.
Security	Click Security to configure settings for the Concordance Desktop database server.
Concatenate DCB's across separate partitions	Select this option to concatenate the databases into one database and then export it into partitions. For example, a partition size of 650 MB creates partitions of the concatenated database that can be copied to CDs. All of the database partitions are treated as one database. The partition size is set in the Options tab of the Export Utility.
Include document/OCR text as a field in database file	When enabled, this feature includes exported text to a field in the database. Type the field name in the text box provided. Note: When the exported text exceeds the Concordance Desktop allowable limit of 12 MB for a field, the excess text will be entered into the next incremental field up to a maximum of six fields. For example, if the first text field is LAW_OCR_01, the first 12 MB of text goes into that field. The next 12 MB of text goes into LAW_OCR_02 and so forth until LAW_OCR_06. If there is still text to be stored, an error message is logged indicating that the text size exceeded maximum space available and data was truncated.
Link to images and native files in their current location	Leaves any images and/or native files included in the export in their current location (LAW case directory). This feature greatly improves the speed of the export because no files are being copied and LAW must only generate the load files. Paths in the load file will reflect the current location of the files.
Truncate text values that exceed their field size	If this setting is enabled, records with text values that exceed their field size in the target DCB will still be added to the database. The offending text values will be truncated and a warning will be logged. When disabled, these records will not be added to the DCB and errors will be logged. The warning and error messages will include the field name, field size, and the offending data size.

To configure export to Concordance Desktop

⚠ This export should only be started from a LAW machine that is also the Concordance Desktop License server or has a Mobile license of Concordance Desktop installed. If this Concordance Desktop installation has reviewer licenses only, it is recommended to do a standard Concordance export. See Configure Security for exceptions to this in version 7.2+.

1. In the main window, on the **Tools** menu, click **Export Utility**.

2. In the Export Utility, click the **Formats/Documents** tab.

3. In the **Available Formats** list, click **Concordance Desktop**, and then click **Select >**.

4. In the **Selected Formats** list, click **Concordance Desktop**, and then click **Configure**.

   The **Concordance Desktop Settings** dialog box appears.

5. Configure options according to the information in the following table:

Option	Description
Use specific database (*.dcb) override path	Allows users to append to the desired database.
Database path	This option is used in conjunction with the "Use specific database (*.dcb) override path" option. Click Browse to locate a Concordance Desktop database. Exported records will be appended to the selected *.dcb file. If you are exporting the database to a different computer/server than where LAW is located then the Concordance services (Concordance Admin Server and Concordance Server services in services.msc) need to be enabled as a network account instead of local account.

Option	Description
Path Notation	The path notation is used to specify how image paths are written to the Opticon load file during the export process. With Hard Path selected, the load file will display a full path to each output file, such as C:\Exports\TestCase\Vol001\image.tif. The Relative Path setting uses a relative path to the images from the export path, instead of the entire path (minus the drive letter). If the UNC Path option is selected, and the export path is a mapped network drive, the image paths are written using an UNC notation, for example: \\comput er name\ shar ename\
If Record Match is Found	The selected option will determine the action LAW will take if a matching record is found in the Concordance database when utilizing the append feature. The three options are:
• **Skip Record**	Record will be omitted if it already exists.
• **Update Existing Record**	Any new information will be applied to the existing record, if one is located.
• **Append All Records**	All records will be appended to existing database.
Field Settings 	Click this button to open the **Concordance Field Settings** dialog box, which lists the fields in the current LAW case. The fields can be selected as "Keyed" or "Indexed" fields before exporting the database to Concordance. When the Concordance database is opened, the selected key and indexed fields are listed in File > Modify. Note: These field settings only apply to Concordance 8 databases (or higher). To modify fields for earlier database versions, edit the **E-Discovery.dcb** database template located in the Template folder in the LAW installation directory.
Security (Only available in version 7.2+)	Click [Security](#) to configure Concordance Desktop database server settings for remote servers.
Concatenate DCB's across separate partitions	Select this option to concatenate the databases into one database and then export it into partitions. For example, a partition size of 650 MB creates partitions of the concatenated database that can be copied to CDs. All of the database partitions are treated as one database. The partition size is set in the Options tab of the Export Utility.

Option	Description
Include document/OCR text as a field in database file	When enabled, this feature includes exported text to a field in the database. Type the field name in the text box provided. Note: When the exported text exceeds the Concordance Desktop allowable limit of 12 MB for a field, the excess text will be entered into the next incremental field up to a maximum of six fields. For example, if the first text field is LAW_OCR_01, the first 12 MB of text goes into that field. The next 12 MB of text goes into LAW_OCR_02 and so forth until LAW_OCR_06. If there is still text to be stored, an error message is logged indicating that the text size exceeded maximum space available and data was truncated.
Link to images and native files in their current location	Leaves any images and/or native files included in the export in their current location (LAW case directory). This feature greatly improves the speed of the export because no files are being copied and LAW must only generate the load files. Paths in the load file will reflect the current location of the files.
Truncate text values that exceed their field size	If this setting is enabled, records with text values that exceed their field size in the target DCB will still be added to the database. The offending text values will be truncated and a warning will be logged. When disabled, these records will not be added to the DCB and errors will be logged. The warning and error messages will include the field name, field size, and the offending data size.

Concordance Direct (DCB)

To configure export to Concordance Direct (DCB)
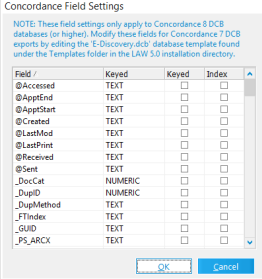
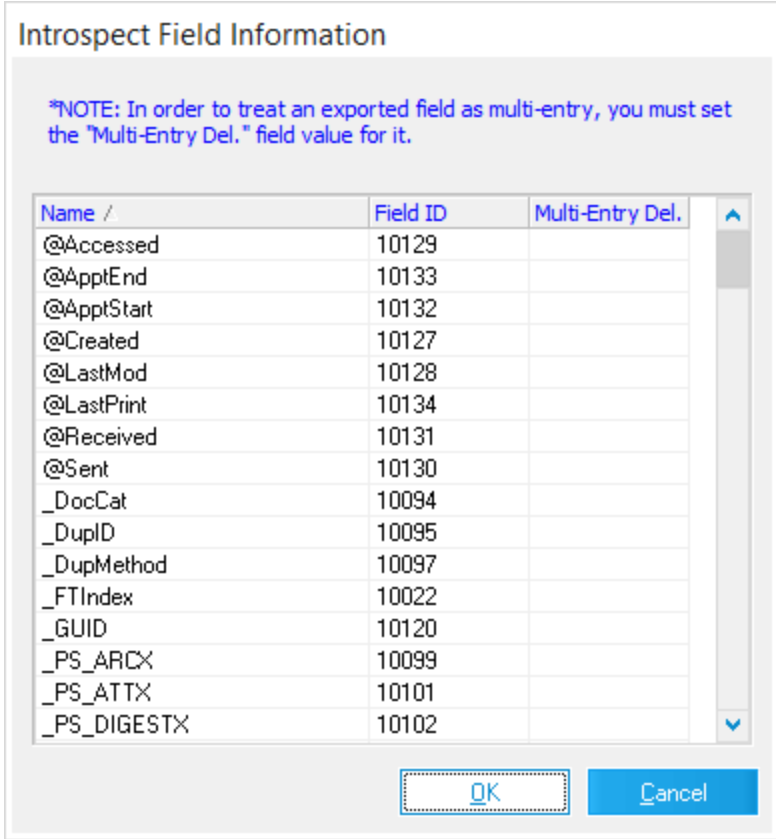1. In the main window, on the **Tools** menu, click **Export Utility**.

2. In the Export Utility, click the **Formats/Documents** tab.

3. In the **Available Formats** list, click **Concordance Direct (DCB)** and then click the **Select >** button.

4. In the **Selected Formats** list, click **Concordance Direct (DCB)** and then click **Configure**.

   The **Concordance Direct Settings** dialog box appears.

5. Configure options according to the information in the following table:

Option	Description
Use specific database (*.dcb) override path	Allows users to append to the desired database.
Security	The Security feature applies login information when appending to existing Concordance DCB databases. Click the button to enter a user name and password for the database. The Security button is disabled in versions of Concordance that do not support this feature,
Database path	This option is used in conjunction with the "Use specific database (*.dcb) override path" option. Click Browse to locate a Concordance database; exported records will be appended to the selected *.dcb file.

Option	Description
Path Notation	The path notation is used to specify how image paths are written to the Opticon load file during the export process. With Hard Path selected, the load file will display a full path to each output file, such as C:\Exports\TestCase\Vol001\image.tif. The Relative Path setting uses a relative path to the images from the export path, instead of the entire path (minus the drive letter). If the UNC Path option is selected, and the export path is a mapped network drive, the image paths are written using an UNC notation, for example: \\comput er name\ shar ename\ Note: Hard paths will always be used if the option **Automatically load Opticon imagebase files** is enabled.
If Record Match is Found	The selected option will determine the action LAW will take if a matching record is found in the Concordance database when utilizing the append feature. The three options are:
Skip Record	Record will be omitted if it already exists.
Update Existing Record	Any new information will be applied to the existing record, if one is located.
Append All Records	All records will be appended to existing database.
Field Settings *[Concordance Field Settings dialog image]*	Click this button to open the **Concordance Field Settings** dialog box, listing the fields in the current LAW case. The fields can be selected as "Key" or "Indexed" fields before exporting the database to Concordance. When the Concordance database is opened, the selected key and indexed fields are listed in File > Modify. Note: These field settings only apply to Concordance 8 databases (or higher). To modify fields for earlier database versions, edit the **E-Discovery.dcb** database template located in the Template folder in the LAW installation directory.
Concatenate DCB's across separate partitions	Select this option to concatenate the databases into one database and then export it into partitions. For example, a partition size of 650 MB creates partitions of the concatenated database that can be copied to CDs. All of the database partitions are treated as one database. The partition size is set in the Options tab of the Export Utility.
Automatically load Opticon imagebase files	When enabled, LAW will automatically load any exported images into Opticon, eliminating the need for the user to do so once the Concordance database is created.
Enable support for Concordance Native Viewer	When enabled, configures the load file created during export to be opened with Concordance Native Viewer 1.0. This setting is selected by default.

Option	Description
	• If both native and image files exist for a record the image file should take precedence in the Opticon file. • If both native and image files exist for a record and if **include tagged documents** is also selected then the native file takes precedence in the Opticon file.
Include document/OCR text as a field in database file	When enabled, this feature includes exported text to a field in the database. Type the field name in the text box provided.
Link to images and native files in their current location	Leaves any images and/or native files included in the export in their current location (LAW case directory). This feature greatly improves the speed of the export because no files are being copied and LAW must only generate the load files. Paths in the load file will reflect the current location of the files.
Truncate text values that exceed their field size	If this setting is enabled, records with text values that exceed their field size in the target DCB will still be added to the database. The offending text values will be truncated and a warning will be logged. When disabled, these records will not be added to the DCB and errors will be logged. The warning and error messages will include the field name, field size, and the offending data size.

Delimited Text

To configure export to delimited text

1. In the main window, on the **Tools** menu, click **Export Utility**.

2. In the Export Utility, click the **Formats/Documents** tab.

3. In the **Available Formats** list, click **Delimited Text** and then click the **Select >** button.

4. In the **Selected Formats** list, click **Delimited Text** and then click **Configure**.

   The **Delimited Text Settings** dialog box appears.

5. Configure options according to the information in the following table:

Option	Description
Data Delimiters	Choose the desired delimiters to surround each field and/or field value in the delimited text file. The Delimited Text export generates a *.csv file named for the last folder in the export path (i.e., Vol001.csv).
Path Notation	The path notation allows users to specify how image paths are written to the load files during the export process. With Hard Path selected, the load file will display a full path to each output file, such as C:\Exports\TestCase\Vol001\image.tif. The Relative Path setting uses a relative path to the images from the export path instead of the entire path (minus the drive letter). If the UNC Path option is selected and the export path is a mapped network drive, the image paths are written using an UNC notation (\\computername\sharename\ ...).
Allow Unicode data (UCS-2 format)	Select this option to view any Unicode data existing in the selected export fields in the delimited text (CSV) file created during export.

📝 The **Allow Unicode data** setting only applies to Concordance database versions 10 and above.

📝 Excel will not parse a Unicode file correctly by default unless a tab [009] is used for the field delimiter.

DocuMatrix 1.5

To configure export to DocuMatrix 1.5

1. In the main window, on the **Tools** menu, click **Export Utility**.

2. In the Export Utility, click the **Formats/Documents** tab.

3. In the **Available Formats** list, click <u>**DocuMatrix 1.5**</u> and then click the **Select >** button.

4. In the **Selected Formats** list, click <u>**DocuMatrix 1.5**</u> and then click **Configure**.

   The <u>**DocuMatrix Settings**</u> dialog box appears.

5. Configure options according to the information in the following table:

Option	Description
Case Name and **Database Name**	These are both optional settings and are not required to create the export from CloudNine™ LAW. These values may be entered if requested.
Include attachments by parent	Forces CloudNine™ LAW to include attachments with any selected parent.
Include page offset data with OCR	This setting uses the OCR information created from the ExperVision or ABBYY OCR engine to create information in the load file for producing hit highlighting in DocuMatrix. Without this setting enabled, OCR text will be included in the load file, but the location of each word will not be included. ("Include Full Text" must also be checked on the Formats/Documents tab of the Export Utility.)

Option	Description
Create XML for fixing existing documents	Use this setting to create an XML file specifically used for updating existing records in an existing DocuMatrix case.
Renumber documents sequentially	When enabled, LAW will renumber the documents in the .xml load file, starting with the specified value in the Starting # field.

📝 DocuMatrix requires attachment (child) documents to have a parent in the load file. If an attachment is included to be exported but the parent is not (using the manual document range selection), this may cause problems when loading the file into DocuMatrix.

EDRM XML 1.0

To configure export to EDRM XML 1.0

1. In the main window, on the **Tools** menu, click **Export Utility**.

2. In the **Export Utility**, click the **Formats/Documents** tab.

3. In the **Available Formats** list, click **EDRM XML 1.0** and then click the **Select >** button.

4. In the **Selected Formats** list, click **EDRM XML 1.0** and then click **Configure**.

   The **EDRM 1.0 Settings** dialog box appears.

EDRM 1.0 Settings

Batch Name

Path Notation
- ○ Hard Path
- ⦿ Relative Path
- ○ UNC Path

☐ Include document/OCR text as content in load file

Note: Use of this setting is not recommended if your data contains any Unicode due to incompatibilities with many Unicode characters and the XML format.

☐ Link to images and native files in their current location

[OK]   [Cancel]

5. Configure options according to the information in the following table:

Option	Description
Batch Name	Associates a specific name with the exported set of files and metadata. The value entered in the text box will be stored in the XML load file in the Batch Name tag.
Path Notation	Specifies how image paths are written to the load files during the export process. With Hard Path selected, the load file will display a full path to each output file, such as C:\Exports\TestCase\Vol001\image.tif. The Relative Path setting uses a relative path to the images from the export path instead of the entire path (minus the drive letter). If the UNC Path option is selected and the export path is a mapped network drive, the image paths are written using a UNC notation (\ \computername\sharename\ ...). When enabled, the Include document/OCR text as content in load file setting includes the text for each document (if available) within the EDRM XML file. Specifically, the text will appear between the starting and ending InlineContent tags.
Include document/OCR text as content in load file	Adds extracted full text of document and any OCR text to the load file.

Option	Description
Link to images and native files in their current location	Creates links in the load file to the current location of image files and all other types of files.

EDRM XML 2.0

To configure export to EDRM XML 2.0

1. In the main window, on the **Tools** menu, click **Export Utility**.

2. In the **Export Utility**, click the **Formats/Documents** tab.

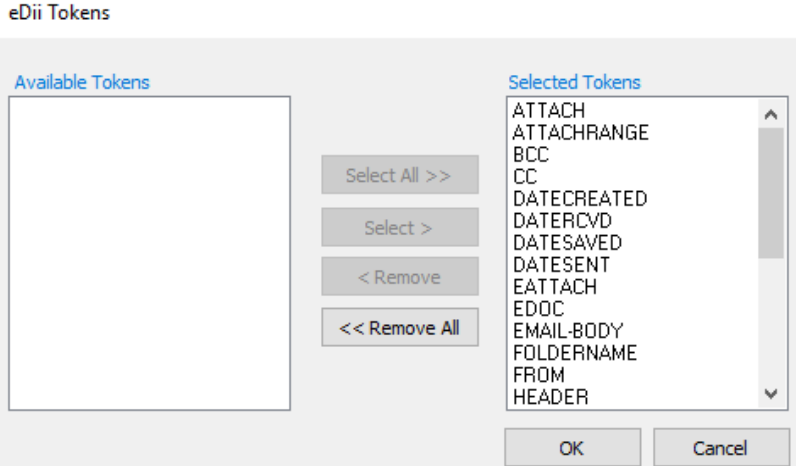3. In the **Available Formats** list, click **EDRM XML 2.0** and then click the **Select >** button.

4. In the **Selected Formats** list, click **EDRM XML 2.0** and then click **Configure**.

    The **EDRM 2.0 Settings** dialog box appears.

5. Configure options according to the information in the following table:

Option	Description
Path Notation	Specifies how image paths are written to the load files during the export process. With Hard Path selected, the load file will display a full path to each output file, such as C:\Exports\TestCase\Vol001\image.tif. The Relative Path setting uses a relative path to the images from the export path instead of the entire path (minus the drive letter). If the UNC Path option is selected and the export path is a mapped network drive, the image paths are written using a UNC notation (\\computername\sharename\ ...). When enabled, the Include document/OCR text as content in load file setting includes the text for each document (if available) within the EDRM XML file. Specifically, the text will appear between the starting and ending InlineContent tags.
Include document/OCR text as content in load file	Adds extracted full text of document and any OCR text to the load file.
Link to images and native files in their current location	Creates links in the load file to the current location of image files and all other types of files.

📝 If you are planning to export to EDRM 2.0 and then re-import the XML back into a new LAW case, be sure to include the <FolderPath> field in the load file. The <FolderPath> field is required in order to recreate the folder structure in LAW upon import.

iCONECT

To configure export to iCONECT Settings

1. In the main window, on the **Tools** menu, click **Export Utility**.

2. In the Export Utility, click the **Formats/Documents** tab.

3. In the **Available Formats** list, click **iCONECT** and then click the **Select >** button.

4. In the **Selected Formats** list, click **iCONECT** and then click **Configure**.

   The **iCONECT Settings** dialog box appears.

5. Configure options according to the information in the following table:

Option	Description
Path Notation	The path notation allows users to specify how image paths are written to the load files during the export process. • With **Hard Path** selected, the load file will display a full path to each output file, such as C:\Exports\TestCase\Vol001\image.tif. • The **Relative Path** setting uses a relative path to the images from the export path instead of the entire path (minus the drive letter). • If the **UNC Path** option is selected and the export path is a mapped network drive, the image paths are written using a UNC notation (\\computername\sharename\ ...).
Date Format	Choose the date format for any exported date fields. Choose the desired format from the drop-down list.
Include document/OCR text as a field in load file	Includes the text for each document (if available) as a field in the CaseLogistix XML file. The **Field Name** text box is used to specify the name of the field to which the text will be exported.

Inmagic Export Settings

To configure export to Inmagic DB/TextWorks Settings

1. In the main window, on the **Tools** menu, click **Export Utility**.

2. In the Export Utility, click the **Formats/Documents** tab.

3. In the **Available Formats** list, click **Inmagic DB/TextWorks** and then click the **Select >** button.

4. In the **Selected Formats** list, click **Inmagic DB/TextWorks** and then click **Configure**.

   The **Inmagic DB/TextWorks Settings** dialog box appears.
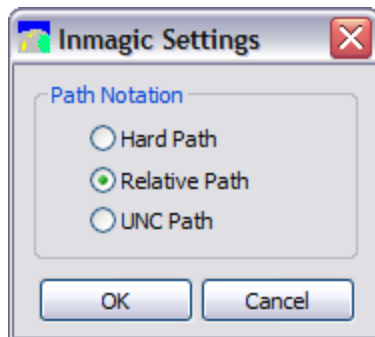
5. Configure **Path Notation** options as needed:

- With **Hard Path** selected, the load file will display a full path to each output file, such as C:\Exports\TestCase\Vol001\image.tif.

- The **Relative Path** setting uses a relative path to the images from the export path instead of the entire path (minus the drive letter).

- If the **UNC Path** option is selected and the export path is a mapped network drive, the image paths are written using a UNC notation (\\computername\sharename\ ...).

Introspect eCM

To configure export to Introspect eCM

1. In the main window, on the **Tools** menu, click **Export Utility**.

2. In the Export Utility, click the **Formats/Documents** tab.

3. In the **Available Formats** list, click **Introspect eCM** and then click the **Select >** button.

4. In the **Selected Formats** list, click **Introspect eCM** and then click **Configure**.

   The **Introspect Settings** dialog box appears.

5. Configure options according to the information in the following table:

Option	Description
General	Enter values for: **Batch Name.** If left blank, the volume name of the exported load file will be used by default. **Index ID.** Appears as repeating value in the load file. **Folder ID.** Appears as repeating value in the load file. Each of these three values is usually provided if this format has been requested.
Include all Bates numbers	Creates a text file called "<image>_uid.txt" for each multi-page document and contains a list of PageIDs contained in the multi-page document.

Option	Description
Link to images and files in current location	When enabled, the export process will generate the load file(s) and link them to the images and/or native files in their current location; the files are not copied.

Note: When using this setting, images MUST be in multi-page format in the CloudNine™ LAW case in order for Introspect to view all pages of the images. Also, the IDX load file will always be written to the image path of the case so relative paths to the documents can be used (required by Introspect) and named according to the batch name as configured in the Introspect settings. A shortcut to the load file will be created in the export path referencing the load file in the image directory of the case. |
| **Use IDX Version 5 format** | Forces LAW to configure the load file to match the specifications for Introspect 5. |
| **<Field IDs..>** | Click this button to display the field configuration dialog shown below: |

Introspect Field Information

*NOTE: In order to treat an exported field as multi-entry, you must set the "Multi-Entry Del." field value for it.

Name /	Field ID	Multi-Entry Del.
@Accessed	10129	
@ApptEnd	10133	
@ApptStart	10132	
@Created	10127	
@LastMod	10128	
@LastPrint	10134	
@Received	10131	
@Sent	10130	
_DocCat	10094	
_DupID	10095	
_DupMethod	10097	
_FTIndex	10022	
_GUID	10120	
_PS_ARCX	10099	
_PS_ATTX	10101	
_PS_DIGESTX	10102	

OK   Cancel

Introspect Field Information dialog box	Use this to define specific Field ID values for any of the fields.

The fields shown in this list are all of the index fields which exist in the current LAW case.

These fields will exist in the Header section of the .idx load file. |

IPRO IntelliVIEW

To configure export to IPRO IntelliVIEW

1. In the main window, on the **Tools** menu, click **Export Utility**.

2. In the Export Utility, click the **Formats/Documents** tab.

3. In the **Available Formats** list, click **IPRO IntelliVIEW** and then click the **Select >** button.

4. In the **Selected Formats** list, click **IPRO IntelliVIEW** and then click **Configure**.

    The **IPRO Settings** dialog box appears.
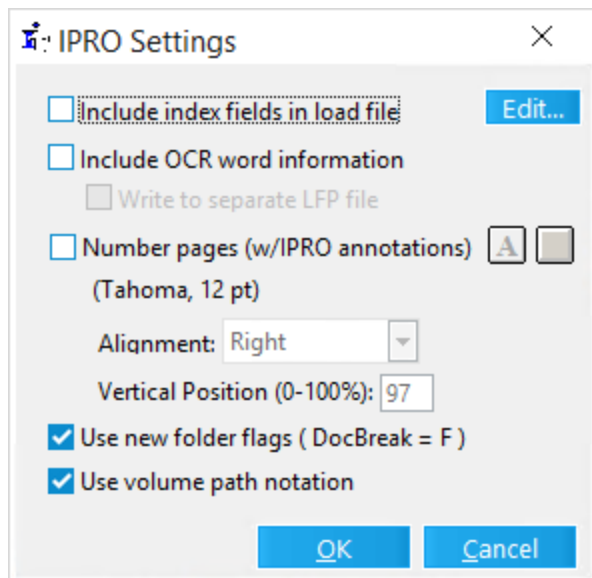
5. Configure options according to the information in the following table:

Option	Description
Include index fields in load file	Specifies fields to include in the LPF file. Click the **Edit** button to display the **IPRO Field Information** dialog.

Option	Description
	IPRO Field Information ✕ Select all fields to be included in the IPRO export file (*.lfp). The field type determines how the field should be included, as an IS or an IO entry, IS entries being reserved for pre-defined tags that exist in the IPRO project. NOTE: Information (IO) fields are limited to 10 per load file and must be mapped to a field number (1-10). **Available Fields** | Name	Index	Type
---	---	---
☐ @Accessed	0	INFO
☐ @ApptEnd	0	INFO
☐ @ApptStart	0	INFO
☐ @Created	0	INFO
☐ @LastMod	0	INFO
☐ @LastPrint	0	INFO
☐ @Received	0	INFO
☐ @Sent	0	INFO
☐ _DocCat	0	INFO
☐ _DupID	0	INFO
☐ _DupMethod	0	INFO
☐ _FTIndex	0	INFO	 0 field(s) selected **Field Information** Field Name: @Accessed Field Type: ○ Tag/Issue (IS) ◉ Information (IO) Field Index (1-10): 0 Tag Fields: 0 Info Fields: 0 OK Cancel • You can select of up to 10 Information (IO) fields and as many Tag/Issue (IS) fields as you need. • When specifying the IO tags, an index value (1-10) must be assigned to the selected field and will match the corresponding field in IPRO. • No two selected IO fields may have the same index value. Selection of index fields in this window is independent of the fields selected under the **Fields** tab in the Export Utility. After the desired selections have been made, click **OK** to save the changes and return to the **IPRO Settings** dialog.
Include OCR Word Information	OCR produced using the ExperVision or ABBYY OCR engine may be included in the IPRO load file using the full text (FT) tag, which allows full text searching in IPRO. • To separate the OCR text from the image information, select **Write to separate LFP file**. This option will generate two IPRO files displayed as [Volume].lfp and [Volume](ocr).lfp.
Number pages (w/IPRO	This feature allows CloudNine™ LAW to create special tags in the exported LFP file that apply the current PageID of the document as

Option	Description
annotations)	an "IPRO Annotation." This allows IPRO users to view/hide the PageID annotation just as if the annotation were created in IPRO itself.
	Alignment determines the horizontal location of the annotation: • Left • Centered • Right
	Vertical Position places the annotation relative to the height of the document. Select 0% to create an annotation at the top of the page. Select 100% to create the annotation at the bottom of the page.
	📝 This annotation is applied directly on top of the existing image; therefore, it could potentially cover existing image data. The IPRO annotation does not modify the image itself.

Use new folder flags (DocBreak = F)	Use this setting to include an (F) flag in the IPRO .lfp file as the document break at the beginning of each new folder. The default value for this feature uses the document (D) flag.
Use volume path notation	Select this option to use a volume path notation. Otherwise, a full path (with drive letter) will be used and no volume will be specified.

JFS Litigator's Notebook

Use the JFS Settings dialog box to map LAW fields to default JFS fields.

To configure export to Litigator's Notebook Settings

1. In the main window, on the **Tools** menu, click **Export Utility**.

2. In the Export Utility, click the **Formats/Documents** tab.

3. In the **Available Formats** list, click **JFS Litigator's Notebook** and then click the **Select >** button.

4. In the **Selected Formats** list, click **JFS Litigator's Notebook** and then click **Configure**.

   The **JFS Litigator's Notebook Settings** dialog box appears.
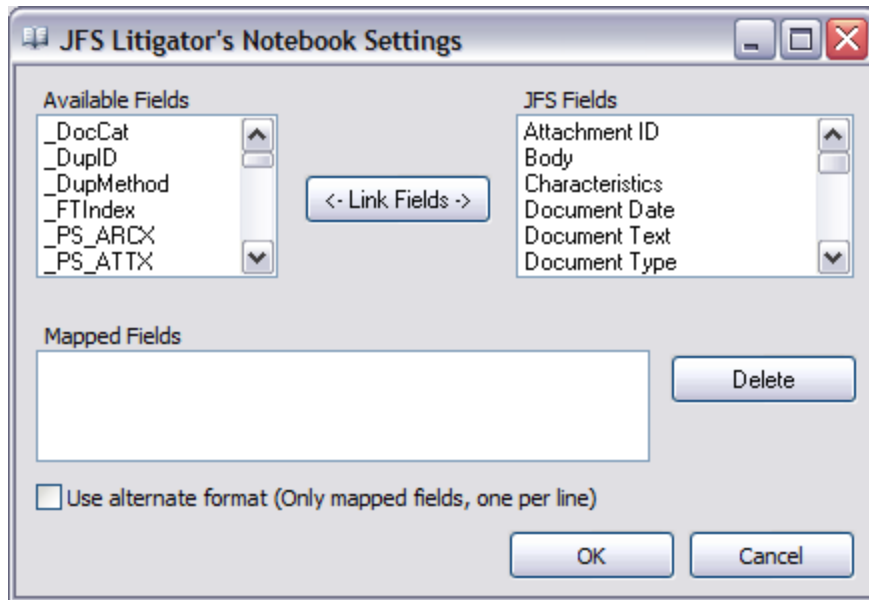
5. Map CloudNine™ LAW fields to JFS fields according to the information in the following table:

To perform this action	To this
Map a LAW field to a particular JFS field.	1. Select the **LAW** field in the **Available Fields** list. 2. Select a field in the **JFS Fields** list. 3. Click **<Link Fields>**. The fields are added to the **Mapped Fields** list.
Undo a mapped field.	Select an item in the **Mapped Fields** list and then click **Delete**.
List only the exported field names (per line) with the corresponding field value.	Select **Use alternate format (only mapped fields, one per line)**.

PDF Conversion

To configure export to PDF Conversion Settings

---

1. In the main window, on the **Tools** menu, click **Export Utility**.

2. In the Export Utility, click the **Formats/Documents** tab.

3. In the **Available Formats** list, click **PDF Conversion** and then click the **Select >** button.

4. In the **Selected Formats** list, click **PDF Conversion** and then click **Configure**.

   The **PDF Settings** dialog box appears.

5. Configure options according to the information in the following table:

Option	Description
Create bookmarks for grouped documents	Use this setting in conjunction with the **Combine Parents/Attachments** option, found in the Export Utility under the Options tab, to create bookmarks in exported PDF files. If a document is not a parent or contains no attachments, no bookmarks will be created in the PDF file for that document. The **Parent and Attachments** drop-down lists will contain the index fields that exist in the current case.
Bookmark Caption	The fields will be used as the bookmark titles in the exported PDF.
Populate PDF metadata	This setting may be used to populate the metadata of a PDF file with index field values stored in the LAW case. This feature must be used in conjunction with the **Combine Parents/Attachments** option located in the Options tab of the Export Utility.

Ringtail Casebook

⊟ **To configure export to Ringtail Casebook**

In the main window, on the **Tools** menu, click **Export Utility**.

1. In the **Export Utility**, click the **Formats/Documents** tab.

2. In the **Available Formats** list, click **Ringtail CaseBook** and then click the **Select >** button.

3. In the **Selected Formats** list, click **Ringtail CaseBook** and then click **Configure**.

   The **Ringtail Settings** dialog box appears.
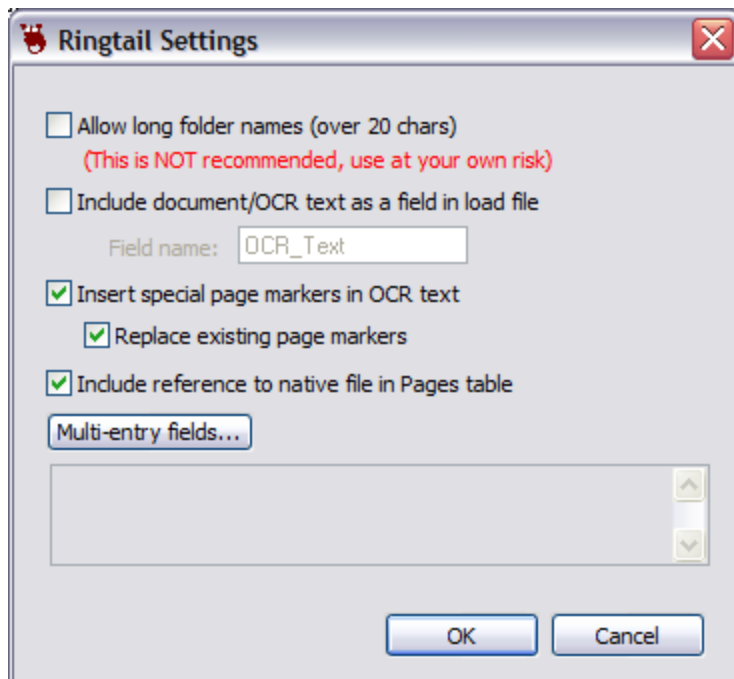
4. Configure options according to the information in the following table:

Option	Description
Allow long folder names (over 20 chars)	This option allows CloudNine™ LAW to ignore Ringtail's recommended folder name length limit of 20 characters.

Option	Description
This setting is not recommended as Ringtail does not officially support long folder names. This option is available due to special LAW user requests.	
Include document/OCR text as a field in load file Ringtail does not directly support this method and it should be used with caution.	Inserts document text into a memo field inside the Ringtail load file. This was the default method for handling Ringtail OCR with LAW versions 4.02.41 and earlier.
Insert special page markers in OCR text	Inserts a special page marker onto the OCR text of each page in the following format: `###{Page}|||Page {PageID}^^^` This tag is used by Ringtail for linking the OCR text to the actual images.
Replace existing page markers	Removes any existing page markers currently on the OCR and replace them with the new value. This feature is useful if the OCR in LAW already contains these markers but document boundaries have since changed. Instead of re-OCRing the documents, this feature replaces the old tag with the new.
Include reference to native file in Pages table	When enabled, and native files are included for export, LAW will write a record for each native file to the Pages table in the Ringtail load file (export.mdb). Records referenced in the pages table will be available for viewing in the **Image** frame in Ringtail. If images and native files are included for export, and the native records are not referenced in the Pages table, Ringtail will locate the native files and allow viewing of them in the **Content** frame, provided the native files are named the same as the associated image and are located in the same folder.

⊟ **Important Format Notes**

The requirements for the Ringtail format should be followed closely to avoid possible problems importing this load file into Ringtail.

Format	Note
Folder names limited to 20 character	To enable folder names longer than 20 characters, enable the **Allow long folder names** option. By default CloudNine™ LAW truncates folder names longer than 20 characters.
Folder names may not contain spaces	Spaces in folder names will automatically be converted to underscores ("_") during the export process.
File names for exported text	Ringtail requires filenames for the exported text files to follow specific rules. The file name must: • Be the same as the image tag. • Have the .txt file extension.
Support for single-page and multi-page TIFFs	Ringtail supports either single-page or multi-page TIFFs; however, the most commonly used image format is single-page TIFF.
Document fields: • BegDoc# • EndDoc# • PgCount	These fields (if included in the Fields tab and selected for export) will be automatically placed in the **Export_Extras** table of the Ringtail load file.

Storm Viewer

About export to StormViewer

Storm Viewer is a freely distributable viewer available to the public. The viewer runs as a front-end to the Storm imagebase. The Storm imagebase can be built and distributed freely by users of CloudNine™ LAW and Storm-X. Storm Versions 1.2 and above now offer the DB-Builder License which allows users to import industry standard loads files and raw image files to build their own Storm ImageBases.

Storm utilizes the powerful Advantage Local Server for accessing image data and metadata. The local server has a 5-user concurrent connection limit, so any 5 users may have a single database open at one time.

For users who wish to scale Storm for use as a document retrieval tool, and have more clients, the Advantage Database Server is a lightweight and powerful relational database

management system (RDBMS) that can add stability, speed, and connections to existing imagebases.

📝 Storm Viewer exports will also work for the Storm software, a free CD-runtime viewer.

Summation

To configure export to Summation

1. In the main window, on the **Tools** menu, click **Export Utility**.

2. In the Export Utility, click the **Formats/Documents** tab.

3. In the **Available Formats** list, click **Summation Blaze** and then click the **Select >** button.

4. In the **Selected Formats** list, click **Summation Blaze** and then click **Configure**.

   The **Summation Settings** dialog box appears.

5. Configure options according to the information in the following table:

Option	Description
Allow advanced (iBlaze) dii features	Enables features not compatible with versions 5.21 and below of Summation.
Write all fields to dii file	Allows the writing of seven or more index fields to be written to the DII file. The default export method is to write the index fields to a text file if the number of index fields is greater than seven.
Include document/OCR text directly in dii file This feature appears to have bugs in Summation. Form feed characters to delimit text pages are not supported and errors about unsupported operations may occur, although all the data does appear to get imported.	Allows the text for the exported documents to be included in the dii load file. If this setting is enabled, it will overwrite the 'Include Full Text' option on the Fields tab of the Export Utility for the Summation format.
Include PST tokens directly in dii file	Forces CloudNine™ LAW to include an extra 'tag' in the edii file. The @PSTFile token allows Summation users to identify the source PST file where the e-mails originated. This can be helpful if there are many individual PST files being processed for a job. If this option is not checked, the @PSTFile token will be omitted from the load file (*.dii). This option is only available in cases that are enabled for electronic discovery.
Include @EDOC token for e-mail messages	If a PST or NSF mail store file is included in the export, enabling this option adds the @EDOC filename token to the load file (*.dii).
Always write index fields to separate file	Forces LAW to place all index field information into a delimited text file regardless of the number of index fields selected for export.
Include field names as first record of delimited text file	Places the index field names in the first line of the delimited text file. This is useful for determining the field order of the data in the load file or for importing into other applications.
Data Delimiters	The data delimiters for the delimited text file may be defined in this section. The default values for this feature can be reset by clicking the Restore Defaults button.

Option	Description
Dii Path Notation	This setting is used to specify the type of volume notation to use in the dii file. The **CD Volume (@V Vol:)** option will return a tag in the dii similar to: "@D @VVol001: \Vol001\001\" where "Vol001" is the volume name. **Hard Path** creates a tag similar to: "@D C:\Exports\Vol001\001\". The **Image Directory (@I)** option will return a tag in the dii similar to: "@D @I\Vol001\001\" where "Vol001" is the volume name. The two options (@V and @I) are the most commonly used with @I being the recommended (most versatile) method. Most users of Summation have a preferred way of importing the dii files so it is important to check on the preferred method.
eDii Tokens	This feature allows users to choose which tokens are placed in the Summation load file. All available tokens are selected by default.

eDii Tokens

Available Tokens

Select All >>

Select >

< Remove

<< Remove All

Selected Tokens

ATTACH
ATTACHRANGE
BCC
CC
DATECREATED
DATERCVD
DATESAVED
DATESENT
EATTACH
EDOC
EMAIL-BODY
FOLDERNAME
FROM
HEADER

OK   Cancel

☑ An INI setting is available to modify the **@MEDIA** value used for e-mail attachments that are e-mail files (i.e. MSG attached to an MSG).
By default, LAW will populate the **@MEDIA** token for these attachments as **Attachment** per the Summation documentation.
However, the value can be changed to **eMail** for e-mails attached to e-mails by adding the following setting in the Law50.ini file in the application path (i.e. C:\Program Files (x86)\Law50):
`[Summation]`
`EmailAttachEmailMedia=eMail`
If the `[Summation]` section already exists, add the key below it. Otherwise, add the entire setting as shown. To switch back to the default of **Attachment**, either remove or comment out the setting above or replace the **eMail** value with **Attachment**.

📝 The @O token will be included in the Summation load file in either of the following conditions:

1) The text is exported to a different location or has a filename different than the image.

or

2) When there is no TIFF image associated with a record.

TrialDirector and Sanction

The TrialDirector and Sanction formats use the same configuration settings.

To configure export to TrialDirector or Sanction

1. In the main window, on the **Tools** menu, click **Export Utility**.

2. In the Export Utility, click the **Formats/Documents** tab.

3. In the **Available Formats** list, click **InData's TrialDirector** or **Sanction** and then click the **Select >** button.

4. In the **Selected Formats** list, click **InData's TrialDirector** or **Sanction** and then click **Configure**.

    The **TrialDirector Settings** dialog box appears.

5. Configure options according to the information in the following table:

Option	Description
Document ID	Uniquely identifies each document within the collection. Users may choose BegDoc# or any other index field in the CloudNine™ LAW case, such as DocID or Exhibit Number (for example).
Object ID	References each page within the document. This field may either be Page ID (used when BegDoc# is selected as the Document ID field) or Auto-Generate, which assigns a .001 extension (and so on) after the Document ID to each page within the document (i.e., EX001.001, EX001.002, EX001.003). The Auto-Generate feature is most commonly used when a field other than BegDoc# is selected as the Document ID.
Description (Optional)	Optional setting allowing users to populate the Description field in TrialDirector or Sanction with values from a user-defined field in the LAW database.

Fields Tab

The Fields tab in the Export Utility is used to select the index fields to be included in the load files, create and maintain custom fields for exports, and to select the Image Tag, or document identifier, that links the index field data to the associated image or native document.

- To access this feature, from the main window, on the **Tools** menu, click **Export Utility**, and then click the **Fields** tab.
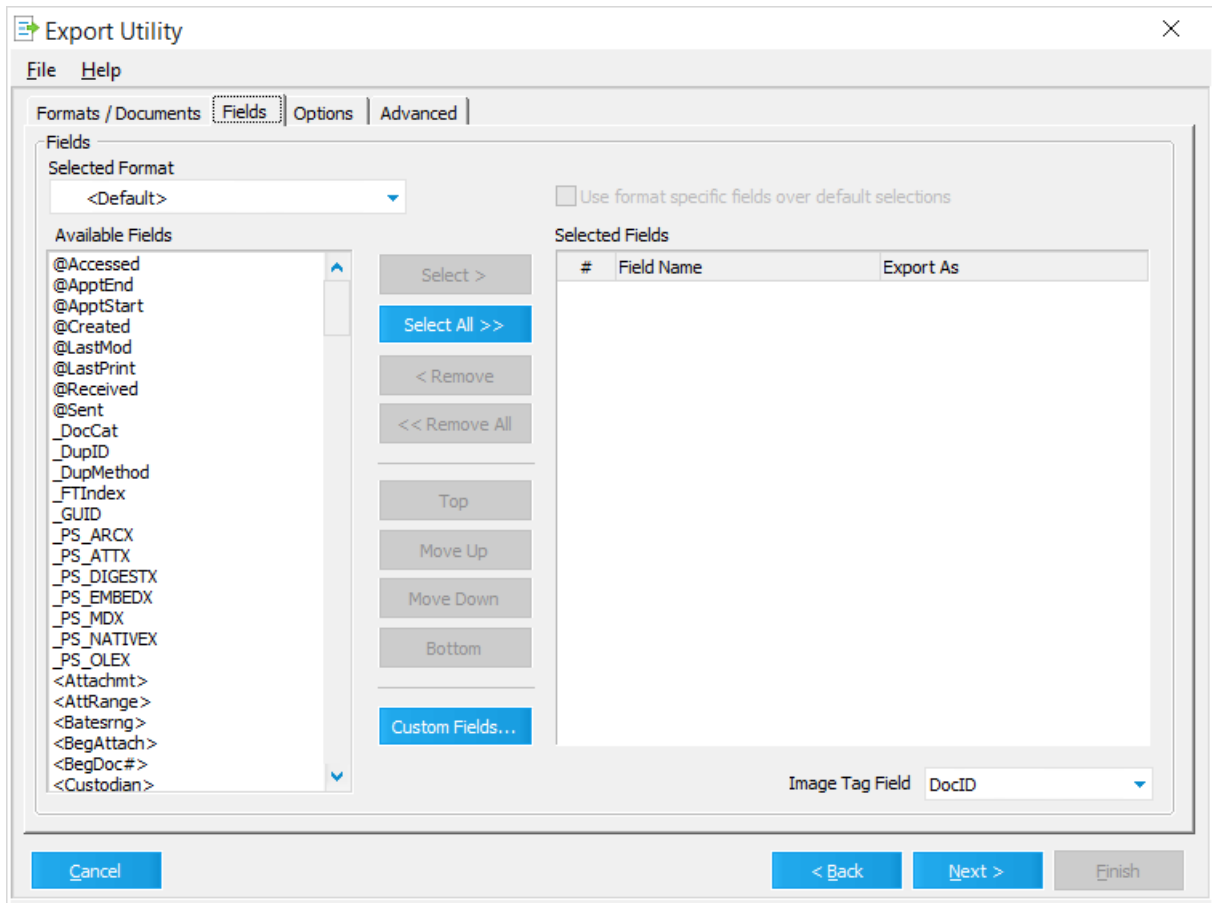
⊟ Selected format

The **Selected Format** list will contain up to five items, depending on the formats selected in the **Formats/Documents** tab:

- Default (always present in list)
- Summation
- Concordance
- Concordance Direct (DCB)
- Ringtail

In certain situations, users may need to include certain fields in a Summation load file and a different set of fields in a Concordance load file, for example, but would like to perform both exports at one time. CloudNine™ LAW allows customization of the field selection and field names for each of the four aforementioned formats while still maintaining a "default" field selection for any other selected formats. This option eliminates creation of multiple exports solely to change index field information for one or more of the formats.

For example, suppose you need to export to Summation, Concordance, and Storm Viewer, and the specifications call for different index fields to be included in each type of load file.

1. You would first choose the Storm Viewer fields with <Default> as the Selected Format in the Fields tab.

2. Next, you would select Summation from the Selected Formats list, check the "Use format specific fields over default selections" option, and then choose the desired fields for the Summation load file.

3. The final step would be to choose Concordance from the Selected Formats drop-down, check the "Use format specific..." option, and then choose the desired fields for the Concordance load file.

In another example, supposed you are asked to export to Summation and Storm Viewer. A requirement is for the export to include the same fields for both formats.

- In this scenario, you could choose <Default> in the **Selected Format** drop-down and then select the desired fields. These fields would then be included in both the Storm Viewer database and the Summation load file.

The **Use format specific fields over default selections** option enables the Available and Selected Fields lists when a format other than <Default> is chosen, allowing users to choose fields to be included in that format's load file.

⊟ **Selecting fields**

Available Fields

The **Available Fields** area displays a list of both user-defined and system fields that are available for export. The following table provides guidance on how to accomplish common tasks:

To accomplish this result	Do this
Include a field in the export	1. Highlight an index field in the **Available Fields** list. 2. Click **Select** or double-click the field name. The field moves to the **Selected Fields** list. When performing native file productions it is important to export a unique reference number for the image tag from LAW for use in the reviewing database. Typically, the **DocID** will be used as for this purpose. This number will serve as the link between the two databases and will be used to tag the records in LAW that will be produced to TIFF, PDF, or paper.

To accomplish this result	Do this
Remove a field	Double-click a field in the **Selected Fields** list. Or Select a field and then click the **Remove** button. Fields may also be selected or deselected by clicking the **Select All** or **Remove All** buttons.
Change the order of fields	To change the order of the fields in the **Selected Fields** list, in the **Selected Fields** list, click the field you want to move, then click one of the following buttons: • **Top.** Moves the selected field to the top of the field list. • **Move Up.** Moves the selected field up one level. • **Move Down.** Moves the selected field down one level. • **Bottom.** Moves the field to the bottom of the field list.

Selected Fields

The Selected Fields list is divided into three columns:

- **#** - Each each field added to the Selected Fields list is assigned a number in the # column, based on where the field falls in the list. For example, the first field in the list has a 1 in the # column, and if there are 5 fields in the list, the last field in the list has a 5 in the # column.
- **Field Name** - Displays the name of the selected index field.
- **Export As** - Allows users to rename the field upon export. This does not rename the field in the LAW case itself, just in the load file. This is useful for applications that require fields to be named a certain way, such as Summation.

📝 Field names displayed in red once moved to the **Selected Fields** list indicates the field name is not compatible with one or more of the selected export formats (i.e., field name is too long or contains unsupported characters). The field will need to be renamed in the 'Export As' column prior to export. The field name will no longer appear in red once the name has been properly changed.

⊟ **Custom fields**

In CloudNine™ LAW, you can create custom fields for exports in export profiles. Custom fields can be used to create fields that combine multiple LAW fields into a single field,

customize existing fields, and export the same fields more than once. Custom fields are created and maintained in the Custom Field Editor dialog box. To make custom fields easy to identify, all custom field names start with the @ symbol.

When an export profile containing custom fields is imported into another case, the custom fields are automatically created for the case when the export profile is imported into the case.

If an export profile imported into a case has a custom field containing a LAW field that does not exist in the case, the custom field will not be created in the case to which the export profile is being imported.

For example, if the export profile contains the custom field **@ETFileInfo**, which is a combination of the LAW **Filename** and **ET_ThreadID** fields, but the case the export profile is being imported into does not contain the **ET_ThreadID** field, the **@ETFileInfo** field will not be created in the case.

LAW comes with eight pre-defined custom date fields. These pre-defined fields cannot be edited or deleted in the Custom Field Editor dialog box, and are only available for electronic discovery-enabled cases. These custom date fields are combinations of existing LAW date fields:

- **@Accessed** = DateAccessed + TimeAccessed
- **@ApptStart** = DateAppStart + TimeAppStart
- **@ApptEnd** = DataAppEnd + TimeAppEnd
- **@Created** = DateCreated + TimeCreated
- **@LastMod** = DateLastMod + TimeLastMod
- **@LastPrint** = DateLastPrnt + TimeLastPrnt
- **@Received** = DateRcvd + TimeRcvd
- **@Sent** = DateSent + TimeSent

To add a custom field

1. Open the Export Utility.

2. Click the **Fields** tab.

3. Click the **Custom Fields** button.

   Clicking the **Custom Fields** button opens the **Custom Field Editor** dialog box.
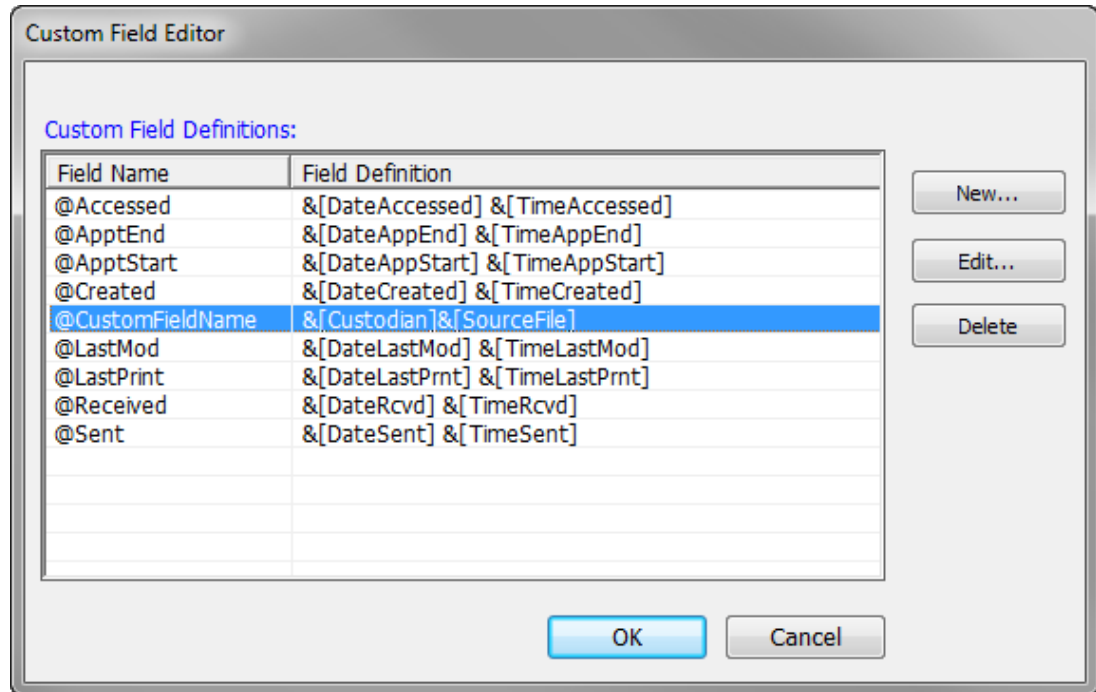
4. Click the **New** button.

    Clicking the **New** button opens the **New Custom Field** dialog box.
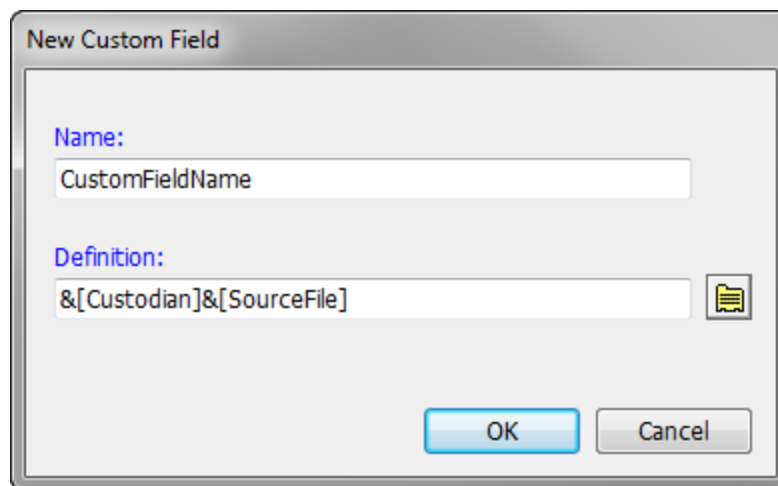
5. In the **Name** field, type the field name.

    Field names can be up to 30 characters and must be unique to the case. Unicode® characters are not supported in custom field names.

    You do not need to type the @ symbol at the beginning of the field name. The @ symbol is automatically added to the field name when you click **OK** in the **New Custom Field** dialog box.

6. In the **Definition** field, type the custom field definition or select the name of the LAW field(s) you want to use for the custom field.

    To select a field, for each field you want to add the to the **Definitions** field, click the **Insert Field** button, 🗐, next to the **Definition** field.

    Clicking the **Insert Field** button, opens the **Insert Field Reference** dialog box.
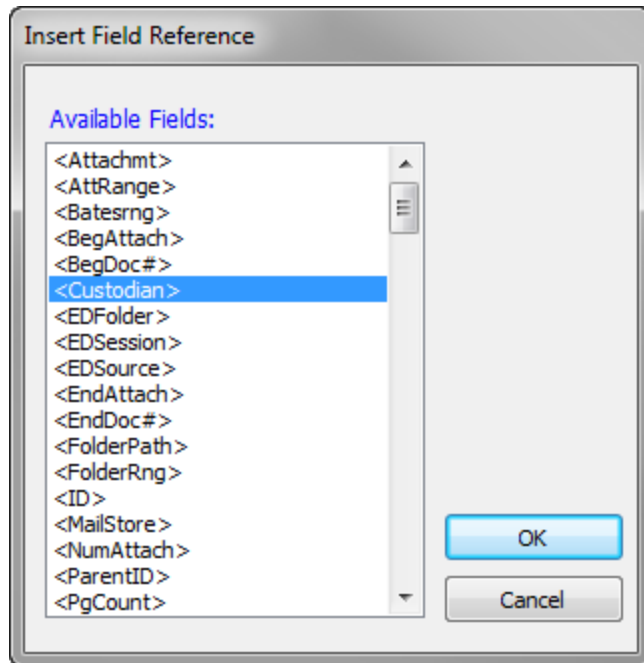
7. Click the field you want to add to the **Definition** field.

    User-created page-level fields are not displayed in the **Available Fields** list in the **Insert Field Reference** dialog box.

8. Click **OK**.

    Clicking **OK** adds the custom field to the **Custom Field Definitions** list.

☐ **To edit a custom field**

1. Open the Export Utility.

2. Click the **Fields** tab.

3. Click the **Custom Fields** button.

    Clicking the Custom Fields button opens the Custom Field Editor dialog box.
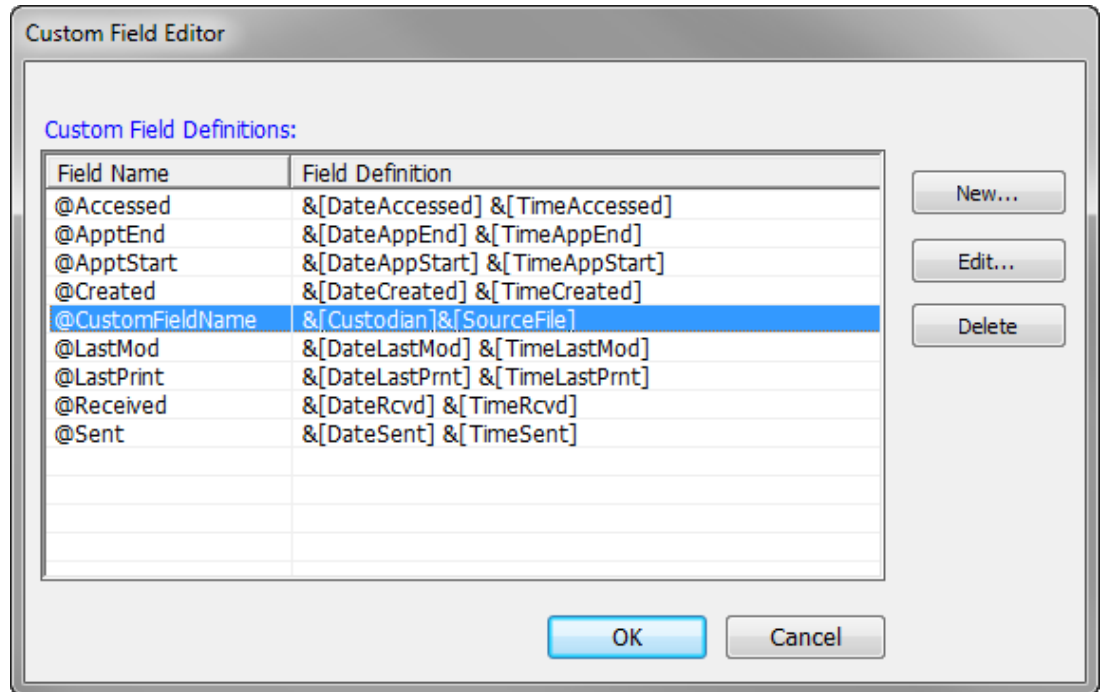
4. In the **Custom Field Definitions** list, click the custom field you want to edit.

5. Click the **Edit** button.

    Clicking the **Edit** button opens the **Edit Custom Field** dialog box.
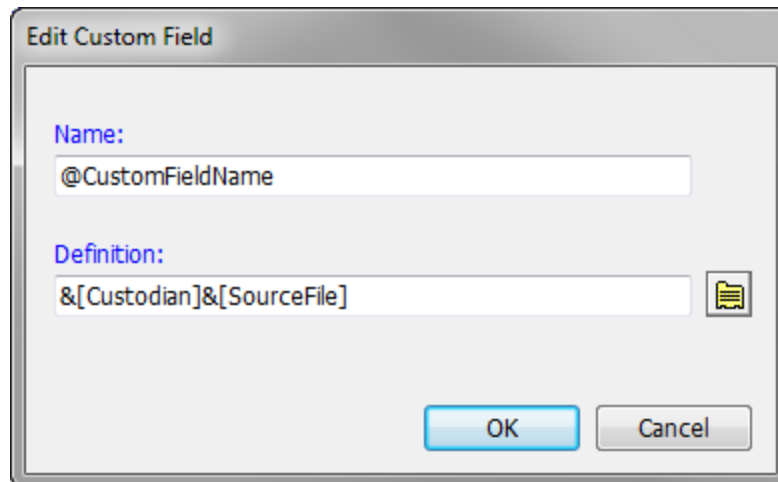
6. Make the necessary edits.

7. Click **OK** to save your changes and return to the **Custom Field Editor** dialog box.

To delete a custom field

1. Open the Export Utility.

2. Click the **Fields** tab.

3. Click the **Custom Fields** button.

    Clicking the **Custom Fields** button opens the **Custom Field Editor** dialog box.
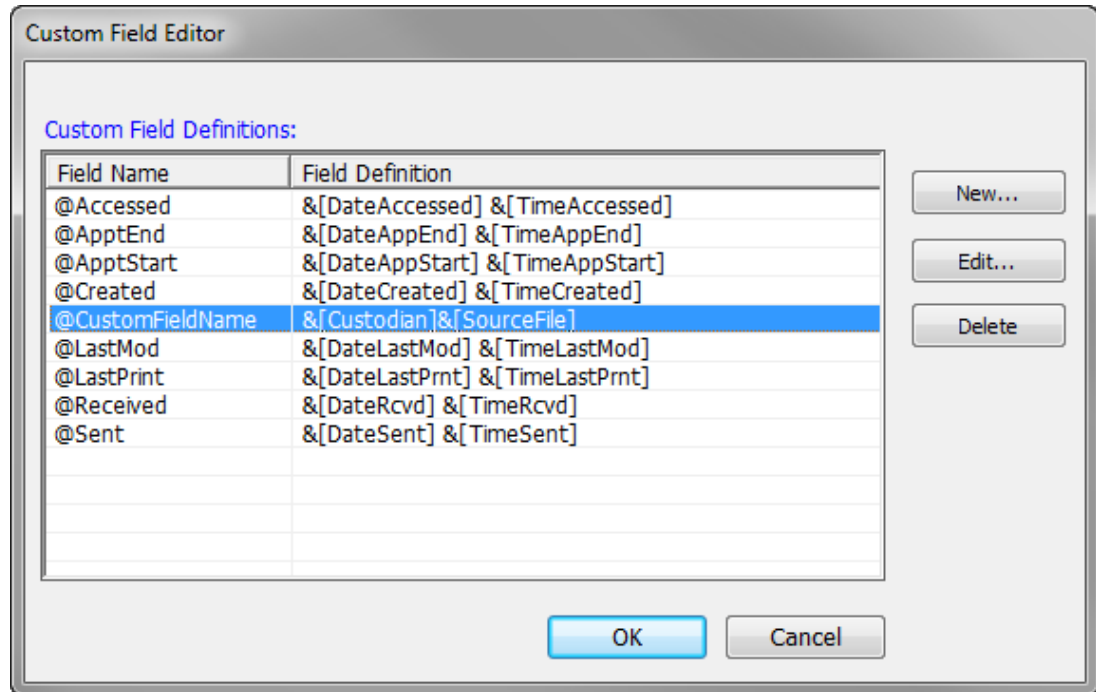
4. In the **Custom Field Definitions** list, click the custom field you want to delete.

5. Click the **Delete** button.

    Clicking the **Delete** button deletes the custom field.

Image Tag field

The Image Tag is a document identifier field. Use it to link images or native documents to the matching index field data. The BegDoc# and DocID fields are commonly used for this purpose, but other user-defined fields may be used provided they contain a unique value and do not contain blank values for any record.

Options Tab

In the Export Utility, the Options tab is where you configure many general settings that control how your export works. For example, the Options tab is where you set the output path, images, native, text, and load files, as well as the folder and file naming schemes, export logging, and various other output settings, such as file format.

To access this feature, from the main window, on the **Tools** menu, click **Export Utility**, and then click the **Options** tab.
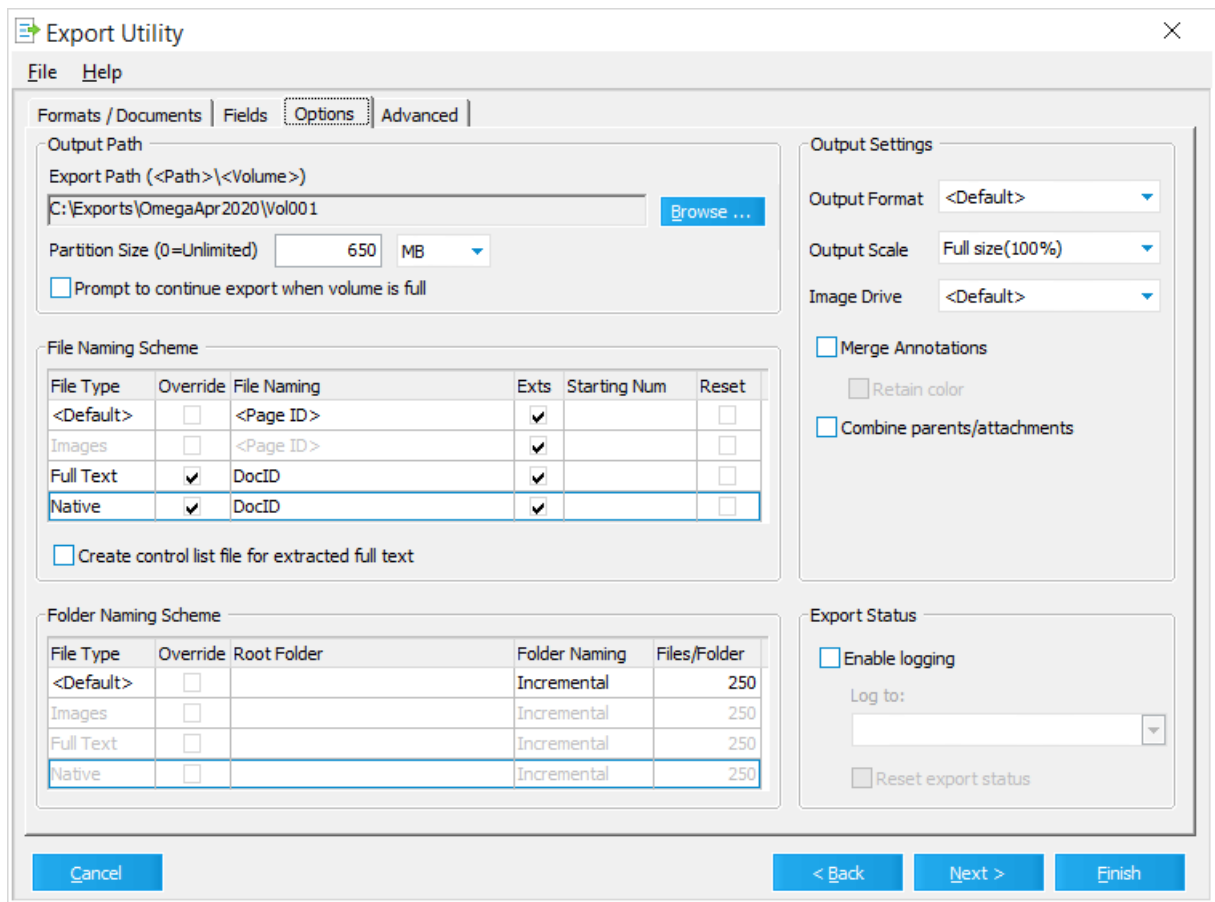
⊟ Output Path

This area of the Options tab contains settings related to the location in which the files will be exported.

Export Path - This value will be the location to which the exported files will be saved. These files may include one or a combination of images, native files, full text, and load files, depending on the selected options.

📝 The maximum character length for file paths in the Export Path field is 250 characters. If the file path exceeds 250 characters, any load files generated by the export will be saved to the $Invalid_Paths folder in the export directory. The rest of the files exported by LAW will be exported to the file path entered in the Export Path field.

Partition Size - This setting is used to determine how much data is written to each volume. The last folder listed in the output path is considered to be the volume name. For example, if the export path listed is C:\Exports\EDD_001\Vol001, then the first volume will be Vol001. When the partition size has been reached, a Vol002 folder will be created, etc. The default of 650 MB should be used if planning on burning the exported data to CDs but may be increased or decreased as needed (0=unlimited, all records will be written to one volume).

Prompt to continue export when volume is full - When this option is enabled, a prompt will appear on the screen each time a volume becomes full and a new volume must be created. The user must click Yes each time in order for CloudNine™ LAW to create the new volume and continue with the export.

⊟ **Default Export Path**

You can specify a default export path by providing the following settings in LAW50.ini under the LAW install folder (i.e. C:\Program Files (x86)\Law50 or under the VirtualStore folder if you don't have write access to the install folder)

[Export]

DefaultDrive=L:

DefaultPath=<Drive>\Exports\<Case Name>\Vol001

Where **DefaultDrive** is the mapped network share of the export location.

LAW will automatically replace <Drive> and <Case Name> in the path above with **DefaultDrive** and the current case name.

⊟ **File Naming Scheme**

The file naming grid is used to specify the type of file name to be used for images, native files, and full text.

File Naming Scheme					
File Type	Override	File Naming	Exts	Starting Num	Reset
<Default>	☐	<Page ID>	☑		☐
Images	☐	<Page ID>	☑		☐
Full Text	☑	DocID	☑		☐
Native	☑	DocID	☑		☐

☐ Create control list file for extracted full text

The grid columns are described in the following table:

Column	Description
File Type	Lists each file type included in the export as well as a Default option, which will apply to all types unless the Override option is used. Only file types that are selected on the [Formats/Documents tab](#) will be displayed; the Default option will always be displayed and represents all three file types. Having each type listed separately allows users to apply different options to each (native, images, full text) if desired.
Override	Overrides the default settings for the desired file type. For example, if **BegDoc#** is needed as the filename for images and the original filename is needed for native files, select the **Override** option in the **Native row** and choose **<Original Filename>** in the **File Naming** column, leaving **BegDoc#** as the default.
File Naming	Specifies a file naming scheme for the exported files. Lists user-defined and system fields in the drop-down for use as the file naming convention, including DocID and BegDoc#.

Column	Description
Exts	Includes the file extension in the exported file name. This will be useful for single-page imports when a document-level file naming scheme is used (otherwise resulting in `.001`, `.002`, etc. extensions).
Starting Num	Available when the **Auto Number** file naming scheme is selected. Enter a starting number for the exported files; the value will increment by one for each exported record.
Reset Num	Available when the **Auto Number** file naming scheme is selected. Forces auto-numbering to restart to the specified starting number for each new folder.
Create control list file for extracted full text	Provides a control list (*.lst file) that consists of a unique document identifier for each record with full text as well as a path to the text file. This option is commonly used to import text into a Summation case with existing records but may be used for other purposes if needed. The .lst file will be created in the currently specified **Export Path**, also found in the **Options** tab.

Folder Naming Scheme

The folder naming grid is used to specify the folder structure to be used for the exported images, native files, and full text.

File Type	Override	Root Folder	Folder Naming	Files/Folder
<Default>	☐		Incremental	250
Images	☐		Incremental	250
Full Text	☐		Incremental	250
Native	☐		Incremental	250

Each column in the grid and its purpose is described in the following table:

Column	Description
File Type	Lists each type of file (images, native, text) included in the export as well as a '<Default>' option, which will apply to all types unless the Override option is used.

Column	Description
Override	Used to override the Default settings for the desired file type. For example, if <Default> is set to Mirror Original, but the job specifications call for Incremental folders for native files only (and mirrored for images and text), the user could select 'Override' beside the Native file type and then choose Incremental in the Folder Naming column.
Root Folder	If a root folder value is specified here, the file type(s) (images, native, and/or full text) will be placed in the mirrored or incremental folders, following this folder structure: <Export Path>\<Root Folder>. For example, if a "r;Text" root folder is specified for the Full Text file type, and the specified export path is C:\Exports\EDD_001\vol001, then the full text will be placed in C:\Exports\EDD_001\vol001\Text. The Folder Naming scheme (see next option) will be applied following the Root Folder.
Folder Naming	Three options exist for folder naming: Custom, Mirror Original, and Incremental. One option may be applied to all by selecting the desired option as the <Default>. Or, use the Override setting and choose different options for each. **Custom** - Uses 1-3 of the specified index fields to create a folder structure when exporting (see Files/Folder option below). **Mirror Original** - Mirrors the current structure as shown in the folder tree in CloudNine™ LAW's main interface. **Incremental** - Places the specified number of files in a "001" folder, creates a "002" folder, etc. (see Files/Folder option below).

Files/Folder - This option only applies to the Incremental and Custom folder naming schemes. If Incremental was chosen, enter the desired number of files to be placed in each folder or use the default of 250. If Custom was chosen, use this field to launch the Custom Folder Structure dialog and choose the field or fields containing the folder structure.

📝 If a folder or file name length exceeds 250 characters for any records, the export path for those records will be changed to <Export Path>\$Invalid_Paths.

⊟ Output Settings

The Output Settings section contains options related to output image files, annotations, and other miscellaneous settings. These settings are described as follows:

Output Format

The Output Format setting allows users to convert images to an alternate format during the export process. The Output Format settings are:

- **<Default>**

  When <Default> is selected, LAW will automatically determine whether the image is exported as a:
  - 24-bit color JPEG
  - 8-bit grayscale JPEG
  - 1-bit black and white TIFF
  - Image-only PDF if exporting PDF files to a single-page format other than the PDF Conversion format on the Formats/Documents tab.

- **JPEG**

  The JPEG format only support single-page image files and should NOT be used with exports that produce multi-page images.

- **PCX**

  The PCX format only support single-page image files and should NOT be used with exports that produce multi-page images.

- **PDF**

  The PDF format can be used to convert images to PDF and may be used with single- or multi-page image formats. This setting has the same effect as choosing the 'PDF Conversion' export format. The PDF Conversion format provides a means to export images as PDF with no load files, whereas the PDF output format setting produces PDF images with all specified load files.

- **PDF (Image Only)**

  The PDF (Image Only) format exports images as image-only PDF files.

- **PNG**

  The PNG format only support single-page image files and should NOT be used with exports that produce multi-page images.

- **TIFF**

- **TIFF (Binary)**

  The TIFF (Binary) format exports images as black and white 1-bit TIFF files.

📝 Note the following when configuring output formats:

- When exporting PDFs to any single-page format other than PDF Conversion, if <Default> is selected as the output format, the PDF files will be converted to image-only PDF files. If PDF is the output format, the PDF files will be searchable.

- If exporting multi-page color or grayscale TIFF images to a single page format with the Output Format set to <Default>, LAW will automatically export these files as JPEG images. This is done for better compatibility with older image viewers that may not support TIFF w/JPEG compression and to minimize the

file sizes of the color images. Black and white TIFF images will not be affected by this process.

Output Scale

The Output Scale setting allows users to reduce the size (AND quality) of the images during the export process. This setting is typically used to create a set of images to be viewed over the Internet or an intranet where bandwidth is limited. This feature may be used to create a second set of images to be viewed as thumbnails for browsing and allow the entire original image to be loaded upon request from a separate location.

Image Drive

The Image Drive setting allows users to specify an alternate drive letter for hard image paths written to load files. If using hard paths for images (not recommended, but necessary with some formats), this setting will replace the drive letter (with the designated letter) written to the load files, so they can be imported without modification from another system. The <Default> setting uses the drive letter of the export path. This setting should only be used if importing the data from another system and the drive letter from which it will be read is known.

Merge Annotations

Merging annotations will "burn" all annotations onto the exported images. See Annotations for more information on merging.

Retain Color

This setting allows color annotations to be preserved when merging annotations. It is ONLY applied when an output format of TIFF is selected for a multi-page export. The Retain Color setting for annotations currently only exists in the Export Utility.

📝 This requires changing the color format of the page and may significantly increase the size of the images. Also, if using the PDF setting users should first ensure that the target application supports PDF images.

Combine parents/attachments

This feature merges attached documents to their respective parents during the export process, creating a single document.

Export Status

This feature allows users to track whether or not a file has been exported.

A user-defined field must be selected to store the export status from the drop-down. Exported files will receive a value of Y; records that did not export will receive a value of **N**. If an index field was created for this purpose, enable this setting and choose the field from the list. If the "Reset export status" option is enabled, LAW will update the export status for all documents in the case (regardless of the documents selected for export).

Creating CD Volumes

CloudNine™ LAW can export a case to compact disk (CD). Note the following about creating CD volumes using the Export Utility:

- The **Options** tab in the Export Utility contains an Output Path section. Inside this section are options to set the export path and partition size of the volumes created.

- If creating standard CD's, you should use 650MB, the default value. Most CD's can hold 700MB, but LAW needs additional buffer space. Since LAW must prevent documents from spanning across CD's, this extra space is used for fitting the last document on the CD. The resulting volume size could result anywhere from ~630MB to ~670MB depending on the documents in the case.

- The last folder of the export path is used as the volume label for the export, so it needs to be named accordingly. For example, an export path of "D: \Exports\Cases\John Doe\Vol001" will use "Vol001" as the volume label. All load files created (with the exception of Doculex) are named after the volume label (e.g., Vol001.dii, Vol001.dat, Vol001.oll, etc.) and all load files that reference a volume label will use this as the CD volume name. This is critical when performing exports that read image information from a CD with a reference to the CD via the volume name. If the volume of the CD is not specified as the last folder name, those applications will not be able to find the images located on the CD.

- Once the export has been created, depending on the size of the case, multiple volume folders may have been created. For example, this sample case created three volumes:
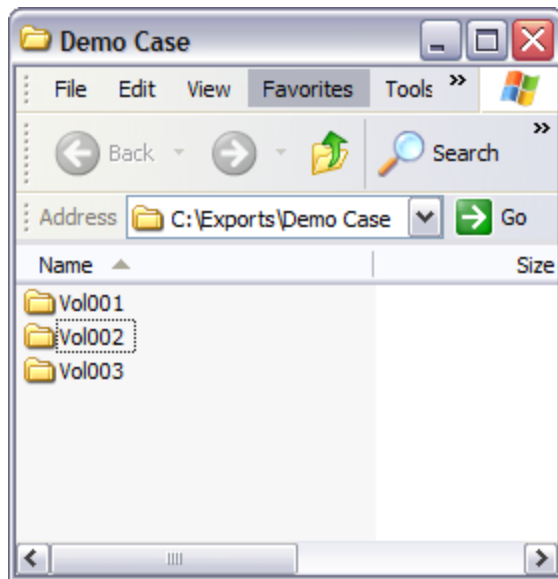
To export a case to CD

1. In the **Output Path** area of the Export Utility, select an output path, and a partition size.

2. Indicate whether to continue export across 2 or more CD volumes.

3. Begin burning the volume folders onto the CD.

⚠ It is important this step is followed exactly or the load files may not load properly into the destination application. Open the desired CD burning software and create the CD so that the entire Vol001 folder is on the root of the CD and name the CD "Vol001". Repeat this step for each volume.

Advanced Tab

The Advanced tab of the Export Utility contains settings to control blank values and to check for duplicate values for the selected image tag and file naming fields. The blank value and duplicate check settings are enabled by default. The Advanced tab also contains settings for exporting native files by tag, making sure redacted text and the native files for redacted documents are excluded from exports, and excluding field content for tagged documents. The native file and conditional field exclusion settings are disabled by default.
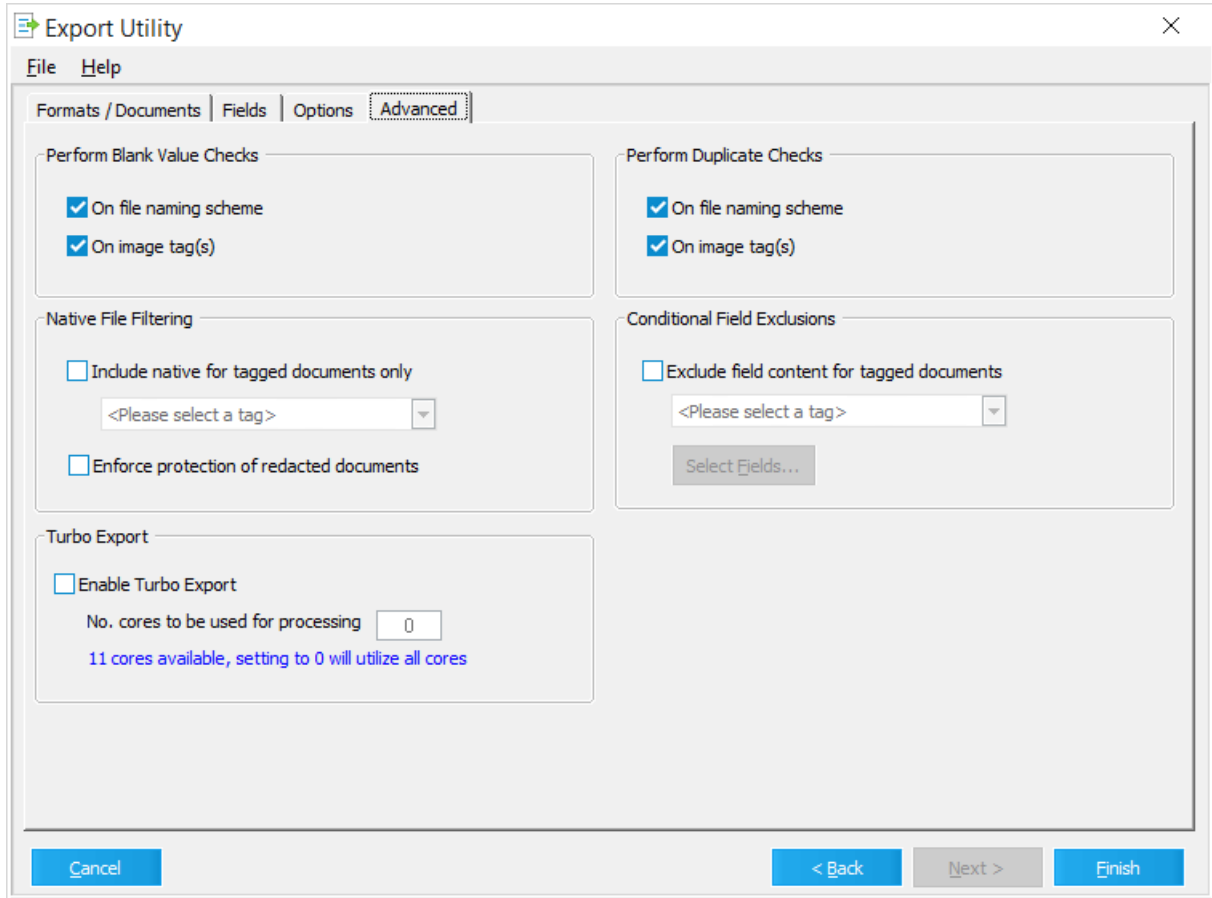
⚠ Disabling checks for blanks and duplicates could result in files being overwritten in the export path. Or you may experience problems with loading into the target application. If these checks are not needed, a speed increase in export initialization is a potential benefit of disabling the settings in larger cases.

To check for blank values

1. In the **Export Utility** dialog box, click the **Advanced** tab.

2. Set these options to determine whether CloudNine™ LAW performs a check for blank values prior to exporting:

   - **On file naming scheme** - When enabled, LAW checks the selected field(s) used as the file naming scheme on the **Options** tab for blank values and notifies you if any are found.

   - **On image tag(s)** - When enabled, LAW checks the selected image tag field on the **Fields** tab for blank values and notifies you if any are found.

3. Configure other export options as needed, and then click **Finish**.

⊟ <u>**To check for duplicate values**</u>

1. In the **Export Utility** dialog box, click the **Advanced** tab.

2. Set these options to determine whether LAW performs a check for duplicate values prior to exporting:

   - **On file naming scheme** - When enabled, CloudNine™ LAW checks the selected field(s) used as the file naming scheme on the **Options** tab for duplicate values and notifies you if any are found.

   - **On image tag(s)** - When enabled, LAW checks the selected image tag field on the **Fields** tab for duplicate values and notifies you if any are found.

3. Configure other export options as needed, and then click **Finish**.

⊟ <u>**To export native files by tag**</u>

On the Formats/Documents tab in the Export Utility dialog box, the Include Native Files check box allows you to globally include or exclude native files during the export. However, if you only want to export some, but not all, native files along with other case items, The Include native for tagged documents only check box on the Advanced tab allows you to only include native documents for documents tagged with a specific tag in the export.

To export native files by tag:

1. Identify or create a Tag (Boolean) field that you will use to tag documents for native file export.
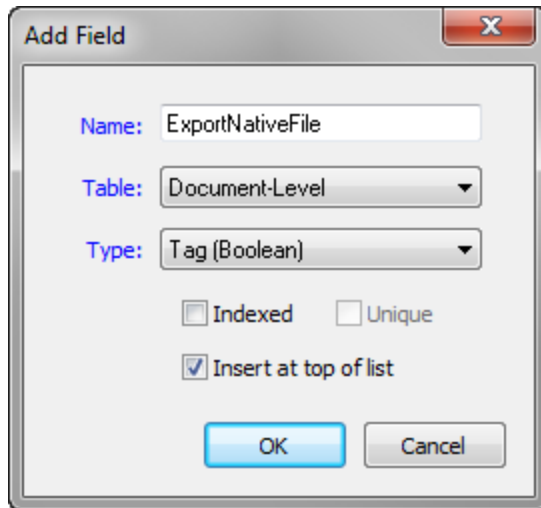
For more information about creating tag fields, see Manipulating Fields.

2. Apply the tag to the documents for which you want native files to be included in the export.

   For more information about applying tags, see Tagging Records.

3. In the **Export Utility** dialog box, click the **Advanced** tab.
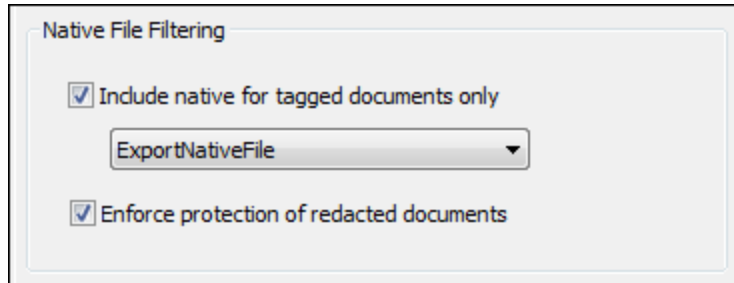
4. Select the Include native for tagged documents only check box, and then select the applicable tag.

5. Configure other export options as needed, and then click **Finish**.

 ☐ **To enforce protection of redacted documents**

The Enforce protection of redacted documents check box determines whether the export will ensure redacted text is excluded from the export. By default, the Enforce protection of redacted documents check box is not selected, but once the setting is defined for an export, the last export setting for the check box will be retained for new exports.
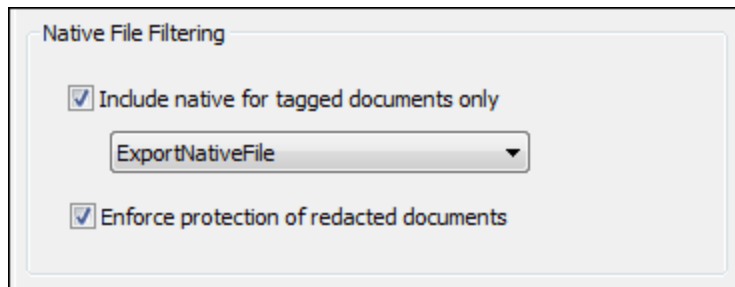
If the Enforce protection of redacted documents check box is selected, the following will occur during the export:

- The export identifies all documents with the HasRedaction fields set to Y.

  When redactions are applied and saved to a document in CloudNine™ LAW, the HasRedaction field is set to Y (Yes) for the document. For more information about the HasRedaction field, see Field Descriptions - LAW.

- If native files are being exported, the export automatically prevents the native files for redacted documents from being exported.

- If images are being exported, redactions applied to a document will automatically be merged with the image to hide the redacted text when the document is exported.

- OCR text for documents with redactions will be excluded from the export if redactions were applied to a document after OCR was performed on the document.

  OCR text for documents with redactions will be included in the export, except for any redacted text, which will automatically be excluded from the export, if redactions were applied to a document before OCR was performed on the document.

- Extracted text for documents with redactions are excluded from the export, regardless of the text priorities defined in the Text Priority section of the Text Options dialog box.

  For example, if the text priority in Text Options dialog box is 1) Extracted Text, 2) Printed Text, 3) OCR Text, having the check box selected will force the export to use the OCR text for the document if the document OCR was performed on the document after applying the redaction. If redactions were applied after OCR was performed on the document, OCR text will also be excluded from the export.

  For more information about defining text priorities, see Formats/Documents Tab.

When the Enforce protection of redacted documents check box is selected, and the export encounters documents with redacted text, the export generates a warning message in the export error log.

- If native files are being exported, the *Export of native file blocked due to redactions* message is displayed in the ErrDetails column.

- If OCR was performed after redactions were applied to a document, the *OCR contains redacted content, export was prohibited* message is displayed in the ErrDetails column.

⊟ **To exclude field content for tagged documents**

The Exclude field content for tagged documents check box determines whether content from specific fields is excluded from the export for documents tagged with a specific tag. Before content from a field can be excluded from an export, the field must be added to the Selected Fields list on the Fields tab in the Export Utility dialog box.

For example, you can select the Exclude field content for tagged documents check box if you want to exclude content from the Email_Subject, From, or any other field that may contain privileged content, for all documents currently tagged with the Privileged tag from the export. By default the Exclude field content for tagged documents check box is not selected.

To exclude field content from the export

1. In the main window, on the **Tools** menu, click **Export Utility**.

   Clicking **Export Utility** opens the **Formats/Documents** tab in the **Export Utility** dialog box.

2. Click the **Fields** tab.

3. Make sure the fields you add to the **Selected Fields** list for the export include the fields you want to exclude content from during the export.

4. Click the **Advanced** tab.

5. Select the **Exclude field content for tagged documents** check box.
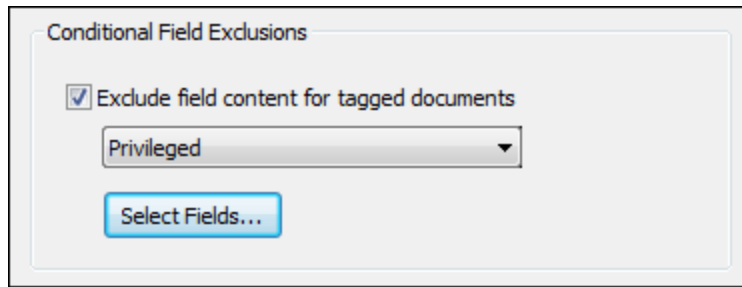
6. In the tag list, select the tag that has been applied to the documents containing field content you want to exclude from the export.

7. Click the **Select Fields** button.

    Clicking the **Select Fields** button opens the **Select Field** dialog box.
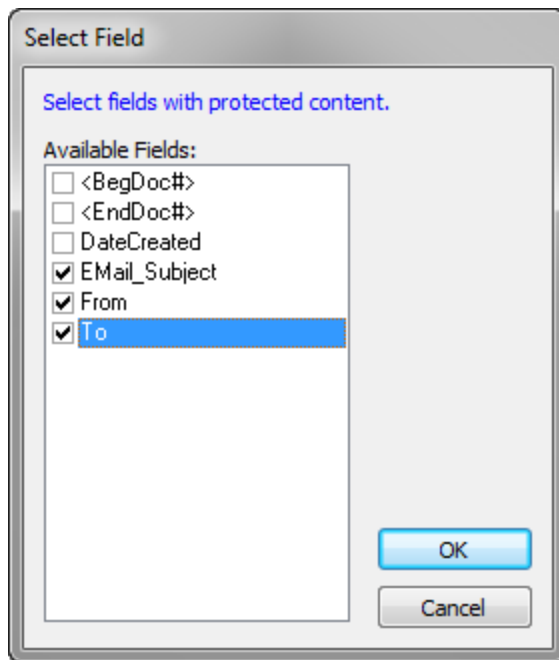
8. Select the check box next to the fields from which you want to exclude content.

9. Click **OK**.

    Clicking **OK** saves your field selections and closes the **Select Field** dialog box.

10. Configure other export options as needed, and then click **Finish**.

⊟ **To Enable Turbo Export- Feature introduced in 6.13.052**

The Turbo Export feature is an enhanced way of getting documents out of LAW vs the traditional export processing. Turbo Export takes advantage of multiple cores on the LAW workstation to achieve faster throughput when processing an export.

For example, you have a 4 core LAW workstation and want to export out 90000 documents. Using Turbo Export your result would look something like this:

<Volume Group > Folder
<C01 – 001> Folder = A Load file and corresponding documents 1-30,000
<C02 – 001> Folder = A Load file and corresponding documents 30,001-60,000
<C03 – 001> Folder = A Load file and corresponding documents 60,001-90,000
Only 3 cores are used by Turbo Export because the remaining core is needed to run the OS and LAW Application.

When enabling this option, there are a few things to consider:

- To take advantage of this feature, the LAW workstation must have at least 3 cores or more.

- Only one Admin license is needed even though it is using multiple cores as workers

- This export has a different output vs the traditional export:

  a) The volume folder acts as a volume group folder

  b) Within the volume group folder are folders prefixed with 'C01-', 'C02-', etc. These folders are where exported documents and load files will be placed. One folder is created for each core used when exporting.

- Across the folders, we will not break apart families or documents.

- The process is evenly distributed across all cores.

- If the export needs to be partitioned out, it too is supported like our traditional export.

To enable Turbo Export:

1. In the main window, on the **Tools** menu, click **Export Utility**.

   Clicking **Export Utility** opens the **Formats/Documents** tab in the **Export Utility** dialog box.

2. Click the **Advanced** tab.

3. Select the **Enable Turbo Export** check box.
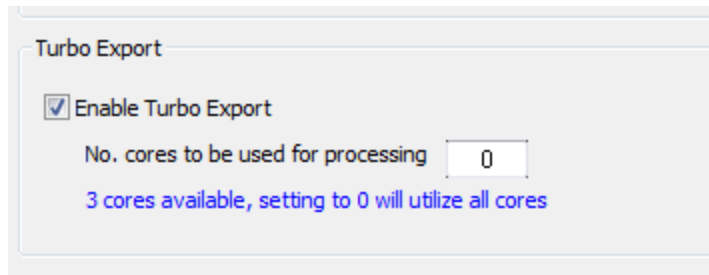
4. LAW will collect the number of cores on your machine.

5. Use **No. cores to be used for processing** setting to manage hardware resources when using multiple programs at the same time. The **No. cores to be used for processing** field defaults to 0. When it is set to 0, all available cores will process data for this case during the export process.

✎ To maximize your Turbo Export, it is recommended to start the export on a machine with 3+ cores, preferably the machine with the most cores available for use.

Export Profiles

Export profiles are used to save settings used in a particular export. Export profiles can save time and help reduce errors when specifying index fields to use and other settings.

Note the following basic facts about export profiles:

- You work with export profiles by using the Export Utility.
- When you save an export profile the file gets the PFL extension.
- You select the folder location where the file is saved.
- No profile is loaded by default when the Export Utility is launched in a new case.

  The profile can be created and saved to a file at any time when working in the Export Utility; otherwise, you are prompted to save the settings after after you start the export or even when you open the Export Utility and change a setting.
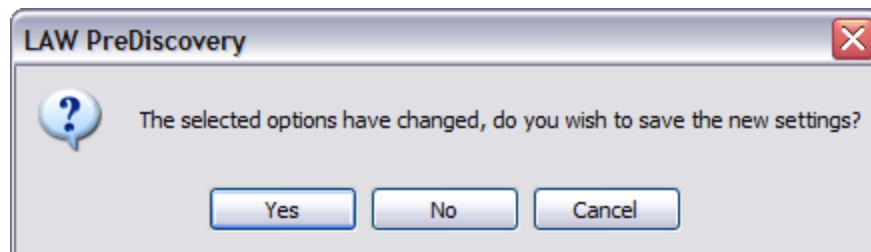
⊟ **To create an export profile**

1. On the **Tools** menu click **Export Utility**.

   • Or click the button from the main or embedded grid toolbar.

   The **Export Utility** dialog box appears.
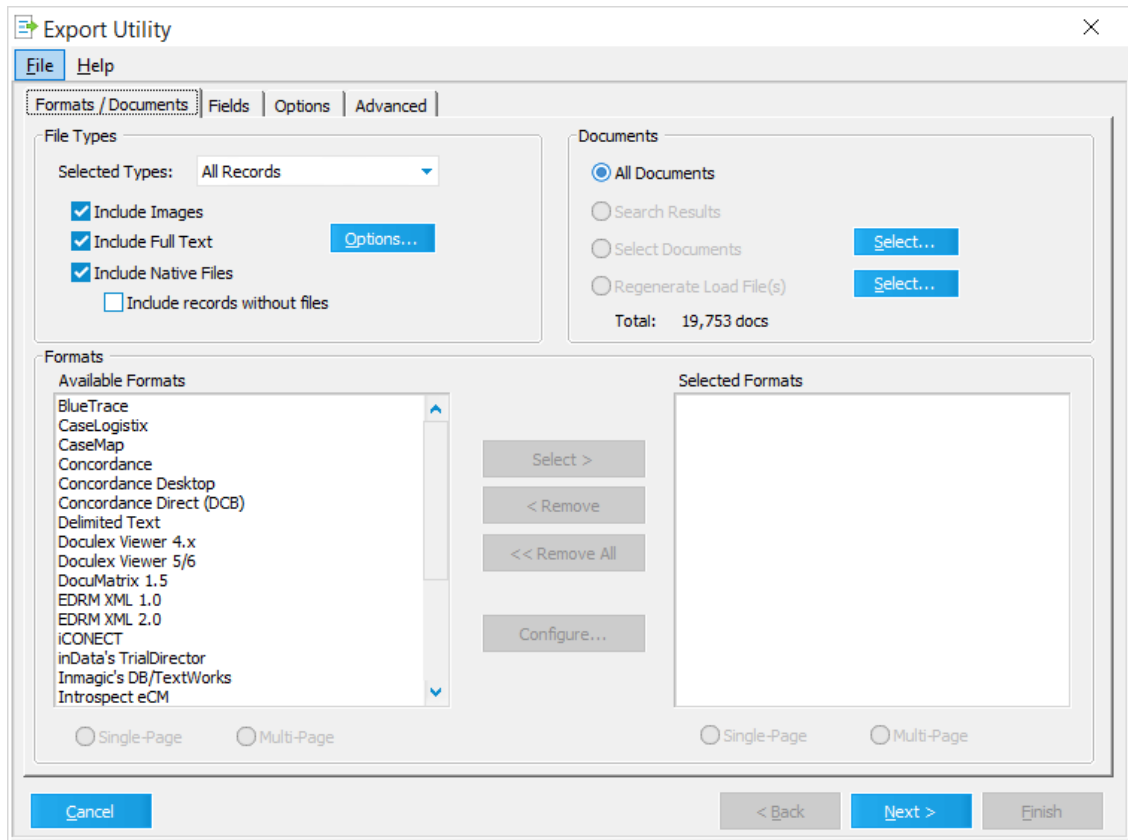
2. Click **File** from the menu bar and then click **Save As**.

3. The **Save As** dialog box appears.

4. Choose a location and enter a name for the profile.

   • Create an 'ExportProfiles' folder in a directory (i.e. LAW50 folder)
   Or
   • Keep profiles with the associated LAW case.

5. Click **Save**.

   The profile name will appear in the title bar of the **Export Utility** dialog as shown.

✎ The profile can also be created after clicking **Finish** from the **Options** tab of the Export Utility. A prompt will appear prior to the export process initializing, asking if you want to save the current settings. If **Yes** is chosen, the user can enter a file name for the profile and a location in which to save the file. If a profile is already applied as in the above example, clicking **Yes** will force the settings to be saved to the currently active profile.

⊟ **To open a profile**

Saved profiles can be applied to additional exports for any CloudNine™ LAW case provided they match, or closely match, the settings needed for a particular export. If the profile does not meet the requirements, it may be edited within the Export Utility by simply opening the profile, changing the desired settings, and then saving the changes.

To open and apply an existing profile

1. In the main window, on the **Tools** menu, click **Export Utility**.

    The **Export Utility** opens.
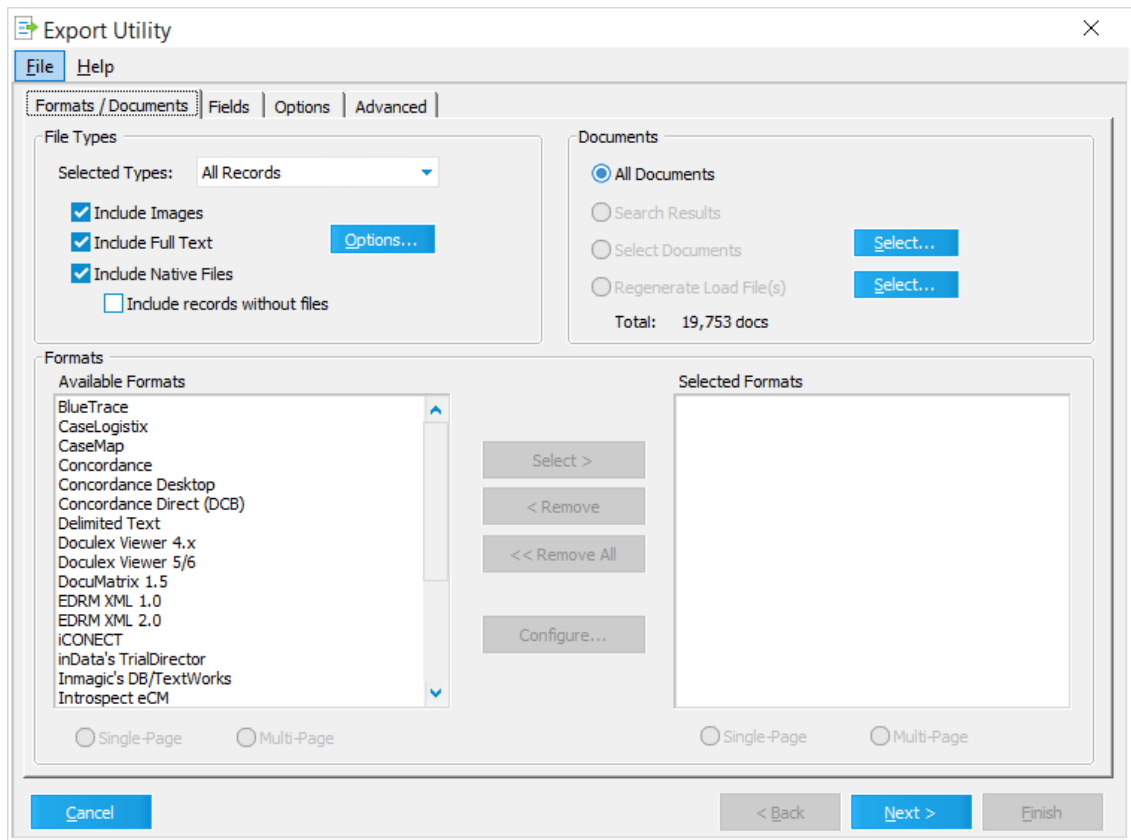
2. On the **File** menu click **Open**.

   The **Open** dialog box appears.

3. Browse to a PLF file and then click **Open**.

   All settings saved to this profile will be applied to the current export session.

📝 When a profile is used and an export is executed, that same profile will be automatically selected when the Export Utility is launched in that LAW case. Profiles may also be opened and applied using the "recent profiles" menu. The last four profiles opened in a case will be listed in the File menu within the Export Utility. Simply click the desired profile to apply it.

Exporting E-Mail Threads

You can pass email threads from LAW to review application by configuring your review application to handle the ThreadID field.

Electronic discovery-enabled cases created using LAW 6.0 and later, contain the ThreadID field. This field tracks e-mail threads from Outlook stores and from loose MSG files. The new field is called ThreadID.

Note the following about the ThreadID field:

- It is populated with the leftmost 22 characters of ConversationIndex field.
- Attachments to e-mails receiving a value for the ThreadID are populated with the ThreadID of the corresponding parent e-mail.
- Opening an existing ED-enabled case will add the ThreadID field to the case.
- ThreadID is not visible by default on the main form or on grids. The ThreadID field is not indexed.

Customizations

The following sections describe some customizations that can be made for CloudNine™ LAW.

Disabling Image Preview

The Image Preview can be disabled per workstation for image based files that are imported through ED Loader or Native Load files, and have not been tiffed.

▭ How to disable the Image Preview

1. Close out of LAW on the workstation that you want to enable the feature.

2. Go to C:\Program Files (x86)\Law50.

3. Open the LAW50.ini file to edit.

4. Look for the [Preferences] section in the LAW50.ini file.

5. Insert **DisableImagePreview=1** under the [Preferences] section

6. If [Preferences] is not in the LAW50.ini file, then add

    [Preferences]
    DisableImagePreview=1

7. Then Save the LAW50.ini file.

💡 If you aren't able to save the LAW50.ini file then you don't have write/modify rights to C:\Program Files (x86)\Law50\law50.ini. Another LAW50.ini file may have been created in C:/Users/(user login)/AppData/Local/Virtual Store/Windows/LAW50.ini.

8. Open LAW and your databases. Any image files that were previously imported but not tiffed will no longer be displayed in the Image Preview window.

💡 If the image preview window is disabled, then the images will only be viewable when the files are tiffed.

CloudNine™ LAW

User Guide

Reference Information

Chapter

3

Reference Information

License Matrix

Each type of LAW license is shown with its corresponding LAW interface items.

For more information about each of the CloudNine™ LAW, CloudNine™ Explore, and TSI Scan licenses, see License Types.

	Admin Import Export	CD Pub Full Text	Edit (QC)	ED: E-Print	ED: Loader	ED: TIFF	Endorse	Full Text Indexing	Near-Duplicate & Email Thread Analysis	OCRf	OCR Exper Open RTK	OCR Exper PDF	Print	Scan
FILE														
OPEN CASE	X	X	X	X	X	X	X	X		X	X	X	X	X
NEW CASE	X													
SAVE			X											X
SAVE AS			X											X
IMPORT	X													
DELIMITED TEXT	X													
LAW CASE	X													
LOAD FILE	X													
TAG LIST	X													
RAW IMAGES	X													
ELECTRONIC DISCOVERY					X									
PRINT	X	X	X	X	X	X	X	X		X	X	X	X	X

		1	2	3	4	5	6	7	8	9	10	11	12	13	14
	PRINT SETUP	X	X	X	X	X	X	X	X		X	X	X	X	X
	SEND	X	X	X	X	X	X	X	X		X	X	X	X	X
	IMAGE	X	X	X	X	X	X	X	X		X	X	X	X	X
	IMAGE + OCR	X	X	X	X	X	X	X	X		X	X	X	X	X
	OCR ONLY	X	X	X	X	X	X	X	X		X	X	X	X	X
	ADMINISTRATION														
	APPLY CASE TEMPLATE	X													
	CASE SUMMARY	X													
	COMPACT DATABASE	X													
	REORGANIZE DOCUMENTS	X													
	SAVE CASE TEMPLATE	X													
	SCAN FOR ERRORS	X													
	VALIDATE RANGES	X													
SCAN															
	SELECT SCANNER														X
	SCANNER SETTINGS														X
	SCAN OPTIONS														X
	NEW DOCUMENT														X
	NEW ATTACHMENT														X
	APPEND														X
EDIT															
	INSERT			X											X
	NEW PAGE(S)			X											X

		1	2	3	4	5	6	7	8	9	10	11	12	13	14
	EXISTING PAGE(S)			X											X
	E-DOCUMENT(S) *requires both Edit and ED Loader			X		X									
	SCANNED DOCUMENT			X											X
DELETE				X											X
REPLACE				X											X
AUTO NUMBER				X											X
ATTACHMENTS				X											X
MERGE DOCUMENTS				X											X
MOVE DOCUMENTS				X											X
RESET OCR FLAGS											X	X	X		
RESET FULL TEXT FLAGS								X							
SPLIT DOCUMENTS				X											X
VIEW PAGE INFO *requires both Edit and Admin		X*		X*											
PROPERTIES		X		X							X	X	X		X
FOLDER															
NEW		X		X											X
OPEN		X	X	X	X	X	X	X	X		X	X	X	X	X
AUTO-CREATE		X		X											X
AUTO-CREATE N FOLDERS		X		X											X
COLLAPSE		X	X	X	X	X	X	X	X		X	X	X	X	X
EXPAND		X	X	X	X	X	X	X	X		X	X	X	X	X

DELETE	X		X											X
EXTRACT AS SUBSET	X		X											X
GRID VIEW	X	X	X	X	X	X	X	X		X	X	X	X	X
GRID VIEW (RECURSE)	X	X	X	X	X	X	X	X		X	X	X	X	X
SUMMARIZE IMAGES	X		X											X
RENAME	X		X											X
MOVE	X		X											X
PROPERTIES	X	X	X	X	X	X	X	X		X	X	X	X	X
INDEX														
DEFAULT FIELD	X		X											X
INCREMENT MODE	X		X											X
MODIFY FIELDS	X													
EDIT PAGE ID	X		X											X
FIND PAGE ID	X		X											X
VIEW														
ZOOM IN	X	X	X	X	X	X	X	X		X	X	X	X	X
ZOOM OUT	X	X	X	X	X	X	X	X		X	X	X	X	X
ZOOM LOCK	X	X	X	X	X	X	X	X		X	X	X	X	X
BEST FIT	X	X	X	X	X	X	X	X		X	X	X	X	X
FIT TO WIDTH	X	X	X	X	X	X	X	X		X	X	X	X	X
ONE PAGE	X	X	X	X	X	X	X	X		X	X	X	X	X
THUMBNAILS	X	X	X	X	X	X	X	X		X	X	X	X	X
PAGE AND THUMBNAILS	X	X	X	X	X	X	X	X		X	X	X	X	X
INVERT	X	X	X	X	X	X	X	X		X	X	X	X	X
PAN WINDOW	X	X	X	X	X	X	X	X		X	X	X	X	X

SCALE TO GRAY	X	X	X	X	X	X	X	X		X	X	X	X	X
PAGE														
FIRST PAGE	X	X	X	X	X	X	X	X		X	X	X	X	X
PREVIOUS PAGE	X	X	X	X	X	X	X	X		X	X	X	X	X
NEXT PAGE	X	X	X	X	X	X	X	X		X	X	X	X	X
LAST PAGE	X	X	X	X	X	X	X	X		X	X	X	X	X
GOTO PAGE	X	X	X	X	X	X	X	X		X	X	X	X	X
FLAG FOR OCR										X	X	X		
SHOW OCR FLAGS										X	X	X		
DESKEW			X											X
ENHANCE IMAGE			X											X
ROTATE PAGES	X	X	X	X	X	X	X	X		X	X	X	X	X
PROPERTIES	X	X	X	X	X	X	X	X		X	X	X	X	X
TOOLS														
BATCH PROCESS	X	X	X	X	X	X	X	X		X	X	X	X	X
BATES NUMBERING	X		X				X							X
IMAGE CLEANUP			X											X
ENDORSE IMAGE							X							
PRINT (IMAGES)							X						X	
E-PRINT (NATIVES)				X										
SCAN FOR SUSPECT FOOTERS			X	X							X	X	X	
LOG VIEWER	X	X	X	X	X	X	X	X			X	X	X	X
OCR										X	X	X		
TIFF CONVERSION							X							

	UPDATE PAGE DATA	X	X	X	X	X	X	X	X		X	X	X	X	X
	DISTRIBUTED BATCH PROCESSING	X	X	X	X	X	X	X	X		X	X	X	X	X
EXPORT UTILITY		X													
DEDUPLICATION UTILITY		X			X										
DUPLICATE VIEWER		X	X	X	X	X	X	X	X		X	X	X	X	X
NEAR-DUPLICATE & EMAIL THREAD ANALYSIS									X						
ANNOTATIONS				X											
BARCODES				X											
LAUNCH VIEWER				X											
OCR											X	X	X		
FULL TEXT INDEX								X							
RUN COMMAND		X	X	X	X	X	X	X	X		X	X	X	X	X
DISPLAY ALL RECORDS		X	X	X	X	X	X	X	X		X	X	X	X	X
SEARCH RECORDS		X	X	X	X	X	X	X	X		X	X	X	X	X
OPTIONS		X	X	X	X	X	X	X	X		X	X	X	X	X
HELP															
HELP TOPICS		X	X	X	X	X	X	X	X		X	X	X	X	X
USER GUIDE		X	X	X	X	X	X	X	X		X	X	X	X	X
BUG REPORT		X	X	X	X	X	X	X	X		X	X	X	X	X
CHECK FOR UPDATE		X	X	X	X	X	X	X	X		X	X	X	X	X
ABOUT LAW		X	X	X	X	X	X	X	X		X	X	X	X	X

Keyboard Shortcuts

If the keyboard shortcuts are not functioning, and a grid display is currently active, please ensure that Review Mode is disabled in the grid. See Tagging Records for more information.

⊟ **Function keys**

Key	Function
F1	Help
F2	Edit Search Entry
F3	Scan New Batch
F4	Deskew Document
F5	Append Document
F6	Replace Pages
F7	Page Size - Letter (8.5 x 11")
F8	Page Size - Legal (8.5 x 14")
F9	Page Size - Double Letter (11 x 17")
F10	Scan Mode - Simplex
F11	Scan Mode - Duplex **
F12	Scan Mode - Flatbed **

** Availability of these modes depends on whether the scanner support for these capabilities.

⊟ **Control keys**

Key Combination	Action
ALT+UP ARROW	Increase scan brightness (32pts)
ALT+DOWN ARROW	Decrease scan brightness (32pts)
CTRL+A	Select All Pages (if thumbnails display has focus)
CTRL+A	Select All Documents (if document list has focus)
CTRL+A	Show All Fields (if Search Results window has focus)
CTRL+X	Hide All Fields (if Search Results window has focus)
CTRL+E	Edit Page ID

Key Combination	Action
CTRL+F	Find Page ID
CTRL+G	Go To Page
CTRL+L	Rotate Left (current or selected pages)
CTRL+M	Merge Documents
CTRL+O	OCR Document
CTRL+P	Print
CTRL+R	Rotate Right (current or selected pages)
CTRL+S	Save Image (saves image with current page orientation)
CTRL+U	Split Document
CTRL+Z	Zoom Lock
CTRL+1	Black and White Scanning
CTRL+2	8-bit Grayscale Scanning
CTRL+3	24-bit Color Scanning
CTRL+F3	Scan New Attachment
CTRL+F4	Enhance Image menu
CTRL+F6	Replace Document
CTRL+F12	Merge Annotations
CTRL+INSERT	Insert New Pages (from scanner)
CTRL+PAGE DOWN	Zoom In
CTRL+PAGE UP	Zoom Out
CTRL+LEFT ARROW	Pan Left (moves image, if zoomed)
CTRL+RIGHT ARROW	Pan Right ARROW (moves image, if zoomed)
CTRL+UP ARROW	Pan Up (moves image, if zoomed)
CTRL+DOWN ARROW	Pan Down (moves image, if zoomed)
ESC	Clear current region (if main image has focus)
ESC	Clear selected pages (if thumbnails display has focus)
SHIFT+INSERT	Attach to Previous

Key Combination	Action
SHIFT+BACKSPACE	Detach All
SHIFT+DELETE	Delete Pages

Document list keys

The focus must be on the document list to use these shortcuts.

Key	Action
LEFT	Previous page
RIGHT	Next page
UP	Previous document
DOWN	Next document
HOME	First page
END	Last page
DELETE	Delete document
SPACEBAR	Toggle page selection for current page

Index

- F -

- G -

- H -

- I -

- J -

- Q -

- R -

- S -

- Z -