

CloudNine™ LAW

Administration Guide

CloudNine™ LAW, Version 7.9.80

- **Installing CloudNine™ LAW**
- **LAW Configuration Utility**
- **Configuring LAW and SQL Server**
- **Compacting the Database**
- **Reviewing Errors**
- **Reorganizing Documents**
- **Scanning for Errors**
- **Validating Document Ranges**
- **Extracting Subsets**
- **Run Commands**
- **Full-text Indexing**
- **Tracking Page Source, Size, and Color**
- **Creating a Message Killer**
- **Reporting**

CloudNine™ LAW Administration Guide

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

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CloudNine™ LAW

Administration Guide

Installation

Chapter

1

Installation

The following sections provide the steps required to install CloudNine™ LAW, TIFF printer drivers, and Sentinel RMS License Manager. If you are installing CloudNine™ LAW, these instructions assume that you are installing to a computer that meets or exceeds the [system requirements](#) of CloudNine™ LAW.

The LAW installer can be downloaded from CloudNine. CloudNine's software download site is <https://cloudnine.com/software-download/>.

By default, LAW and Explore are installed in the ...\\Program Files(x86)\\LAW50\\ directory.

System Requirements

The following table lists the recommended system requirements needed to run CloudNine™ LAW.

Current Version is **LAW 7.9.80**

Computer/Processor	8 core 2.5+ GHz
ED Loader Memory (RAM)	16+ GB
Turbo Import Memory (RAM)	32+ GB <i>It is recommended that systems have 4GB of RAM per 1 processing core.</i> <i>Note: "Ideal" processing requirements may call for a higher allocation of core/RAM resources.</i>
Hard Drive	Solid State Drive 100 GB+ free space <i>CloudNine LAW uses temporary storage on the computer it is running on. When working with large files; a significant amount of drive space may be used.</i>
Network File Storage (Case Databases/Images/Text/Native Documents)	When importing electronic discovery documents, the size of data can vary greatly based on source data. <i>Data can inflate to 3-4 times of its original size.</i>
Display	1080p monitor resolution

Network	10/100/1000 Mbps. Gigabit recommended. <i>Applicable only if using a network server to host LAW case files or associated documents.</i>
Operating System	Microsoft Windows 10 or 11 Microsoft Windows Server 2016 (version 1607) Microsoft Windows Server 2019 (version 1809) <i>Only 64-bit versions of Microsoft Windows are supported.</i>
Database Software	Microsoft SQL Server 2016 Microsoft SQL Server 2017 Microsoft SQL Server 2019 <i>Express versions of the SQL Server versions listed above are supported for smaller cases as they have a limit of 10GB per database.</i>
Scanner Hardware	Scanners with ISIS drivers (for supported scanners, see https://www.opentext.com/support/scanner-drivers) OR Scanners with TRAIN drivers via CloudNine LAWtsi (Touch Screen Interface)
Antivirus Software	Antivirus is not required, but highly recommended to protect you from damage caused by viruses embedded within your processed documents.
.NET Framework	3.5 and 4.8 or higher

All in One System Requirements (An all in one box usually has LAW and SQL on the same box)	Depending on intended use, the all in one could be smaller. Please call support for more information.
Processor and RAM	16 Cores and 64gb of RAM

All in One System Requirements (An all in one box usually has LAW and SQL on the same box)	Depending on intended use, the all in one could be smaller. Please call support for more information.
Operating Systems and SQL	Windows 10, 11 or Server 2019
Hard Drive Space	1tb of SSD

In addition to the above system requirements, there are several native applications that can be used with LAW. Native applications are used for importing Electronic Discovery and TIFF conversion. Turbo Import and Turbo Imager do not require native applications.

Application	Supported Versions
Adobe Acrobat	Adobe Reader Adobe Acrobat Pro X Adobe Acrobat Reader X Adobe Acrobat Standard XI Adobe Acrobat Pro XI Adobe Acrobat Reader XI Adobe DC (Standard or Pro) (non 64bit)
Avantstar Quick View Plus	Avantstar Quick View Plus 13 Professional Avantstar Quick View Plus 17 <i>See Avantstar's license agreement prior to using this application with LAW.</i>
Corel Word Perfect	Corel Word Perfect 12
Lotus/IBM Notes	Lotus Notes 8.5 IBM Notes 9

	<i>Lotus/IBM Notes must be installed in Single-User mode.</i>
Microsoft Office	<p><i>For Turbo Import, the 64-bit Microsoft Office Suite may be installed and used for ingestion and Batch Tiffing (LAW 7.5+).</i></p> <p><i>ED Loader and PST reconstitution workflows require a local installation of 32-bit Office.</i></p> <p>Microsoft Office 2010</p> <p>Microsoft Office 2013</p> <p>Microsoft Office 2016</p> <p>Microsoft Office 365 (Local Install)</p>
Microsoft Project	<p>Microsoft Project 2003</p> <p>Microsoft Project 2007</p> <p>Microsoft Project 2010</p> <p>Microsoft Project 2013</p> <p>Microsoft Project 2016</p> <p><i>Only 32-bit versions are supported.</i></p>
Microsoft Visio	<p>Microsoft Visio 2003</p> <p>Microsoft Visio 2007</p> <p>Microsoft Visio 2010</p> <p>Microsoft Visio 2013</p> <p>Microsoft Visio 2016</p> <p><i>Only 32-bit versions are supported.</i></p>
Oracle AutoView	<p>Oracle AutoView 19</p> <p>Oracle AutoView 20</p> <p>Oracle AutoView 21</p>

SOLIDWORKS eDrawing	SOLIDWORKS eDrawings Viewer 2013 <i>32-bit version only</i>
Web Browser	Microsoft Internet Explorer 11 Microsoft Edge

LAW Licensing

Licensing Styles

LAW can use two different styles of licenses, but can only use one style at a time:

- **Software Key Licensing**

With software key licensing, licenses are bundled into software product keys, which are hosted on the license server. Software product keys are activated on the license server using the License Manager. Licenses in a software product key are managed in the LAW Profile Manager. Licenses in activated software product keys can be monitored in both the License Manager and the LAW Profile Manager.

- **Temporary Key Licensing**

Temporary license keys are provided by CloudNine, and manually entered for LAW on the machine LAW is installed on. A temporary license key for LAW is activated in LAW PreDiscovery from the Change License Server dialog box in the LAW Profile Manager.

A software product key contains the specific LAW licenses and license seats assigned to the key. For more information about CloudNine™ LAW, see [License Types](#).

License Server

A license server is the computer hosting the LAW licenses.

- 💡 It is best practice to have the license server be a separate computer from the computer(s) where LAW is installed, but a license server can also be the computer where LAW is currently installed if the computer is also hosting the product licenses.

For software key licensing, a license server is the computer where the License Manager is installed, and where the software product keys are activated and hosted.

In order for LAW to access the LAW licenses on a license server, LAW needs to be configured to point to the license server by entering the license server in the Change License Server dialog box in the LAW Profile Manager.

Licensing Hierarchy

When LAW checks for available licenses, they check for licenses using the following hierarchy:

1. Temporary Key Licensing
2. Software Key Licensing

Managing Licenses

- **LAW Profile Manager**

The LAW Profile Manager is used for managing the license server used by LAW and for managing and monitoring the licenses contained in software product keys. It is also used for entering temporary license keys for CloudNine™ LAW. For more information, see [LAW Profile Manager](#).

- **License Manager**

The License Manager is used exclusively for activating and managing software product keys on a license server, and for monitoring the license information for software product keys activated on a license server. For more information, see [License Manager](#).

- ⚠ Please note that machine specifics of the computer/server hosting the license is used in generating the authorization for licensing. If you are planning to make changes to your license server that would affect the machine's unique identifiers, then please contact LAW Support to assist with the license transfer prior to making the changes to avoid any disruption of service.

Currently virtual machines set to auto migration in cluster environments are not supported because it will change the machine unique identifiers and will invalidate the license server. For cluster environments it is recommend that you turn off auto migration on the virtual machine, that is the license server, to avoid any disruption of service.

License Types

CloudNine™ LAW, CloudNine™ Explore, and CloudNine™ Explore Web can be installed together and consist of multiple modules that provide different functionality. Modules may be licensed individually or by bundle. The module you need depends on the requirements of your project. For a one page summary of each function and which license supports each, see [License Matrix](#).

All modules support the following set of basic features:

- Open cases
- Use the View menu
- Access the help system
- Print image records of a document, one at a time
- Navigate between individual pages of documents
- Rotate pages
- View page properties
- Use grid views
- Run external programs using the Run Command feature
- Customize LAW by using the Options dialog

The **Admin (Import/Export)** license allows you to:

- Create cases
- Create and modify index fields
- Import and export, except for importing by ED Loader
- Perform the following administrative functions:
 - Summarize cases
 - Reorganize cases
 - Scan for errors
 - Compact the database
 - Validate ranges
 - View reports
 - Apply and save case templates
- Create and delete folders

The **CD Publishing with Full Text** license allows you to:

- Create searchable optical character recognition (OCR) indexes for Storm exports

The **Edit/Review (QC)** license is used to perform quality control and coding. It allows you to perform specific functions under the Edit menu:

- Insert existing pages
- Delete pages and documents
- Replace image from file
- Auto Number at a page/document level
- Split
- Merge
- Move pages
- Perform page level cleanup
 - Rotate
 - Image cleanup
- Perform searches, filtering, grouping, coding, and tagging
- Perform specific batch processing functions: Document numbering, image cleanup, scan for suspect footers, and update page data
- Perform all folder functions
- Perform deduplication after importing electronic discovery
- Access the Log Viewer
- Annotations (Required)
- Set preferences

The **Electronic Discovery e-Print** license allows you to:

- Batch print native files directly to paper
- Print slipsheets with document information

The **Electronic Discovery Loader** license allows you to:

- Import native files
- Import metadata
- Extract text from native files
- Deduplicate native files

The **Electronic Discovery TIFF** license allows you to:

- Convert native files to TIFF images in CloudNine LAW
- Replace image in LAW with existing image file
- Convert single documents to TIFF images files (print file through native application and save resulting TIFF to LAW record)

The **Endorse** license allows you to:

- Assign headers/footers/watermarks
- Number documents
- Endorse documents

The **Full Text Indexing** license allows you to:

- Index extracted text
- Perform full text searching in LAW cases that are held in SQL Server (.mdb) databases

The **Near-Duplicate/Email Thread** license allows you to:

- Run the Near-Duplicate & Email Thread Analysis utility in CloudNine™ LAW
 - Run the near-duplicate analysis and email thread analysis in CloudNine™ Explore
 - View the near-duplicate results on the Near-Duplicates tab in the Duplicate Viewer dialog box
 - Compare near-duplicate documents in the Near-Duplicate Viewer dialog box
 - View and compare near duplicates CloudNine™ Explore Web
 - View email threads in CloudNine™ Explore Web
 - License also creates and populates near-duplicate and email thread fields
- ✍ The Near-Duplicate/Email Thread license is only used by CloudNine™ LAW and CloudNine™ Explore on an as-needed basis, so the license is only displayed 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 CloudNine™ LAW > Licenses).

The **OCR (ABBYY FineReader)** license allows you to:

- Perform optical character recognition (OCR) on entire documents or pages
 - Reset OCR flags
 - Create searchable PDF or PDF/A files using the ABBYY FineReader OCR engine
 - Perform OCR on East Asian languages (Chinese, Japanese, and Korean)
- ✍ A full list of languages using ABBYY FineReader's can be found here: <https://answercenter.ediscovery.co/litigation/ac/lawdc/abbyy-ocr-languages.html>

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.

The **OCR (ExperVision OpenRTK)** license allows you to:

- Perform OCR on documents or pages
- Reset OCR flags

The **OCR (ExperVision PDF Add-On)** license allows you to:

- Create searchable PDF files using the ExperVision OpenRTK OCR engine

The **Print** license allows you to:

- Apply headers, footers, and watermarks to printed pages
- Batch print image records
- Print slip sheets between documents with or without field information

There are two **Scan** licenses, Scan (Gold - Token based) and Scan (Platinum - Unlimited). Both licenses provide the same permissions. The only difference between the two licenses is the Scan (Gold - Token based) license is token based, so each time you scan, a scan token is removed from your license key. With the Scan (Platinum - Unlimited) license, you can scan an unlimited number of times. This license allows you to:

- Scan documents (all Scan features)
- Edit documents (all Edit menu features, including Insert and Replace)
- Create and delete folders
- Number documents
- Clean up images
- Reset OCR flags

The **Imaging Agent** license is only available through software licenses. The Imaging Agent license is required to run the Turbo Imager service and can be used on Turbo Import or ED Loader cases. This license is not able to be checked out through Help>About CloudNine™ LAW>Licenses or the Profile Manager.

The **Import Agent** license is only available through software licenses. The Import Agent license is required to create and access Turbo Import enabled cases. This license is not able to be checked out through Help>About CloudNine™ LAW>Licenses or the Profile Manager.

The **TSI Scan** license allows you to:

- Allows scanning to a LAW case using LAWtsi (touch screen interface)

For more information, see the [LAWtsi Guide](#).

License Manager

The License Manager is installed on the license server for CloudNine™ LAW and CloudNine™ Explore. The License Manager is used exclusively for software key licensing, and is used to activate, refresh, and deactivate the software product keys hosted on the license server. The licenses and license seats for the activated software product keys on a license server can be monitored from the License Manager. You can also monitor the licenses and license seats for the activated software product keys on the current license server from the LAW Profile Manager.

- ✎ You cannot view the license information for temporary licenses or hardware keys in the License Manager dialog box. You can only view license information for the software product keys activated on the license server in the License Manager dialog box.

License Server: localhost [Refresh](#)

License	Total	Active Processing	Undock	Free	Expiration
Explore - Processing Agent	20	0	0	20	9/30/2019
Explore - Review	100	0	0	100	9/20/2019
LAW® - Admin (Import/Export)	10	1	0	9	9/30/2019
LAW® - Edit/Review (QC)	10	1	0	9	9/30/2019
LAW® - Electronic Discovery: e-Print	10	1	0	9	9/30/2019
LAW® - Electronic Discovery: Loader	10	1	0	9	9/30/2019
LAW® - Electronic Discovery: TIFF/PDF	10	1	0	9	9/30/2019
LAW® - Endorse	10	1	0	9	9/30/2019
LAW® - Full Text Indexing	10	1	0	9	9/30/2019
LAW® - Import Agent	20	0	0	20	9/30/2019
LAW® - OCR (ABBYY FineReader)	10	1	0	9	9/30/2019
LAW® - OCR (ExperVision OpenRTK)	10	1	0	9	9/30/2019
LAW® - OCR (ExperVision PDF add-on)	10	1	0	9	9/30/2019
LAW® - Print	10	1	0	9	9/30/2019
LAW® - Scan (Platinum - Unlimited)	10	1	0	9	9/30/2019
Near Dupe/Email Thread	5	0	0	5	9/30/2019

Buttons: Undock, Reclaim Undock, Clients, Activations

- ⚠ Please note that machine specifics of the computer/server hosting the license is used in generating the authorization for licensing. If you are planning to make changes to your license server that would affect the machine’s unique identifiers, then please contact LAW Support to assist with the license transfer prior to making the changes to avoid any disruption of service.

Currently virtual machines set to auto migration in cluster environments are not supported because it will change the machine unique identifiers and will invalidate the license server. For cluster environments it is recommend that you turn off auto migration on the virtual machine, that is the license server, to avoid any disruption of service.

To activate a software product key

Unless you are manually activating a software product key, you will need an Internet connection to activate a software product key in the License Manager.

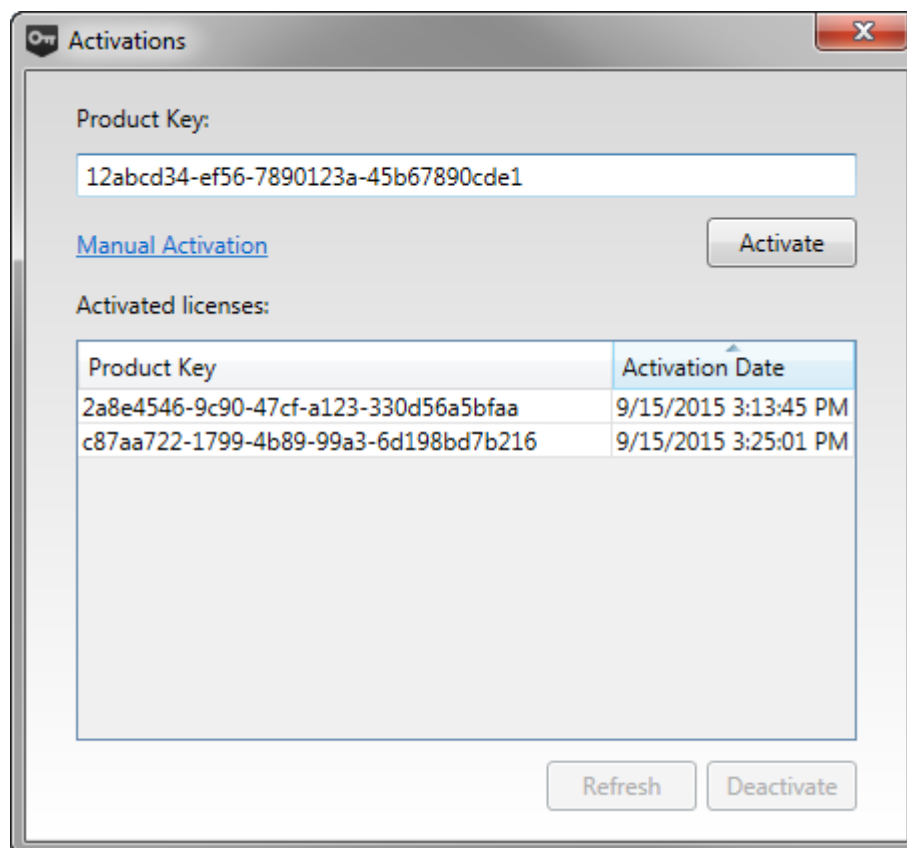
1. Open the **License Manager** on the license server.

To open the **License Manager**, click **Start menu > All Programs > CloudNine LAW > License Manager**.

2. Click the **Activations** button.

Clicking the **Activations** button opens the **Activations** dialog box.

Any software product keys already activated on the license server are displayed, along with the date and time each software product key was activated, in the **Activated licenses** list.



3. In the **Product Key** field, enter the software product key provided by CloudNine.
4. Click **Activate**.

Clicking **Activate** activates the software product key, and the *Product key successfully activated.* message is displayed.

5. Click **OK** to close the message and **Activations** dialog box and return to the **License Manager** dialog box.

The **License Manager** displays the LAW and/or CloudNine™ Explore license information from the activated software product key(s). If more than one software product key is activated on the license server, the **License Manager** displays the combined license information from each of the software product keys currently activated on the license server.

- ✍ When multiple EIDs are activated on the same license server with overlapping features, the overlapping features will display the expiration date of the EID that expires first.
 - For example, a perpetual EID contains 1 Tiff, 1 Admin, 1 ED Loader, and 1 OCR and is activated on the license server with an expiration date of NEVER. A burst license for 2 Tiff licenses, 1 Edit, and 1 OCR licenses that Expires on 6/18/2018 is activated on the same license server. The license manager will display the 3 Tff and 2 OCR licenses combined with an expiration date of 6/18/2018.
 - Deactivating the burst license or the perpetual license from the license server to activate on a different server, will remove all overlapping licenses. For example, deactivating the burst license will remove all Tiff and OCR licenses in addition to the 1 Edit license, leaving the 1 Admin and 1 ED Loader on the license server. The current workaround is to deactivate the remaining license (perpetual EID) and activate it again.

☐ To activate product keys using the command line utility

If you need to automate license activation for large scale automated deployments, you can use the command line utility to activate product keys.

You must have an internet connection to activate product keys using the command line utility.

1. To open the command line utility, click **Start**, type "Command Prompt", and press Enter.
2. In the command line utility, enter the following to activate a product key:

```
LicenseConsole.exe /Activate=<Product Key>
```

☐ To activate license files using the command line utility

If you need to automate license activation for large scale automated deployments, you can use the command line utility to activate license files.

1. To open the command line utility, click **Start**, type "Command Prompt", and press Enter.
2. In the command line utility, enter the following to activate a license file:

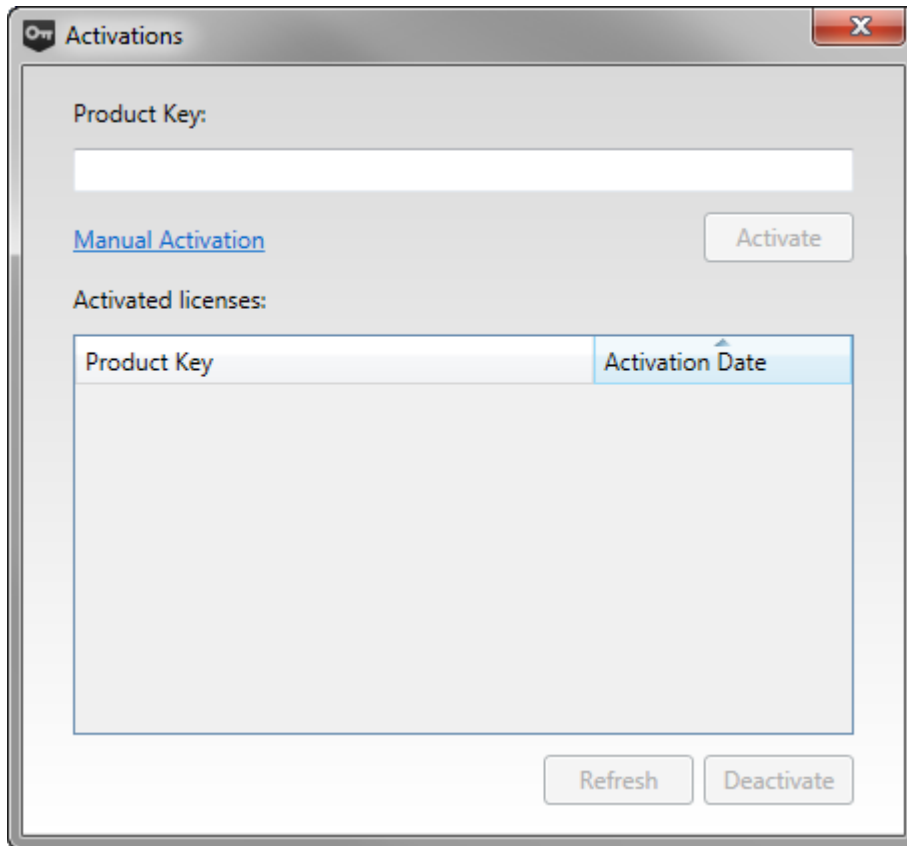
```
LicenseConsole.exe /ActivationFile=<File>
```

To manually activate a software product key

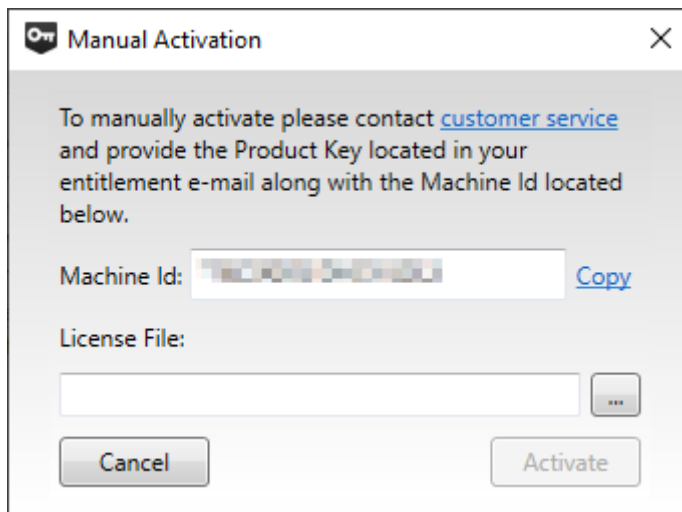
If you need to activate a software product key, but do not currently have an Internet connection on the license server where the License Manager is installed, you can manually activate the software product key.

To manually activate a software product key, you will need to contact the LAW Technical Support team, provide them with the software product key and the machine ID for the license server, then the Technical Support team will generate and send you a license code file for activating the software product key on the license server. You can locate the machine ID you will need to provide the Technical Support team in the Manual Activation dialog box.

1. Open the **License Manager** on the license server by selecting **Windows Start > All Programs > CloudNine LAW > License Manager**.
2. Click **Activations**. The **Activations** dialog box displays.



- 3. Click the **Manual Activation** link. The **Manual Activation** dialog box displays.

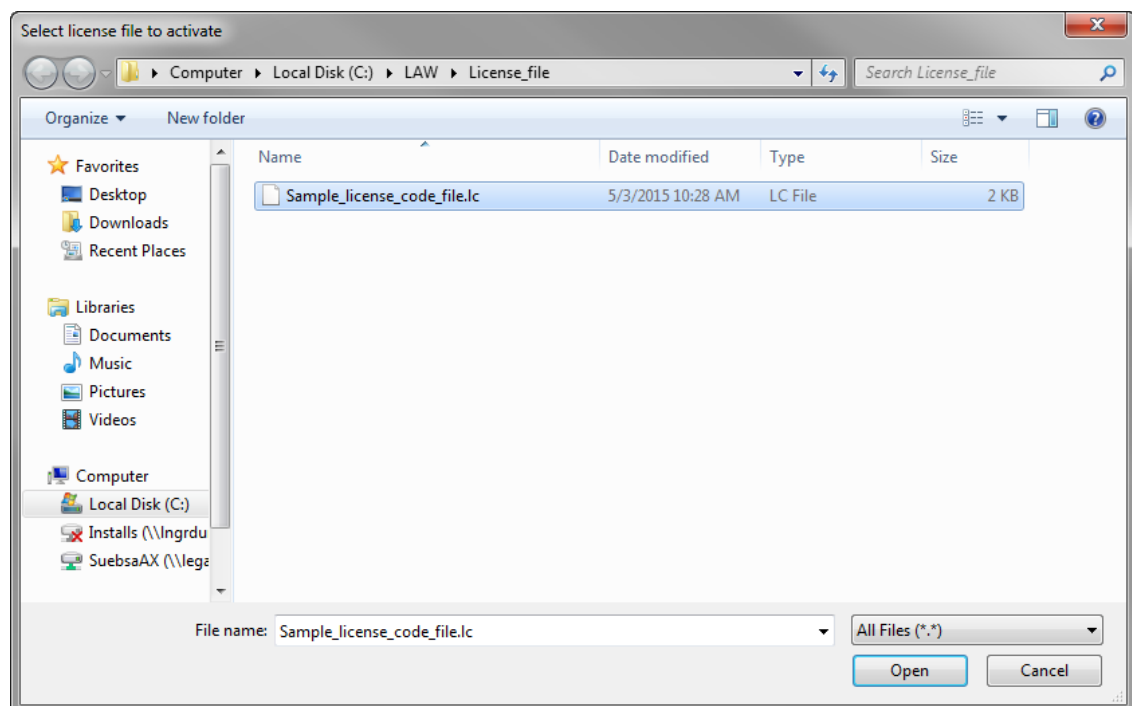


The **Machine Id** box displays the machine ID for the license server. If you need to copy the machine ID, click the **Copy** link.

4. Have your software product key and your machine ID ready, and then contact LAW Technical Support at 713-462-6464 ext.12 for CloudNine™ LAW Support.

The Technical Support team will generate and provide you with a license code file.

5. Save the license code file to the license server where you will be activating the software product key.
6. In the **Manual Activation** dialog box, click the ellipsis button, **...**, next to the **License File** box.
7. Clicking the ellipsis button opens the **Select license file to activate** dialog box.



8. Navigate to and click the license code file.
9. Click **Open**. The license code file and path are added to the **License File** field.
10. Click **Activate**. A "License(s) activated" message displays.
11. Click **OK**.

The **License Manager** displays the LAW and/or CloudNine™ Explore license information from the activated software product key. If more than one software product key is activated on the license server, the **License Manager** displays the combined license information from each of the software product keys currently activated on the license server.

- ✎ When multiple EIDs are activated on the same license server with overlapping features, the overlapping features will display the expiration date of the EID that expires first.
 - For example, a perpetual EID contains 1 Tiff, 1 Admin, 1 ED Loader, and 1 OCR and is activated on the license server with an expiration date of NEVER. A burst license for 2 Tiff licenses, 1 Edit, and 1 OCR licenses that Expires on 6/18/2018 is activated on the same license server. The license manager will display the 3 Tff and 2 OCR licenses combined with an expiration date of 6/18/2018.
 - Deactivating the burst license or the perpetual license from the license server to activate on a different server, will remove all overlapping licenses. For example, deactivating the burst license will remove all Tiff and OCR licenses in addition to the 1 Edit license, leaving the 1 Admin and 1 ED Loader on the license server. The current workaround is to deactivate the remaining license (perpetual EID) and activate it again.

☐ **To view the license information for another license server**

The License Server field in the License Manager dialog box indicates which license server license information is currently being displayed in the License Manager dialog box. The License Server field in the License Manager dialog box does not determine which license server is being used by LAW and CloudNine™ Explore.

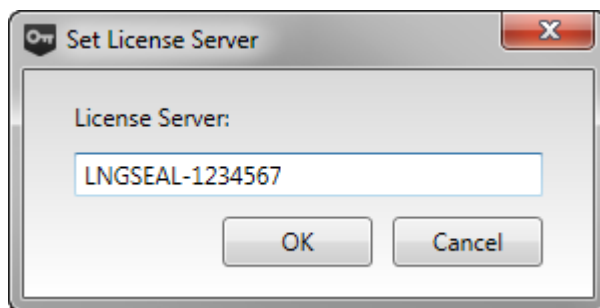
The [Environment Licensing](#) tab in the LAW Configuration Utility determines which license server is used for CloudNine LAW.

1. Open the **License Manager** on the license server.

To open the **License Manager**, click **Start menu > All Programs > CloudNine LAW > License Manager**.

2. Click the **License Server** field link.

Clicking the **License Server** field link opens the **Set License Server** dialog box.



3. In the **License Server** field, enter the machine name or IP address of the license server containing the software product key information you want to view.

4. Click **OK**.

If you entered a valid license server, clicking **OK** opens the *License server successfully set* message.

5. Click **OK**.

The license server you entered is displayed in the **License Server** field, and the license information for the software product key(s) currently activated on the license server is displayed in the **License Manager** dialog box.

☐ [To view the list of activated software product keys](#)

There are two places you can view the list of activated software product keys on a license server:

- **License Manager.** The Activated licenses list in the Activations dialog box displays every software product key currently activated on the license server and the date and time each software product key was activated.
- **DataStore.xml file.** When software product keys are activated in the License Manager, all activated software product keys on the license server and the local dates and times the software product keys were activated are stored in the DataStore.xml file in the following directory on the license server:

C:\ProgramData\LexisNexis\Litigation License Manager

The DataStore.xml file is automatically updated with the latest software product key activation information from the License Manager.

☐ [To update a software product key](#)

If changes have been made to your software product key, such as adding additional licenses or renewing the software product key, you can update your software product key by clicking the Refresh button in the Activations dialog box. When the Refresh button is clicked, the License Manager contacts the CloudNine servers over the Internet to get the latest updates for your software product key(s). An active Internet connection is required to update software product keys using the Refresh button.

💡 In order for the "Refresh" button to work, all licenses must be checked in.

1. Open the **License Manager** on the license server.

To open the **License Manager**, click **Start menu > All Programs > CloudNine LAW > License Manager**.

2. Click **Activations**.


Clicking **Activations** opens the **Activations** dialog box.

3. In the **Activated licenses** list, click the software product key you want to update.

4. Click **Refresh**.

When the software product key update is completed, the message *License successfully refreshed.* is displayed.


5. Click **OK** to close the message.

6. In the **Activations** dialog box, click the close button, , to return to the **License Manager** dialog box.

7. In the **License Manager** dialog box, click the **Refresh** link above the **Expiration** column to display the latest license information.

To deactivate a software product key

Software product keys can be deactivated from the Activations dialog box in the License Manager. A software product key needs to be deactivated if you need to move the software product key from one machine to another. Deactivating a software product key on the machine where it is currently activated makes it available for activation on another machine.

 In order for the "Deactivate" button to work, all licenses must be checked in.

1. Open the **License Manager** on the license server.

To open the **License Manager**, click **Start menu > All Programs > CloudNine LAW > License Manager**.


2. Click **Activations**.

Clicking **Activations** opens the **Activations** dialog box.

3. In the **Activated licenses** list, click the software product key you want to deactivate.

4. Click **Deactivate**.

When the software product key deactivation is completed, the message *License successfully deactivated.* is displayed.


5. Click **OK** to close the message.
6. In the **Activations** dialog box, click the close button, , to return to the **License Manager** dialog box.
7. In the **License Manager** dialog box, click the **Refresh** link above the **Expiration** column to display the latest license information.

When a software product key is deactivated, the software product key is removed from the **Activated licenses** list in the **Activations** dialog box, and the license seats contained in the software product key are removed from the license list in the **License Manager** dialog box. To change the license server please go to [Environment Licensing](#) in the LAW Configuration Utility.

To refresh the license list in the License Manager

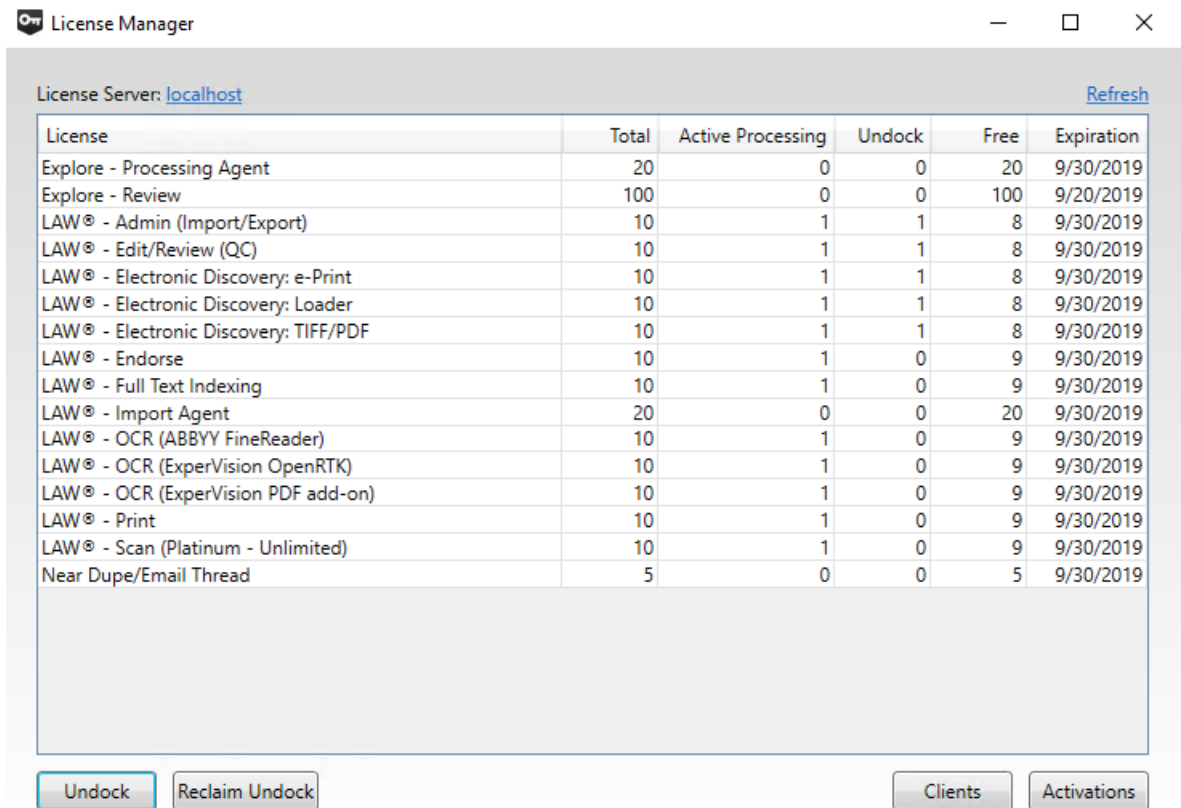
The license information displayed in the License Manager dialog box is automatically refreshed each time you open the dialog box or when you leave and return to the dialog box, such as when you activate a software product key.

You can also refresh the license information currently displayed in the License Manager dialog box by clicking the Refresh link located above the Expiration column.

-  In rare cases you may need to deactivate all software licenses and reactivate to have an accurate license count/ expiration date.

License Manager Updates as of Version 6.18+

The License Manager in version 6.18+ has several new options available. Undock, Reclaim Undock, and Clients are the new options. In Use changed to Active Processing in the display. Undock was also added to the display to indicate which licenses were undocked.



💡 Only workstations that have version 6.18+ will be able to view and utilize these options.

Undock button - Currently CloudNine™ Explore, CloudNine™ Explore Web, and ELA licenses are not available for the Undock option.


Reclaim Undock button - Currently CloudNine™ Explore, CloudNine™ Explore Web, and ELA licenses are not available for the Reclaim Undock option

⚠️ If an undocked license expires, it will still need to be reclaimed before continued use on the workstation resumes.

Clients

Clients are the various workstations that can utilize the software licenses. Workstations need to be running version 6.8.113+ in order to utilize software licensing.

1. Open the **License Manager** on the license server.

- *Windows 7* - To open the **License Manager**, click **Start menu > All Programs > CloudNine LAW > License Manager**.
- *Windows 10 or Server 2012 R2* - To open the **License Manager**, click **Windows Icon  > CloudNine LAW > License Manager**.

2. Select **Clients** tab.



Note: the Clients tab will be grayed out if there are not any licenses checked out or undocked currently.

License Manager - □ ×

License Server: [localhost](#) [Refresh](#)

License	Total	Active Processing	Undock	Free	Expiration
Explore - Processing Agent	20	0	0	20	9/30/2019
Explore - Review	100	0	0	100	9/20/2019
LAW® - Admin (Import/Export)	10	0	0	10	9/30/2019
LAW® - Edit/Review (QC)	10	0	0	10	9/30/2019
LAW® - Electronic Discovery: e-Print	10	0	0	10	9/30/2019
LAW® - Electronic Discovery: Loader	10	0	0	10	9/30/2019
LAW® - Electronic Discovery: TIFF/PDF	10	0	0	10	9/30/2019
LAW® - Endorse	10	0	0	10	9/30/2019
LAW® - Full Text Indexing	10	0	0	10	9/30/2019
LAW® - Import Agent	20	0	0	20	9/30/2019
LAW® - OCR (ABBYY FineReader)	10	0	0	10	9/30/2019
LAW® - OCR (ExperVision OpenRTK)	10	0	0	10	9/30/2019
LAW® - OCR (ExperVision PDF add-on)	10	0	0	10	9/30/2019
LAW® - Print	10	0	0	10	9/30/2019
LAW® - Scan (Platinum - Unlimited)	10	0	0	10	9/30/2019
Near Dupe/Email Thread	5	0	0	5	9/30/2019

Version 6.18+

The Clients tab will be enabled if there are licenses checked out or licenses undocked.

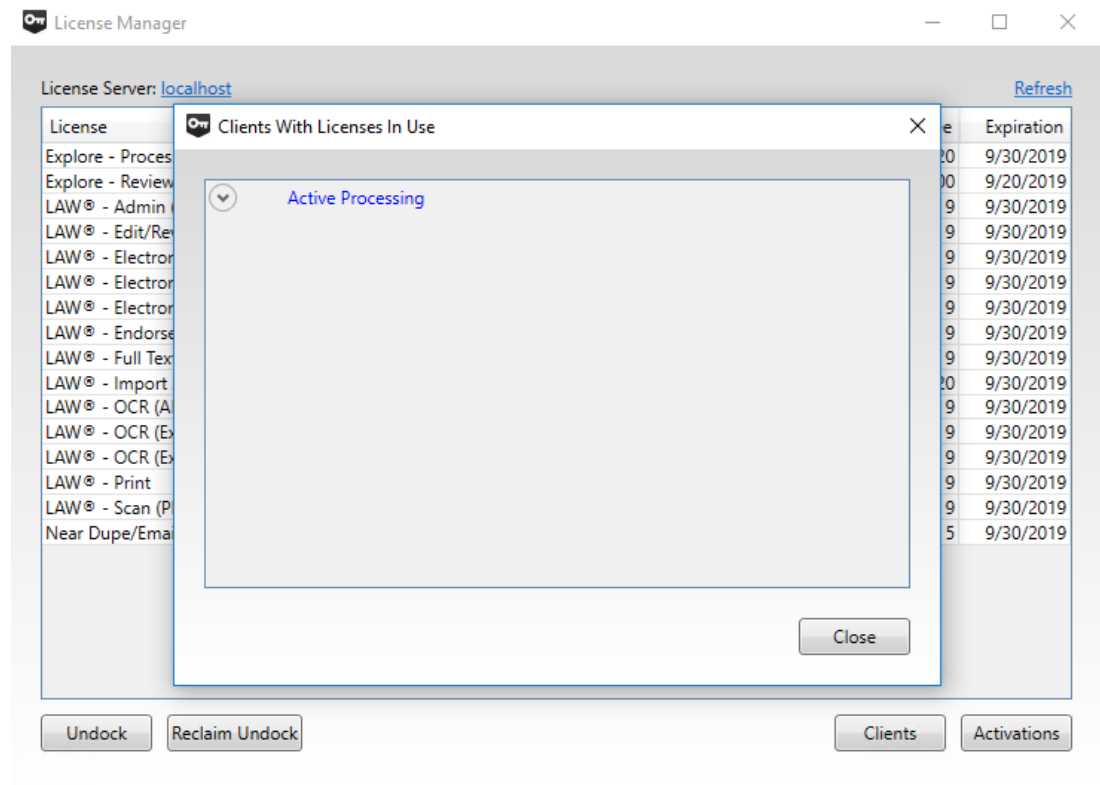
License Manager

License Server: localhost [Refresh](#)

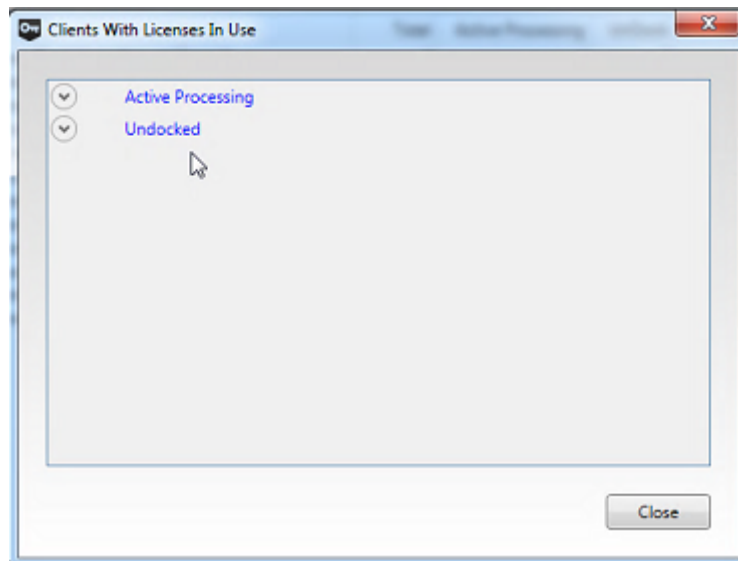
License	Total	Active Processing	Undock	Free	Expiration
Explore - Processing Agent	20	0	0	20	9/30/2019
Explore - Review	100	0	0	100	9/20/2019
LAW® - Admin (Import/Export)	10	1	1	8	9/30/2019
LAW® - Edit/Review (QC)	10	1	1	8	9/30/2019
LAW® - Electronic Discovery: e-Print	10	1	1	8	9/30/2019
LAW® - Electronic Discovery: Loader	10	1	1	8	9/30/2019
LAW® - Electronic Discovery: TIFF/PDF	10	1	1	8	9/30/2019
LAW® - Endorse	10	1	0	9	9/30/2019
LAW® - Full Text Indexing	10	1	0	9	9/30/2019
LAW® - Import Agent	20	0	0	20	9/30/2019
LAW® - OCR (ABBYY FineReader)	10	1	0	9	9/30/2019
LAW® - OCR (ExperVision OpenRTK)	10	1	0	9	9/30/2019
LAW® - OCR (ExperVision PDF add-on)	10	1	0	9	9/30/2019
LAW® - Print	10	1	0	9	9/30/2019
LAW® - Scan (Platinum - Unlimited)	10	1	0	9	9/30/2019
Near Dupe/Email Thread	5	0	0	5	9/30/2019

Version 6.18+

- 3. Active Processing will be displayed if CloudNine™ Explore processes are running or licenses are checked out.

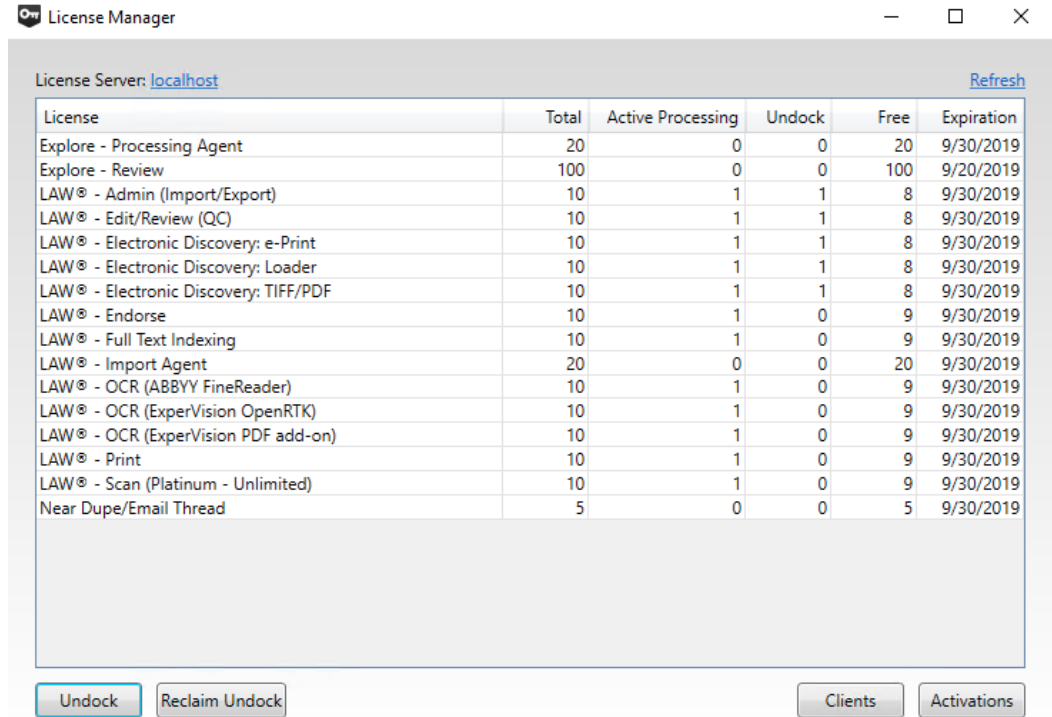


4. If there are Undocked licenses, then Undock will be displayed as well.



5. Select **Active Processing** to expand the list of clients that are currently using licenses from the license server.

6. Each computer that currently has licenses checked out from the license server will be displayed.
7. Selecting the computer name will list the individual licenses checked out and the login used to check out the licenses.



8. Select **Close** to return to the main display in the License Manager.

The licenses in use are displayed based upon when the License Manager was opened or the License Manager was last refreshed. If you have checked out/checked in licenses and are not seeing them in the display then select **Refresh** then **Clients** again.

All workstations using LAW/CloudNine™ Explore software licenses will be displayed under Clients, but only workstations using version 6.18+ will be able to view the Clients tab.

CloudNine™ Explore and/or Near Dupe & Email Threading Analytics licenses will only display if the computer is currently running that process on that machine.

Active Processing

In earlier versions of CloudNine™ LAW, this was labeled as "In Use". As of 6.18+, Active Processing references all licenses that are currently in use by any workstation accessing software licenses from the license server at the point in time that the License Manager was opened or last refreshed. For more information about refreshing the License Manager see [Refresh](#).

Undock

As of 6.18+, the Undock column references all licenses that are currently undocked by any workstation accessing the software licenses from the license server at the point in time that the License Manager was opened or last refreshed. For more information about refreshing the License Manager see [Refresh](#).

- ⚠ If an undocked license expires, it will still need to be reclaimed before continued use on the workstation resumes.

Software License Undocked Keys

The purpose of an undock license key is to temporarily hold licenses checked out from the license server, so that licenses can be used on a second computer. A typical use of undock keys is to furnish a laptop with the licenses necessary to conduct on-site discovery operations.

Undock software licenses are generated from the License Manager, where you specify which licenses to checkout and the length of time to check them out. When the licenses are ready to be returned to the original license server, the licenses are reclaimed from the License Manager using the Reclaim Undock menu selection. For more information about the License Manager, see [License Manager](#).

- ⚠ If an undocked license expires, it will still need to be reclaimed before continued use on the workstation resumes.

Sentinel USB license keys, physical undock license keys, and the functionality for generating and reclaiming undock license keys in the LAW Profile Manager are only available with hardware key licensing.

- 💡 In version 6.18+ there is an option for undocking LAW and Near Dupe/Analytics using software licensing. CloudNine™ Explore, CloudNine™ Explore Web, Turbo Import, temporary licenses, and ELA licensing are currently not available for undock software licenses.

For more information see [LAW Licensing](#).

 [How to create a software undock license.](#)

As of Version 6.18+, software licenses are able to be undocked for off-site use when internet usage may or may not be available for connecting to the license server via the internet.

 **Important Considerations before creating software undock licenses notes.**

1. The computer that will be using undocked licenses off-site will need to be on the same network as the license server when creating the undock license.
2. The computer that goes to the License Manager to create the undock license must be the one to be used off-site.
3. Once the undock license is generated it cannot be moved to another computer; the only option is to reclaim it (returning it to the license server).
4. It is recommended to Reclaim Undocked licenses prior to checking out new undocked licenses and after completing off-site work.

1. Open the **License Manager** on the computer that will be used off-site.

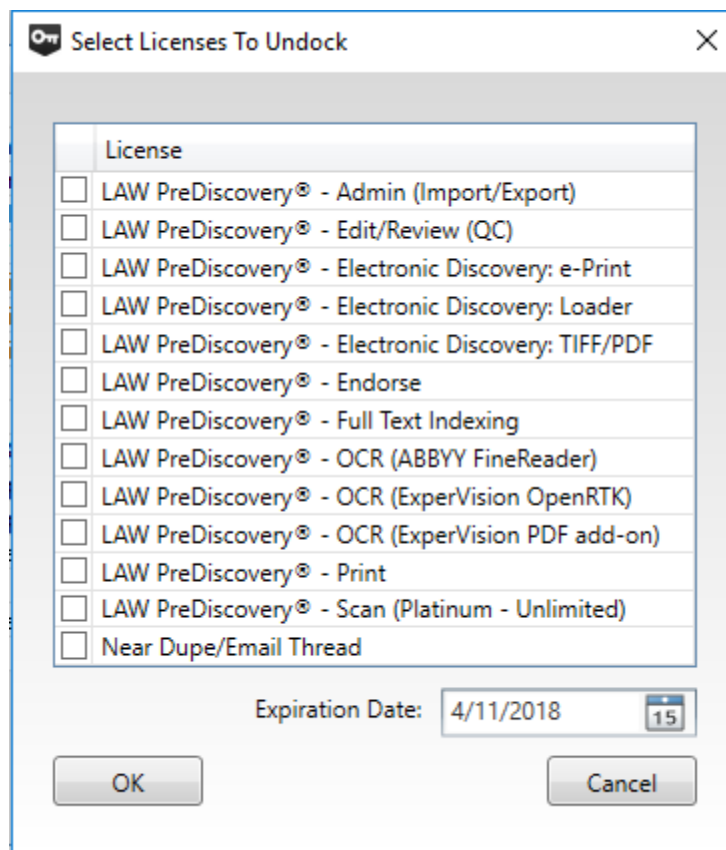
Windows 7

To open the **License Manager**, click **Start menu > All Programs > CloudNine LAW > License Manager**.

Windows 10 or Server 2012 R2

To open the **License Manager**, click **Windows Icon**  **> CloudNine LAW > License Manager**.

2. Select the **Undock** button.
3. The Select Licenses to Undock window will then open in a new window.



4. Select all of the desired licenses that the workstation will need for the off-site project.

Only one of each license can be selected. The licenses are checked out to that workstation only. The workstation with the undocked licenses does not function as a license server and does not share the licenses that are undocked.

5. **Expiration Date:** enter the date that you would like the undock licenses to automatically expire or select the calendar icon and choose the date.

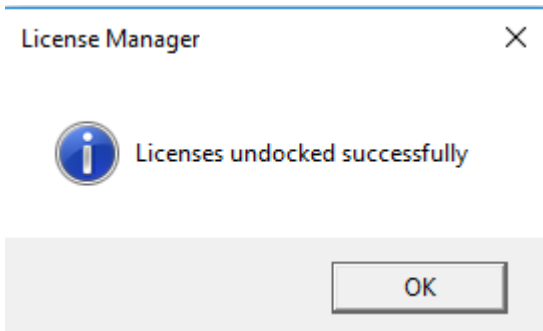


Some points to remember when selecting the expiration date:

- The license must be checked out for longer than one day. For example, if today is April 13th then the license(s) must be checked out until the 14th of April at the earliest.
- The licenses are not valid after the subscription expiration.
- If you have multiple subscription expiration dates then each undocked license will have an expiration based on that license's expiration date.

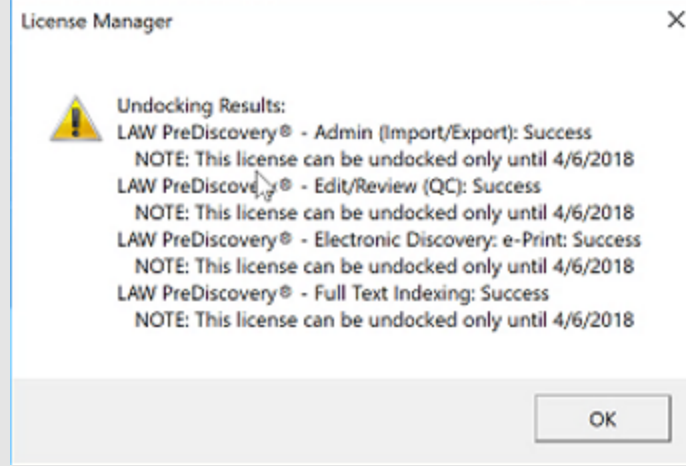
6. Select **OK** to check out the selected licenses.

- 7. The Licenses undocked successfully window will open if all of the selected licenses were successfully checked out.

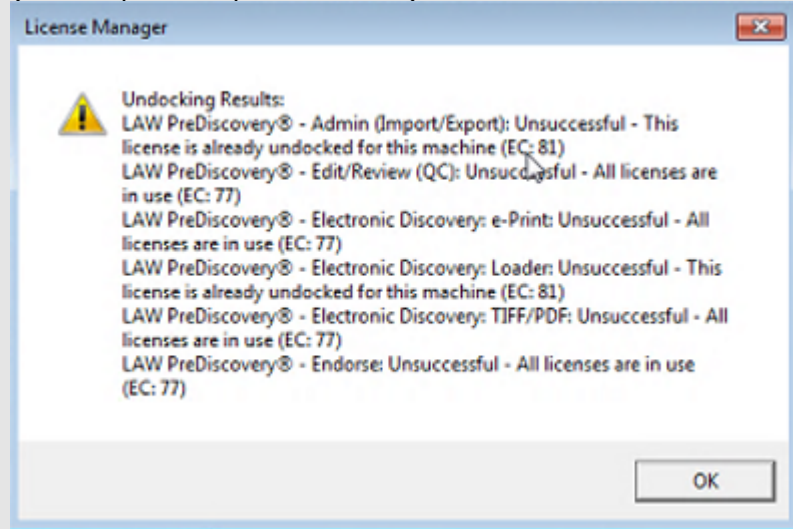


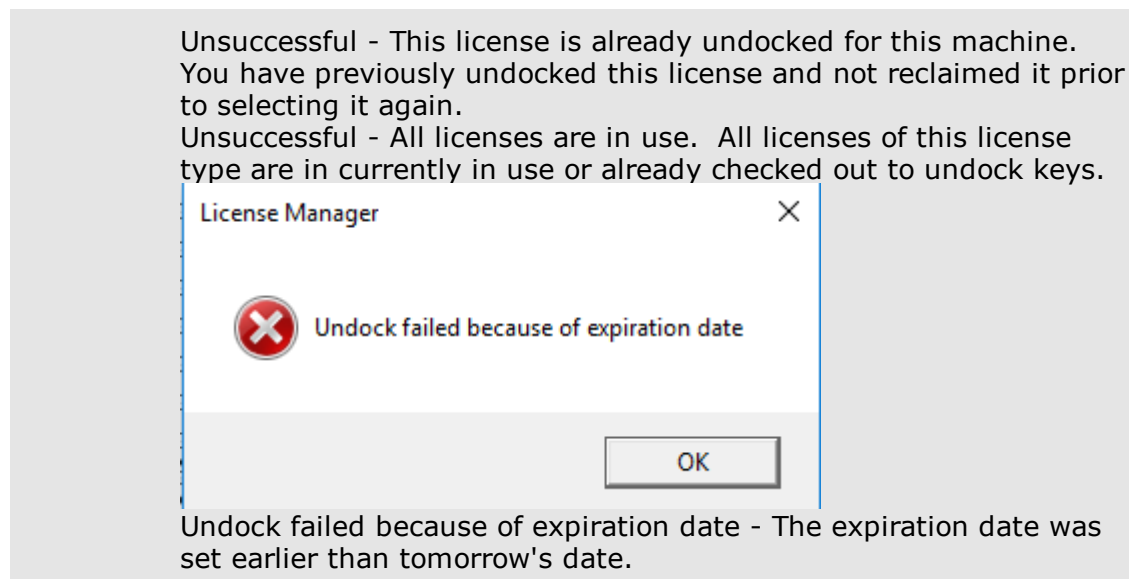
Some possible Undocking Results:

Success - The individual license was successfully checked out.



Success - Note: This license can be undocked only until (subscription expiration date).





8. To return the undocked licenses to the license server see [Reclaim Undock](#) licenses.

9. To view licenses currently undocked go to [Clients](#).

⚠ If an undocked license expires, it will still need to be reclaimed before continued use on the workstation resumes. Undocked licenses can only be reclaimed from the workstation that created the undock license.

☐ [Using a software undock license.](#)

After creating an undock license, from the computer that will be using the undock license(s), launch CloudNine™ LAW.

LAW will open to the main screen of LAW, the features checked out to the undock license will be available for use.

If you are needing additional features then you will need to either reclaim your undocked licenses and undock all features again, or undock additional features.

All Undock licenses will Expire at midnight on the day that they were set to expire. The undock licenses must be reclaimed before using licenses from the license server or temporary licenses.

When going to Help> About CloudNine™ LAW> Licenses> the undock licenses will be displayed and the earliest expiration date if you have multiple undocked licenses with multiple expiration dates.

☐ [How to reclaim a software undock license.](#)

In order to return the undocked licenses to the license server, you must log into the License Manager from the computer that undocked the licenses.

1. Open the **License Manager** on the license server.


Windows7

To open the **License Manager**, click **Start menu > All Programs > CloudNine LAW > License Manager**.

Windows 10

To open the **License Manager**, click **Windows Icon > CloudNine LAW > License Manager**.

2. Select **Reclaim Undock**.
3. The licenses that were undocked using this workstation will be available under Free.

 If an undocked license expires, it will still need to be reclaimed before continued use on the workstation resumes.

Using a Software Undocked license

After creating an undock license, from the computer that will be using the undock license(s), launch CloudNine LAW.

LAW will open to the main screen of LAW, the features checked out to the undock license will be available for use.

If you are needing additional features then you will need to either reclaim your undocked licenses and undock all features again, or undock additional features while on the licensing network.

All Undock licenses will Expire at midnight on the day that they were set to expire. The undock licenses must be reclaimed before using licenses from the license server or temporary licenses.

When going to Help> About CloudNine™ LAW> Licenses> the undock licenses will be displayed and the earliest expiration date if you have multiple undocked licenses with multiple expiration dates.

LAW Profile Manager

The LAW Profile Manager is the utility used for managing licenses. The licensing type you are using for LAW determines which functionality is available in the LAW Profile Manager.

All licenses are maintained in a software product key on the license server. A license server is where a software product key is activated on the computer.

You can use the LAW Profile Manager to perform the following tasks:

- Connect to a license server for CloudNine™ LAW
- Add, edit, and delete custom license profiles for LAW

- Monitor usage and availability of licenses
- Enter a temporary license key for LAW

To start the LAW Profile Manager

- Click **Start**, point to **All Programs**, point to **CloudNine LAW**, and then click **Profile Manager**.

To create or change a password

To create a password for the first time on a computer:

1. Click **Start**, point to **All Programs**, point to **CloudNine LAW**, and then click **Profile Manager**.
2. Click **Advanced**.

A prompt to enter an administrative password appears. The password is stored at a workstation level, meaning each computer on which LAW is launched, whether running locally or in a client/server configuration, will prompt for a password when executed initially.

3. In the **Enter Admin Password** dialog box, type a case-sensitive password that is at least 6 characters long and then type it again to confirm.
4. Click **OK**.

To change the password on a computer:


1. Click **Start**, point to **All Programs**, point to **CloudNine LAW**, and then click **Profile Manager**.
2. Click **Advanced**.

If you are not in administrative mode, the **Enter Password** dialog box appears.

3. Type the current administrative password and then click **OK**.
4. On the **Tools** menu, click **Change Administrative Password**.

Clicking **Change Administrative Password** opens the **Change Admin Password** dialog box.

5. In the **Enter new password** field, type a case-sensitive password that is at least 6 characters long, and then type it again in the **Confirm Password** field.
6. Click **OK**.

-  A prompt for a password after clicking **Advanced** means that you are not running the LAW Profile Manager in administrative mode. For more information,

see the **To switch to Administrative Mode** section in this topic.

▣ [To use a temporary license in CloudNine LAW](#)

If you were issued a temporary LAW license key, the license needs to be entered directly into the C:\Program Files (x86)\Law50\law50.ini to access CloudNine LAW.

Once you obtain a full LAW license key, then remove the license from C:\Program Files (x86)\Law50\law50.ini and save the file. CloudNine LAW will then use the license server configured in the [LAW Configuration Utility](#).

When a temporary license is in use, the **LAW Profile Manager** dialog box is not displayed when starting the LAW application.

▣ [To connect to a license server](#)

1. Setting the license server in [Configure Environment](#) in the LAW Configuration Utility needs to be done prior to launching LAW.

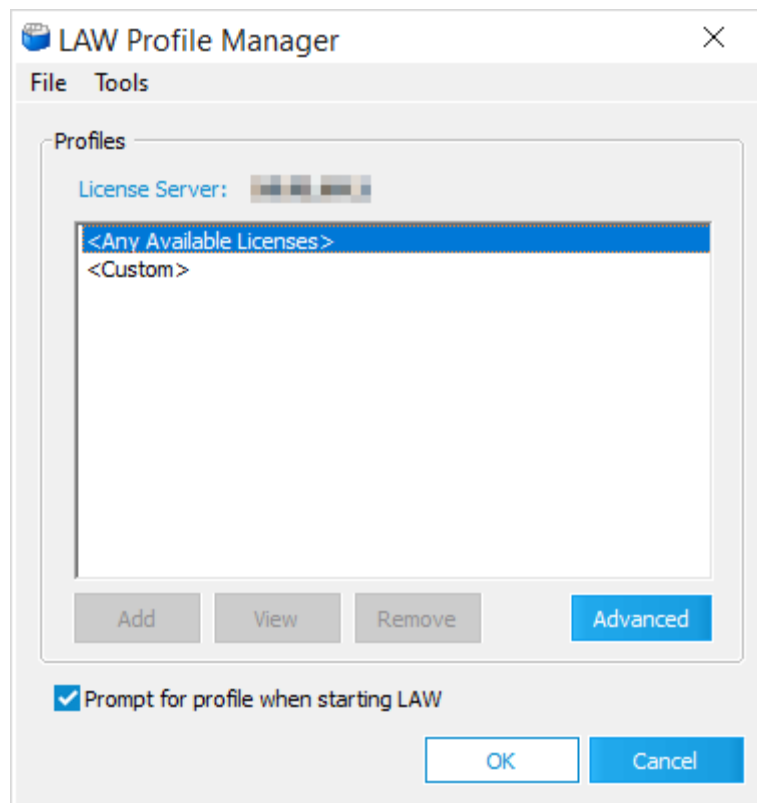
If a valid license server computer name has been entered, the **LAW Profile Manager** dialog box opens.

If a license key is not found on the specified server, a message will appear stating that the key was not found and will ask to try another server. If this happens click **Yes**, and then follow the prompts to change the license server.

▣ [To select licenses by using a license profile](#)

Each time you start LAW, instead of selecting licenses singly, you can load a *license profile*.

1. Start the LAW Profile Manager.



2. Check out licenses by means of a license profile by selecting one of the following:
 - **<Any Available Licenses>** Checks out one of each available license. These licenses will not be available to other workstations using the same license key.
 - **<Custom>** You can check out specific licenses based on their tasks. For example, if you need to scan documents, you can select just the Scan license. Click **OK** to open the list of licenses.
 - **User defined.** Any user-defined license profile is listed below the two system profiles. To create a user-defined license profile, see the [To create custom profiles](#) section in this topic.
3. Select the licenses needed for the session and then click **OK**.

Only the selected licenses are checked out and available on that workstation. If one or more license modules cannot be checked out, a message box appears stating which licenses could not be acquired. This message will not appear if the CD Publishing license could not be acquired.

[To create custom profiles](#)

1. Start the LAW Profile Manager.

2. Click **Add**.

If the **Add** button is grayed out, switch to administrative mode to enable it. On the **File** menu, click **Switch to Administrative Mode** and then enter and confirm the password, click **OK** twice and then click **Add**.

3. In the **Add New Profile** dialog box type the name of the new profile and a description.


4. Select the licenses to include in the profile.

5. To set this profile as the default profile for the current user, select **Default Profile**.

6. Click **OK**.

The new license profile is displayed in the **LAW Profile Manager** dialog box. If selected as the default profile, it is automatically highlighted.

7. To automatically check out licenses and bypass the LAW Profile Manager, select the profile as the default profile. Then deselect **Prompt for profile when starting LAW** in the **LAW Profile Manager** dialog box.

-  To re-enable the setting that automatically opens the LAW Profile Manager, set `Prompt=1` in the `profman.ini` file in `<application path>\ProfMan`. The section in the INI file containing this setting is in the following format: `[<user name>]`.

To hide the system profiles

Hiding a profile can be useful to safeguard against inadvertently selecting the wrong profile. For example, the LAW Profile Manager populates the Profiles area with two system profiles **<Any Available Licenses>**, and **<Custom>**. To prevent users from checking out more licenses than needed, these profiles may be hidden.

1. Start the LAW Profile Manager.
2. Click **File**, and then click **Switch to Administrative Mode**. Enter the administrative password, click **OK**, and then **OK** again.
3. Right-click the system profile to hide and then click **Hide System Profile**.

To restore the system profiles

- Right-click anywhere in the **Profile** area and then click **Restore Hidden Profiles**.

About Administrative Mode

You must switch the LAW Profile Manager to administrative mode before you can perform several administrative functions, such as working with licenses and working with profiles.

One way to switch to administrative mode is to start the LAW Profile Manager, and then, on the **File** menu, click **Switch to Administrative Mode** and then type the administrator password. Alternatively, there are many features that require you to provide the administrator password before continuing. Switching to administrative mode enables you to:

- Add, edit, and delete profiles.
- Refresh licenses to add any newly purchased licenses to the software product key.
- Enter the advanced view of the LAW Profile Manager.
- Hide/restore system profiles.

To switch to Administrative Mode

1. Click **Start**, point to **All Programs**, point to **CloudNine LAW**, and then click **Profile Manager**.

The **LAW Profile Manager** dialog box appears.

2. Click **File** and then click **Switch to Administrative Mode**. The **Enter Password** dialog box appears.
3. Type the administrative password and then click **OK**.

Clicking **OK** opens the *Successfully switched to administrative mode* message.

4. Click **OK**.

To configure administrative details

1. Click **File** and then click **Switch to Administrative Mode**. The **Enter Password** dialog box appears.

3. Type the administrative password and then click **OK**.

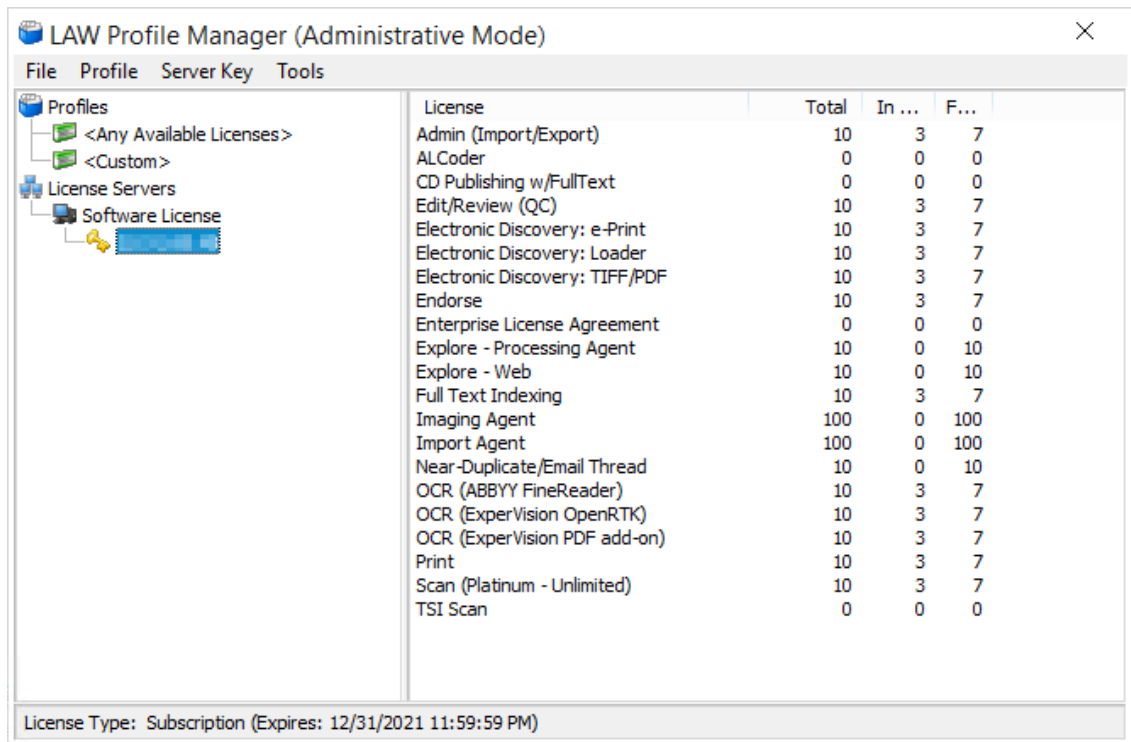
Clicking **OK** opens the *Successfully switched to administrative mode*. message.

4. Click **OK**.

5. Click **Advanced**.

The LAW Profile Manager searches for the license servers.

The **LAW Profile Manager (Administrative Mode)** dialog box appears.



6. Use the following menu commands to configure the administrative mode of the LAW Profile Manager:

Use the	When you want to
File menu	<ul style="list-style-type: none"> • Refresh the view of profiles. • Refresh the view of available license servers.
Profile menu	<ul style="list-style-type: none"> • Add, edit, and delete profiles. • Set a profile as the default.
Server Key menu	<ul style="list-style-type: none"> • Change the license server. • Refresh the view of license counts when new licenses have been purchased and added to the existing software product key. <p>The Server Key menu is enabled when you click Software License, a license server, or a license key under License Servers in the LAW Profile Manager tree view.</p>
Tools menu	<ul style="list-style-type: none"> • Change the administrative password. • Disable or enable automatic refresh of the view of network server keys. This option is controlled by the Enable LAW license server enumeration setting, which is enabled by

Use the	When you want to
	default.
Profiles tree	<ul style="list-style-type: none"> • Add, edit, and delete custom profiles. • View details about all profiles stored on the current computer, as well as the two default license selection methods (<Any Available License> and <Custom>). When a profile is selected, the right pane will display the name, description, and licenses stored in that particular profile.
License Servers tree	<p>View details about the current license server.</p> <p>Software License is displayed under License Servers and the license server's computer name is displayed under Software License.</p> <p>The LAW Profile Manager columns provide the following information:</p> <ul style="list-style-type: none"> • License. Lists each type of LAW license. Licenses that do not exist on the product key are listed, but 0 is displayed in the Total, In Use, and Free columns for the license. • Total. Displays the total number license seats for each type of license. • In Use. Displays the number of license seats in use for each type of license. • Free. Displays the number of available license seats for each type of license.

About concurrent user licenses (Hardware Key licensing only)

Concurrent user licenses are only available with hardware key licensing.

The total number of user licenses controls the total number of users that may work concurrently in LAW and/or Explore. Concurrent licensing means that users can run CloudNine LAW and/or CloudNine Explore using any combination of licenses, at the same time. For example, if a key contains 10 concurrent user licenses, and 3 workstations are currently logged into CloudNine LAW, then 7 concurrent user licenses will be available at that time.

In the License Servers tree, the serial number of the license server key is listed with two numbers in parentheses beside it. These two numbers reflect concurrent user license counts.

The first number indicates the number of concurrent licenses in use.

The second number indicates the total number of concurrent licenses contained on the server key.

For example, the "5" in (5/20) means that LAW is running on 5 computers. The "20" means that there is a total of 20 concurrent licenses on the key. In this example, you could conclude that concurrent user licenses are still available.

The amount of concurrent user licenses that you may work with depends on a number of factors. If more are needed, contact CloudNine.

To Add new licenses to an existing Server Key (Hardware Key licensing only)

The Refresh License(s) from Internet feature in the LAW Profile Manager is only available with hardware key licensing. The instructions in this procedure apply only after you have purchased additional licenses from CloudNine sales and a sales representative has updated the license counts.

1. Log in to a computer designated as a license server.
2. Start the LAW Profile Manager.
3. Click **File** and then click **Switch to Administrative Mode**.
File menu in the LAW Profile Manager dialog box
The Enter Password dialog box appears.
4. Type the administrative password and then click **OK**.
Clicking **OK** opens the Successfully switched to administrative mode message.
5. Click **OK**.
6. On the File menu click **Refresh License(s) from Internet**.
The key will be updated with the new license counts.

To acquire or release licenses from CloudNine LAW

To avoid closing LAW and launching the LAW Profile Manager in order to change the selection of license modules, licenses can be checked out and released from within the LAW application.

1. In LAW on the **Help** menu, click **About CloudNine LAW**, and then click **Licenses**.

The **License Information** dialog box appears.

License Information

Enterprise License

Active Key

Server Name: ██████████

Serial No. <SOFTWARE LICENSE>

Licenses

- Admin (Import/Export)
- CD Publishing w/Full Text
- Electronic Discovery: Loader
- Electronic Discovery: e-Print
- Electronic Discovery: TIFF/PDF
- Endorse
- Full Text Indexing
- OCR (ABBYY FineReader)
- OCR (ExperVision OpenRTK)
 - OCR (ExperVision PDF add-on)
- Print
- QC / Edit / Review
- Scan (Gold - Token Based)
- Scan (Platinum - Unlimited)

In the **Active Key** area, the **Server Name** field displays the license server name. The **Serial No.** field displays SOFTWARE LICENSE for software key licensing and the product key expiration date(s) (if applicable).

The **Licenses** area displays the LAW licenses. When a license's check box is selected, it means the license is currently checked out. If a license name is grayed out, the product key does not contain this license.

2. Perform one of the following:

- To acquire a license, select the license's check box. A message box will appear indicating whether license acquisition was successful.
- To release a license, clear the license's check box. No message box will appear.



- At least one license must remain checked out while LAW is running.

- If the OCR license is released, OCR Add-on (PDF) will be automatically released because it also depends on the OCR license.

Undocked Keys

When using hardware key licensing, the software licenses needed to run LAW are provided on encrypted Sentinel USB keys, called *license keys*. CloudNine can also provide encrypted USB keys that do not contain licenses. These are called *undocked license keys*. The purpose of an undocked license key is to temporarily hold licenses checked out from the license key, so that licenses can be used on a second computer. A typical use of undocked keys is to furnish a laptop with the licenses necessary to conduct onsite discovery operations.

Undocked license key are generated from the LAW Profile Manager, where you specify which licenses to checkout, and the length of time to check them out. When the licenses are ready to be returned to the original license key, the licenses are reclaimed from the LAW Profile Manager using the Reclaim Undocked Key(s) menu selection. For more information about the LAW Profile Manager, see [LAW Profile Manager](#).

Sentinel USB license keys, undocked license keys, and the functionality for generating and reclaiming undocked license keys in the LAW Profile Manager are only available with hardware key licensing. For more information about licensing, see [LAW Licensing](#).

[To obtain undocked keys](#)

There are two sources of undocked keys:

- Undocked keys can be purchased from CloudNine. For more information you can contact CloudNine.
- LAW 4.0 license keys and Z-Print keys can be reused as undocked keys after upgrading to LAW 5.0 or above.

 Software licenses cannot be used as undocked keys until version 6.18.148+.

[To create an undocked key on a local server](#)

1. Plug an undocked USB key into the LAW license server.
2. Click **Start**, point to **All Programs**, point to **CloudNine™ LAW**, and then click **Profile Manager**. The **LAW Profile Manager** dialog box opens.
3. On the **File** menu, click **Switch to Administrative Mode**, and then type the administrator password.

4. Click **OK**.
Clicking **OK** opens the *Successfully switched to administrative mode* message.
 5. Click **OK**.
 6. On the **Tools** menu, click **Options**, and then clear the **Enable LAW license server enumeration** check box, if it is already selected.
 7. Click **OK**.
 8. On the **File** menu, click **Undocked Key Admin**, and then click **Create Undocked Key**.
 9. Do one of the following, depending on how many license keys are plugged into the local computer, not counting the undocked key:
 - If more than one license key is plugged into the local computer, you will see the **Select License Key** dialog box, which lists the license keys plugged into the computer. Select a license key and then click **OK**. The **Select Licenses** dialog box opens.Or
 - If just one license key is plugged in, the **Select Licenses** dialog box opens immediately.
 10. Select licenses to check out, select an expiration date, and then click **OK**. The **Undock Successful** confirmation box opens.
 11. Click **OK** to close the message box.
- The undocked key may be detached from the current workstation and used on a different LAW workstation.

To create an undocked key on a local server (alternative method)

1. Plug an undocked USB key into the LAW license server.
2. Click **Start**, point to **All Programs**, point to **CloudNine™ LAW**, and then click **Profile Manager**. The **LAW Profile Manager** dialog box opens.
3. On the **File** menu, click **Switch to Administrative mode**, and then type the administrator password.
4. Click **OK**.
Clicking **OK** opens the *Successfully switched to administrative mode.* message.
5. Click **OK**.

6. On the **Tools** menu, click **Options**, and then clear the **Enable LAW license server enumeration** check box, if it is already selected.

7. Click **OK**.

8. Click **Advanced**, type the administrator password, and then click **OK**.

The **LAW Profile Manager (Administrative Mode)** dialog box opens.

9. Select a key. Licenses held on the selected key are listed. Licenses showing 1 or higher in the Free column are available for checkout.

10. On the **Server Key** menu, click **Create Undocked Key**. The **Select Licenses** dialog box appears.

11. Select licenses to check out, select an expiration date, and then click **OK**. The **Undock Successful** confirmation box opens.

12. Click **OK** to close the message box. The newly created undocked key appears below the key. The undocked key may be detached from the current workstation and used on a different LAW workstation.

13. Optionally, click the undocked key. License key details are visible, including key serial number, key type, check-out date, expiration date, and the names of checked out licenses.

To reclaim undocked keys

1. Plug the undocked USB key into the LAW license server.

2. Click **Start**, point to **All Programs**, point to **CloudNine™ LAW**, and then click **Profile Manager**. The **LAW Profile Manager** dialog box opens.

3. On the **File** menu click **Switch to Administrative Mode**, and then enter the administrator password.

4. Click **OK**.

5. On the **Tools** menu, click **Options**, and then clear the **Enable LAW license server enumeration** check box, if it is already selected.

6. Click **OK**.

7. On the **File** menu, click **Undocked Key Admin**, and then click **Reclaim Undocked Key(s)**.

8. In the **Reclaim Successful** confirmation, click **OK**.

LAW reclaims all licenses on the undocked key and returns them to the server key.

To view properties of a local server, keys, and undocked keys

1. Click **Start**, point to **All Programs**, point to **CloudNine™ LAW**, and then click **Profile Manager**. The **LAW Profile Manager** dialog box opens.
2. On the **File** menu click **Switch to Administrative Mode**, and then enter the administrator password.
3. Click **OK**.
4. On the **Tools** menu, click **Options**, and then clear the **Enable LAW license server enumeration** check box, if it is already selected.
5. Click **OK**.
6. Click **Advanced**, type the administrator password, and then click **OK**.

The **LAW Profile Manager** dialog box opens in administrative mode. The license servers are shown with license keys and any undocked keys.

7. Select license servers, keys, and undocked keys to view the details of each, as described in the following table:

Click this:	To view these details:
License server	<ul style="list-style-type: none"> • Server name • IP address • Key count
Keys	<ul style="list-style-type: none"> • License types contained on the key • Total of each type of license • Number of each type in use • Number of each type available
Undocked keys	<ul style="list-style-type: none"> • Key serial number • Type (public or private) • Check-out date • Expiration date • Names of any checked out licenses, for example Electronic Discovery: Loader

Installing CloudNine LAW

Once you have confirmed the system and licensing requirements you are ready to install CloudNine™ LAW, and optionally CloudNine™ Explore.

- ✎ Sentinel Protection Server and Sentinel RMS License Manager are installed using a separate installer. When configuring LAW you will need to make sure you have access to your License Manager and that you have a valid LAW License.

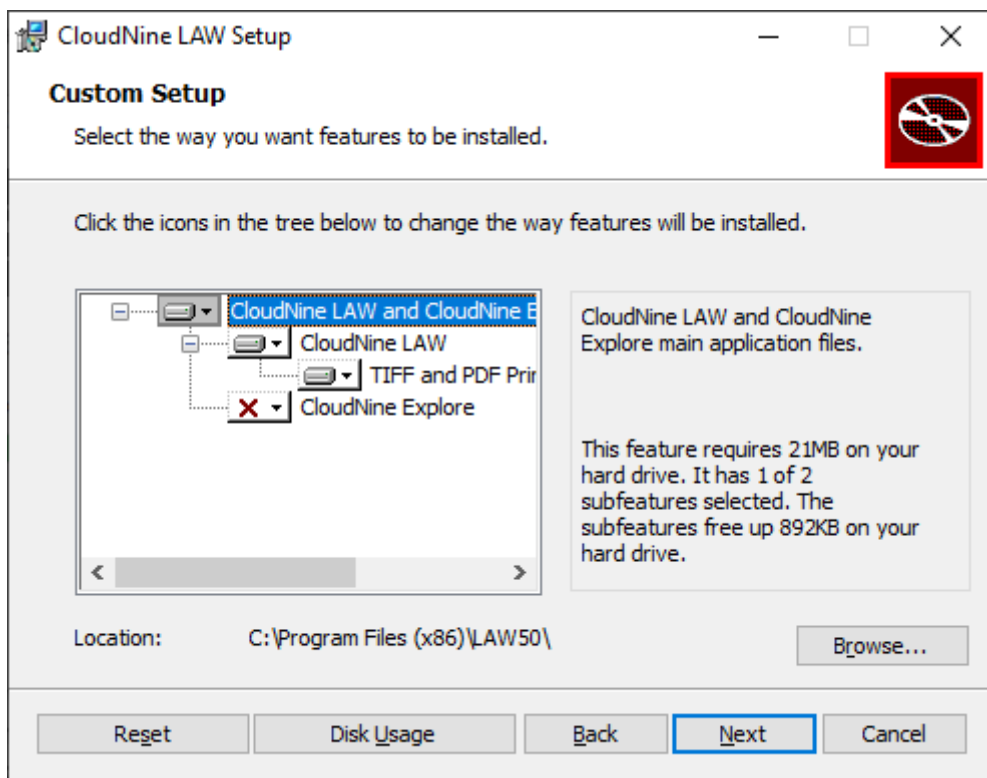
1. Run the installation executable file. The License Agreement dialog opens.



2. Check the **I agree to the license terms and conditions** if you accept the terms, and then click **Install**. The **Setup Progress** dialog displays and an additional **LAW Setup Wizard** dialog appears.



3. Click **Next** to continue installing LAW. The **Custom Setup** screen appears.



- Select the features you wish to install by clicking the down arrow to the left of the feature name. A red X indicates the feature is not currently selected for installation.

By default, LAW and the TIFF Printer Drivers are enabled for installation. CloudNine™ Explore is not enabled for installation by default.

The features available for installation are as follows:

Feature	Description
CloudNine™ LAW	Installs LAW50.exe and related folders, system files, templates, and utilities.
CloudNine™ Explore	Provides advanced prefiltering functionality. This feature requires additional licensing to run.
TIFF / PDF Printer Drivers	A driver for batch printing, and for batch- and single-TIFF conversion. Supports text extraction during TIFF conversion. Installation is recommended. Also includes the LAW Image Driver 300 DPI Printer. This is used to convert documents to TIFF at a resolution of 300 dots per inch.

- You may choose a non-standard installation directory if necessary. If you want to change the installation directory on your machine, in the **Custom Setup** dialog, click **Browse**. The **Change destination folder** dialog opens. Browse to the directory of your choosing, or type in a **Folder name**. Click **OK** to save the new installation location and return to **Custom Setup**.
- In the **Custom Setup** dialog, click **Next**.
- If you chose to install CloudNine™ Explore, the **Configure CloudNine Explore Service** dialog opens.

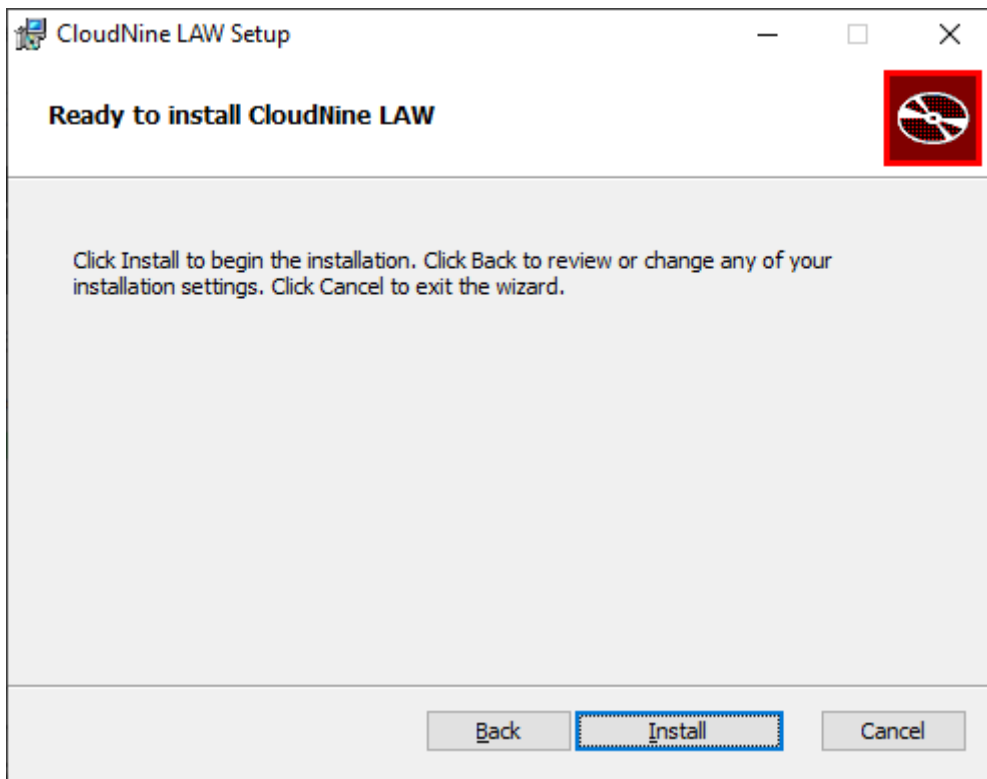
8. At the **Configure CloudNine Explore Service** screen, either enter a
 - Microsoft Windows account (**User name** and **Password**) that the Explore Service will the run on.
 - Enter or create an account into a group that will not hinder the access rights below.
 - Full read/write/modify access to share/location (source data and case folders), SQL, any workstations.
 - Add this account to SQL with db_owner role.
 - **User Names** should be in this format (without angled brackets or quotations): <"network domain"\ "network user name">
 - Local System Account option from the Run As drop-down
 - Then the current Windows user must have access permissions to the SQL Server, or you will be unable to connect

⚠ The **User Account** setting is required to operate CloudNine™ Explore in a distributed environment. The user you select must have permissions to access the

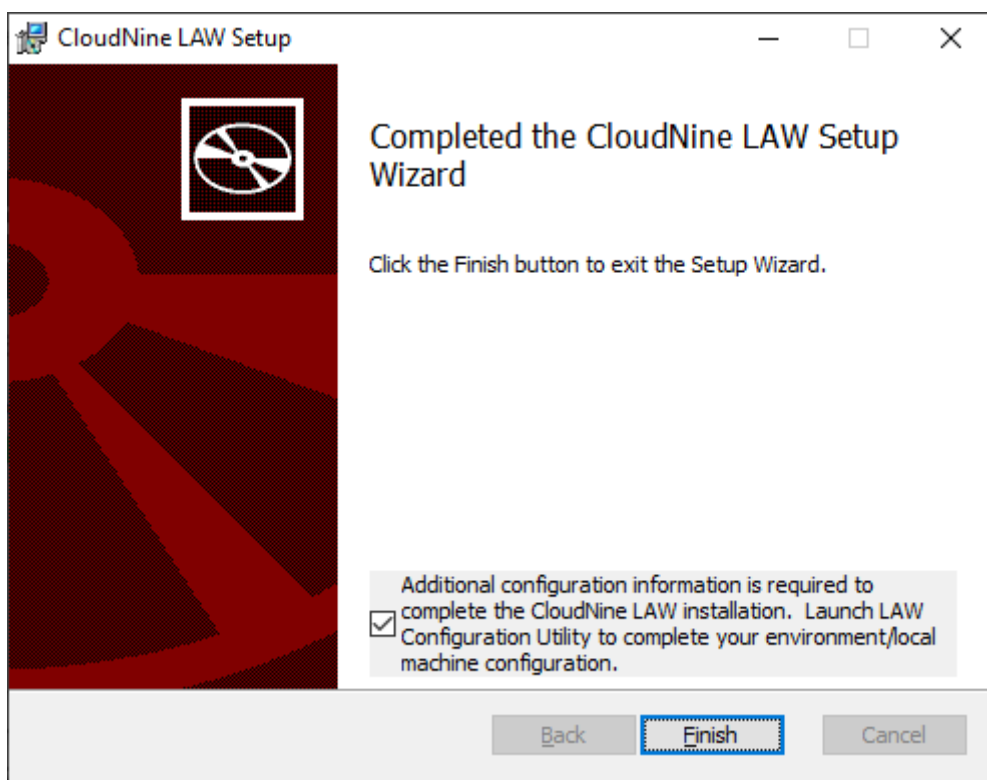
network resources and to operate the SQL Server instance that will be used by Explore. For more information on network resources required to set up Explore for distributed processing, see the Explore documentation.

If you select **Local System Account** for **Run As**, CloudNine™ Explore will NOT be able to run in a distributed environment. **Local System Account** should only be selected for a single station installation where the SQL Server is hosted on the same station and all file resources are accessed locally. If you select **Local System Account** you should grant "NT AUTHORITY\SYSTEM" proper permissions to access SQL Server.

9. Click **Next**. The **Ready to Install the Program** dialog opens.




10. Click **Install**. The **Installing CloudNine LAW** dialog opens to show progress for the install. When the installation is complete, the **Completed** dialog opens.



11. Click **Finish** in the **Completed** dialog, and click **Close** in the CloudNine LAW setup completion window. At this time, additional configuration information is required to complete the CloudNine LAW installation. The CloudNine LAW Configuration Utility displays to allow you to configure your environment and local machine. See [LAW Configuration Utility](#) for more information.

 Additional configuration information is required to complete the CloudNine LAW installation. Launch LAW Configuration Utility to complete your environment/local machine configuration. See [LAW Configuration Utility](#) for more information.

 It is recommended to give all users full rights to the following locations after installation completes and prior to launching the application:
C:/Program Files (X86)/Law50

It is required that users have full rights (read, write, modify) to where the databases will be stored.

If you would like to create desktop shortcuts for LAW and CloudNine™ Explore, you can create desktop shortcuts from the LAW and Early Data Analyzer .exe files. The **Law50.exe** file is located in the ...**Program Files (x86)\Law50** directory, and the **LAW.EdAnalyzer.exe** file is located in the ...**Program Files (x86)\Law50\EDAnalyzer64** directory.

To use software key licensing or a temporary license key for LAW and CloudNine™ Explore, you need to activate the software product key or temporary license key before being able to access the LAW and/or CloudNine™ Explore functionality permitted by the licenses in the software product key or temporary license key.

- To activate a software product key, see [License Manager](#).

Advanced Configuration

Encryption and TLS Protocols

As of version 7.3, LAW supports TLS 1.2 encryption protocols for Windows 10 systems.

- For information on enabling TLS on your environment systems, we recommend you work with your Administrator.
- LAW is compatible with systems running TLS 1.2 encryption; TLS 1.0 may be disabled on these systems.
- For instructions on enabling/disabling TLS 1.2 and 1.0, please reference <https://docs.microsoft.com/en-us/windows-server/security/tls/tls-registry-settings>.

LAW FIPS Compliance and Configuration

Effective starting with version 7.5.X, CloudNine LAW is certified for FIPS encrypted Windows 10 operating systems.

Administrators can enable FIPS via either local system registry, or via Group Policy.

When enabled, the operating system will ensure that only FIPS validated hashing and encryption modules are used by the operating system (including .NET libraries).

For more information on the FIPS encryption and usage with Windows 10, the STIG guidelines are listed here for reference:

https://www.stigviewer.com/stig/windows_10/.

Users can also reference the STIG guidelines for enabling FIPS encryption:

https://www.stigviewer.com/stig/windows_10/2019-01-04/finding/V-63811.

Antivirus Best Practices and Recommendations

With any eDiscovery processing tool, an anti-virus scanning utility can alter files and interrupt chain of custody and hashing values.

Best Practices for insulating against unwanted AV impacts in processing include:

- Separate the Processing Network other Review and Business Networks (e.g., separate LAN or vLAN).
- Only run virus scanning after processing is completed (e.g., when moving processing volumes to new locations for Production or Review Loading).
- If on-demand virus scanning is a compliance requirement, then scan only the file shares with extracted ESI.
- These paths should be excluded so as to avoid impacts to processing speed and reliability:
 - Installation directory
 - Local User Log Directory
 - Local User Data store Directory
 - Local Computer Data store Directory
 - LAW Case Directory
 - LAW Worker Temp Directory
 - Source data location

Additionally, Users may reference the EDRM recommended practices regarding virus protection here: <https://www.edrm.net/resources/frameworks-and-standards/edrm-model/edrm-stages-standards/edrm-processing-standards-guide-version-2/>.

Required LAW and Explore Ports

The required port exceptions for LAW and Explore are listed below.

LAW

Outgoing:

- ms-sql-s -> 1433 (TCP/UDP)
- www, http -> 80 (TCP)
- https -> 443 (TCP/UDP)
- microsoft-ds -> 445 (TCP/UDP)
- smtp -> 25 (TCP) * Configurable via Tools->Options->Notifications
- Sentinel Protection Server (3rd party) -> 7002 (TCP)

- Sentinel RMS Server (3rd party) -> 5093 (UDP)

LAWtsi

Outgoing:

- ms-sql-s -> 1433 (TCP/UDP)
- www, http -> 80 (TCP)
- microsoft-ds -> 445 (TCP/UDP)
- Sentinel Protection Server (3rd party) -> 7002 (TCP)
- Note: LAW TSI interfaces with 3rd party TWAIN drivers which may use various network communication methods to access devices. Ports would have to be determined by your Scanner manufacturer/vendor.

LAW Management Console

Outgoing:

- ms-sql-s -> 1433 (TCP/UDP)
- microsoft-ds -> 445 (TCP/UDP)
- UDP -> 8401 (UDP) * Configurable via Tools->Options

Incoming:

- UDP -> 8401 (UDP) * Configurable via Tools->Options

Explore

Outgoing:

- ms-sql-s -> 1433 (TCP/UDP)
- www, http -> 80 (TCP)
- microsoft-ds -> 445 (TCP/UDP)
- https -> 443 (TCP/UDP)
- Sentinel Protection Server (3rd party) -> 7002 (TCP)
- Sentinel RMS Server (3rd party) -> 5093 (UDP)


Incoming (web only, end user configurable):

- www, http -> 80 (TCP)
- https -> 443 (TCP/UDP)

LAW Configuration Utility

The LAW Configuration Utility allows you to configure the [Environment](#) or [Local Machine](#).

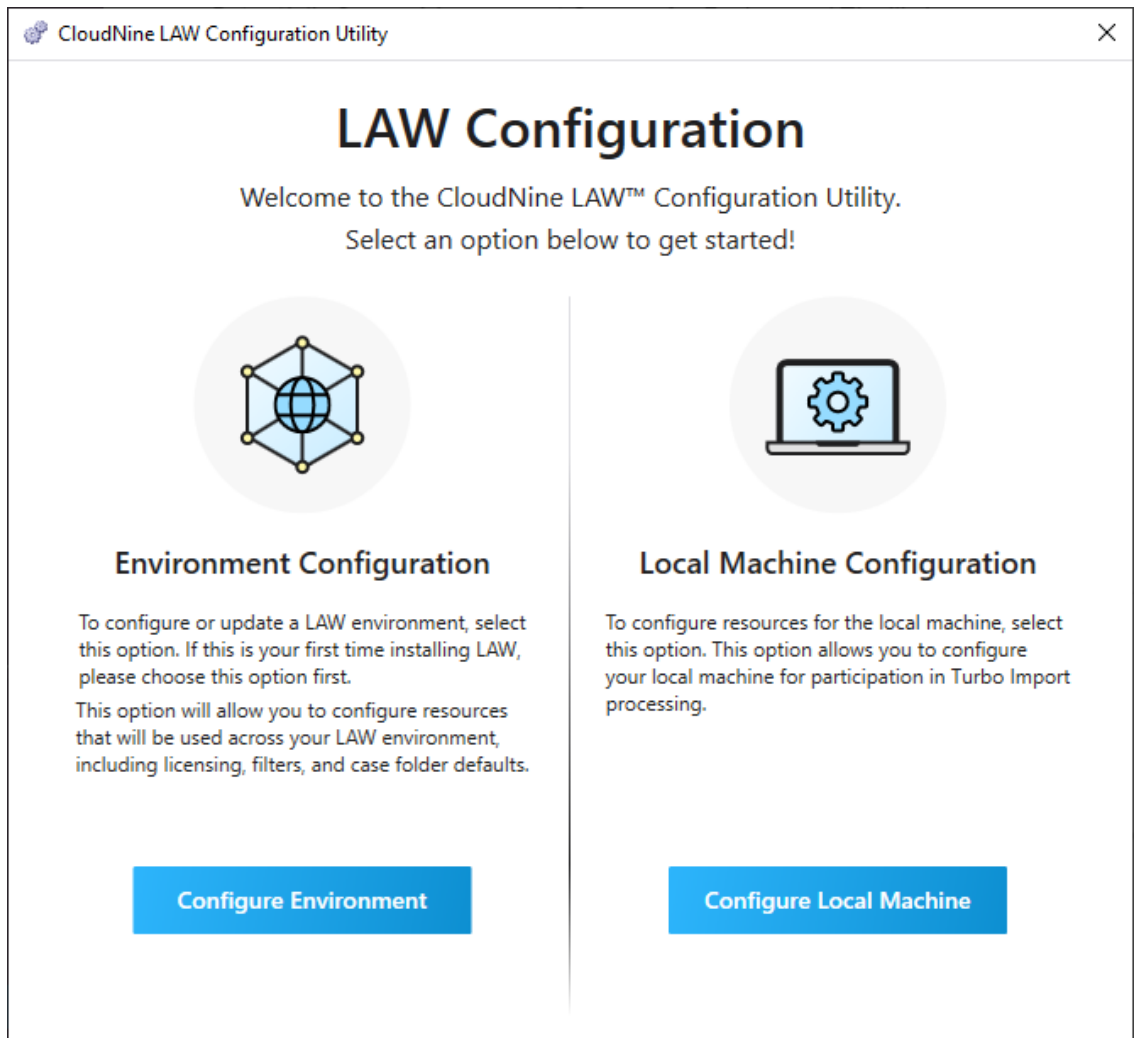
- Environment configuration is for choosing the location/source for the overall LAW environment including:
 - SQL database instance
 - Case List Migration (for version 7.2+)
 - Path where cases are stored
 - License server
 - File Type Database
 - NIST (optional)
- Local Machine is used to configure this machine as a LAW workstation and/or Turbo Import station including:
 - Roles
 - Management database
 - LAW Service

 The Environment Configuration must run on at least one installation of LAW to configure the overall environment for all LAW workstations. Once the overall environment has been configured then the installer can proceed to Configure Local Machine for all other installations of CloudNine™ LAW.

Launching the LAW Configuration Utility

The LAW Configuration Utility automatically runs immediately after installing CloudNine LAW. You can also alter your LAW configuration using the LAW Configuration Utility after installation is complete.

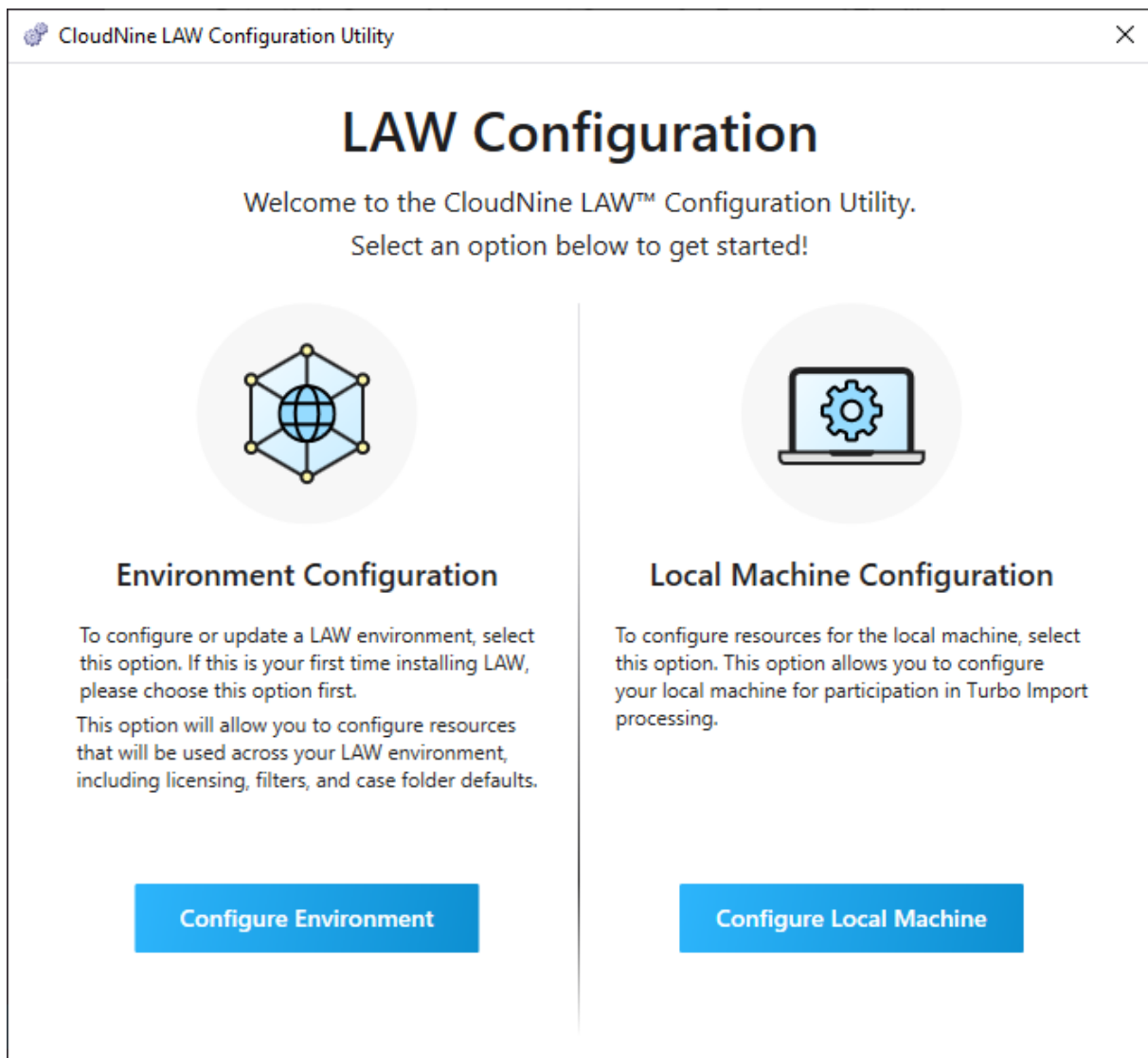
1. Click the **Windows Start Button**, expand the **CloudNine LAW** folder, and select the **LAW Configuration Utility**.
2. **The CloudNine LAW Configuration Utility** opens in a new window.



3. If this is your first time installing LAW, you should select [Configure Environment](#). If you have an existing environment configured you can proceed to [Configure Local Machine](#).

Configure Environment

Changes made to the environment configuration affect all workstations connected to that environment. The environment settings persist to licensing, LAW Management Console, both Turbo Import and Electronic Discovery import settings, and case creation settings.



To configure or update a LAW environment, select **Configure Environment**. If this is your first time installing LAW please choose this option first. This option will allow you to configure resources that will be used across your LAW environment, including licensing, filters, and case folder defaults.

💡 The Environment Configuration must be ran on at least one installation of LAW to configure the overall environment for all LAW Workstations. Once the environment configuration has been completed on at least one machine, then each additional CloudNine™ LAW installation can be configured via the [Configure Local Machine](#) option.

⚠️ It is recommended to use either the LAW_user or Windows Authentication consistently throughout the configuration. Using mixed forms of authentication for different resources such as: file type database, NIST, or SQL is not recommended.

As the Environment configuration is across all workstations, the use of "localhost" entered in the Server Name field for any of the database pages (Management DB, FTM, NIST) in the Configuration Utility will be converted to the machine name of the computer being configured when the user selects the "Test Connection" button.

Management DB

The LAW management database is used to host shared settings for your LAW environment. Database configuration is required before using the application.

The screenshot shows a window titled "CloudNine LAW Configuration Utility - Environment". On the left is a sidebar with menu items: "Management DB" (highlighted in blue), "Case List Migration", "Default Paths", "Licensing", "File Type DB", "NIST", and "Review". The main area is titled "Management Database" and contains the following text: "The LAW Management database is used to host shared settings for your LAW environment. Database configuration is required before using the application." Below this are three input fields: "SQL Server Name*" (placeholder: "Enter Server Name..."), "SQL Database Name*" (value: "LAW5_Management"), and a checked checkbox "Use Windows Authentication". Underneath the checkbox are two more input fields: "User Name*" (value: "law_user") and "Password*" (masked with dots). At the bottom of the main area is a warning icon and text "Database Connection Has Not Been Tested" next to a "Test Connection" button. At the very bottom of the window are three buttons: "Cancel", "Back", and "Next".

1. Enter your **SQL Server Name**. This is the IP address, or server name for the SQL server that will be managing the LAW environment. All LAW Workstations in your environment and the LAW Management Console will be using this database.
2. Enter your **SQL Database Name**. The default database name is LAW5_Management with the corresponding password entered. This database will be used for environment configuration settings.

3. Use Windows Authentication:

- If selected, windows authentication is enabled and the current windows login will be used to connect to the database. The windows login must be listed under SQL security logins and have the necessary permissions to that database.
- If not selected, then SQL authentication is used and a **User Name** and **Password** needs to be provided. The user name law_user and associated password is provided by default.

💡 If desired, you can use SQL authenticated custom logins. See [Adding SQL Server custom logins to existing databases](#) for more information.

⚠️ If you use the Local System Account to run the [LAW Service](#), then you should use law_user (SQL Login) for the Management and File Type databases. Running the Local System Account in tandem with Windows Accounts for Management and File Type database logins may prevent LAW from correctly processing documents.

4. Click **Test Connection**. This step is required before continuing with the environment configuration. If the Management Database is configured correctly and accessible through the network then a "Connection Test Succeeded" message will display.
5. Click **Next** to proceed to [Case List Migration](#).

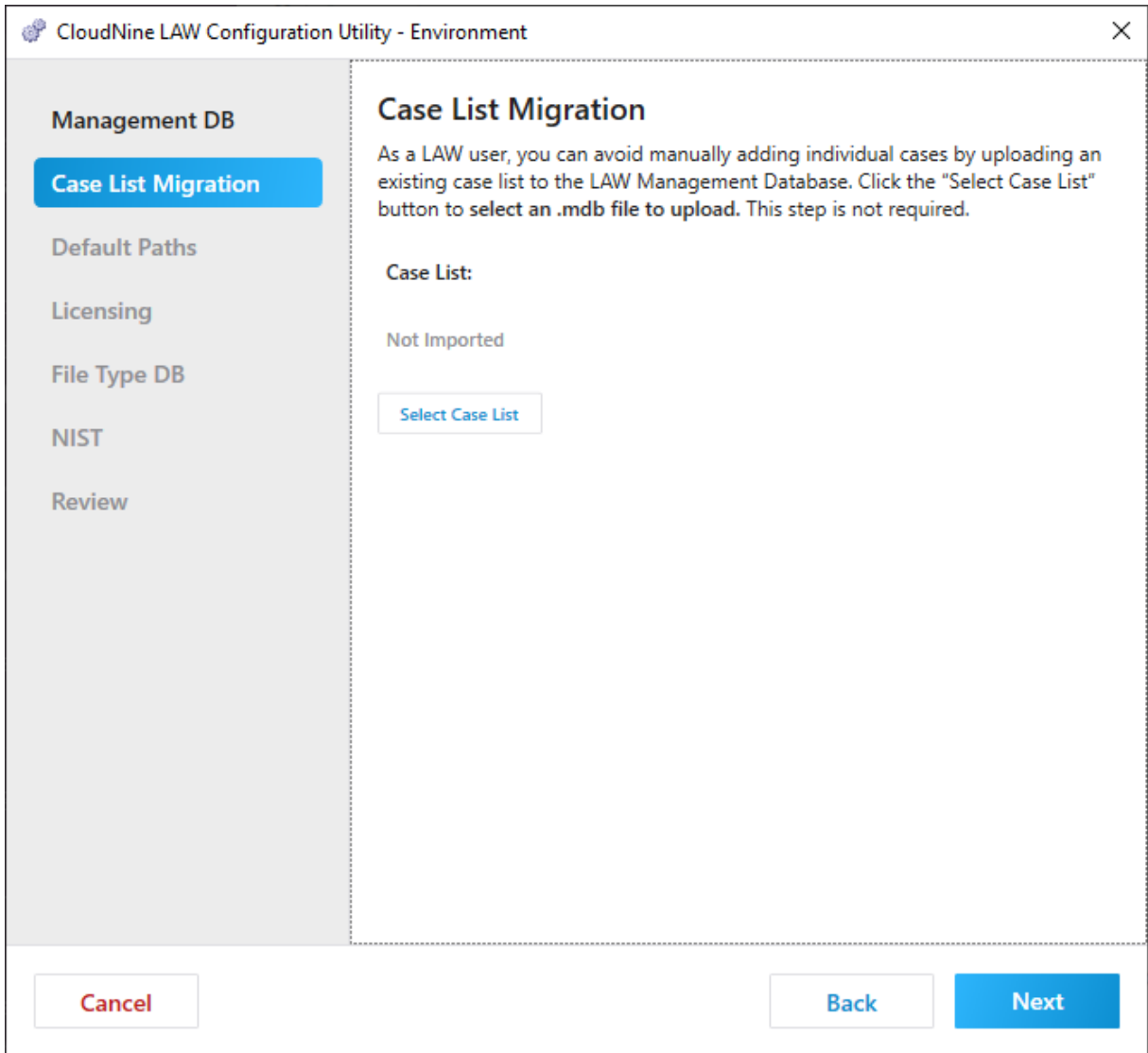
Case List Migration

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. In version 7.2+, the case list is migrated into the SQL Management database in the LAW Configuration Utility.

The case list is configured and stored in the SQL management database during the LAW Configuration Utility [Management DB](#).

The caselist is required in to be configured in the LAW5_Management database for the SQL Server that is configured as the Management Database in the LAW Configuration Utility. If you would like to add the case list from an Access Database to the newly formed SQL case list then follow the steps for Migrating Existing Case List into SQL.

- ✍ If you have no cases to migrate (for new LAW environments) or you would like to migrate your cases later; then click Next to skip this process.



1. Click **Select Case List**.
2. In the file explorer window that displays, navigate to the location and select the caselist.mdb that you would like to migrate. Click **Open**.
3. The **Case List Migration** display updates to show the caselist.mdb file that you selected.
4. Click **Next** to proceed to [Default Paths](#).

- ⚠ Only one caselist.mdb can be migrated to the SQL case list at a time. Clicking Select CaseList again and browsing to a different caselist.mdb will only change the path to the location of the newly selected caselist.mdb. The LAW Configuration Utility must be initiated multiple times to add multiple caselist.mdb's from various locations.
- 📍 The case list is stored in the SQL server specified as the Management DB. This process does not need to be completed on multiple workstations as long as all workstations in the environment are configured to use the same Management DB.

Default Paths

LAW stores files in both Case and Image folders that are defined in this step of your environment configuration.

CloudNine LAW Configuration Utility - Environment

Management DB

Case List Migration

Default Paths

Licensing

File Type DB

NIST

Review

Default Paths

This area specifies the directories where LAW case files are stored. The Case Folder path and Image Folder paths may be entirely different.

Case Folder*

Enter Case Folder Path...

Image Folder*

Enter Image Folder Path...

Note: UNC network paths are strongly recommended for LAW Case and Image folders. (Ex: \\SomeServer\SomeFolder\MyCases\CaseName) Non-UNC paths may prevent some computers from participating in the processing of cases.

Case and Image folders are not set

1. Enter the **Case Folder** path where LAW should store the case files. Alternatively you can click **Browse** to select the folder via a file explorer window.

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 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.

2. Enter the **Image Folder** path where LAW should store the image files. Alternatively you can click **Browse** to select the folder via a file explorer window.

- ✍ It is recommended that all LAW users have read, write and modify permissions to both the case folder and image folder.
 - ✍ The case and image paths may be entirely different. The paths may point to a folder on the local computer, to a UNC path, or to a network drive that is mapped for all workstations. A UNC path is recommended for case and image folders.
3. Click **Validate Paths** after selecting the Case Folder and Image Folder to have the paths validated.
 4. Click **Next** to proceed to [Licensing](#).

Licensing

This part of the environment configuration provides information for your LAW license server. If this is your first time installing LAW, please specify the IP or name of the machine you will use as your LAW license server.

You may update this information at any time if you need to reference licenses on a different license server, or have migrated your existing license server.

The screenshot shows a window titled "CloudNine LAW Configuration Utility - Environment". On the left is a sidebar with the following menu items: Management DB, Case List Migration, Default Paths, Licensing (highlighted in blue), File Type DB, NIST, and Review. The main content area is titled "Licensing" and contains the following text: "This page allows you to point to the machine that will host your CloudNine LAW license key. If this is your first time installing LAW, please specify the IP or name of the machine you will use as your LAW license server. You may update this information at any time, if you need to reference licenses on a different license server, or have migrated your existing license server." Below this text is a section labeled "License Server*" with a text input field containing the placeholder "Enter License Server...". To the right of the input field is a warning icon (a yellow triangle with an exclamation mark) and the text "License Server is not set". To the right of the warning is a button labeled "Test Connection". At the bottom of the window are three buttons: "Cancel", "Back", and "Next".

1. Enter the **License Server**. This is the computer name or IP address of the workstation that you setup as your LAW license server.

💡 The license server needs to have Sentinel Protection started and an active license dongle connected or Sentinel RMS started in order to validate the server. If this is the first install then you may need to choose this workstation as your license server and then change it once your license server has been configured.

Changing the License Server in the LAW Configuration Utility will affect all computers in the environment as soon as the configuration is complete.

2. Click **Test Connection**. A "Connection Test Succeeded" message displays indicating that your LAW license server was accessible.

3. Click **Next** to proceed to [File Type DB](#).

Once the configuration utility has completed with the Environment Configuration then the LAW Profile Manager for each LAW Workstation will have the corresponding license server. The license server can only be changed through the LAW Configuration Utility.

File Type DB

The File Type Management database is used to include/exclude file types during import into LAW cases.

If you would like to utilize a File Type Management SQL database from a previous LAW Installation, please specify that database information during this step of configuring your environment.

CloudNine LAW Configuration Utility - Environment

File Type Database

The File Type Management database is used to include/exclude file types during import into LAW cases.

If you are configuring a new LAW environment, we recommend that you use the pre-populated database information in the fields below.

If you would like to utilize a File Type Management SQL database from a previous LAW installation, please specify the database information below.

SQL Server Name*

Enter Server Name...

SQL Database Name*

Enter Database...

Use Windows Authentication

User Name*

Enter User Name...

Password*

Enter Password...

Database Connection Has Not Been Tested [Test Connection](#)

An existing Access File Type Management Database could not be located on your system. If you would like [Import FTM](#)

[Cancel](#) [Back](#) [Next](#)

1. Enter the **SQL Server Name**. This is the SQL Server that will host the File Type database.

The LAW Configuration Utility will look for the configuration properties referencing an existing SQL File Type Management database at startup. If an ini file exists and contains File Type Management Database configuration info, then this tab will be populated with those values. If not, the values specified in [Management DB](#) will be used.

2. Enter the **SQL Database Name**. This is the name of the File Type database.

3. **Use Windows Authentication:**

- If selected, windows authentication is enabled and the current windows login will be used to connect to the File Type database. The windows login must be listed under SQL security logins and have the necessary permissions to that database.
 - If not selected, then SQL authentication is used and a **User Name** and **Password** needs to be provided. The user name law_user and associated password is provided by default.
4. Click **Test Connection**. A "FTM is loaded" message displays indicating that the database was found and loaded.
 5. Optionally, if an existing File Type Management database could not be located, you can use select **Import FTM** to select and upload an existing database.
- 💡 If there is not an existing Access File Type Management Database to browse out to nor an existing File Type Management Database in the named SQL server, then LAW will create one when the Environment Configuration completes.
6. Click **Next** to proceed to [NIST](#).

NIST

The **NIST** configuration allows you to upload the NSRL/NIST collection to the LAW Management database for document NIST filtering.

CloudNine LAW Configuration Utility - Environment

Management DB

Case List Migration

Default Paths

Licensing

File Type DB

NIST

Review

NIST

The NIST database option allows users to upload the NSRL/NIST collection to the LAW Management database for document NIST filtering.

If you are configuring a new LAW environment, we recommend that you use the pre-populated database information in the fields below.

If you would like to utilize an existing NIST database, enable "Configure NIST Database" and specify the database information below.

Configure NIST Database

SQL Server Name*

SQL Database Name*

Use Windows Authentication

User Name*

Password*

Test Connection

Cancel **Back** **Next**

If you are configuring a new LAW environment, you can use the pre-populated database information that appears on the NIST configuration page.

Current NIST list can be download here: [rds_modernm2023](https://www.fishbase.org/links/rds_modernm2023)

If you wish to configure LAW to use an existing NIST database:

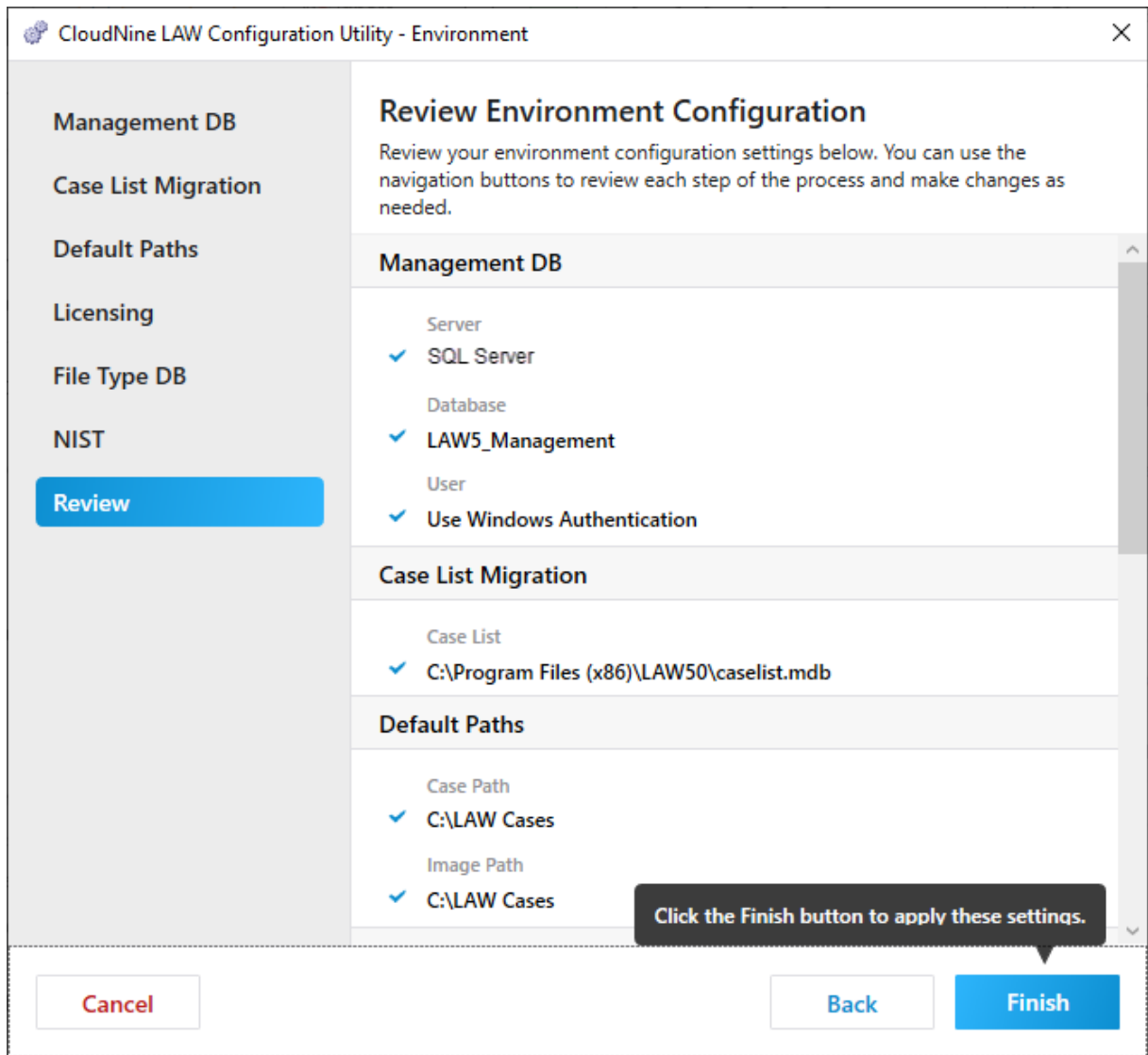
1. Select **Configure NIST Database**.
2. Enter the **SQL Server Name**. This is the SQL Server that will host the NIST database.
3. Enter the **SQL Database Name**. This is the name of the NIST database. The default is LAW_NIST.

4. Use Windows Authentication:

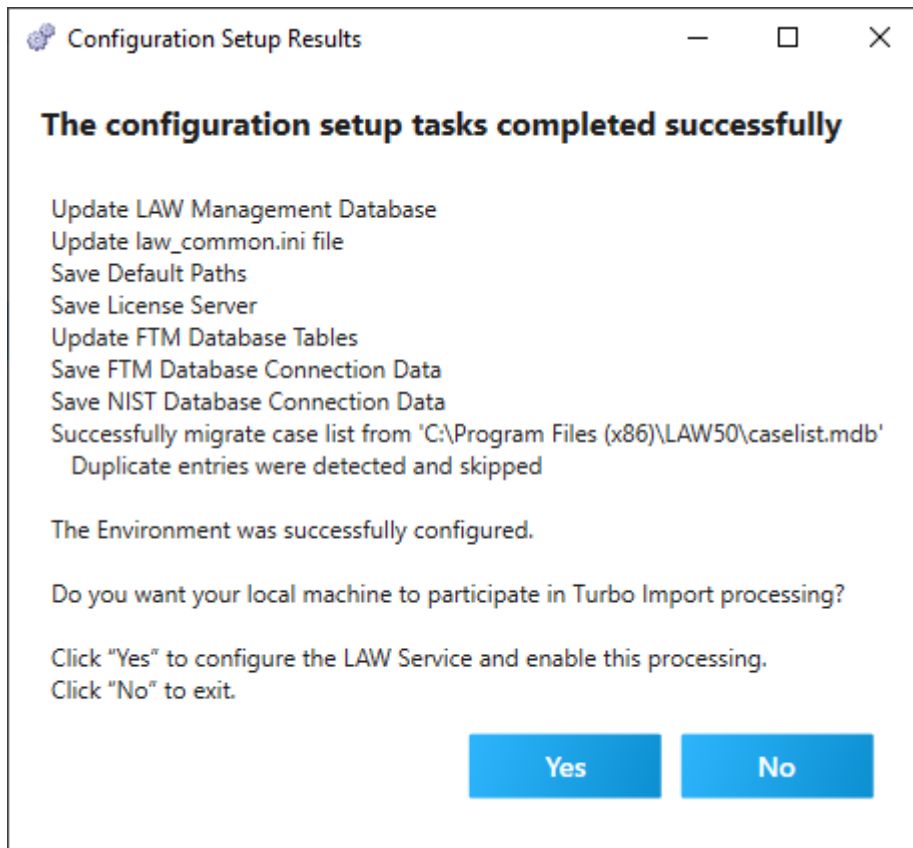
- If selected, windows authentication is enabled and the current windows login will be used to connect to the NIST database. The windows login must be listed under SQL security logins and have the necessary permissions to that database.
 - If not selected, then SQL authentication is used and a **User Name** and **Password** needs to be provided. The user name law_user and associated password is provided by default.
5. Click **Test Connection**. A "NIST is loaded" message displays indicating that the database was found and loaded.
 6. Click **Next** to proceed to [Review](#).

Review

The **Review** page allows you to confirm your environment configuration choices before applying.



1. Use the scrollbar at the right to scroll through the environment configuration settings that have been made.
2. If you need to adjust any environment configuration settings, click **Back** to move through the previous screens and make your updates.
3. Once you are done, click **Finish** to apply the environment settings. The **Configuration Setup Results** dialog is displayed.



4. If you will be using Turbo Import, click **Yes** to continue to [Configure Local Machine](#) (you will be taken directly to the [Service](#) configuration). Otherwise, click **No** to complete the environment configuration.

5.

6.

7.

8.

9.

1. On the **Review tab** confirm that the correct path is reflected for the caselist.mdb then select **Finish**.
2. Review the **Configuration Setup Results** for the status of the case list migration.

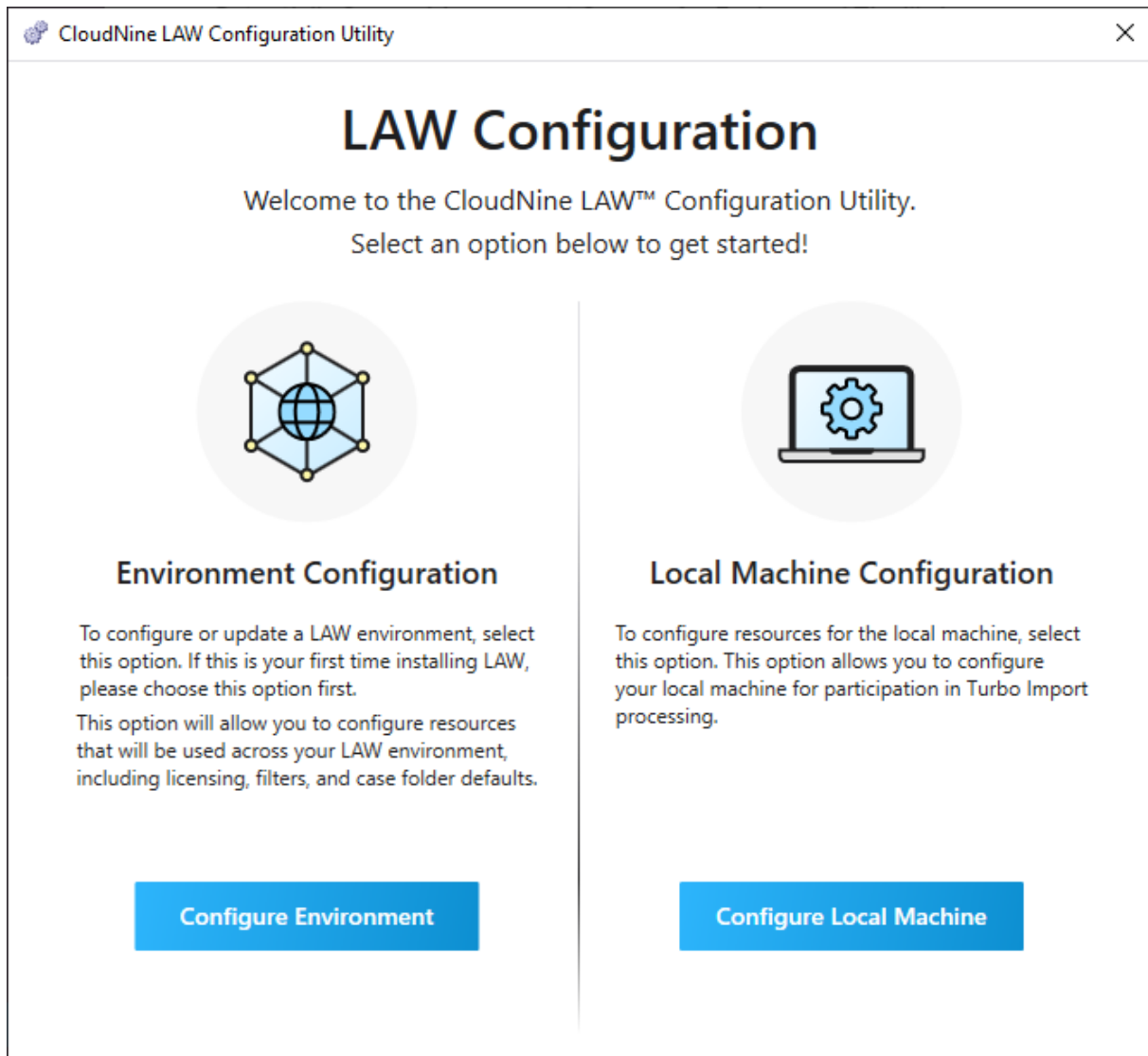
3. Possible Statuses are:

- Successfully migrate case list from 'C:\Program Files (x86) \LAW50\caselist.mdb'. - The case list (at path specified) was added to the SQL case list.
- Successfully migrate case list from 'C:\Program Files (x86) \LAW50\caselist.mdb'. Duplicate entries were detected and skipped. - The case list (at path specified) was appended to the SQL case list. Duplicate case names were detected and the duplicates were skipped.
- Not Imported. - A case list was not selected to be migrated at this time.

Configure Local Machine

Changes made to the local machine configuration are specific to a single workstation. You should complete the environment configuration before doing local machine configurations on each workstation.

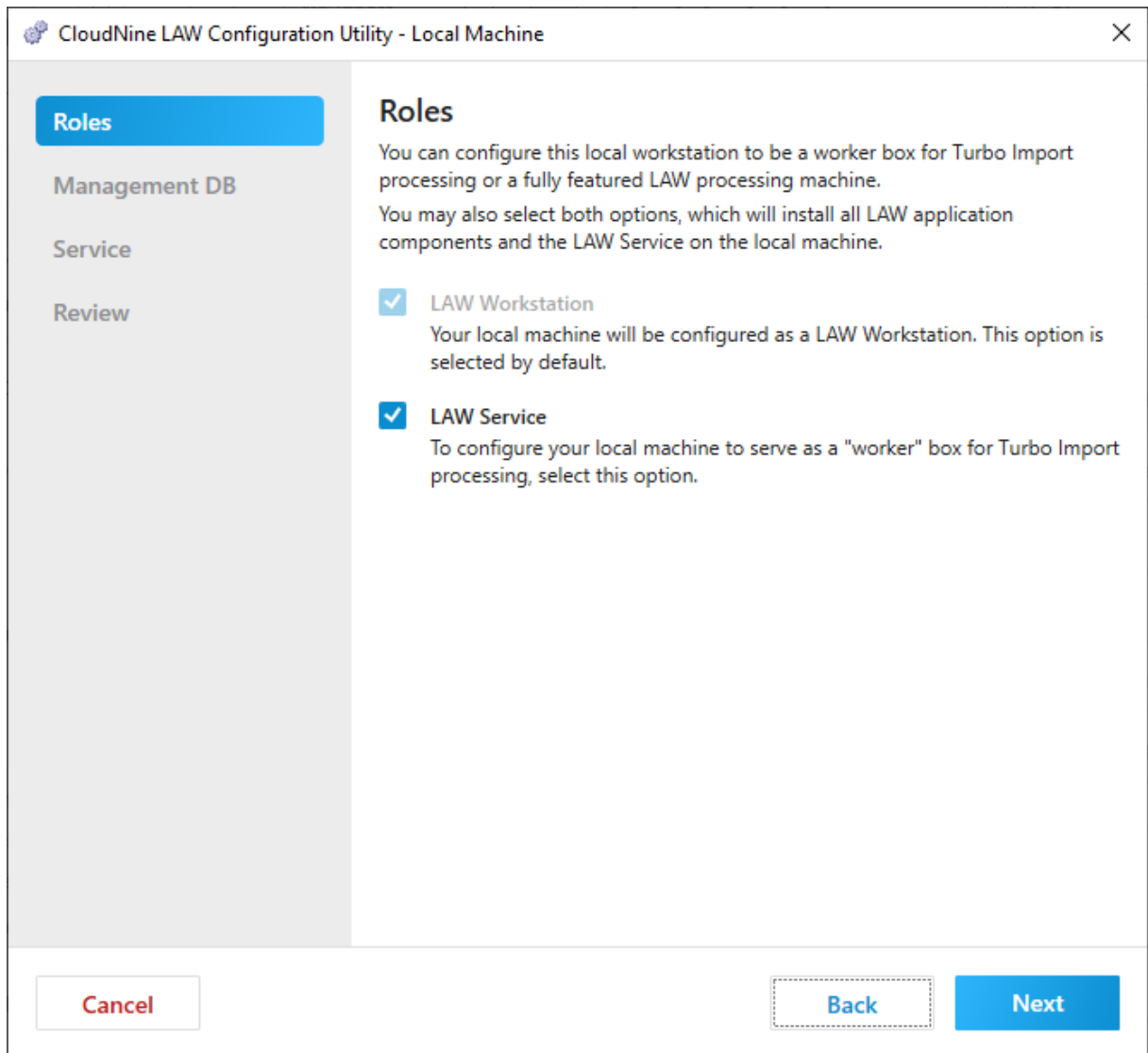
Local Machine configuration allows you to setup a machine for participation in Turbo Import processing and as a LAW Workstation.



To configure the local machine environment, select **Configure Local Machine**.

Roles

The role configuration determines how the current local machine will be used by LAW.



1. **LAW Workstation.** If selected, this local machine will be configured as a LAW Workstation. This option is selected by default. This selection is required in order for LAW to open on this machine.
2. **LAW Service.** If selected, this local machine can serve as a "worker" box for Turbo Import processing.
3. Click **Next** to proceed to [Management DB](#).

💡 In order to utilize Turbo Import at least one installation of CloudNine™ LAW should have LAW Service also installed and active. If there are no instances of LAW Service configured within your environment then Turbo Import will be in a Work Pending state indefinitely.

Local Management DB

The information on the Management Database page should match what was configured as your Management DB for your LAW Environment. If you have not yet configured a LAW Management database, please return to environment configuration by selecting **Back** two times and then selecting **Configure Environment**. See details for configuring the [Management DB](#).

CloudNine LAW Configuration Utility - Local Machine

Roles

- Management DB
- Service
- Review

Management Database

To connect to an existing LAW Management database, please specify the database and connection details. If you have not yet configured a LAW Management database, please return to the main "LAW Configuration" page and select "Configure Environment" to configure a LAW Management database.


SQL Server Name*

SQL Database Name*

Use Windows Authentication

User Name*

Password*

 Database Connection Has Not Been Tested

1. Enter the **SQL Server Name**. This is the IP address, or server name of the SQL server for your already configured LAW Management database.
2. Enter the **SQL Database Name**. This is database name for your already configured LAW Management database.
3. **Use Windows Authentication:**

- If selected, windows authentication is enabled and the current windows login will be used to connect to the database. The windows login must be listed under SQL security logins and have the necessary permissions to that database.
 - If not selected, then SQL authentication is used and a **User Name** and **Password** needs to be provided. The user name law_user and associated password is provided by default.
- 💡 If desired, you can use SQL authenticated custom logins. See [Adding SQL Server custom logins to existing databases](#) for more information.
- ⚠️ If you use the Local System Account to run the [LAW Service](#), then you should use law_user (SQL Login) for the Management and File Type databases. Running the Local System Account in tandem with Windows Accounts for Management and File Type database logins may prevent LAW from correctly processing documents.
4. Click **Test Connection**. If the Management Database is configured correctly and accessible through the network then a "Connection Test Succeeded" message will display.
 5. Click **Next** to proceed to [Service](#).

Service

- 💡 If LAW Service was not selected in [Roles](#), then this page will be skipped during the configuration and advance directly to the [Review](#) tab.

CloudNine LAW Configuration Utility - Local Machine

Roles

Management DB

Service

Review

Service

Machines that participate in Turbo Import processing will need to configure the LAW Service.

Run service as:

User Account

User Name*

Enter User Name...

Password*

Enter Password...

Confirm Password*

Confirm Password...

Local System Account should only be selected for a single station installation where all file resources (i.e. Home Directory, source data, export folders, LAW ini files) are accessed locally. The **User Account** setting is required to operate the LAW Service in a distributed environment. The user you select must have permissions to access the network resources.

All fields are required

Validate Input

Cancel

Back

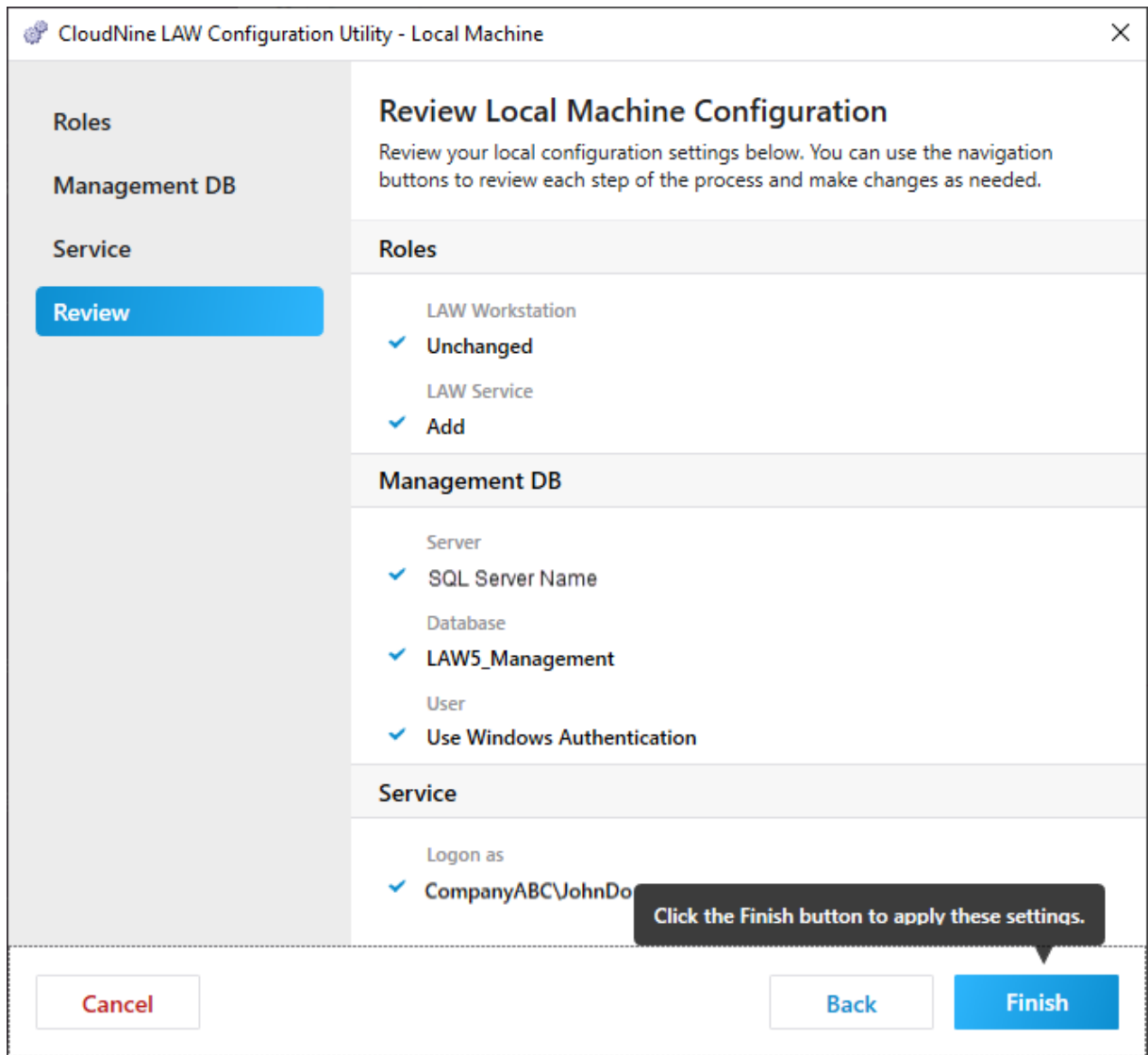
Next

1. Select the appropriate **Run Service as** option:
 - **Local System Account** - this should be selected for a single station installation where all file resources (i.e. Home Directory, source data, export folders, LAW ini files) are accessed locally.
 - **User Account** - this is required to operate the LAW Service in a distributed environment. The user you select must have permissions to access the network resources. 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.
2. If you choose the **User Account** option:
 - Enter the **User Name**. This is the login used for the LAW Service to process with Turbo Import. Should be in the format of "network domain\network user name".

- Enter the **Password** and **Confirm Password**. This is the password corresponding to the **User Name**.
 - Click **Validate Input**. If the input data is validated properly you will see a "Input Valid" message displayed.
3. Click **Next** to proceed to [Review](#).

Local Review

The **Review** page allows you to confirm your local machine configuration choices before applying



1. Use the scrollbar at the right to scroll through the environment configuration settings that have been made.
2. If you need to adjust any environment configuration settings, click **Back** to move through the previous screens and make your updates.
3. Once you are done, click **Finish** to apply the environment settings. The **Configuration Setup Results** dialog is displayed. Click **OK** to close the LAW Configuration Utility. Your LAW configuration is complete.

Silent Install

- ✎ Sentinel Protection Server and Sentinel RMS License Manager are installed separately from LAW. When configuring LAW you will need to make sure you have access to your License Manager and that you have a valid LAW License.

When you need to install the full version of CloudNine™ LAW, including CloudNine™ Explore, on numerous machines, you can save time by running silent installations of LAW and Explore. Silent installations install applications without prompting you for input during the installation.

1. Open a Command Prompt window by typing "cmd" in the Windows Search box and then selecting Run as administrator.
2. Determine the version of LAW you wish to install, and the appropriate name for the associated installation executable. This is your **<installation executable>**. For example, the installer for LAW 7.4 is **law_full_7.4.58.exe**.
3. Determine the features you want to install. Features are added to the command line as a comma-delimited list (no spaces, and feature names are case-sensitive). This is your **<feature list>**. For example, to install all available features your feature list would be **LawApplication,LAWPrinterDrivers,ExploreApplication**.

Features available for installation:

- **LawApplication** - installs the CloudNine™ LAW application
 - **LAWPrinterDrivers** - installs the TIFF Print Drivers
 - **ExploreApplication** - installs the CloudNine™ Explore application and service
4. Enter the following in the Command Prompt window:

<installation executable> /s /qn ADDLOCAL=<feature list>

In the statement above, replace the **<installation executable>** and **<feature list>** with the values you determined in steps 2 and 3 above.

5. Press **ENTER** in the Command Prompt window to run the silent installation on the machine.

Virtual Machine Environments for LAW and Explore

Virtual Machine and SQL Server Setups

Virtual Workstation and SQL Server Setups for CloudNine™ LAW and CloudNine™ Explore

There are two setup categories:

Standard: Minimal/default recommendations for environments with limited resources

Optimal: Best performance recommendations

CloudNine™ LAW VM Workstations

The number of VMs for LAW workstations should reflect the number of licenses available for use. Please consult with your LAW users to determine the number of licenses available or needed.

Category	CPU Cores	RAM
Standard LAW VM	2	4 GB
Optimal LAW VM	4	8 GB

CloudNine™ Explore VM Workstations

VMs for Explore are specified differently than LAW because Explore utilizes workstation cores for processing while LAW does not. Please consult with your Explore users to determine the best approach.

The three examples below illustrate the worker/agent concept with regard to resource planning: 1 Explore worker/agent = 1 CPU core of a VM workstation.

Example 1

If 4 CPU Cores are available

When using Explore on the same workstation as LAW, we encourage configuring the VM workstation according to the Optimal recommendation for LAW VM workstations. In this configuration, Explore will use all 4 cores of the workstation to allocate workers/agents.

Example 2

If 8 CPU Cores are available – 2 separate workstations

A: If 2 workstations configured to the Optimal LAW VM workstations recommendations are available, Explore will distribute work across these 2 VMs so long as 8 worker/agent licenses are also available.

Example 3

Explore can also utilize 8 cores and 16 GB of RAM if available on the same VM workstation to allocate all 8 worker/agents so long as 8 worker/agents licenses are also available. We recommend that such a VM be dedicated for Explore processing only.

CloudNine™ LAW and CloudNine™ Explore SQL Server Recommendations

To avoid competition for resources, we recommend using separate SQL servers for Explore and LAW as follows:

CloudNine™ Explore or LAW SQL Server

RAM is recommended to be 4 times the number of cores available on the Server OS. For example, a 4 core SQL Server requires 16GB of RAM.

Number of LAW VM workstations per LAW SQL Server

The number of LAW workstations that can be comfortably served by an SQL Server is determined by the number of cores on that SQL Server. We recommend no more than 4 LAW workstations per SQL Server core as a standard configuration. An optimal configuration would be fewer LAW workstations per SQL Server core. The chart below shows the server to workstation standard and optimal recommendations:

Standard 4-Core LAW SQL Server	Up to 16 LAW workstations
Optimal 4-Core LAW SQL Server	Up to 8-10 LAW workstations

Number of Explore worker/agents per Explore SQL server

The number of Explore worker/agents that can be comfortably server by an SQL Server is determined by the number of cores on that SQL Server. We recommend no more than 2 agents/workers per SQL Server core as a standard configuration. An optimal configuration would be fewer Explore agents/workers per SQL Server core.

Standard 4-Core Explore SQL Server	Up to 8 Agents/Workers
Optimal 4-Core Explore SQL Server	Up to 4 Agents/Workers

Overhead Sizes for CloudNine™ LAW and CloudNine™ Explore

For LAW, the overhead is in the file server more than the LAW SQL database itself. Most of the data stored in a LAW database is metadata and image information – LAW points to or references the files located on file server for activities such as native file conversion or export.

For Explore, the overhead is in the SQL Server database. Since Explore relies heavily on SQL Server, the majority of data, like content and metadata, is stored in the SQL Server database.

- ✍ There is a case creation option in Explore for copying the content to separate text files on the file server. This will decrease the size of the Explore SQL Server database. However, taking this approach could decrease the speed in indexing and searching in Explore. The reason for this note is to let you know an alternative option if the level of storage space is limited for your SQL Server databases.

CloudNine Explore Web Configurations

CloudNine™ Explore Web requires a Web server for hosting the CloudNine™ Explore Web Application’s Web site. The Web site uses the WISA stack. The required operating systems, applications, and framework for the web server are listed below. Installation documentation is provided by our LAW/Explore Technical Support team.

Server OS	Server 2012 X64 Server 2012 R2 X64 (Express Editions are supported as well)
Applications and Framework	IIS 7.5 or Higher A ASP.Net (.net4, MVC 3)
Browsers supported	Internet Explorer - IE 9, IE 10, IE 11 Microsoft Edge Firefox - 30.0+ Chrome - 42.0.2311+ Safari

Licensing for Virtual Machines

Software Licensing (Versions 6.8/1.8 and higher)

As of version 6.8/1.8 of LAW/Explore, we offer software based licensing. For those who are using our older style hardware USB dongle key, this can be an alternative in going 100% virtual. Some things to note are listed below.

A: The installation can be provided by our LAW/Explore technical support team for installation instructions

B: Contact your CloudNine Account Manager to request transfer from the USB hardware dongle key to software based licensing.

C: Installation of the new licensing system is in the existing version of 6.8 and higher

D: Existing LAW/Explore SQL server can be used to host the licensing server or alternative server can be used.

- ⚠ Please note that machine specifics of the computer/server hosting the license is used in generating the authorization for licensing. If you are planning to make changes to your license server that would affect the machine's unique identifiers, then please contact LAW Support to assist with the license transfer prior to making the changes to avoid any disruption of service.

Currently, virtual machines set to auto migration in cluster environments are not supported because it will change the machine unique identifiers; this will invalidate the license server. For cluster environments, it's recommended that you turn off auto migration on the VM that is the license server to avoid any disruption of service.

Multi-Instance User Scenarios

As part of the enhancements that were added in LAW 7.4, you can now run multiple instances of LAW on a single workstation.

With multiple instances, a small litigation team can balance workflows and productions in parallel without requiring multiple machines for each process. For example, an attorney would be able to log into a virtual or physical machine and perform document review and searching while an analyst is tiffing on that same virtual or physical machine. Another example would be an analyst running productions while another user is importing.

Taking advantage of multi-instance scenarios can result in an infrastructure cost savings:

LAW 7.3: Tiff, Import, Export, and Index at the same time -Requires 4 individual machines

LAW 7.4: Tiff, Import, Export, and Index at the same time -Requires 1 machine with multiple user instances

The following sections provide a breakdown of how various LAW processes work in regards to multi-instance scenarios.

ED Loader

ED Loader is limited to one instance per virtual or physical machine. When ED Loader is already running and a user tries to open a second instance, the user will be notified that an ED Loader instance is already running.

TURBO IMPORT

Turbo Import already supported multiple logins prior to the LAW 7.4 release. You can run as many instances up to the available cores on a virtual or physical machine.

OCR

Multiple OCR batch processes cannot be run. If an instance of LAW is running OCR via Batch Processing, a second instance will be prompted to create a distributed batch job, which will be queued and automatically processed when the first instance is done or another LAW machine (different virtual or physical machine) becomes available.

INDEXING

Multiple LAW instances can not index the same case, but they can index different cases in parallel. The total number of index workers across all instances of LAW on a system is limited to the number of available cores. This is further limited by the "Index Workers" case setting.

BATCH PROCESSING

Only one instance across multiple user sessions can perform batch processing. If an instance of LAW is batch processing, a second instance will be prompted to create a distributed batch job, which will be queued and automatically processed when the first instance is done or another LAW machine (different virtual or physical machine) becomes available.

SCAN

Only one instance of LAW can be connected to any scanner on a system at a given time. A user can disconnect from a scanner to allow other users on the system to use it. If a scanner is disconnected, the next time LAW is launched, a scanner will not be connected automatically.

TURBO EXPORT

Turbo Export is limited to one instance per virtual or physical machine. When Turbo Export is already running and a user tries to start a new Turbo Export, they will be informed that Turbo Export is already running.

Law Management Console (LMC)

One instance of LMC is allowed per machine. If a user attempt to launch a second LMC on the same system, they will be shown a message indicating the user that is currently running LMC on the machine.

ADMINISTRATION

Multiple instances of LAW can generate reports, view documents, and perform administrative tasks.

CloudNine™ LAW

Administration Guide

Administering CloudNine LAW

Chapter

2

Administering CloudNine LAW

LAW supports many core administrative functions.

Database Installation and Configuration

CloudNine™ LAW requires separate database software to be installed and configured properly. Standard Microsoft SQL Server is recommended, but Express may be used in environments with small cases (Express has a limit of 10GB per database). See the [System Requirements](#) for more details on requirements for proper setup.

Proper installation and configuration of SQL Server should be discussed with your SQL database administrator.

The following instructions provide sample values to use to setup a configuration of SQL Server (Express) with Tools. Use this as a starting point when discussing a production oriented SQL Server configuration with your SQL database administrator.

Installation Tasks

- Instance name: can use default -- for example, **SQLEXPRESS**
- Features: **Database Engine Services** and **Management Tools - Basic**
- Account Name: **NT AUTHORITY\ NETWORK SERVICE**
- Password = **leave blank** (default)
- Database Engine Configuration dialog box: **Mixed Mode** (SQL Server authentication and Windows authentication)
- SQL Administrator password: select a password of your choice.
- User accounts: **Add Current User**. Or add at least one Windows login or domain user account.

SQL Considerations for LAW

The Answer Center provides the minimum and recommended versions of SQL for use with your specific version of CloudNine™ LAW it is recommended to consult the [system requirements](#) before installing SQL.

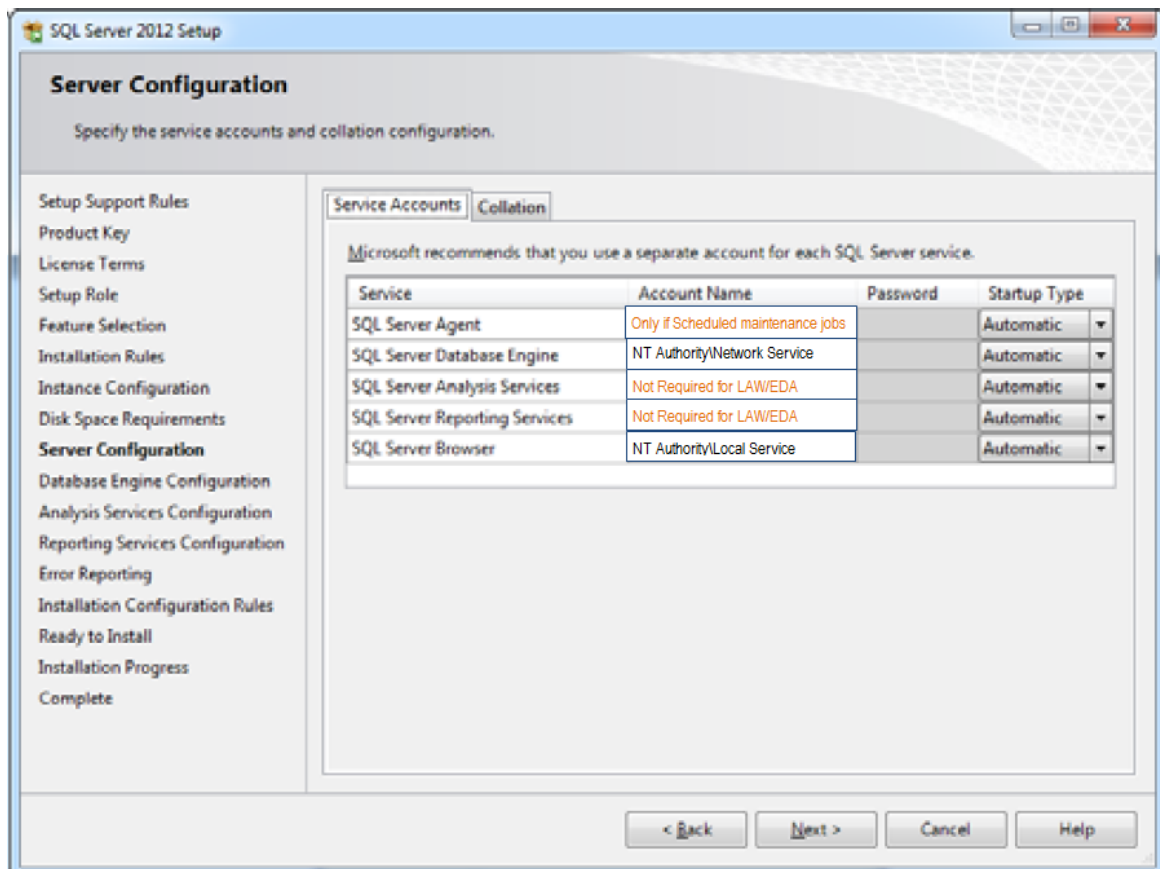
💡 The following are considerations and recommendations for a SQL database administrator when setting up an instance of SQL for use with LAW and/ or CloudNine™ Explore.

Suggestions setting up SQL for use with LAW

- Document your installs so that server instances can easily be reproduced.
 1. Computer/server name where SQL is installed
 2. SQL system administrator password
 3. SQL Instance name

- ⚠️ If you write your password down it recommended to keep it in a secure location, possibly off-site.

- Install only the SQL Server Services that you are going to need. LAW only needs the **SQL Server Database Engine** and **SQL Server Browser** services.



Some Services are not needed by LAW and/or Explore

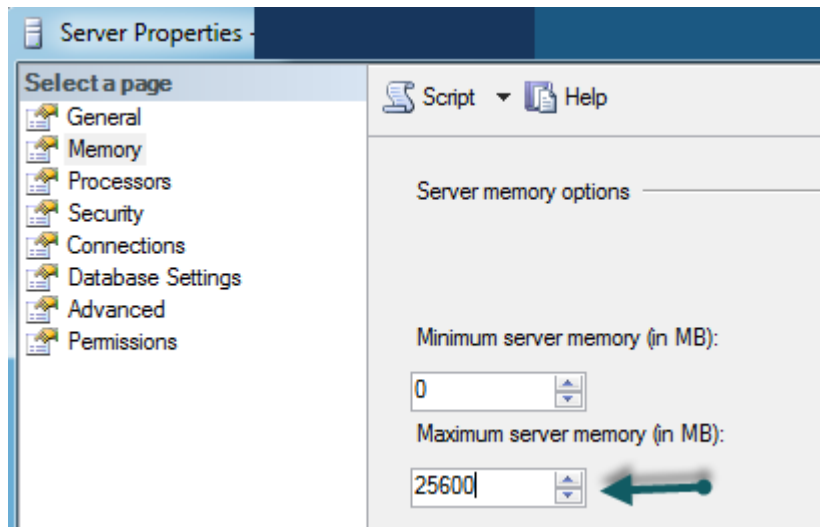
You can install the SQL Server Agent if you intend to run jobs on the server or do maintenance tasks such as automated backups. However, this function is best handled by a DBA.

The other services (SQL Server Analysis and SQL Server Reporting Services) are unnecessary for LAW/CloudNine™ Explore and consume valuable resources on your server.

- It is best to locate your databases (.mdf and .ldf) and your tempdb on separate physical disks; preferably NOT a USB-connected disk. This makes it easier to troubleshoot disk access problems, should they occur.
- We do not recommend the use of NTFS data file encryption or compression on SQL server databases and log files.

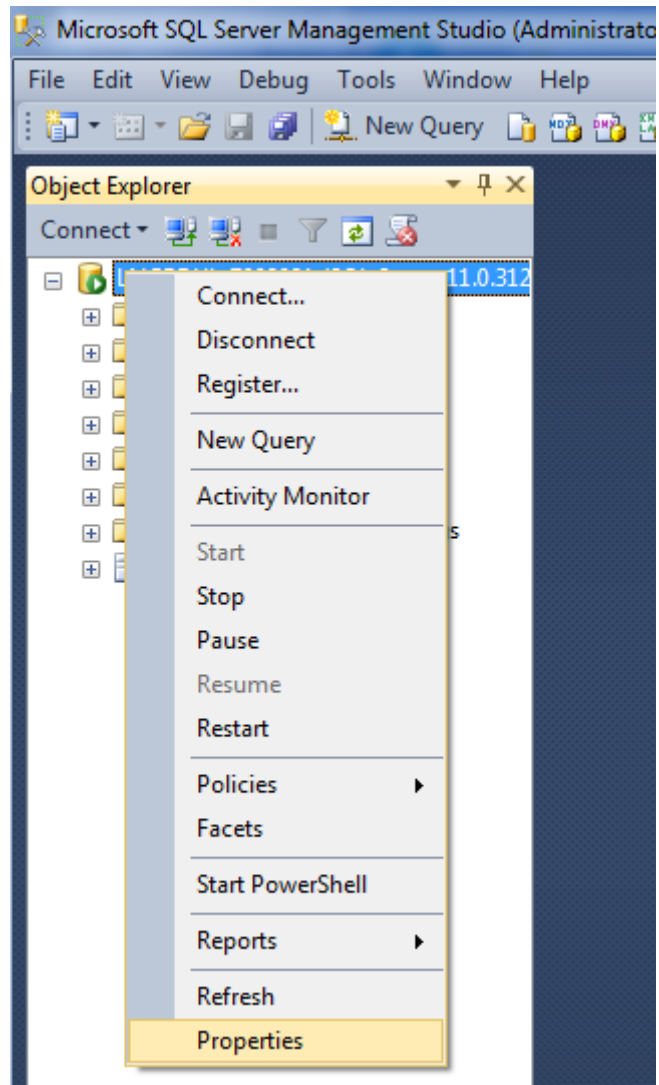
Suggestions for configuring your instance of SQL for use with LAW

- SQL Server max memory allocation is uncapped by default. This should be capped at approximately 80% of the physical memory allocated to the machine. For example, a server with 32 GB of physical RAM should be capped in SQL Server Management Studio at 25600 MB.

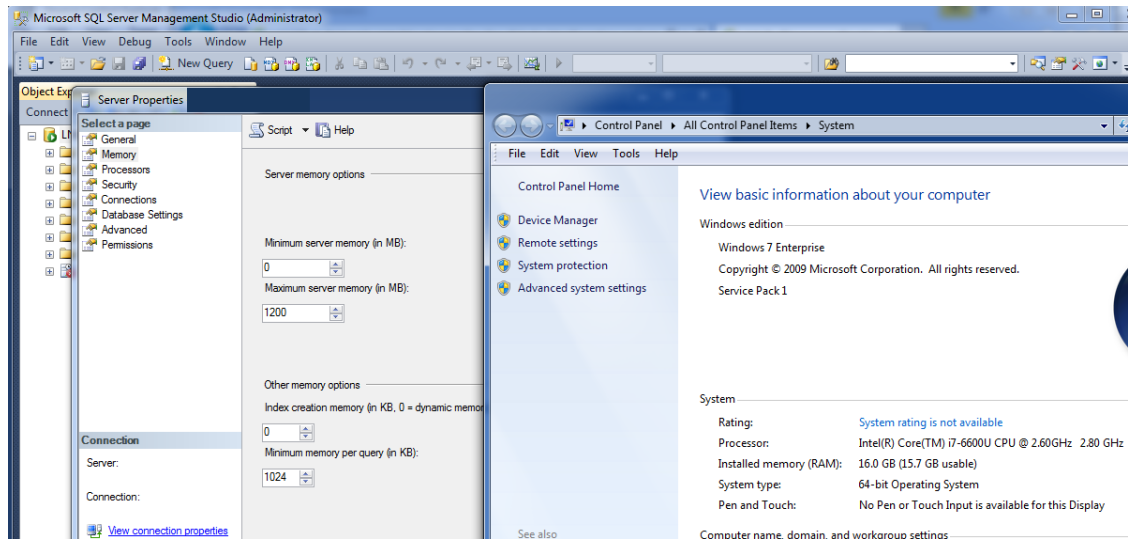


Configuring your SQL Server max memory allocation.

1. Open the SQL Instance through the SQL Server Management Studio.
2. Then right click on the Instance name and select Properties.



3. Then select the Memory tab.



4. The **Maximum server memory (in MB)**: should be approximately 80% of your servers available memory unless you have multiple instances on the same server.

- Leave the “auto create statistics” and “auto update statistics” options on for all user databases. Only in very rare cases should these be turned off, and if they are turned off, then you must manually update the statistics yourself. Please see [Microsoft's website](#) for more information.
- Do not use the “auto shrink” database option, as it can waste SQL Server resources unnecessarily and contribute to index fragmentation. Instead, if you need to shrink a database, do so manually. For more information please see [Microsoft's website on Considerations for the "autogrow" and "autoshrink" settings](#).
- Do not rely on AUTOGROWTH to automatically manage the size of your databases. Instead, proactively monitor and alter database size as circumstances dictate. Only use AUTOGROWTH to deal with unexpected growth For more information please see [Microsoft's website on Considerations for the "autogrow" and "autoshrink" settings](#).

Suggestions for SQL maintenance

- Set up daily full backups of your databases. You can set a job to schedule your backups as long as you have SQL Agent service running.
- Perform full backups during periods of low user activity in order to minimize the impact of backups on users.

- Periodically perform "test backup restores" to ensure that your backups are good and can be restored.
- Store backups offsite and in a secure location.

Configuring LAW and SQL

SQL Server user account options

There are three methods of specifying user accounts for use with SQL Server. It is strongly recommended that the same login is used for configuring the LAW Environment, NIST, and File Type Management databases.

Create a Global Default User for CloudNine™ LAW	Create SQL Server Authentication custom login for CloudNine™ LAW	Create Individual Users with Integrated Security
<p>Use this method when using SQL Server for other applications in addition to CloudNine™ LAW. This option helps to prevent users of SQL Server from accessing and modifying any other existing databases.</p> <p>To create a generic global user account using this method:</p> <ul style="list-style-type: none"> • Setup a SQL Server user with create/modify permissions. • The user name and password should be: <p>User: LAW_User</p> <p>Pwd: (Contact Technical support for assistance.)</p> <p>When using the default user, the security mode for SQL Server must be set to SQL Server and Windows or mixed-mode authentication.</p>	<p>Use this method when using SQL Server for other applications in addition to CloudNine™ LAW. This option helps to prevent users of SQL Server from accessing and modifying any other existing databases yet provides additional security for your databases.</p> <p>To create a custom SQL user account:</p> <ul style="list-style-type: none"> • Setup a SQL Server user with create/modify permissions. • The user name and password will be referenced whenever accessing SQL (Database management, NIST storage, File Type Database Management, and for caselist storage). <p>User: (Custom SQL login following SQL Guidelines)</p>	<p>This method allows a user to create SQL Server cases without adding a special user to SQL Server as long as the current user has database create permissions on the specified SQL Server. Windows integrated security may be used when accessing/creating SQL Server cases.</p> <p>If using this method, each user must be setup on the SQL Server to allow access to the case.</p> <p>To enable this feature:</p> <ul style="list-style-type: none"> • Select the Use Windows NT integrated security option when specifying the database backend for newly created cases.

Create a Global Default User for CloudNine™ LAW	Create SQL Server Authentication custom login for CloudNine™ LAW	Create Individual Users with Integrated Security
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Pwd: (Custom password following SQL Guidelines)


When using this option, the security mode for SQL Server must be set to **SQL Server and Windows** for **mixed-mode** authentication.

Create a SQL Server Authentication custom login

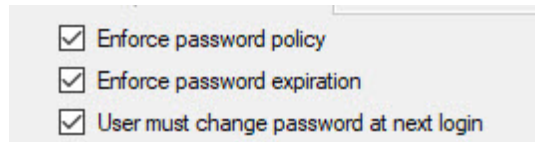
How to create a SQL Server Authenticated custom SQL login for CloudNine LAW using a custom name and/ or password.

The option for the custom SQL Server Authenticated login is only available for use with LAW 7.1 and higher. It is not supported on workstations that are using earlier versions of LAW.

1. Start **SQL Server Management Studio**. This is located in the Start>All Programs>Microsoft SQL Server> **SQL Server Management Studio**.

Windows 10:  >Microsoft SQL Server> **SQL Server Management Studio**.

2. Login to the SQL Server instance.
3. Expand **Security**, right click **Logins**, and then select **New User**.
4. In **Login name** type (the desired login name).
5. Select **SQL Server authentication**.
6. In the **Password** and **Confirm password** fields type the desired password. (Please make a note of this password in a secure place as LAW Support does not have a means to reset this password if forgotten or misplaced).
7. Select/deselect password options based on your company policy: **Enforce password policy**, **Enforce Password expiration**, and **User must change password at next login**.



If opting to leave **Enforce password policy**, **Enforce Password expiration**, and **User must change password at next login** selected; when the password is changed then you will need to also update each LAW case and database through LAW that uses that password. See **Adding SQL Server Authentication custom login** for more information about updating the passwords.


8. In the left panel of the dialog box, click **Select Server Roles** and then select **dbcreator**.
9. Click **OK**.
10. Close **Microsoft SQL Management Studio**.

[!\[\]\(d3fb9f94af8b26d1c844efa9a98805b0_img.jpg\) Adding SQL Server Authentication custom login to existing databases](#)

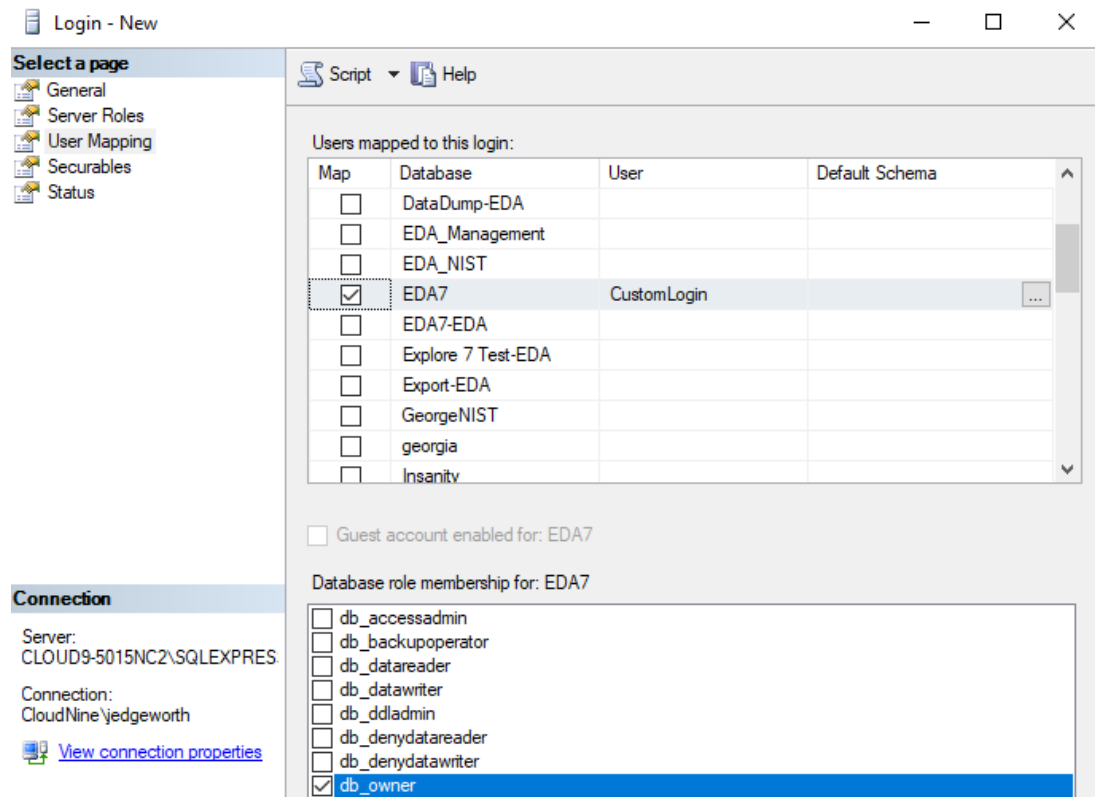
The Custom SQL Server Authenticated login is available for all newly created databases by simply using the login and password during case creation. For existing cases, the case will need to be mapped to the custom login in SQL.

1. Start **SQL Server Management Studio**. This is located in the Start>All Programs>Microsoft SQL Server> **SQL Server Management Studio**.

Windows 10:  > Microsoft SQL Server > **SQL Server Management Studio**.

2. Login to the SQL Server instance as a SQL administrator (or on an account with elevated privileges).
3. Expand **Security**, expand **Logins**.
4. Right click on the newly created custom login, and then select **Properties**.
5. Select **User Mapping**.
6. Select the box for the database  and then select **db_owner** for each database that the new login is to be provisioned.

The database role, **db_owner**, needs to be selected following the selection of each database. Selecting multiple databases and then selecting the role **db_owner** will only add **db_owner** to the last database selected.



Troubleshooting SQL Configuration

After configuring SQL you may need to confirm that the services are running or make needed changes.

1. Go to Windows Start, and Select **Microsoft SQL Server** (Version #) and expand the selection.
2. Select **SQL Server (Version #) Configuration Manager**.
3. The SQL Server Configuration Manager opens in a new window.
4. Select **SQL Server Services**.
5. Confirm that both SQL Server and SQL Server Browser are Running and the Start Mode is set to Automatic.
6. If the Start Mode is NOT set to Automatic:
 - a. Right click on the name (SQL Server or SQL Server Browser).
 - b. Select **Start**.
7. If SQL Server or SQL Server Browser are not running:
 - a. Right click on the name (SQL Server or SQL Server Browser) and select Properties.
 - b. A new window opens for the Properties of the selected service.
 - c. Select the Service tab.
 - d. Select Start Mode.
 - e. Choose Automatic from the drop-down menu.
 - f. Click OK.
8. Expand **SQL Server Network Configuration**.
9. Select **Protocols** for (SQL or SQLExpress depending on your SQL).
10. TCP/IP should be Enabled. If not then right click on TCP/IP and select **Enable**.

SQL 2017 Setup

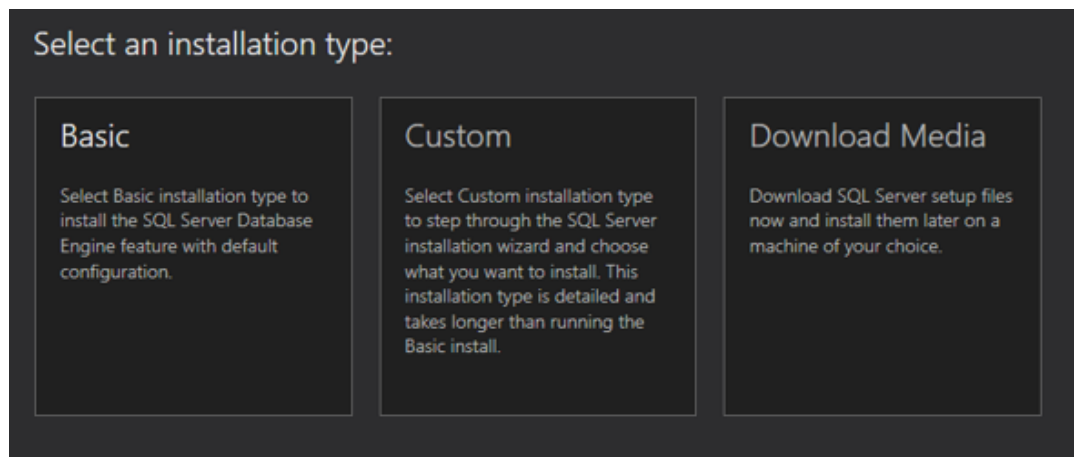
This section describes an example of a known, working setup of SQL Server 2017.

Installation Steps

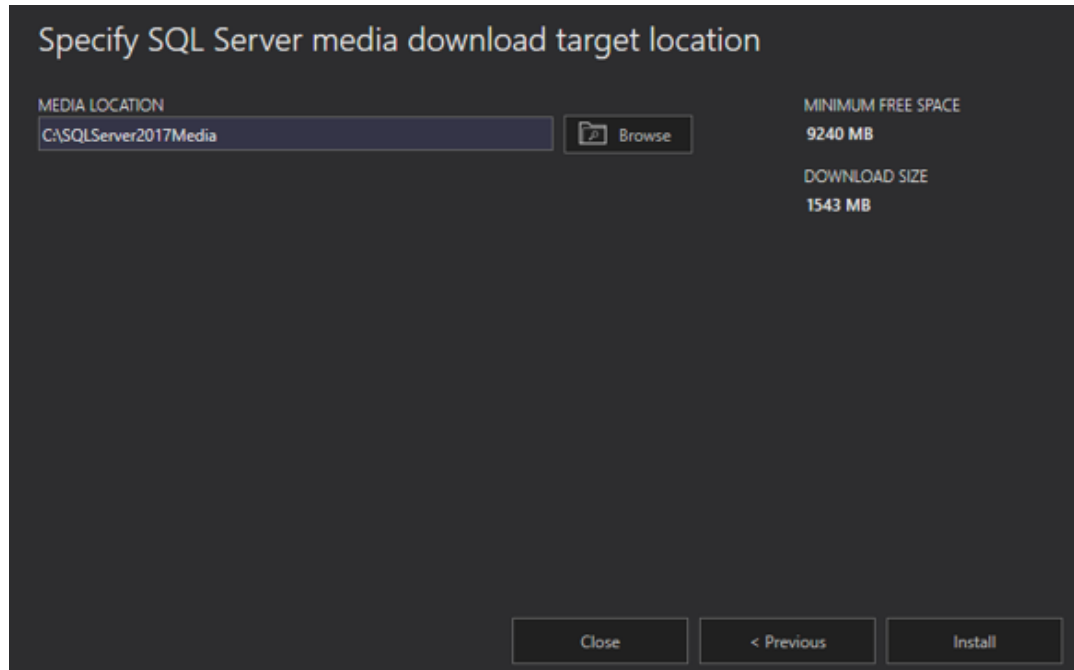
Step 1: Install SQL Server 2017

SQL Server 2017 with an installation of Microsoft SQL Server Management Studio 17.

1. Download the installer file for SQL Server 2017 from the Microsoft website.
2. Run the installation file. The SQL Server 2017 installation window opens.



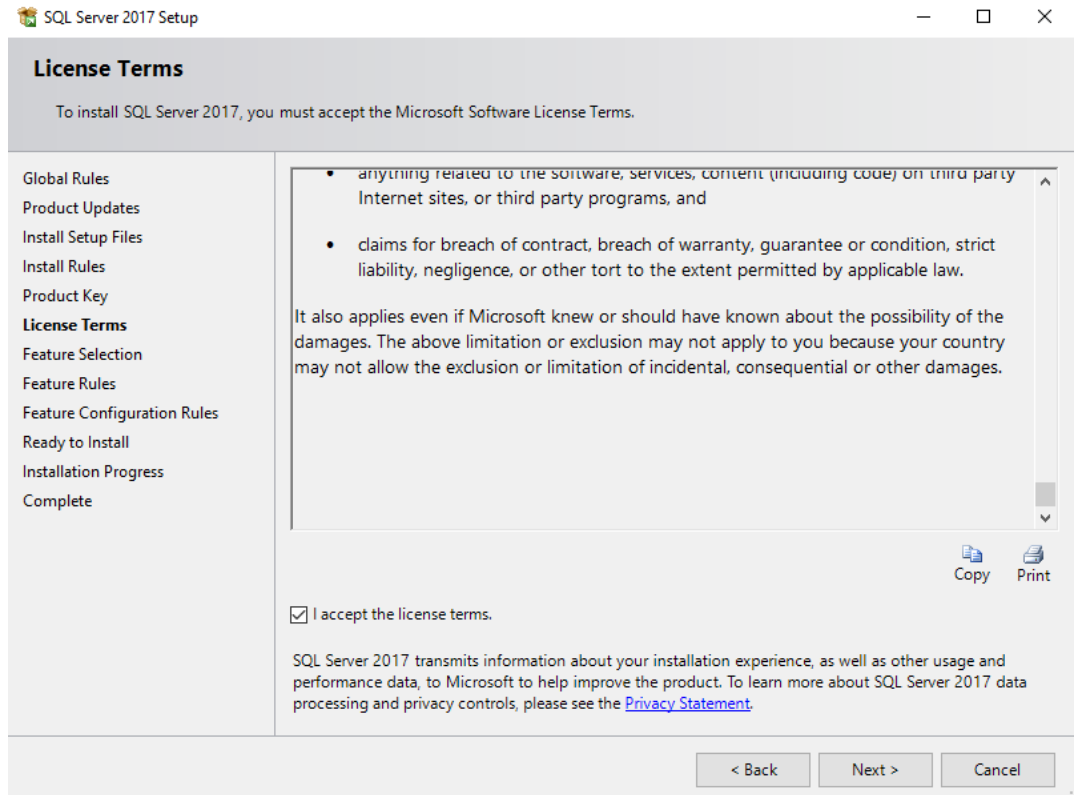
3. Select **Custom** then follow prompts to continue.
4. Specify SQL Server media download target location will open in a new window. Browse to the location that you would like to save your SQL files.



5. After setting the installation path, then select **Install**.
6. In SQL Server Installation Setup dialog box select the **Installation** tab.

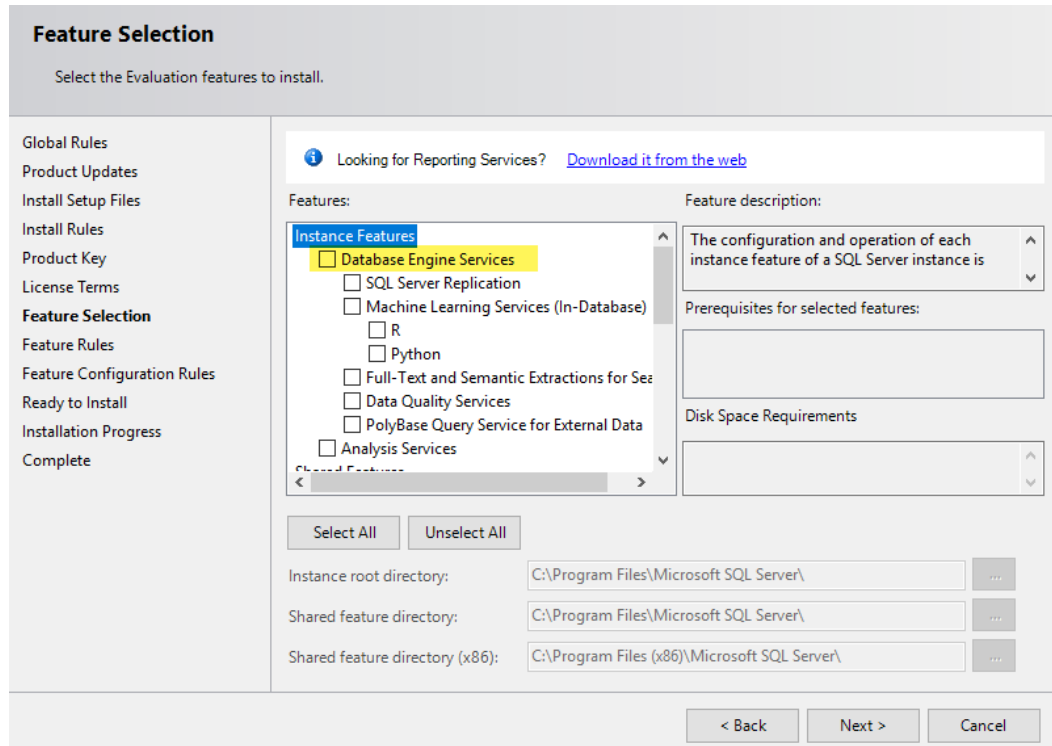


7. Select [Install SQL Server Management Tools](#) to download and install SQL Server Management Studio 17.6+.
8. Select **New SQL Server Standalone installation or add features to an existing installation.**
9. The SQL Server 2017 Setup window with License Terms will open next.



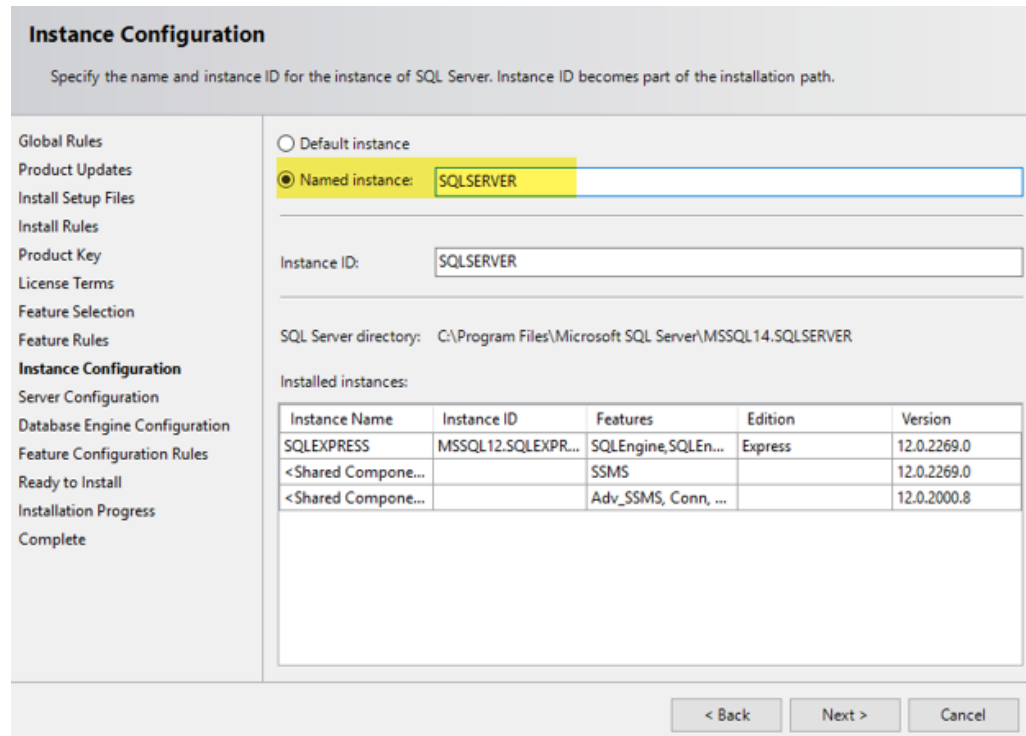
10. If you accept the license terms then select **Next**.

11. The SQL Server 2017 Setup: Feature Selection window will open in a new window.



For CloudNine™ LAW, **Database Engine Services** and **Client Tools Connectivity** are required. Please refer to your SQL database administrator for other features that you may need.

12. Select or deselect options accordingly to your SQL database administrator's guidelines, then select **Next**.
13. The Instance Configuration window will open. Select Named instance, if you would like to change the instance name. The default is SQLExpress.



14. Select **Next** after making any necessary changes.
15. The SQL Server 2017 Setup: Server Configuration window will open. The services will vary depending on options chosen during Feature Selection.

Server Configuration
Specify the service accounts and collation configuration.

Global Rules
Product Updates
Install Setup Files
Install Rules
Product Key
License Terms
Feature Selection
Feature Rules
Instance Configuration
Server Configuration
Database Engine Configuration
Feature Configuration Rules
Ready to Install
Installation Progress
Complete

Service Accounts Collation

Microsoft recommends that you use a separate account for each SQL Server service.

Service	Account Name	Password	Startup Type
SQL Server Agent	NT Service\SQLAgent\$S...		Automatic
SQL Server Database Engine	NT Service\MSSQL\$SQL...		Automatic
SQL Server Browser	NT AUTHORITY\LOCAL...		Automatic

Grant Perform Volume Maintenance Task privilege to SQL Server Database Engine Service
This privilege enables instant file initialization by avoiding zeroing of data pages. This may lead to information disclosure by allowing deleted content to be accessed.
[Click here for details](#)

< Back Next > Cancel

16. SQL Server Browser service, under Startup Type, needs to be set to **Automatic**.
17. Leave the password blank.
18. Click **Next**.
19. In Database Engine Configuration dialog box, select Mixed Mode (SQL Server authentication and Windows authentication).

Database Engine Configuration

Specify Database Engine authentication security mode, administrators, data directories and TempDB settings.

Global Rules
Product Updates
Install Setup Files
Install Rules
Product Key
License Terms
Feature Selection
Feature Rules
Instance Configuration
Server Configuration
Database Engine Configuration
Feature Configuration Rules
Ready to Install
Installation Progress
Complete

Server Configuration | Data Directories | TempDB | FILESTREAM

Specify the authentication mode and administrators for the Database Engine.

Authentication Mode _____

Windows authentication mode

Mixed Mode (SQL Server authentication and Windows authentication)

Specify the password for the SQL Server system administrator (sa) account. _____

Enter password:

Confirm password:

Specify SQL Server administrators _____

SQL Server administrators have unrestricted access to the Database Engine.

< Back | Next > | Cancel

20. In the Enter password and Confirm password fields, type the SQL System administrator password you want to use. Recommended: write the password down in a secure location.
21. Under Specify SQL Server administrators, click **Add Current User**. Add other users as necessary, and then click **Next**.
22. When the installation is complete the Complete window will open.
23. Select **Close**.

Step 2: Add SQL user account for LAW

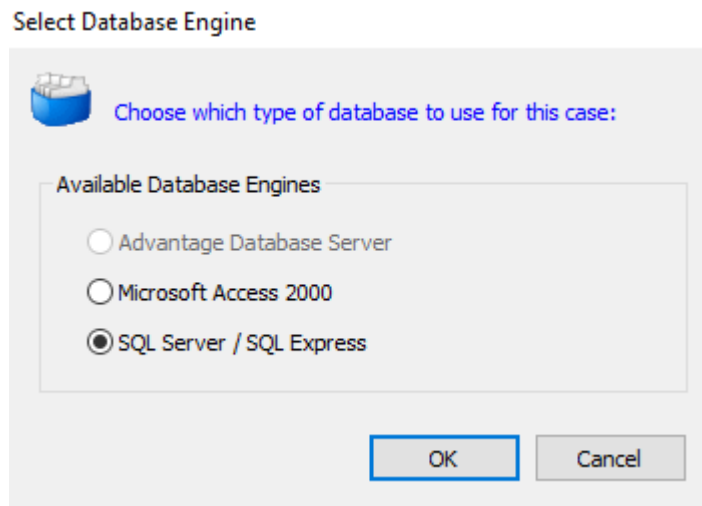
1. Start SQL Server Management Studio. This is located in Windows>Microsoft SQL Server Tools 17> Microsoft SQL Server Management Studio 17.
2. Login to the new SQL Server instance.
3. Expand **Security**, right click **Logins**, and then click **New User**.
4. In Login name type LAW_User.
5. Select SQL Server authentication.
6. In the Password and Confirm password fields type (Contact Technical support for password assistance.).
7. Deselect **Enforce password expiration**, **Enforce password policy**, and **User must change password at next login**.

8. In the left panel of the dialog box, click **Select Server Roles** and then select **dbcreator**.
9. Click **OK**.
10. Close Microsoft SQL Management Studio.

You can use a [custom login](#) and password for SQL Server Authentication.

Step 3: Add SQL instance name to LAW

1. On the File menu click **New Case**.
Or
On the main form toolbar click **New Case**.
2. The Select Database Engine dialog box appears.



3. Select **SQL Server/ SQL Express**
4. Click **OK**.
5. **New Case - Properties** opens in a new window.

6. Type the SQL instance name and select an authentication mode for the new case.

If you are installing a full version of SQL, then you would only have the name of your SQL Instance in the screenshot above. It would not include\SQLExpress.

7. Continue the case creation process Creating a New Case.

Compacting the Database

Compacting should be done on a weekly basis at a minimum. However, if multiple users are performing extensive coding and scanning in a case, consider compacting the database daily.

Reasons to compact a database

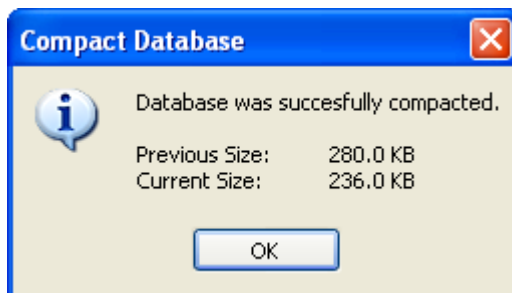
Compacting databases is an essential part of database maintenance. Compacting the database can provide the following benefits:

- Consolidate unused disk space.
- Rebuild indexes.
- Decrease the size of the database.
- Increase performance.
- Reduce the incidence of failed database operations.
- Reduce problems related to network latency associated with running queries on very large databases.

databases tend to increase in size as information is added and removed. The space used by records is not reclaimed when records are deleted, causing the size of the database to grow over time. This unused space is removed during the compact operation, reducing the size of the database. The size of the database before and after the compact operation will be reported, so users can see how much space was recovered (Access only).

To compact the current database

- On the **File** menu, click **Administration** and then click **Compact Database**.



- ✎ The Compact Database feature is not supported for SQL Server-based cases.

Reviewing Errors

You can use the Log Viewer to review errors and warnings that may occur during these operations:

- Importing
- Exporting
- Batch Processing
- Reorganizing
- Scanning
- Deduplication
- Page Count Extraction
- Turbo Imager

To start Log Viewer

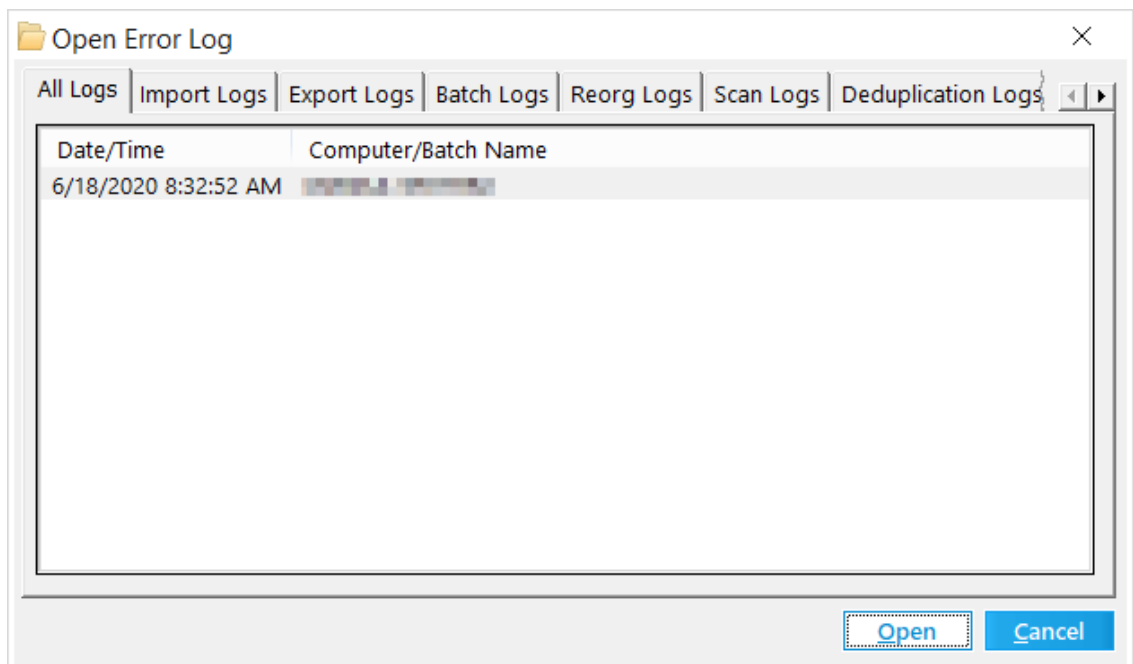
You can start the Log Viewer in either of the following ways:

- After processing the operation, if errors or warning conditions occurred, you are prompted to view the Log Viewer. You may choose to open the viewer at this time.

Or

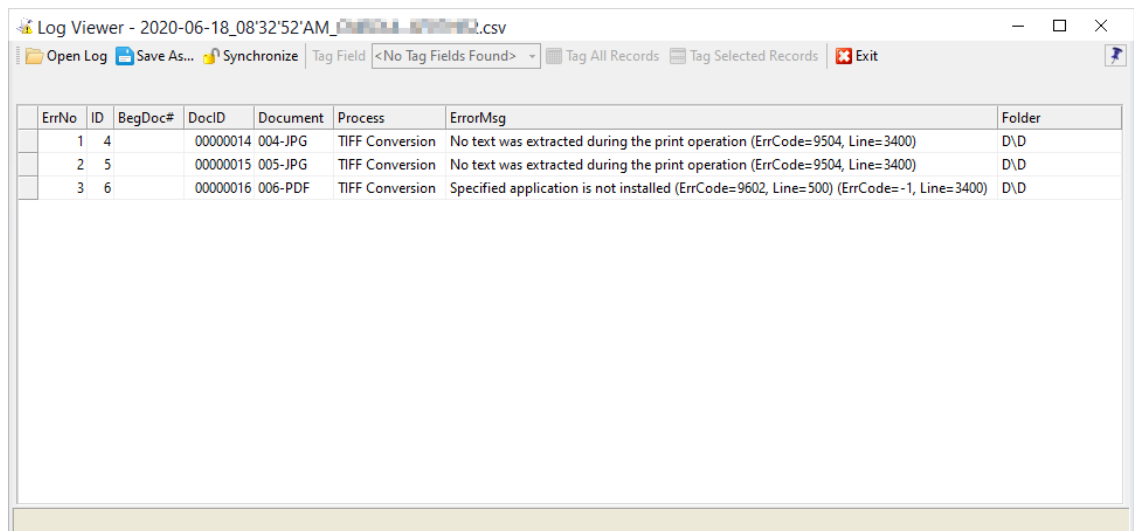
1. From the main window, on the **Tools** menu, click **Log Viewer**.

The **Open Error Log** dialog box appears.



2. Do one of the following:
 - In the **All Logs** tab, select a log to open.
 - Click a different tab and then select a log.
3. Click **Open**.

The **Log Viewer** dialog box appears. The table lists fields is log files and the title bar shows the filename of the error log. Error logs for most processes are stored in <case root>\\$Logs in *.csv format.



The screenshot shows the Log Viewer dialog box with the following table:

ErrNo	ID	BegDoc#	DocID	Document	Process	ErrorMsg	Folder
1	4		00000014	004-JPG	TIFF Conversion	No text was extracted during the print operation (ErrCode=9504, Line=3400)	D:\D
2	5		00000015	005-JPG	TIFF Conversion	No text was extracted during the print operation (ErrCode=9504, Line=3400)	D:\D
3	6		00000016	006-PDF	TIFF Conversion	Specified application is not installed (ErrCode=9602, Line=500) (ErrCode=-1, Line=3400)	D:\D

Tagging records for review

You can apply a Tag (Boolean) value to records shown in the Log Viewer. This action can be useful for creating custom reports, reviews, and selecting items for further processing, etc.

1. Create a Tag (Boolean) field. For more information on creating tag fields, see Creating Tag Fields.
2. On the **Tools** menu, click **Log Viewer**.
3. Select the tag field you created in the previous step.
4. Click the **Tag All Records** button.
5. Select the desired records and then click the **Tag Selected Records** button.
 - Tagged records will appear checked in the grid displays and set to **<Yes>** in the Index display.
 - Tag values cannot be toggled using this feature.

Reorganizing Documents

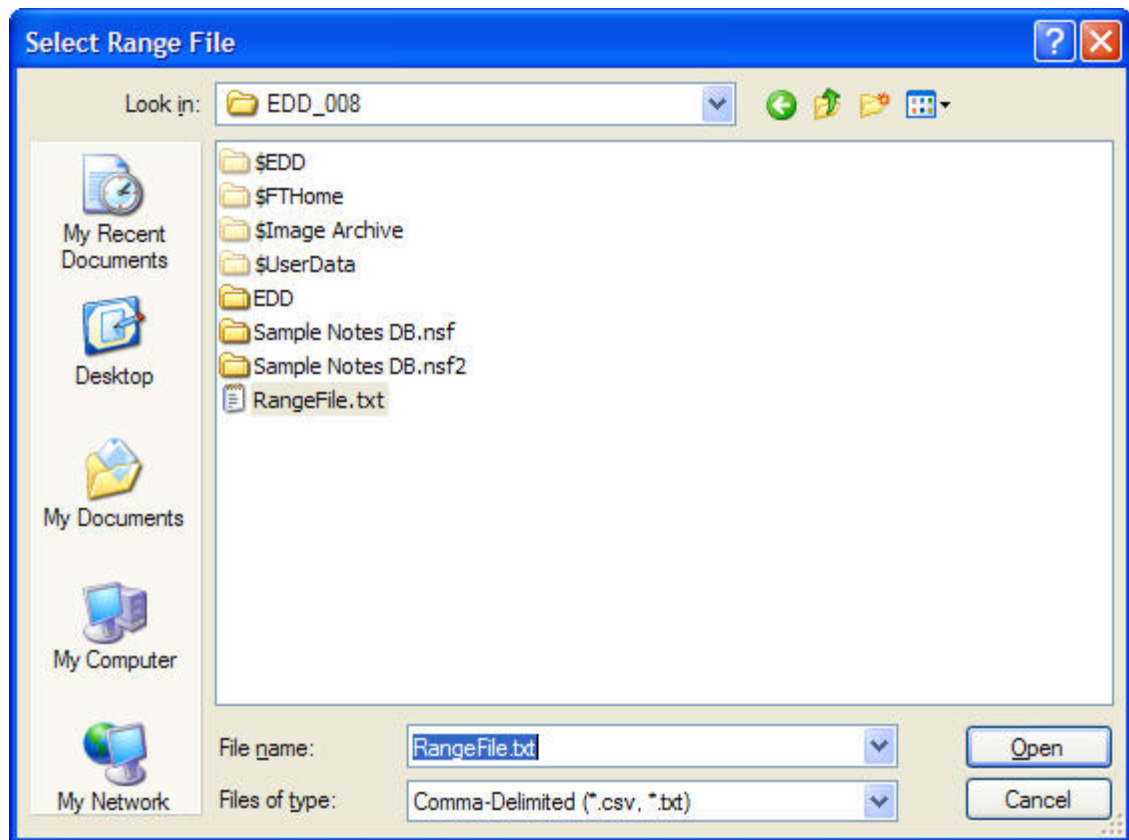
You can reorganize your documents based on the ranges specified in a selected range file.

Note the following facts when considering when to reorganize documents:

- The best time to run the reorganize documents function is prior to OCR operations.
- The reorganize function is capable of reorganizing text extracted from documents by OCR. However, information not associated with the leading document for a range will be discarded.
- If an error does occur you might see a message stating that the image and OCR text are not synchronized. In such cases, the reorganize process will stop and the OCR data will have to be removed or corrected for the image.
- This issue can occur any time the OCR process stops before it completes. For example, the issue could result if the OCR engine crashes, if you attempt to insert new pages into a document after the OCR process ends, or if you try to merge documents with incomplete OCR.
- The case needs to be an Electronic Discovery enabled case. This option is not enabled in Turbo Import cases.

To reorganize documents

1. Click **File**, click **Administration**, and then click **Reorganize Documents**.
2. Select a range file. A range file is a comma-delimited text file consisting of two fields: BegDoc# and EndDoc#.



CloudNine™ LAW will begin rebuilding documents based on the specified ranges.

Scanning for Errors

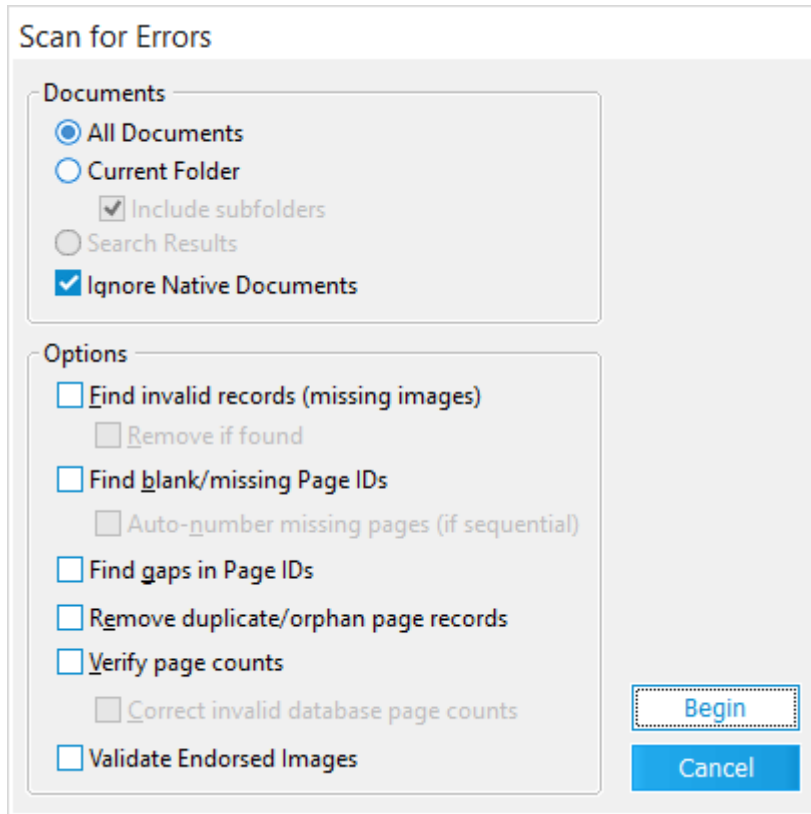
As cases increase in size, you will want to detect and eliminate certain types of problems in the database. The Scan for Errors feature provides a means to automatically search the database for some common problems. You can run the Scan for Errors feature on all documents in the case, the current case folder, or the current search results. The Scan for Errors feature can be accessed from the File > Administration menu or the Database Query Builder dialog box.

Note the following facts about the Scan For Errors feature:

- Errors that are detected are logged in a file named scandb.log that is kept in the temp folder (%temp%\Law50\Log).
- When the scan is complete, if errors were found CloudNine™ LAW will present the option to view the log file.

To scan for errors from the File menu

1. On the **File** menu, click **Administration**, and then click **Scan For Errors**.



2. Select options to customize the scan and then click **Begin**. Options to customize the scan are described in the following table:

Option	When you want to
All Documents	Scan all documents for errors.
Current Folder	Scan only documents in the current folder for errors.
Include subfolders	Scan documents in all folders within the current folder for errors.
Search Results	Scan documents in the current search results. This option is only available when the Scan for Errors dialog box is opened from the Database Query Builder dialog box. For more information, see To scan for errors from the Query Builder .
Ignore Native Documents	Prevent native documents (records without images) from being repeatedly scanned and logged as errors.

Option	When you want to
Find invalid records (missing images)	Verify that each record in the database has a corresponding image.
Remove if found	<p>Remove invalid records.</p> <p>This option is useful if you have used Windows or some other program outside of LAW to delete or move files.</p> <p>These actions could cause LAW to contain records that do not point to valid images. These extra records can affect processing and summary functions, so users should remove them.</p>
Find blank/missing Page IDs	<p>Find documents with pages that have blank or empty Page ID entries.</p> <p>Whether intentional or simply operator errors, certain export formats require non-blank Page ID entries for renaming or linking purposes. This option provides a way to find the documents with blank entries so users can take the appropriate measures to correct them.</p> <p>To add page IDs to pages that have blank or empty Page ID entries after they are found:</p> <ol style="list-style-type: none"> 1. Open the standalone grid display. 2. On the Query menu, click Blank Page IDs. <p>A 'missing' Page ID is defined as being a document record with an incorrect number of page-level records. Since each document should have the same number of page-level records as the document's page count, this check ensures (for example) that a 5-page document has exactly 5 records in CloudNine™ LAW's page table. If any missing page records are found, LAW will automatically sequentially number the PageID values of the missing page level records if Auto-number missing pages is selected.</p>
Find gaps in Page IDs	<p>Find gaps or breaks in the numbering sequence.</p> <p>Pages in a case are typically numbered sequentially. Sometimes, however, there may be breaks in the numbering sequence. This option allows users to find these breaks to ensure that all pages are accounted for and to confirm these breaks, if any, are intentional and correspond to the original documents.</p>
Remove duplicate/orphan	Fix duplicate page records or records that consist of orphan pages.

Option	When you want to
page records	<p>Duplicate page records can result when a document contains two "page 3's" for example. Since there can only be one 'page 3', this record is safe to remove. Duplicate records can be detected while numbering a range of documents as it causes a duplicate PageID to be detected during this process.</p> <p>An orphan page record is a page level record that no longer belongs to an existing document. This may have occurred after a document was deleted, but a failure occurred deleting the page records for the deleted document. These records are also safe to remove from the database.</p>

Verify Page Counts Validate the page count of every image in the case that has a record.

CloudNine™ LAW opens every image and compares the actual page count with the page count stored in the database.

If the page count in the database is incorrect, it is updated, provided the **Correct invalid database page counts** option is selected. Because every image has to be opened, this option can be very time consuming for large cases. However, this option has several benefits. First of all, it ensures that the total page count displayed in the Case Summary is accurate for billing purposes. Second, by opening every image file, it ensures that none of the images have become corrupted (if they are, it will be logged). Third, it ensures that there are no excess Page ID entries (entries for pages greater than the actual page count) that can affect the export process.

Validate Endorsed Images	<p>Validate the endorsements applied using batch processing.</p> <p>If the process finds an image that is not the expected size of the applied endorsement or white space where an endorsement is expected, the file is logged in a TXT file saved in the %temp% document. The ID, DocID, and Error Message are included in the log.</p>
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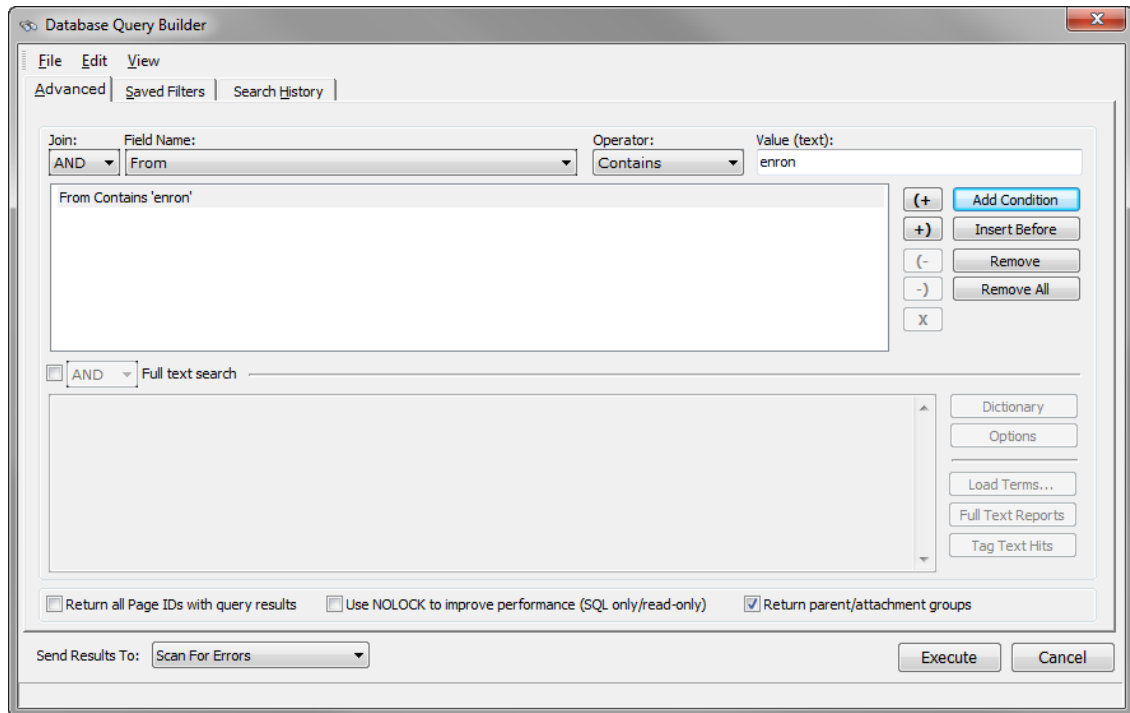
 **To scan for errors from the Query Builder**

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 ().

The **Database Query Builder** dialog box appears.



2. Create the search query for the search results you want to scan for errors.

For more information about creating search queries, see [Creating Queries and Full Text Searching](#).

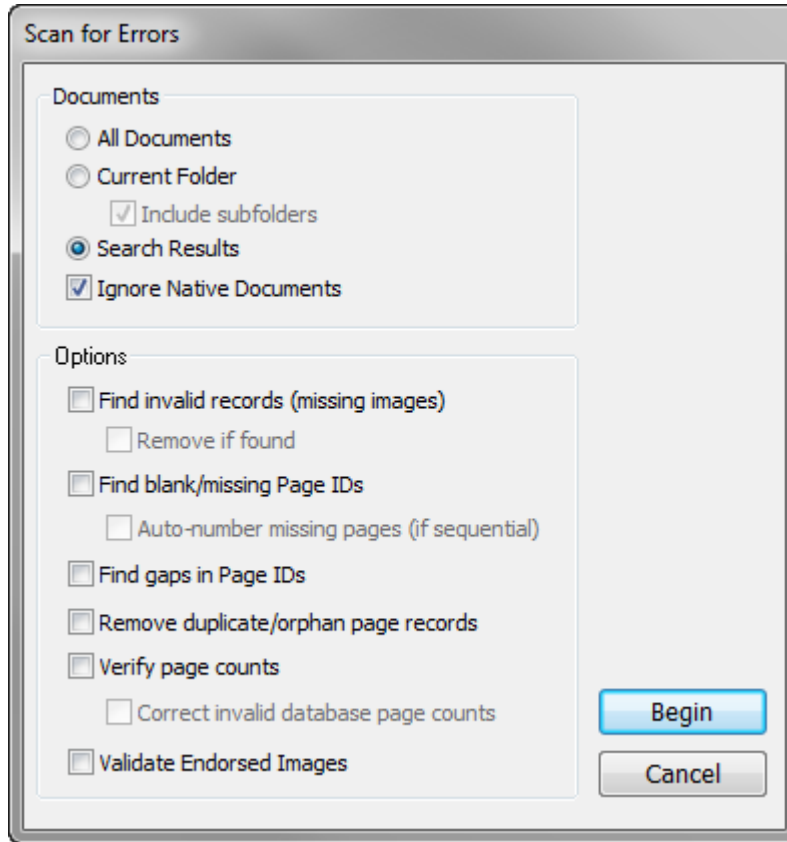
3. Select the output options as needed:

- **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.
- **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.

4. In the **Send Results To** list, click **Scan For Errors**.

- Click **Execute**.

Clicking **Execute** opens the **Scan for Errors** dialog box. The **Search Results** option and **Ignore Native Documents** check box are automatically selected in the **Documents** section.



- Select options to customize the scan and then click **Begin**. Options to customize the scan are described in the following table:

Option	When you want to
All Documents	Scan all documents for errors.
Current Folder	Scan only documents in the current folder for errors.
Include subfolders	Scan documents in all folders within the current folder for errors.
Search Results	Scan documents in the current search results. This option is only available when the Scan for Errors dialog box is opened from the Database Query Builder dialog box.
Ignore Native Documents	Prevent native documents (records without images) from being repeatedly scanned and logged as errors.

Option	When you want to
Find invalid records (missing images)	Verify that each record in the database has a corresponding image.
Remove if found	<p>Remove invalid records.</p> <p>This option is useful if you have used Windows or some other program outside of LAW to delete or move files.</p> <p>These actions could cause LAW to contain records that do not point to valid images. These extra records can affect processing and summary functions, so users should remove them.</p>
Find blank/missing Page IDs	<p>Find documents with pages that have blank or empty Page ID entries.</p> <p>Whether intentional or simply operator errors, certain export formats require non-blank Page ID entries for renaming or linking purposes. This option provides a way to find the documents with blank entries so users can take the appropriate measures to correct them.</p> <p>To add page IDs to pages that have blank or empty Page ID entries after they are found:</p> <ol style="list-style-type: none"> 1. Open the standalone grid display. 2. On the Query menu, click Blank Page IDs. <p>A 'missing' Page ID is defined as being a document record with an incorrect number of page-level records. Since each document should have the same number of page-level records as the document's page count, this check ensures (for example) that a 5-page document has exactly 5 records in CloudNine™ LAW's page table. If any missing page records are found, LAW will automatically sequentially number the PageID values of the missing page level records if Auto-number missing pages is selected.</p>
Find gaps in Page IDs	<p>Find gaps or breaks in the numbering sequence.</p> <p>Pages in a case are typically numbered sequentially. Sometimes, however, there may be breaks in the numbering sequence. This option allows users to find these breaks to ensure that all pages are accounted for and to confirm these breaks, if any, are intentional and correspond to the original documents.</p>
Remove duplicate/orphan	<p>Fix duplicate page records or records that consist of orphan pages.</p>

Option	When you want to
<p>page records</p>	<p>Duplicate page records can result when a document contains two "page 3's" for example. Since there can only be one 'page 3', this record is safe to remove. Duplicate records can be detected while numbering a range of documents as it causes a duplicate PageID to be detected during this process.</p> <p>An orphan page record is a page level record that no longer belongs to an existing document. This may have occurred after a document was deleted, but a failure occurred deleting the page records for the deleted document. These records are also safe to remove from the database.</p>
<p>Verify Page Counts</p>	<p>Validate the page count of every image in the case that has a record.</p> <p>CloudNine™ LAW opens every image and compares the actual page count with the page count stored in the database.</p> <p>If the page count in the database is incorrect, it is updated, provided the Correct invalid database page counts option is selected. Because every image has to be opened, this option can be very time consuming for large cases. However, this option has several benefits. First of all, it ensures that the total page count displayed in the Case Summary is accurate for billing purposes. Second, by opening every image file, it ensures that none of the images have become corrupted (if they are, it will be logged). Third, it ensures that there are no excess Page ID entries (entries for pages greater than the actual page count) that can affect the export process.</p>
<p>Validate Endorsed Images</p>	<p>Validate the endorsements applied using batch processing.</p> <p>If the process finds an image that is not the expected size of the applied endorsement or white space where an endorsement is expected, the file is logged in a TXT file saved in the %temp% document. The ID, DocID, and Error Message are included in the log.</p>

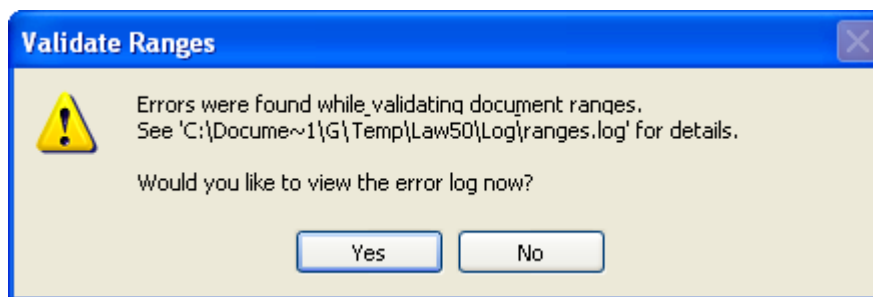
Validating Document Ranges

The process of validating document ranges is composed of the following steps:

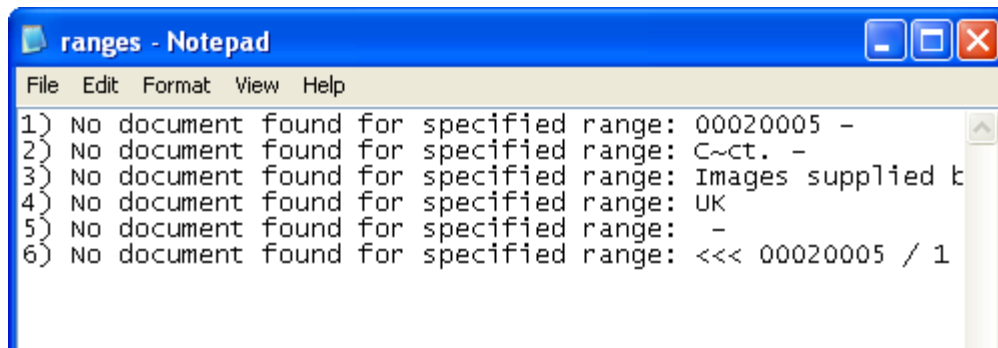
1. Before scanning, inspect the documents to determine document breaks.
2. Create a range file that describes document breaks. A range file is a delimited text file with two fields, BegDoc# and EndDoc#.
3. Use the Validate Ranges function and reorganize document as necessary using the [Reorganize Documents](#) function.
4. After the scan process check that document breaks were applied correctly. If errors are found after scanning, you can manually correct document breaks by using a combination of the Merge Documents and Split Documents functions.

To validate ranges

1. On the **File** menu, click **Administration**, and then click **Validate Ranges**.
2. Enter the path to a range file.
 - A range file is a comma-delimited text file that consists of two fields: BegDoc# and EndDoc#.
 - After a range file is identified, documents are compared against the range file in two passes.
 - The first pass ensures that all pages fall within the specified ranges. This pass is only useful if the documents and ranges are numbered sequentially with few or no gaps. Otherwise, LAW may report an excessive amount of errors. Any pages that do not fall within one of the specified ranges will be reported in the error log.
 - The second pass validates all of the specified ranges against the documents in the case. Any ranges that are not found is reported.



3. To display the error log, click **Yes**.



Extracting Subsets

This feature extracts data and images of the current folder to a selected output folder. This feature has been designed to be useful for creating partial backups and re-importing. Not all indexes and field properties are retained, so the output is not suitable for a standalone working case.

To extract subsets

- On the **Folder** menu, click **Extract as Subset**.
- ☑ This function works with either ADS or Access databases and always produces a project.mdb file. This feature is not supported with SQL Server cases.

Run Commands

This topic covers integration of CloudNine™ LAW with custom applications and scripts. This topic assumes you have intermediate to advanced programming skills. CloudNine assumes no responsibility for any damage done when you use a LAW run command to start external applications, scripts, commands or access active content.

LAW allows you to run executable files, commands, and scripts on LAW cases. Note the following facts when you run external commands from within CloudNine™ LAW:

- The connection string to the current database is passed to the executable or script.
- Only programs located locally within the <AppPath>\Commands folder or located on a network within the <shared settings>\Commands folder can be executed from within CloudNine™ LAW. If the same commands exists in both the <AppPath>\Commands folder and <shared settings>\Commands folder, the command in the local <AppPath>\Commands folder gets priority.

- If the external program contains a file description, this value will be used in the menu name. If no file description is found, the menu name is populated by the filename without the extension.

- ✍ With the assistance of CloudNine Technical Support, you can use a run command to perform various tasks. Please contact CloudNine Technical Support for instructions and assistance with this process.

Full-text Indexing

To perform full-text searches, the text for the records must first be indexed. The following indexing capabilities are offered by CloudNine™ LAW:

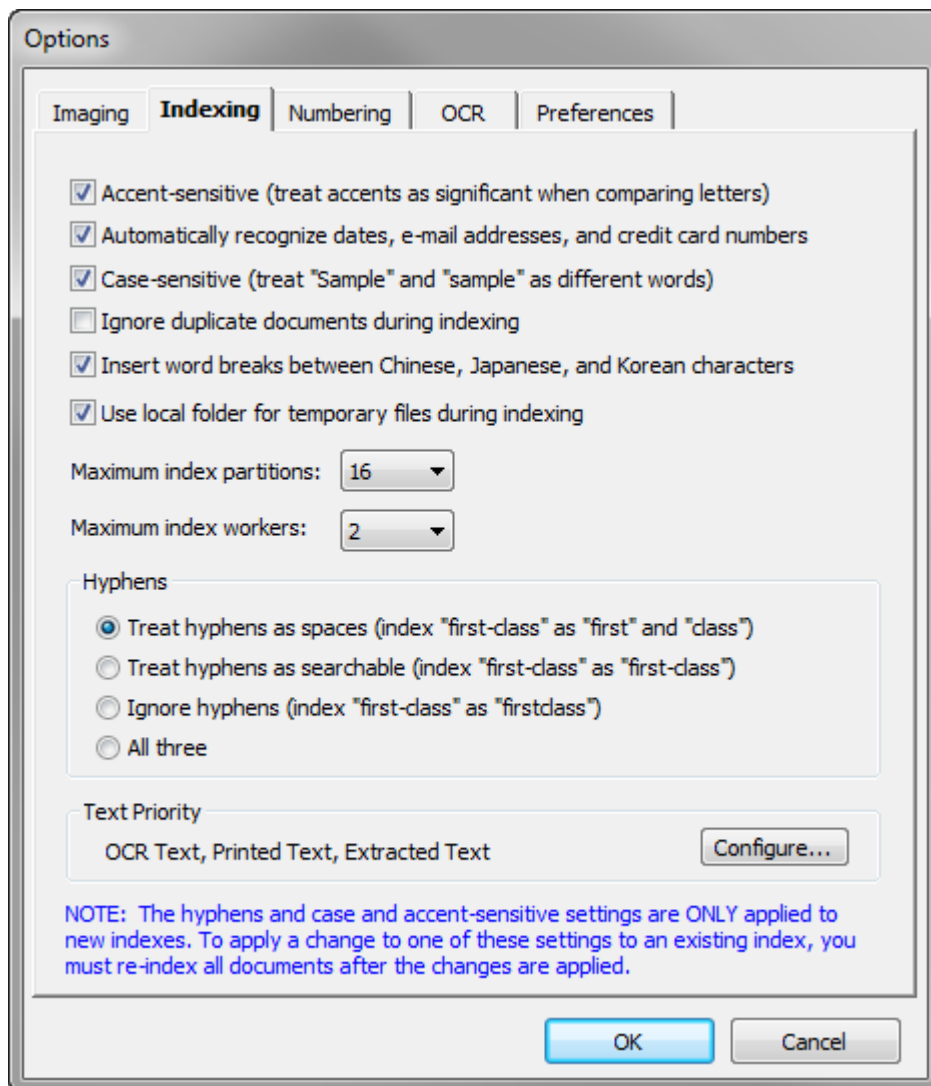
- Allow automatic indexing occur after you:
 - Use ED Loader or Turbo Import to create new records.
 - Import a case.
 - Import raw images if the new record has associated text.
 - Create scanned images and then OCR them.
- Manually start the indexing process as necessary.
- You can reindex documents, for example when you import a load file that contains records with text; or after you add text to previously indexed documents, as when you perform OCR or TIFF conversion after import.
- You can also disable automatic indexing as a post import action in ED Loader.

To configure indexing options

Before you perform any action that involves indexing, consider configuring indexing options. Indexing options provide you with control over how certain words, punctuation, and other text elements are handled during indexing. Auto-indexing can also be enabled from this form.

1. On the **Tools** menu, click **Options**.
2. Click the **Indexing** tab.

The **Indexing** tab appears.




3. Set the general options as needed:

- **Accent-sensitive** - The indexer will take accents into account in indexing words with this option enabled. For most users this is not recommended because this option increases the chance of missing the retrieval of a document if an accent was omitted in one letter.
- **Automatically recognize dates, e-mail addresses, and credit card numbers** - Enable this option to have the indexer scan for anything that looks like a date, e-mail address, or credit card number during indexing.
- **Case-sensitive** - The indexer will take capitalization into account in indexing words when this option is enabled. In a case-sensitive index, "CREDIT", "Credit", and "credit" would be three different words. This option can be useful, for example, when you are searching for a term, such as a capitalized name that can be confused with a common non-capitalized word.

- **Ignore duplicate documents during indexing** - When enabled prior to indexing, LAW will not index any duplicate records in the case. Duplicate records have a DupStatus of either **G** or **C**. The "parent" duplicate, DupStatus=**P**, is also included. Enabling this option can help to increase performance of indexing, searching, and review because only text from unique files is added to the index.
 - **Insert word breaks between Chinese, Japanese, and Korean characters** - Check this box if you plan to search Chinese, Japanese, or Korean documents that do not contain word breaks. Some Chinese, Japanese, and Korean text does not include word breaks. Instead, the text appears as lines of characters with no spaces between the words. Because there are no spaces separating the words on each line, the indexer sees each line of text as a single long word. To make this type of text searchable, enable automatic insertion of word breaks around Chinese, Japanese, and Korean characters so each character will be treated as single word.
 - **Use local folder for temporary files during indexing** - During indexing, the dtSearch Engine may need to create temporary files to store word lists that are too large to fit into memory. By default, these files will be placed in the index folder. Use this setting to instruct the indexer to use the local user's temporary folder for these files. The indexer will automatically delete the word list files when the index update completes. This is the recommended setting for cases on network drives, NAS, or SAN devices.
 - **Maximum index partitions** - By default, **16** is selected. You can select up to 32 index partitions. When **16** is selected, the machine running the indexing process will use up to 16 index partitions. The default index partition size is 125,000 documents. The index partition size determines the maximum number of documents that can be added to an index partition before creating another partition.
 - **Maximum index workers** - By default, **2** is selected. You can select up to 16 index workers. When **2** is selected, the machine running the indexing process will use 2 workers per available processor, with a limit of 8 workers. If a machine has more than 8 processors, only a maximum of 8 workers will be used.
4. Set options for handling hyphens in terms as needed:
- **Treat hyphens as spaces** - This is the default method of handling hyphens for indexing. For example, "first-class" would be treated as "first class."
 - **Treat hyphens as searchable** - Hyphens are treated as searchable text. For example, "first-class" would be indexed as "first-class."
 - **Ignore hyphens** - Hyphens are ignored during indexing. For example, "first-class" would be indexed as "firstclass."
 - **All three** - Applies all of the above options to allow multiple ways of finding text.

5. If necessary, change the priority of the type of text to index. For more information, see the next section in this topic, **To change the text priority order**.

6. Click **OK**.

 If index options are changed after the case has already been indexed, the case will need to be reindexed in order for the changes to be applied.

To change the order of text priority

Records in LAW can have up to four types of text: text extracted from a document by optical character recognition (OCR), printed text, text extracted from electronic documents, and text from the text document linked to a document. Only one type of text for each record can be included in the index at any given time.

The default priority is:

1. OCR Text
2. Printed Text
3. Extracted Text
4. Linked Text

Note the following facts that apply to text priority:

- If the default values above are used, OCR text will be indexed. If OCR does not exist for a document, then printed text is used. If no OCR or printed text is available, extracted text is indexed. If no OCR, printed, or extracted text exists for a document, the text from the text file linked to the document will be indexed.

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 > Options), and the document was imported into LAW using a load file.

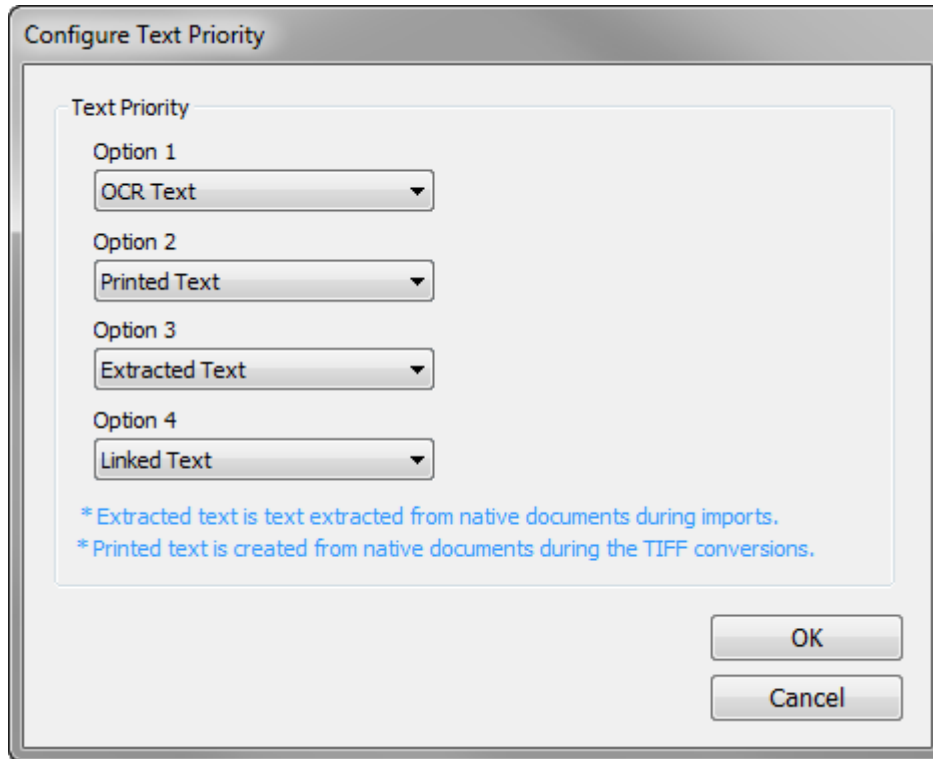
- The sequence of priority can be changed as needed.
- For positions 2, 3, and 4, you can select <None> to remove alternate text types from consideration for indexing.

To change text priority order

1. On the **Tools** menu, click **Options**.
2. Click the **Indexing** tab.

- Click the **Configure** button.

The **Configure Text Priority** dialog box appears.



- Choose the desired text types for options 1, 2, 3, and 4.

For example, to include only a particular type in the index, such as Extracted Text, choose Extracted Text for Option 1, and then choose <None> for options 2, 3, and 4.

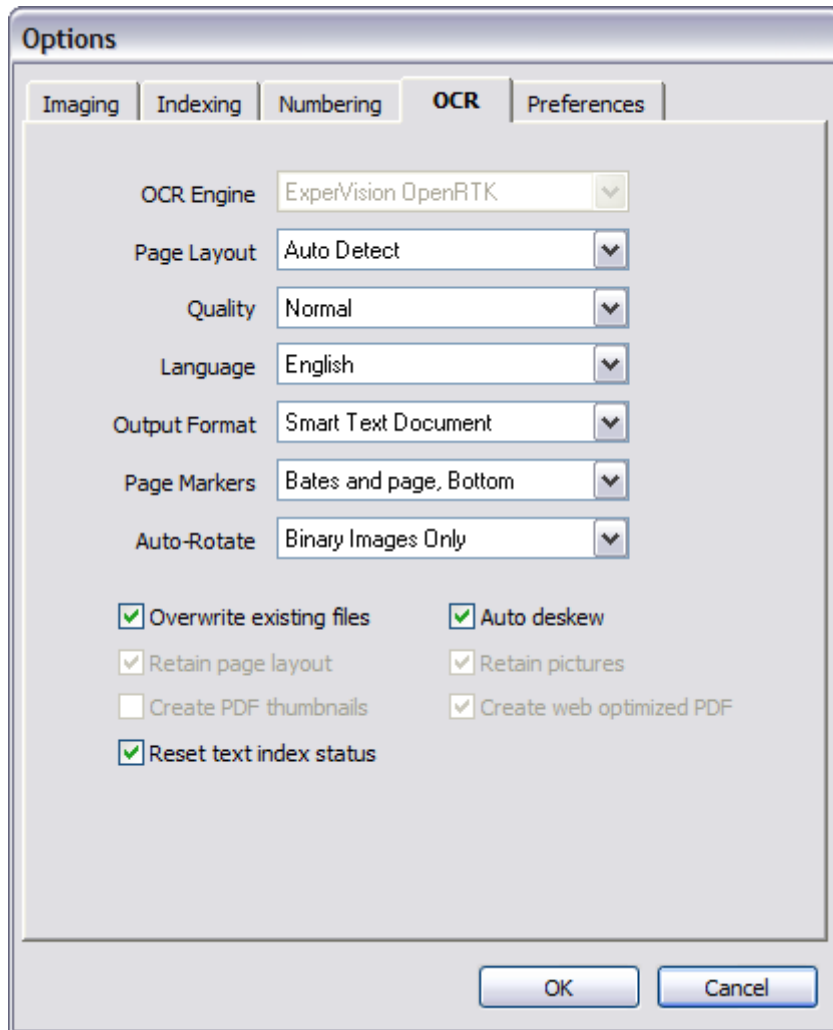
- ✎ If the above index options are changed after the case has already been indexed, the case will need to be reindexed in order for the changes to be applied.

To flag documents and reset flags for indexing

Documents must be in a "flagged" state in order to be included in the indexing process. A document that is flagged for indexing means that it will be indexed when you run the indexing process manually. The steps required to flag or reset flags on documents depend on whether you are setting this on an OCR operation, a TIFF conversion, or whether flagging or reset will occur on one folder or a set of folders.

To set the option to reset text index status for OCR

1. From the main window, on the **Tools** menu, click **Options**, and then click the **OCR** tab.
2. The **OCR Options** dialog appears.



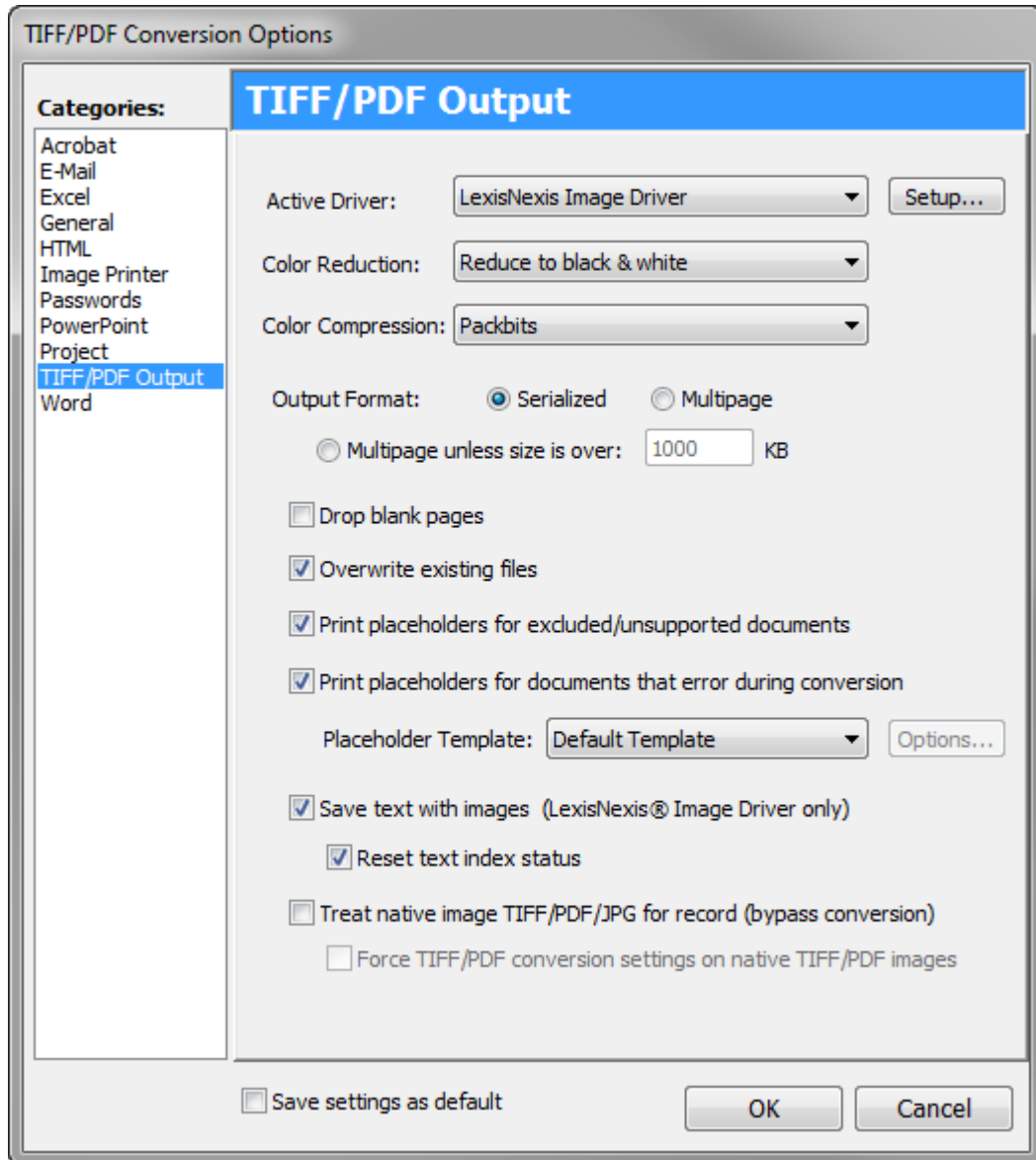
3. Select **[OCR] Reset text index status** to reset text index status for OCR processing of individual records or batches of records.

Clearing this option 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.

To set the option to reset text index status for TIFF conversion

1. From the main window, on the **Tools** menu, click **Batch Process**.
2. In the **Batch Process** dialog, on the **Options** menu, click **TIFF Output**.

3. The **TIFF Conversion Options** dialog appears.



Do one of the following:

- Select **[TIFF Conversion] Reset text index status** to reset the status and allow indexing to occur again.

Or

- Clear **[TIFF Conversion] Reset text index status** to 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.

To manually flag documents for indexing

In certain situations, one or more documents may need to be manually flagged for indexing. For example, if the OCR text for a document was deemed unusable and deleted outside of CloudNine™ LAW, the document could be manually re-flagged for indexing so the printed text for that document would be indexed instead.

To reset the text index flags for documents in one folder

1. In the main form, select the documents in the document list.
2. On the **Edit** menu, click **Reset Full Text Flags**, and then select **ON**. To remove the flag, choose **OFF** instead.

To reset all documents or documents that span folders

1. From the main form, click click **Tools** and then click **Display All Records**.

The standalone grid opens.

2. In the standalone grid, on the **Tools** menu, click **Reset Full Text Flags**, and then click **ON** to enable records to be reindexed, or **OFF** to prevent records from being reindexed.

The full text index flags for all documents in the current record set are set to **ON** or **OFF**. For more information about the text flag values stored in this field, see the **_FTIndex field values** section in this topic.

After the desired documents have been flagged, they can be indexed.

3. In the main form, on the **Tools** menu, click **Full Text Index** and then click **Index New Documents**.

To enable automatic background indexing

An auto-indexing feature is available for indexing text as a background process, allowing text to be indexed as records are being imported rather than waiting for an EDD import to complete.

1. On the **Tools** menu, click **Options** and then click **Indexing**.
2. Set options as needed.

When records with associated text are imported via the LAW case import, LAW will prompt to index once the import has been completed.

To index new documents after ED Import

If the indexing is not performed immediately after the ED import, it may be performed at any time thereafter.

- On the **Tools** menu, click **Full Text Index**, and then click **Index New Documents**.

The Index New Documents feature will index any records that are "flagged" to be indexed.

To reindex all documents

A case can be reindexed if needed.

1. From the **Tools** menu, click **Full Text Index**, and then click **Re-Index All Documents**.

Clicking **Re-Index All Documents** opens the **Confirm Re-Index All Documents** dialog box.

2. Click **Yes** to reindex all documents in the case.

The Re-Index All Documents feature is useful in the event an indexing option needs to be changed or the index has somehow become corrupt.

FTIndex field values

The `_FTIndex` system field is automatically created when a case is ED-enabled. It holds a numeric code that represents the status for the indexing process.

The possible values for this field are:

- 0**: No text is available for indexing.
- 1**: The record has text that is ready for indexing.
- 2**: The record was flagged again for indexing but has not yet been reindexed.
- 3**: The record text is indexed.

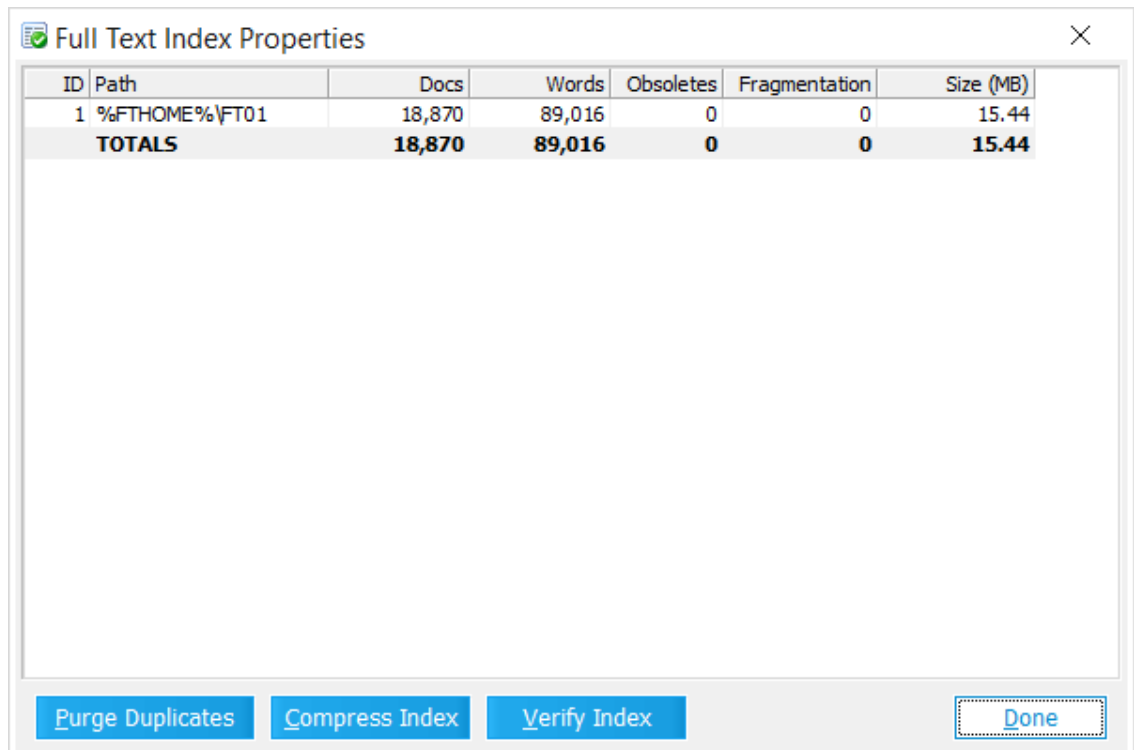
To access full-text index properties

1. On the **Tools** menu, click **Search Records**.

The **Query Builder** starts.

2. Select the **Full text search** check box.
3. Click the **Options** button, and then click the **Index Properties** button.

The **Full Text Index Properties** dialog box appears. This screen provides details about the full-text indexes for the current LAW case, such as the size and the number of indexed documents and words in each index.



ID	Path	Docs	Words	Obsoletes	Fragmentation	Size (MB)
1	%FTHOME%\FT01	18,870	89,016	0	0	15.44
TOTALS		18,870	89,016	0	0	15.44

Purge Duplicates Compress Index Verify Index Done

4. Select options as needed:

- **Purge Duplicates** - This function removes all records that were flagged as duplicate records in LAW (DupStatus=G or C) from the full text index. This feature will first scan the case and then return the duplicate count in a message box.
 - Click **Yes** to remove the duplicates from the index or click **No** to cancel. To prevent these records from being included prior to indexing, use the Ignore duplicate documents during indexing option.
- **Compress Index** - Compressing the index removes obsolete records from the index. Obsolete records may include documents that were deleted from the case or records that were removed from the index using the Purge Duplicates feature. These obsolete documents are not returned in searches. If the "ObsoleteCount" value in this dialog is greater than zero, use the Compress Index function.

- **Verify Index** - This function will check the full text index for problems or corruption. If any issues are discovered, an error will be returned after running the verify and the case will likely need to be reindexed.


To configure ED Loader auto-indexing

1. In the main window, on the **File** menu, click **Import** and then click **Electronic Discovery**.
2. Click the **Settings** tab and then select **Post Import Actions**.
3. Select or de-select **Perform full-text indexing** as necessary.

If the **Perform full-text indexing** option is enabled, after import you will be prompted to choose whether to index the text of the new documents. If the setting is disabled, import will complete without your having the option to perform full-text import.

Tracking Page Source, Size, and Color

You can capture at the page-level the source, size, and color of scanned and imported images, and for images or PDF files created via TIFF Conversion within CloudNine™ LAW cases. This data is stored within the case database in the following page-level system fields:

- PageSource
 - PageSize
 - PageHeight
 - PageWidth
 - PageColor
-
-  • When pages are scanned into a case all of the fields are populated.
 - Images acquired via raw image import or via load file receive only a PageSource value.
 - Images files created in LAW via TIFF Conversion or by single-document TIFF conversion receive values for PageSource and PageColor.
 - Images affected by the "Treat native TIFF as image for record (bypass conversion)" setting do not receive a PageColor value.

Batch processing

A batch process is available to populate this missing information for imported images and documents converted to TIFF files. For more information on how to create a report containing the page-level information, see [Page Properties Report](#).

Field names and values

These are the five fields used to store page-level properties:

- PageSource
- PageSize
- PageHeight
- PageWidth
- PageColor

Three of these fields are lookup fields and are listed differently within the database. Possible values contained in these fields are listed in the following table. The lookup field names as referenced in the database are shown in parentheses beside the field name displayed in the LAW interface. Also, the numeric values used in the database are listed in parentheses beside the textual value users will see in CloudNine™ LAW.

Field	Lookup field names as referenced in the database	Possible values (database numeric value)
PageSource	(SourceID)	Feeder (1) Flatbed (2) Imported (3) TIFF Conversion (4) Manual TIFF Conversion (5)
PageColor	(ColorID)	Black & White (1) Color (2) Grayscale (3)
PageSize	(PageSizeID)	Letter (1) *8.5x11 Legal (2) *8.5x14 Double Letter (3) *11x17 Oversized (4) *Any pages outside the above 3 sizes
PageWidth	--	Varies (Example: 8.5)

Field	Lookup field names as referenced in the database	Possible values (database numeric value)
PageHeightVari es	--	(Example: 11)

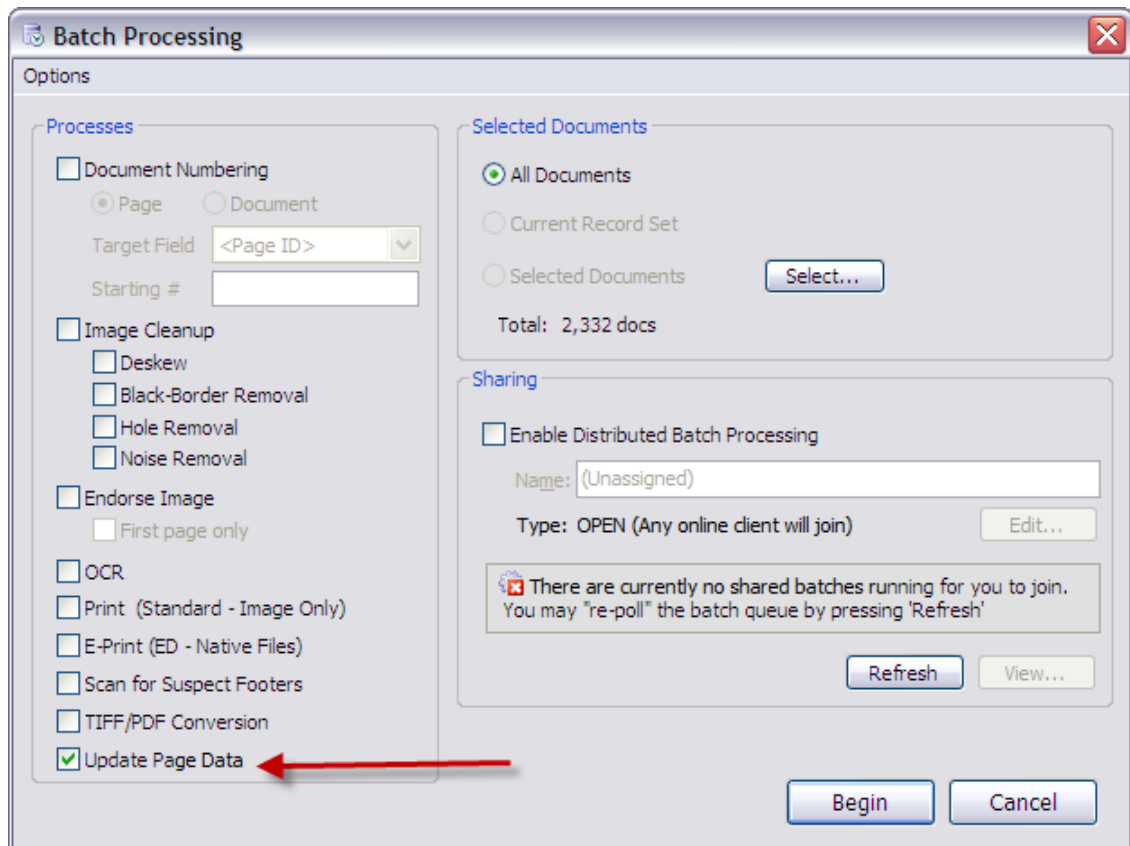
To update page data

You can use the Update Page batch process to populate the PageColor, PageSize, PageWidth, and PageHeight fields for any images in the selected record set missing this information. PageSource is not affected during this process because the source can only be captured at the time the image is acquired. As mentioned, imported images receive only a PageSource value and images or PDF files created by TIFF conversion only receive PageSource and PageColor values. This process is necessary to populate the remaining fields if this type of data is needed for a particular project.

To start the Page Update batch process

1. From the main menu, click **Tools** and then click **Batch Process**.

The **Batch Processing** dialog appears.



2. In the **Batch Process** dialog select **Update Page Data** and then click **Begin**.

The batch process starts.

To set page size tolerance

A page size tolerance setting can be used to set a margin for the page size values. The default value of the tolerance is set to one-tenth (.1). Using the default value, for example, everything up to 8.6 x 11.1 is interpreted as 'Letter' size. This setting applies at the application level.

To set page size tolerance

1. Use Windows Explorer to open the LAW installation folder. By default the path is:

C:\Program Files (x86)\Law50

2. Use Notepad or some other text editor to open the Law50.ini file.

3. Scroll to the [Settings] section. If one does not exist you can create the setting by typing [Settings] directly into the file.
4. Edit the [Settings] section as follows, substituting <value> for a whole number or decimal value:
`[Settings] PageSizeTolerance= <value>`
5. Save the file.

Creating a Message Killer

When e-print or TIFF conversion jobs are processing in CloudNine™ LAW, sometimes messages are generated during the process than need to be manually closed before processing can continue. For large jobs, having to monitor the job and manually close each message as they are generated can be very time consuming. In CloudNine™ LAW, once you know which messages are generated, you can set up a custom message killer, which will automatically log and close each message that is generated during the e-print or TIFF conversion job process, so that you do not have to manually acknowledge each message during the process.

A message killer in LAW is an XML file that tells LAW which messages to look for, log, and close automatically. You can add multiple messages to the XML file. When LAW encounters a message, it will check the XML file to see if it matches one of the messages in the XML file. If it matches, LAW will automatically log and close the message.

The messages automatically closed by LAW are logged to the ErrorMessage field for the document associated with the message.

The message killer XML file is stored in the shared directory defined for the case in the Path for global profiles, grid views, and filters field on the Preferences tab in the Options dialog box (Tools menu > Options). For more information about the shared directory, see Managing Grid Views, Index Profiles, and Working With Saved Searches and Search History.

Message Killer XML File Format

Here is an example of the XML code for creating a custom message killer. The XML code in this example contains the information for three different messages. Each message in the XML file is contained within the - <CustomMessage></CustomMessage> brackets.

```
<?xml version="1.0" encoding="utf-8" ?>
```

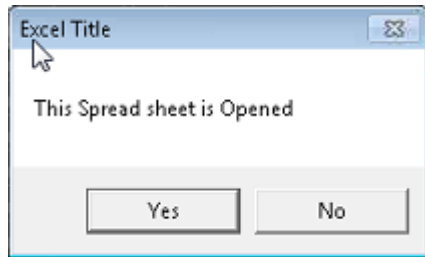
```
- <CustomMessages>
  - <CustomMessage>
    <WindowTitle>Microsoft Office PowerPoint</WindowTitle>
    <MessageClass />
    <ButtonToPress>OK</ButtonToPress>
    <SourceApplication>Microsoft PowerPoint</SourceApplication>
  </CustomMessage>
  - <CustomMessage>
    <WindowTitle>Password</WindowTitle>
    <MessageClass />
    <ButtonToPress>OK</ButtonToPress>
    <SourceApplication>Microsoft Word</SourceApplication>
  </CustomMessage>
  - <CustomMessage>
    <WindowTitle>Microsoft Office Excel</WindowTitle>
    <MessageClass />
    <ButtonToPress>Don't Send</ButtonToPress>
    <SourceApplication>Microsoft Excel</SourceApplication>
  </CustomMessage>
</CustomMessages>
```

To create a custom message killer

1. Identify the message you want to automatically close during processing.

To create the custom message killer, you will need the message's title, the name of the button in the message dialog box that needs to be pressed to acknowledge and close the message, and the source application of the file for which the message is generated.

For example, in the following message dialog box, the title is **Excel Title**, the button name is **Yes**, and the source application is **Microsoft Excel**.



2. Create the custom message killer XML file.

For example, if you were creating the file for the Excel Title dialog box pictured above, the XML code in the file would be:

```
<?xml version="1.0" encoding="utf-8" ?>
- <CustomMessages>
  - <CustomMessage>
    <WindowTitle>Excel Title</WindowTitle>
    <MessageClass />
    <ButtonToPress>Yes</ButtonToPress>
    <SourceApplication>Microsoft Excel</SourceApplication>
  </CustomMessage>
</CustomMessages>
```

3. Save the XML file using the **CustomMessageKiller.xml** file name, and save the file to the case's Shared directory.

The case's Shared directory is defined in the **Path for global profiles, grid views, and filters** field on the **Preferences** tab in the **Options** dialog box (**Tools menu > Options**). The default directory is **C:\Program Files (x86)\LAW50\Shared**.

4. Open the case's **law50.ini** file.

The **law50.ini** file is located in the C:\Program Files (x86)\Law50 folder.

- ✎ If you do not have "write" access to the law50 folder, then your law50.ini would be written to your virtual store (C:\Users\(\Windows login)\AppData\Local\Virtual Store\Program Files (x86)\LAW50)

5. Add the following to the **law50.ini** file:

[GlobalProfilePath]

[path to the CustomMessageKiller.xml file in the Shared directory]

For example:

[GlobalProfilePath]

C:\Program Files (x86)\LAW50\Shared\CustomMessageKiller.xml

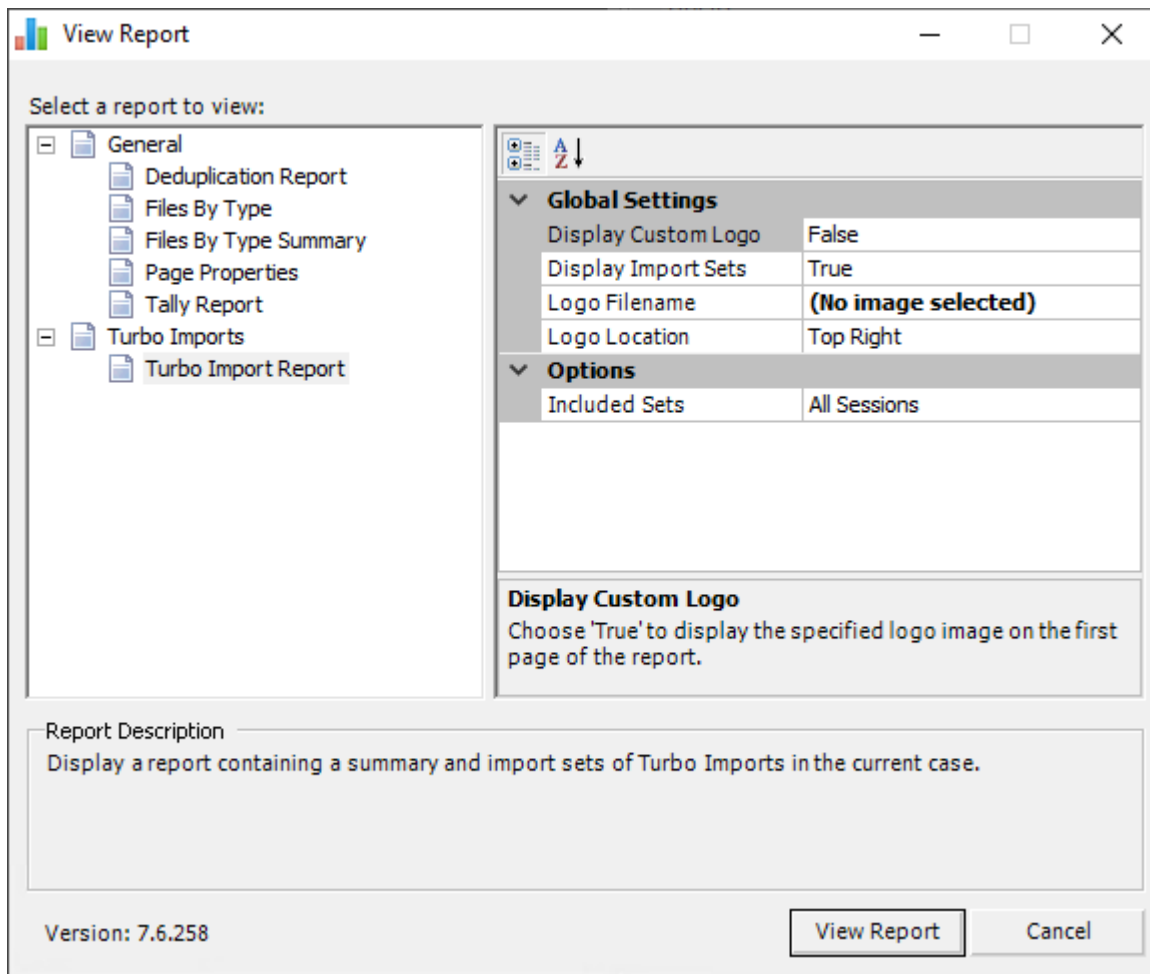
6. Save the **law50.ini** file.

When LAW PreDiscovery is running an e-print or TIFF conversion job and encounters a message, it will check the **CustomMessageKiller.xml** file. If the message matches any of the messages entered in the **CustomMessageKiller.xml** file, the message will automatically be logged and closed.

Reporting

CloudNine™ LAW provides support for generating a number of predefined reports as well as ad hoc reports based on the results of a query. Predefined reports available for all cases include the [Page Properties](#) and [Tally](#) reports. In addition, if Electronic Discovery is enabled the following reports are available: [ED Loader Session](#), [Turbo Import Report](#), [Exception](#), and [Deduplication or Inter-Case Deduplication](#) reports. The type of deduplication and type of case determines which type of reports will appear in the View Reports dialog box. The [Turbo Import Report](#) is available for Turbo Import cases.

Click on a topic for more information on [Deduplication Reports](#), [Files By Type](#), and [Files By Type Summary](#) topics.



Viewing Reports

After you open a report for viewing, you can configure grouping of report data, add your own logo to the report, and then generate an output as a PDF file or other format.

To view a report

You have several choices for accessing reports.

1. Do one of the following:

- In the main window, on the toolbar click the View Reports button: .

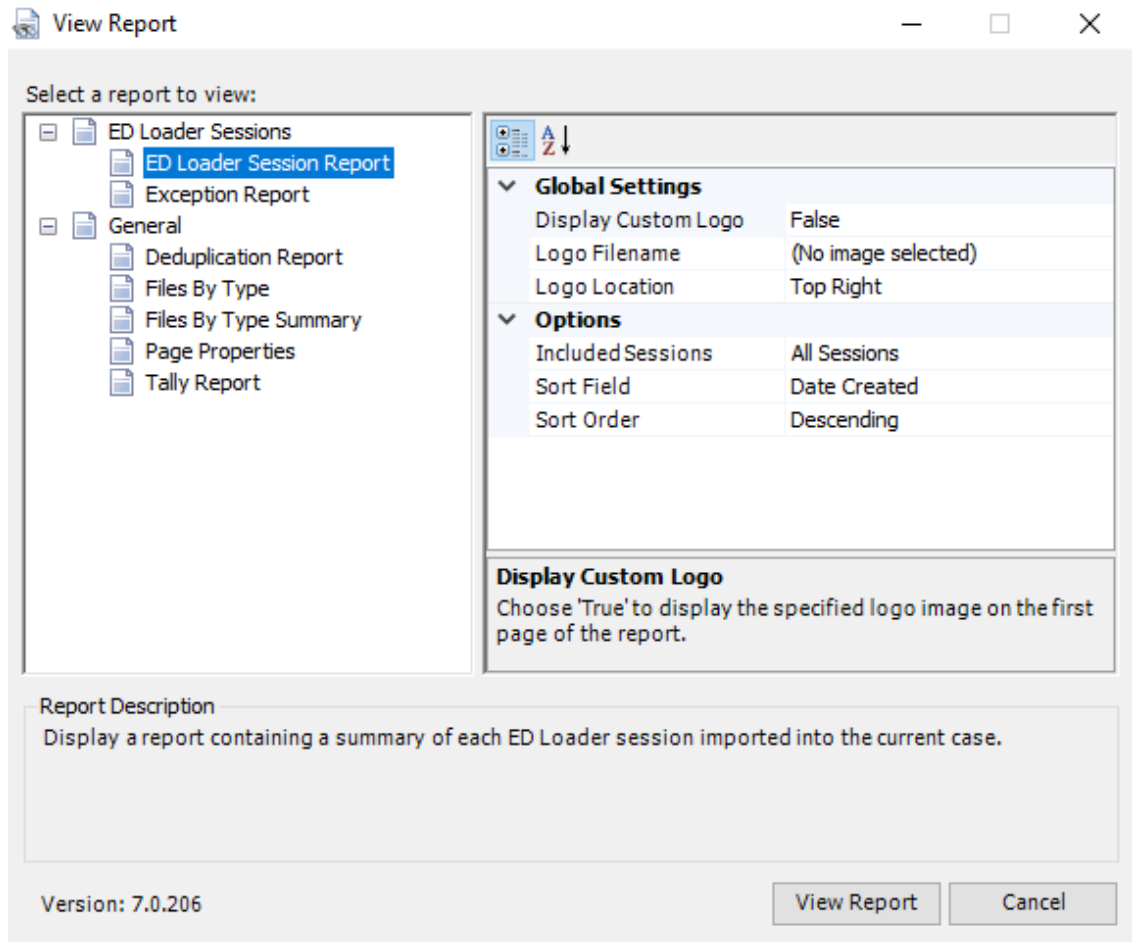
Or

- On the **File** menu, click **Administration**, and then click **View Reports**.

Or

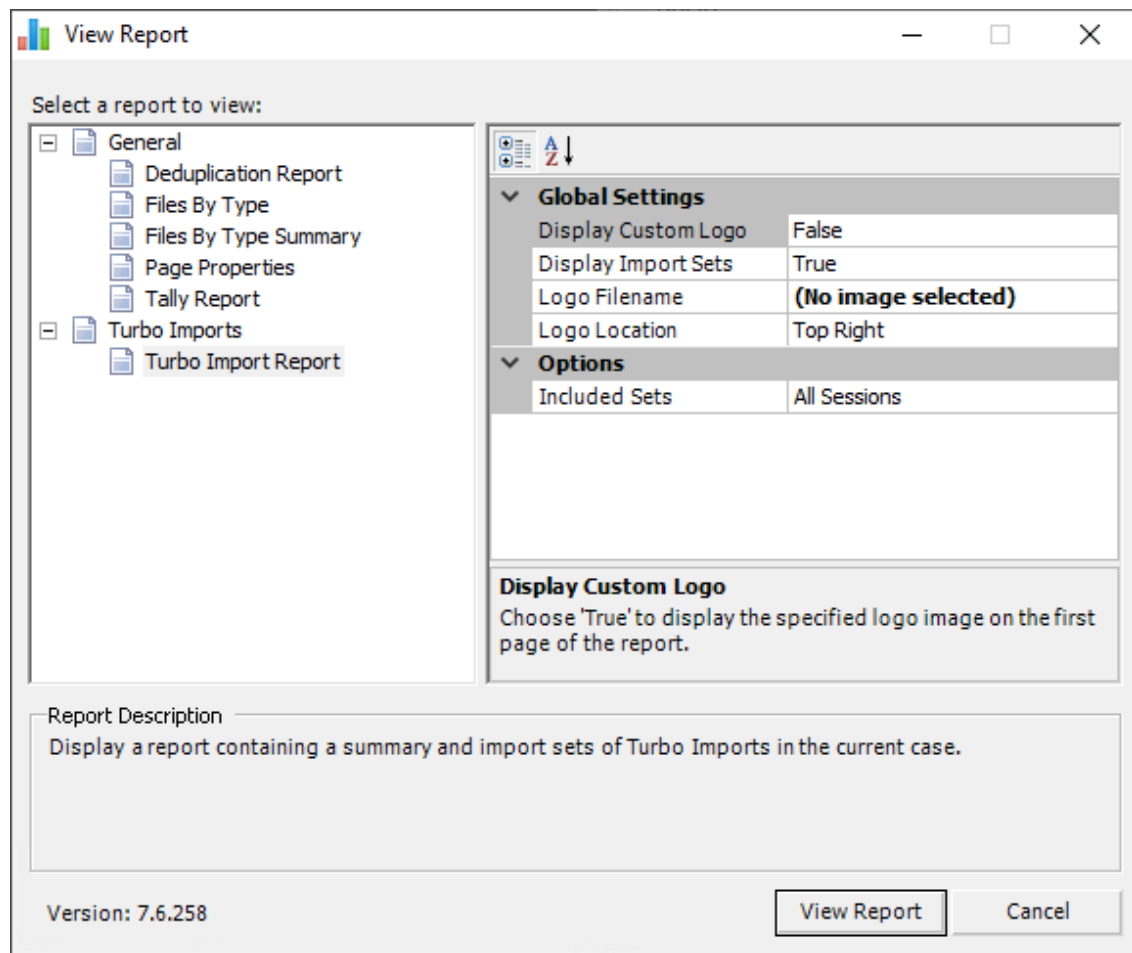
- From a grid display, on the **Tools** menu, click **View Reports**.

The **View Report** dialog box appears.



Reports in ED Loader enabled cases

Or



Reports in Turbo Import enabled cases

2. Select a report, and then click **View Report**.

- ⚠ If the **View Reports** dialog box is launched from a grid, or if a grid is active when the tool is launched, certain reports can be limited to the current record set loaded in the grid.

[To remove or restore grouping](#)

By default options to group reports are enabled in the **View Reports** dialog box.

- To remove grouping, in the options area click the **Alphabetical** button located above the options. The group headers, Global Settings and Options, will be removed.
- To restore group headers, click the **Categorized** button.

[To add a logo to reports](#)

Global settings apply to every type of report and when they are changed, the changes persist to the other reports as well. The Options located below the Global Settings are report-specific and therefore will change each time a new report is selected in the left panel. These options are discussed in the separate topics for each report (see the "Report Types" section below).

1. Open the **View Reports** dialog box. For more information see **To view a report** section in this topic.
2. Configure options for adding logos according to your needs by consulting the following table:

Option	Procedure	Notes
Display Custom Logo	<ol style="list-style-type: none"> 1. Set this option to True. 2. Specify the path to the logo file in the Logo Filename setting. 	<p>Enables (or disables) a custom logo.</p> <p>The logo appears on the first page of the report.</p>
Logo Filename	<ol style="list-style-type: none"> 1. Click the ellipsis (...) button in the second column beside this setting. 2. Browse to the desired image file (.bmp, .jpg, or .gif), and then click Open. <p>The path to the image will appear in the field.</p>	<p>For the logo to appear, the Display Custom Logo setting must also be set to True.</p>
Logo Location	<p>Set the location to one of the following:</p> <ul style="list-style-type: none"> • Top Left • Top Right • Bottom Left • Bottom Right 	<p>Determines where logo is located on the first page of the report.</p>

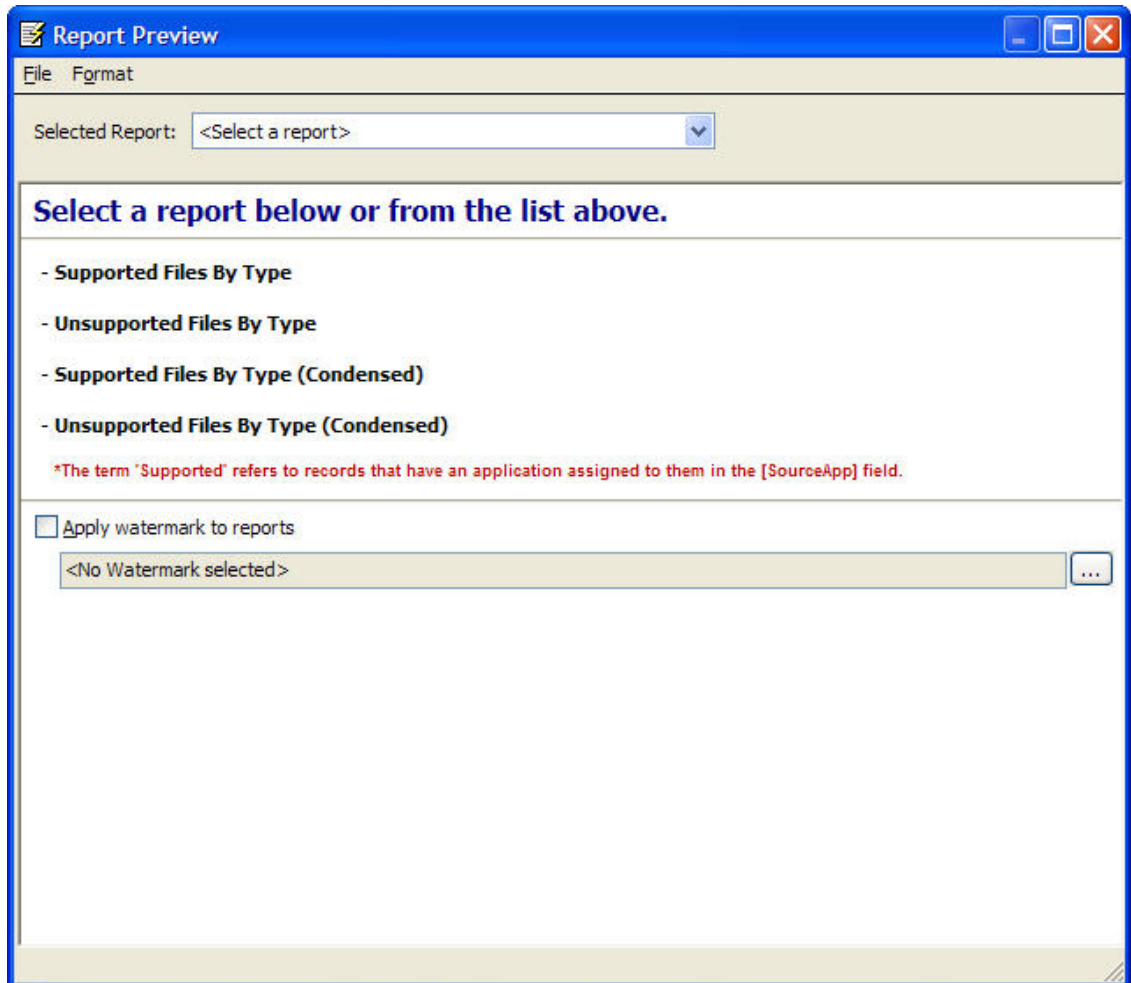
To generate reports in PDF and other formats

1. On the **File** menu, click **Administration**, and then click **View Reports**.
Or
 - From a grid display, on the **Tools** menu, click **View Reports**.

The **View Reports** dialog box appears.

2. Select a report, and then click **View Report**.
3. Click the **View Report** button.

The report opens in the **Report Preview** dialog box.



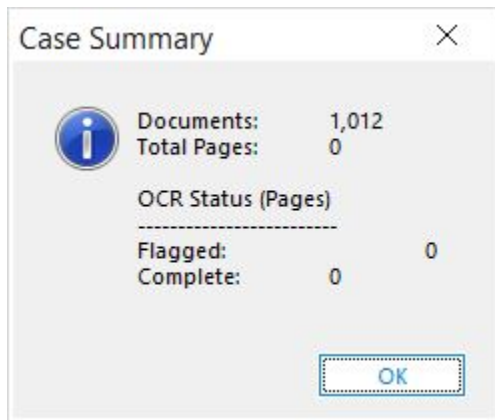
4. Save the file using one of the file types provided in the **Save as type** drop down.

If on your computer you have installed a print driver that can save print jobs to file, such as Adobe Acrobat, you can optionally click **Print**, and then print the report to the print driver that generates PDF or other file output.

Case Summary Report

The Case Summary report provides a quick status of current optical character recognition (OCR) operations. This report is useful for answering basic questions related to billing and project status. The report lists these items:

- Number of documents.
- Total pages.
- Number of pages flagged for OCR. For more information, see [Flagging Documents/Pages for OCR](#).
- Number of pages completed.

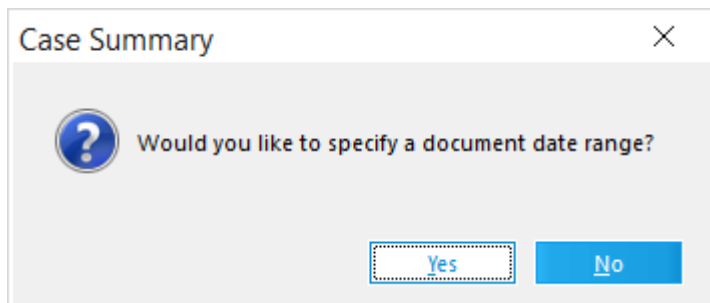


- ✎ This summary can be incorrect if invalid records or page counts exist in the database, both of which can be detected and/or corrected with the [Scan for Errors](#) functions.

To create a Case Summary report

1. On the **File** menu, click **Administration**, and then click **Case Summary**.

LAW prompts you to enter a date range for narrowing summary information.



2. Do one of the following:

- Click **No** to generate a report for all dates.

Or

- Click **Yes** to specify a date range. Use the calendar controls to specify a start and end date. These dates apply to document creation dates. After you have selected a data range, click **OK**.

The screenshot shows a dialog box titled "Select Date Range" with a close button (X) in the top right corner. It contains two calendar grids. The left grid is labeled "Start Date" and the right grid is labeled "End Date". Both grids show the month of June for the year 2020. The days of the week are abbreviated as S, M, T, W, T, F, S. In the "Start Date" grid, the date 17 is highlighted in yellow. In the "End Date" grid, the date 17 is also highlighted in yellow. Below the grids are two buttons: "OK" and "Cancel".

Deduplication Reports

The Deduplication report provides a summary and detailed view of deduplication information for the current case.

- If documents in the CloudNine™ LAW case were deduplicated using the ED Loader, Turbo Import, or CloudNine™ LAW's internal Deduplication Utility or if the documents were not deduplicated at all, the "Deduplication Report" will be available in the View Reports dialog.
- If the case was last deduplicated using the external Inter-Case Deduplication utility, then the "Inter-Case Deduplication Report" will be displayed in the report list. This report includes the same information as the Deduplication report, but includes data from any cases the current case was deduplicated against. This report does not list the case name at the top since the information may apply to more than one case.

[Report options](#)

In addition to the Global Settings, the following options are available for the two deduplication reports:

- **Display Custodian Details** - When set to True, the report will contain a "Custodians" section. All custodians in the case will be listed here and a duplicate summary will be included for each custodian. Set this option to False to exclude the Custodians section from the report.
- **Display Parent/Dup File List** - When set to True, the report will contain a "Parent/Duplicate File List" section which lists every parent and duplicate record (minus attachments) in the case(s), followed by duplicate totals.
- **Group File List By** - If the Parent/Duplicate File List is included in the report (see above option), the Group File List By option can be used to group the file list by parents or duplicate records.

Report contents

Two sections exist below the Summary header in the deduplication report: Process Summary and Duplicates.

Process Summary

In the Process Summary, the Total Records count represents the number of records in the current LAW case (and member cases if the report spans multiple cases).

The Processed count represents the number of records that have been deduplicated, while the Unprocessed count represents the number of records that have not been deduplicated (DupStatus = Null or U). Files that are ineligible for deduplication (i.e. images imported via raw image import) will also be included in the Unprocessed count.

Duplicates

The Duplicates section lists the duplicates and file size totals. The Total Duplicates count is the total number of records that have been flagged as duplicates (DupStatus=G or C). The "Dup. (non-att.)" count is the number of records that are duplicates (DupStatus=G or C) and may or may not have attachments. The "Dup. Atts" count is the number of records that are duplicates (DupStatus=G or C) and are attachments. For example, an e-mail item containing two attachments would be counted as 1 record for the Dup. (non-att.) section since it is the master duplicate of the family; then, the two attachments would be counted as 2 records for the Dup. Atts section since those records have received a duplicate status based on their parent record. The file sizes of the duplicate files in LAW are provided beside these totals in both MB and GB.

- If the Display Custodian Details option was set to True prior to creating the report, the Custodians section will appear below the Summary.

The Custodians section contains the same information as the Summary, but is the section is sorted by Custodian name and the data is broken down for each custodian in the associated LAW case(s). In the above example, nine total

records exist in the case with a Custodian field value of CustodianB and four of those records are duplicates (DupStatus=G or C).

- If the Display Parent/Dup File List option was set to True prior to creating the report, the Parent/Duplicate File List section will appear next.

This section contains a file listing of duplicates and their associated parent records for the associated LAW case(s). This file list can be useful for listing and/or locating duplicate records for each original duplicate record in the case. Attachment records are not included in this list. For each record, the report displays the DocID, Custodian, Path (original), and the DupStatus value. In the above image, the shaded rows represent the parent records (DupStatus=P) and the duplicates are listed below their respective parent records. If the Group File List By option was set to Duplicates, the duplicate(s) would appear first, followed by the parent record. Below the file list, the report will display a total count of global duplicates (DupStatus=G) and a total count of custodian-level duplicates (DupStatus=C).

ED Loader Session Report

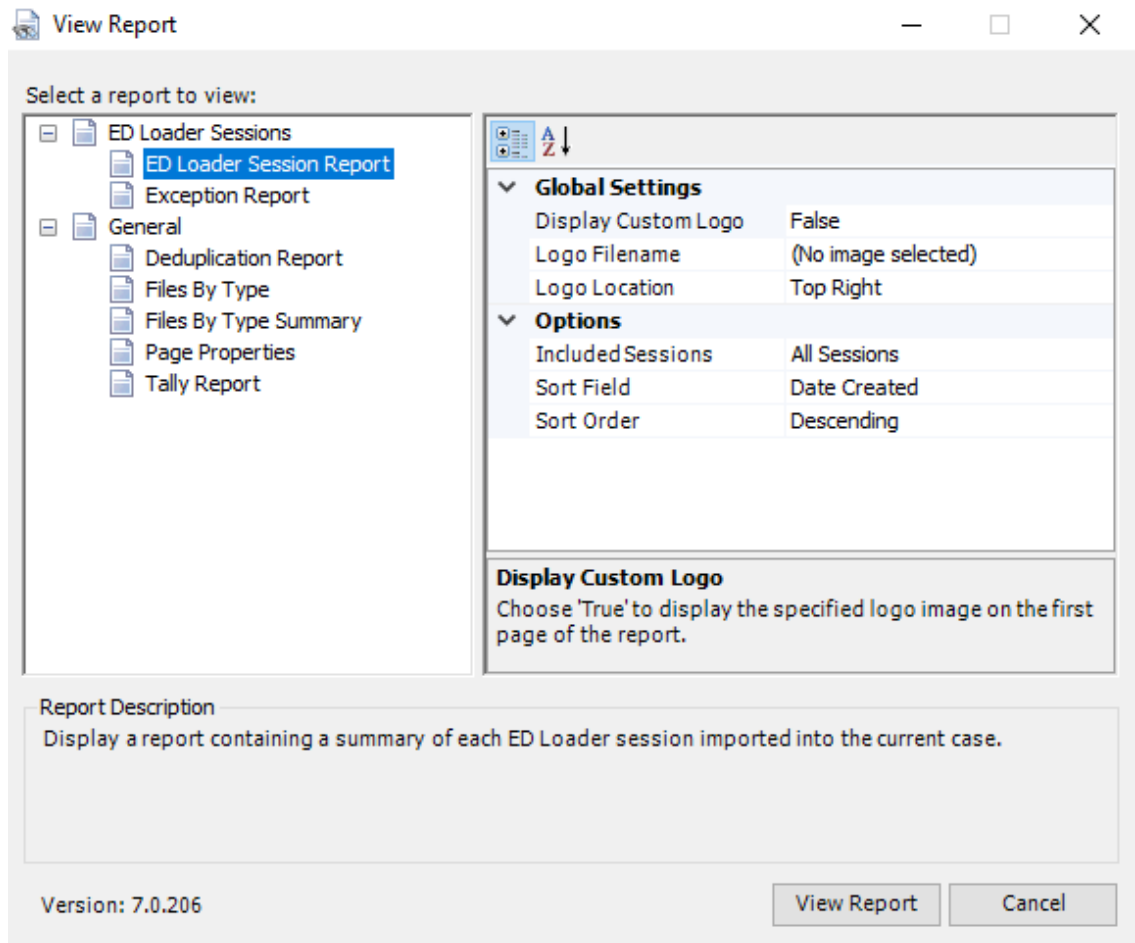
The ED Loader Session Report provides a summary of the records logged for each ED Loader Session imported into a case.

[To create an ED Loader Session Report](#)

Anytime after you run an ED Loader session, you can create a pre-formatted session report, suitable for reporting or billing purposes.

1. From the main window, on the **File** menu, click **Administration**, and then click **View Reports**.

The **View Report** dialog box appears.



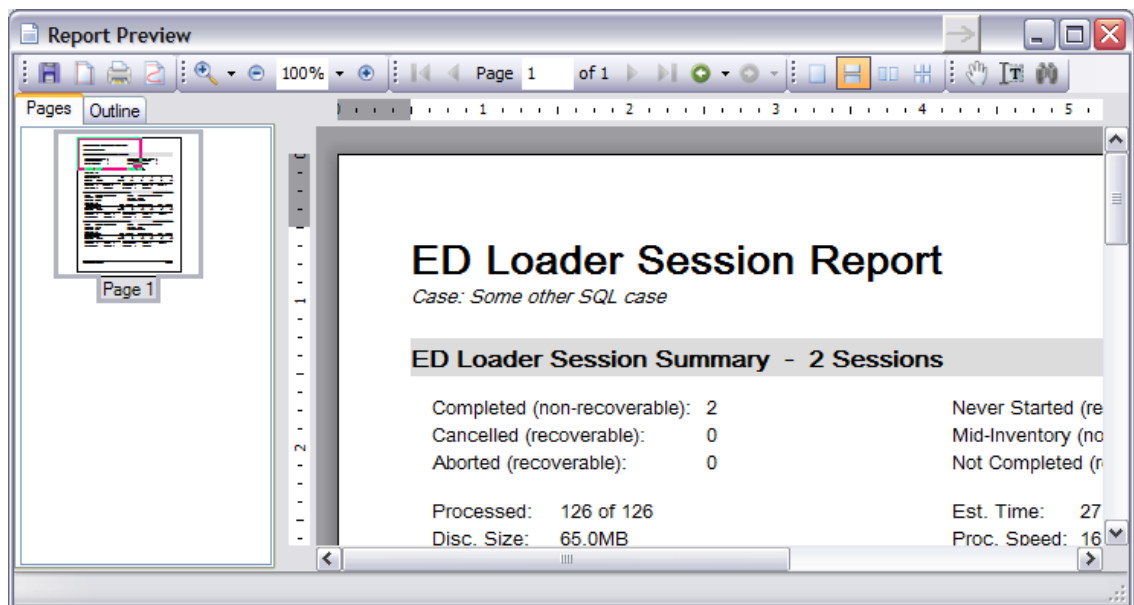
2. Click **ED Loader Session Report**.
3. Configure settings and options for the report, as needed:

Setting/option	Steps
Add a custom logo to the report.	<ol style="list-style-type: none"> 1. Click Display Custom Logo, and then select True. 2. Click Logo Filename field, and then click the selection button (...). 3. Browse to a bitmap file, JPG or GIF file, and then click Open. 4. Click Logo Location and then select: Top Right, Top Left, Bottom Right, or Bottom Left.
Select sessions to include in the report.	<ol style="list-style-type: none"> 1. Click Included Sessions field, and then click the selection button (...).

Setting /option	Steps
	2. In the Select Sessions dialog box, select each session to include in the report and then click OK .
Select a field by which to sort the report.	<ul style="list-style-type: none"> Click Sort Field, and then select Date Created or Session Label.
Specify a sort order.	<ul style="list-style-type: none"> Click Sort Order, and then select Descending, Ascending, or None.

4. Click **View Report**.

The **Report Viewer** opens with an **ED Loader Session Report** open for your review.



5. In the **Select Summary Database** dialog box, click a CloudNine™ LAW ED Summary file (*.EDSD) and then click **Open**.
6. Review the session report and view, print or save the report as needed.

If you choose to save the report, the following formats are available:

- C1 Document (*.c1d) (default)
- Adobe PDF (*.pdf)
- OpenXml Excel (C1Report) (*.xlsx)
- Microsoft Excel (C1Report) (*.xls)
- Rich text (C1Report) (*.rtf)
- Open XML Word (*.docx)
- HTML (C1Report) (*.htm)

- Enhanced metafile (*.emf)
- Compressed metafile (C1Report) (*.emz)
- Tiff image (*.tiff)
- Png image (*.png)
- Jpeg image (*.jpg)
- Gif image (*.gif)
- Bmp image (*.bmp)
- Plain text (C1Report) (*.txt)

Report contents

The ED Loader Session Report consists of four primary sections:

- Header Section
- Session Summary Section
- Session Detail Section(s)
- Footer Section

These sections are described as follows:

Header Section: The Header Section contains the title of the report along with the name of the currently active case in CloudNine™ LAW. If a logo image is specified to be displayed at the top of the report then the logo will appear in this section.

Session Summary Section: The summary section consists of a summary of the data fields contained in each session detail section along with a total number of sessions specified in the report. Note: if only one session is selected for the report, the summary section will not be displayed.

Session Detail Section(s): The session detail section contains the data specific to a certain ED Loader session imported into the current CloudNine™ LAW case. The name of the session assigned by the operator can be found in the grey bar at the top of each detail section followed by the session's ID and the created date of the session itself found in the tblEDSessions.ID table.

A definition of each field can be found below:

- **Status:** The current state of the session. Possible field values include: Completed (non-recoverable), Aborted (recoverable), Cancelled (recoverable), Not Completed (recoverable), Mid-Inventory (non-recoverable), and Never Started (recoverable, editable).
- **Creator:** Username of the operator who created the session followed by the Workstation the operator used to create the session.

- **Processed:** Is the number of items in the inventory list that have been processed.
- **Disc. Size:** The discovered size consists of the total number of MB's ED Loader was required to process while analyzing each item in the inventory. This value includes the file sizes from items such as zips, embedded items, e-mails, e-mail attachments, and other items that ED Loader may have processed during the analysis phase.
- **Disc. Items:** The total number of discoverable items found after processing the items listed in the inventory.
- **Est. Time:** ED Loader does not currently log the total amount of time spent importing a specific session so this calculation is an estimate based on the Created date field found in case's document table. The Created field consists of a time stamp of when the record was added to CloudNine™ LAW. By finding the minimum and maximum created dates for the records in a specific ED Loader session, the estimated processing time can be calculated.
- **Proc. Speed:** Calculates the average speed using the total number of documents found in the LAW case for the ED Loader session divided by the estimated time calculation. This is also an estimated value since the total processing time is only an estimate.
- **Session Contents**
 - **Written to LAW:** Displays the total number of records written to the LAW case for a specified session. This total will include duplicate records and/or records which qualify for a file type filter if the filter action is not set to 'Exclude'. So if the record was written to the LAW case, it will be included in this total.
 - **Total Size:** Displays the total file size of the records written to the LAW case.
 - **File Type List:** Displays a total file count and file size of the records written to LAW with the following file types...
 - E-Doc: Only E-Doc items and excludes attachments and archives.
 - Embedded: Only embedded items of parents that are E-Docs.
 - Archive: Only archive items that are not mail attachment items.
 - Archive Attachments: Only archive items that belong to archives that are not mail attachment items.
 - E-Mail: Only mail items by excluding E-Docs and embedded files. Includes native MSG and EML files.
 - E-Mail Attachments: Only mail attachment items whose parents are not E-Docs. Includes embedded items if the parent is an e-mail.
 - **Errors/Warnings:**
 - Processing Errors: Counts the number of processing errors occurred in the current session.
 - Commit Errors: Counts the number of database write errors occurred in the session.
 - Warnings: Counts the number of warnings logged for the session.
 - Incomplete: The number of records logged where the inventory status is either "Unprocessed" or "Processing".

- **Filters:**

- **Conditionally Excluded:** Number of records which were excluded because of being a mail store item or an empty (0 bytes) file.
- **File Type Filter:** Number of records found to match the specified file type filter. These records will be included in the total records written to LAW if the filter action is enabled to log the record.
- **Suspect:** Displays the number of records which appear to have suspect extensions.
- **Duplicates:** Counts the number of records found to be duplicates. The duplicate 'Action' must be set to log the records for these items to be included in the 'Written to LAW' calculation.
- **DeNist (NIST Filter):** The total number of records not written to LAW because of an exclusion caused by the NIST Filter.

Footer Section: The footer section is used to display a logo image if the bottom of the report location is specified. Also, the printed date and page count of the report exists in this section.

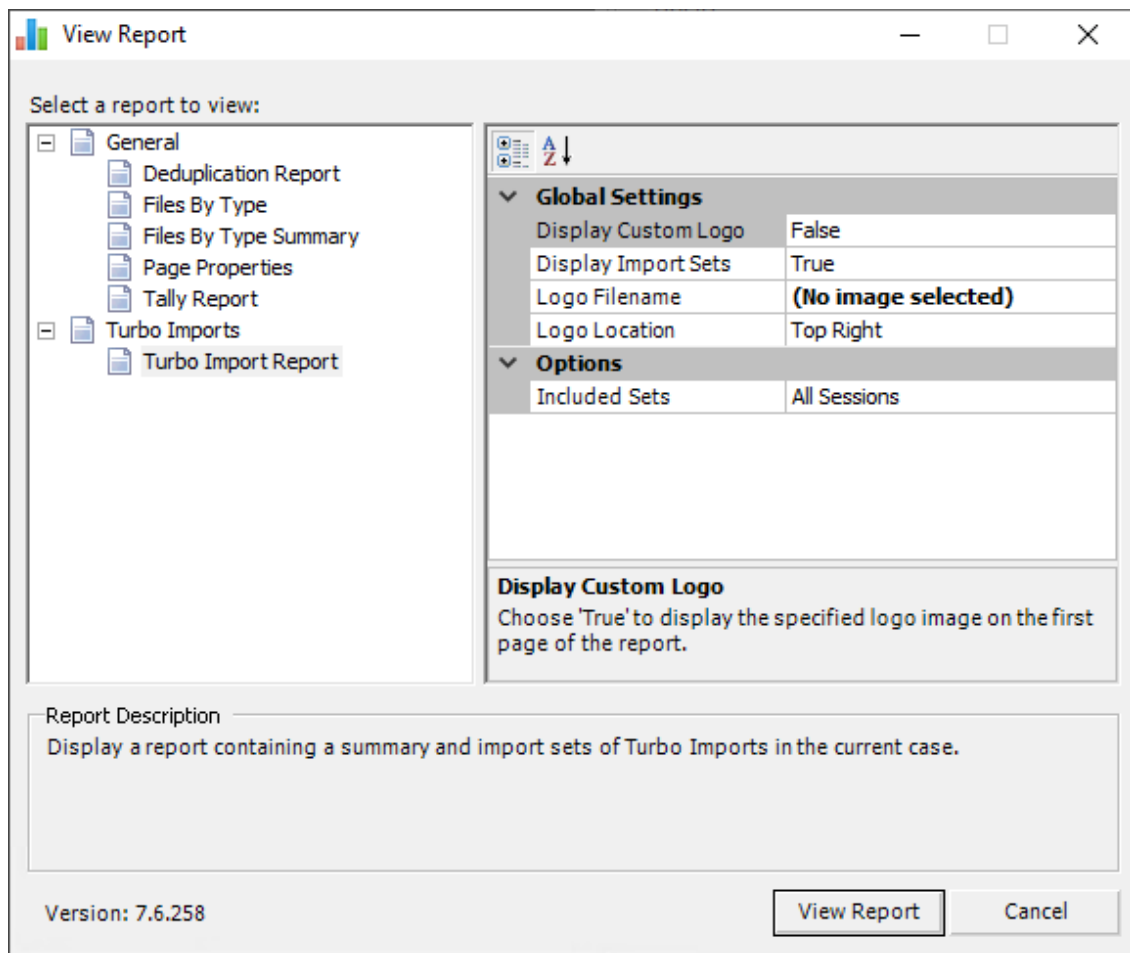
Turbo Import Report

The Turbo Import Report is a static report that serves as a snapshot for your imported data. As new data is imported, the import is updated to reflect new statistics; however, the report does not reflect deleted sources, custodians, or import sets.

[To create a Turbo Import Report](#)


Anytime after you run an Turbo Import, you can create a pre-formatted report, suitable for reporting or billing purposes or customize it.

1. From the main window, on the **File** menu, click **Administration**, and then click **View Reports**. The **View Report** dialog box appears.




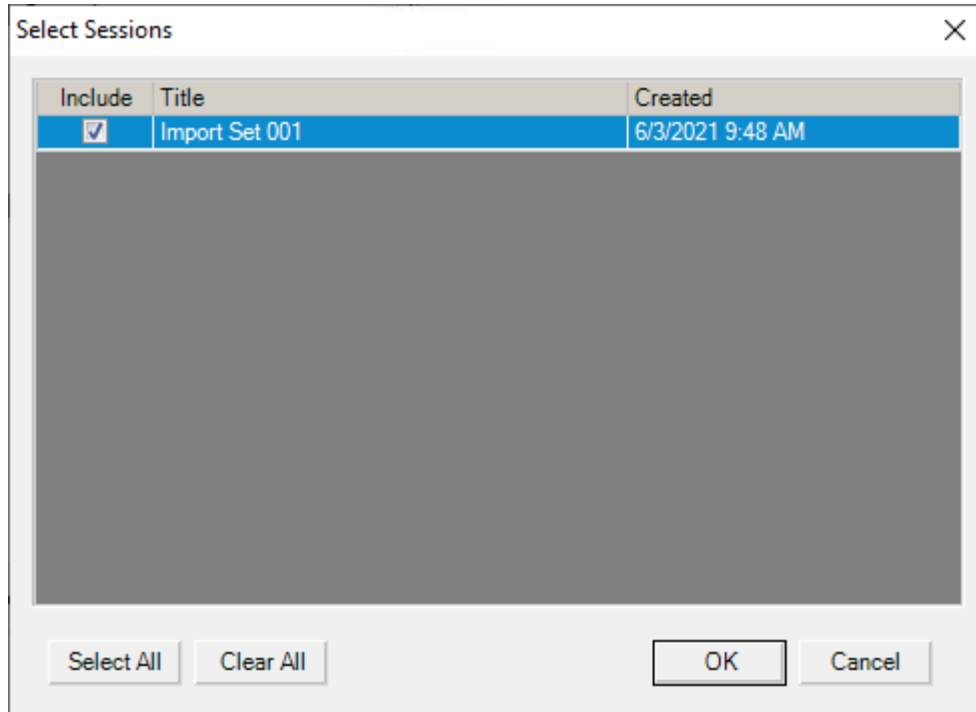
2. Click **Turbo Import Report**.
3. [Add a custom logo, as needed:](#)
 1. Click **Display Custom Logo**, and then select **True**.
 2. Click **Logo Filename** field, and then click the selection button (...).
 3. Browse to a bitmap file, JPG or GIF file, and then click **Open**.
 4. Click **Logo Location** and then select: **Top Right**, **Top Left**, **Bottom Right**, or **Bottom Left**.
4. [Options](#)

Included Sets - Select the Turbo Import set(s) to include in the report.

 The Included Sets option on the report will limit the report to only the import sets that the user selects. For example, if 3 import sets are

selected then the Summary section is the total for those 3 import sets only and each import set is reported in the subsequent sections. If no import sets are selected then the report will total up all the import sets and only display the summary section.

1. Click **All Sessions** and the **ellipses**  to configure the selected sets.
2. The Select Sessions window opens.



3. Select the sessions to be included in the report.
 - Click the include box by the desired sessions.
 - **Select All** - Selects all sessions.
 - **Clear All** - Clears all selections.
4. Click **OK** to save the changes and close the window.
5. Click **View Report**.

The **Report Preview** opens with **Turbo Import Report** for your review.

Turbo Import Report
Case: 6-3 testing

Turbo Import Summary - 1 Import Set

	Count	Size
Source Files	3	807.4KB
Expanded Items (Pre-Filter)	17	640.3KB
Processing Errors	0	
Total Items Excluded by Filters	0	0B
NIST	0	0B
FileType	0	0B
Duplicates	2	60.5KB
Total Items Written to LAW Case	17	640.3KB

By Import Set

Import Set : Import Set 001 6/3/2021 9:48:57 AM

	Count	Size
Source Files	3	807.4KB
Expanded Items (Pre-Filter)	17	640.3KB
Processing Errors	0	
Total Items Excluded by Filters	0	0B
NIST	0	0B
FileType	0	0B
Duplicates	2	60.5KB
Total Items Written to LAW Case	17	640.3KB

Source Files:
Account of source files that were imported into the system. This includes PSTs, Archives, Loose Files, etc.

Expanded Items (Pre-Filter):
This is the total of expanded records before any filtering has been applied to the import set.

Processing Errors:
Count of critical and processing errors. This includes password encryption warnings and other scenarios that prevented data from being extracted from the source.

Total Items Excluded by Filters:
This is the count and size of items that were not written to the LAW database due to user-specified filter exclusions.
*FYI: The Filter Breakdown counts may reflect items based on multiple filter conditions and may be counted more than once in the breakout section. The "Total Items Excluded by Filters" line does not double count.

Total Items Written to LAW:
The number and size of items that were written to the LAW database. This is a POST-FILTER count.

Printed on 6/3/2021 2:08:48 PM Page 1 of 1

6. Review the session report and view, print or save the report as needed.

If you choose to save the report, the following formats are available:

- C1 Open XML Document (*.c1dx) (default)
- C1 Binary Document (*.c1db)
- C1 Document (*.c1d)
- Adobe PDF (*.pdf)

- OpenXml Excel (C1Report) (*.xlsx)
- Microsoft Excel (C1Report) (*.xls)
- Rich text (C1Report) (*.rtf)
- Open XML Word (*.docx)
- HTML (C1Report) (*.htm)
- Enhanced metafile (*.emf)
- Compressed metafile (C1Report) (*.emz)
- Png image (*.png)
- Jpeg image (*.jpg)
- Gif image (*.gif)
- Bmp image (*.bmp)
- Plain text (C1Report) (*.txt)

Turbo Import Report contents

The Turbo Import Report consists of four primary sections:

- Header Section - title of the report along with the name of the currently active case in CloudNine™ LAW. If a logo image is specified to be displayed at the top of the report then the logo will appear in this section.
- Turbo Import Summary section - summary of all records imported via Turbo Import into the case. The total count of selected Import Set(s) is included in the header. See more information about this summary section below.
- Turbo Import Summary by Import Set(s)- summary of all records imported during a specified import set. Includes the Import Set name and date/time that the Import Set commenced (time is based on the time zone for Turbo Import). See more information about this summary section below.
- Footer Section - used to display a logo image if the bottom of the report location is specified. Also, the printed date and page count of the report exists in this section.

Summary Section Details:

Source Files:

A count of source files that were imported into the system. This includes PSTs, Archives, Loose Files, etc.

Expanded Items (Pre-Filter):

This is the total of expanded records before any filtering has been applied to the import set. (This does not include archive and pst containers in the count.)

Processing Errors:

Count of critical and processing errors. This includes password encryption warnings and other scenarios that prevented data from being extracted from the source.

Total Items Excluded by Filters:

This is the count and size of items that were not written to the LAW database due to user-specified filter exclusions. (Only items selected to exclude will be counted.) See [Deduplication Reports](#), [Files by Type Report](#), or [Files by Type Summary Report](#) for additional reports.

- NIST (NIST Filter): The total number of records not written to LAW because of an exclusion caused by the NIST Filter.
- File Type (File Type Filter): Number of items not written to LAW because their file type matched a file type to exclude in the File Type Management Database.
- Duplicates: Counts the total number of records found to be duplicates and not written to LAW. The duplicate 'Action' must be set to exclude the records for these items to be counted here and will be excluded in the 'Written to LAW' calculation.

*FYI: The Filter Breakdown counts may reflect items based on multiple filter conditions and may be counted more than once in the breakdown section. The "Total Items Excluded by Filters" line does not double count.

Total Items Written to LAW Case:

The number and size of items that were written to the LAW database. This is a POST-FILTER count.

Exception Report

The Exception report provides both a summary and a detailed overview of ED Loader session exception data. This report focuses on records that were filtered or received errors or warnings during the ED Loader import process.

[Report options](#)

In addition to the Global Settings, the following option is available for the **Exception** report:

Included Sessions - By default, this option will be set to **All Sessions**, meaning all sessions in the current case will be included in the report.

- Click the ellipsis button in the second column to launch the **Select Sessions** dialog to select specific sessions.
- Click on the **Title** or **Created** column header to sort the session list.

Report contents

The **Summary** section of the **Exception** report provides three sets of information: **Item Summary**, **Filters**, and **Errors**.

The **Item Summary** displays a count of items processed (prior to expansion), items discovered (after expansion), records written to the CloudNine™ LAW case database (after expansion, filtering, errors, etc.), and records that were not written due to errors or filtering. Post-process file sizes are also included for the last three items mentioned.

- The **Filters** section displays a list of the ED Loader filters (conditional, NIST/NSRL, deduplication, and file type) and provides a count and post-process file size for each.
- The **Errors** section displays the total counts for processing errors (errors that occurred during processing, but records were likely still written to the case database), commit errors (errors that occurred during processing and prevented the record from being written to the case database), warnings, and incomplete records (records that will be listed in the Incomplete tab in the ED Loader's Session Viewer).
- The **Details** section of the report provides a more detailed view of filtered records, filter actions, a list of warnings and error messages, and a list of sessions included in the report.

Files By Type Report

This report contains a list of native files associated with electronic discovery records in a CloudNine™ LAW case. The records will be grouped by their file type description, such as Adobe Portable Document Format (PDF) or HyperText Markup Language (HTML). Non-ED records may optionally be included in the report.

Report options

In addition to the Global Settings, the following option is available for the **Files By Type** report:

Document Range - When the range is set to All Documents, the report will span the entire CloudNine™ LAW case. The Current Record Set option will only be available if one of the grid displays are active when launching from File > Administration or when launching from the standalone grid display's Tool menu (View Reports).

File Type Filter - Three filters for the report are available:

All File Types - This option includes both supported and unsupported file types in the report. The term "supported" refers to files with a valid source application

assigned for printing, such as Adobe Acrobat or Microsoft Word. Non-ED records may be included depending on the state of that setting (see #2).

Supported File Types - This option includes supported file types only in the report. Non-ED records may be included depending on the state of that setting (see #2).

Unsupported File Types - This option includes unsupported file types only in the report. Non-ED records are not currently included in this report, regardless of the state of the "**Include Non-ED Records**" setting.

Include Non-ED Records - When set to True, non-ED records such as scanned documents or images imported via load file will be included in the report, provided the **All File Types** or **Supported File Types** filter is selected. These records will be grouped under the <Non-ED Records> header.

Report contents

The contents of this report will vary depending on the selected options.

The report groups the entries by their file description or by the <Non-ED Records> header for non-ED records, such as scanned documents. The group header will also display the total file count for that type, the number of pages (if available), and the total file size. The page counts and file sizes are also available for each individual file. The Pages value is pulled from the PgCount field in the LAW case. If the PgCount is not greater than zero, LAW will check the EDPages field and use that value. The file sizes are post-process file sizes.

Files By Type Summary Report

The Files By Type Summary report provides a condensed version of the Files By Type report by providing native file counts and sizes per source application. This report does not include a listing of every native file path, which is the key difference between the Files By Type Summary and the Files By Type report.

Report options

In addition to the Global Settings, the following option is available for the Files By Type report:

Document Range - When the range is set to All Documents, the report will span the entire CloudNine™ LAW case. The **Current Record Set** option will only be available if one of the grid displays are active when launching from File > Administration or when launching from the standalone grid display's Tool menu (View Reports).

File Type Filter - Three filters for the report are available:

All File Types - This option includes both supported and unsupported file types in the report. The term "supported" refers to files with a valid source application assigned for printing, such as Adobe Acrobat or Microsoft Word. Non-ED records may be included depending on the state of that setting (see #2).

Supported File Types - This option includes supported file types only in the report. Non-ED records may be included depending on the state of that setting (see #2).

Unsupported File Types - This option includes unsupported file types only in the report. Non-ED records may be included depending on the state of that setting (see #2).

Include Non-ED Records - When set to True, non-ED records such as scanned images or images imported via load file, will be included in the report.


Report contents

The contents of this report will vary depending on the selected options. This report shows a listing of each unique file type included in the case. For each file type, the report provides a total file count, the total number of pages, and the total file size (post-process). The Pages value is pulled from the PgCount field in the LAW case. If the PgCount equals zero, LAW will check the EDPages field and use that value.

Folder Summary Report

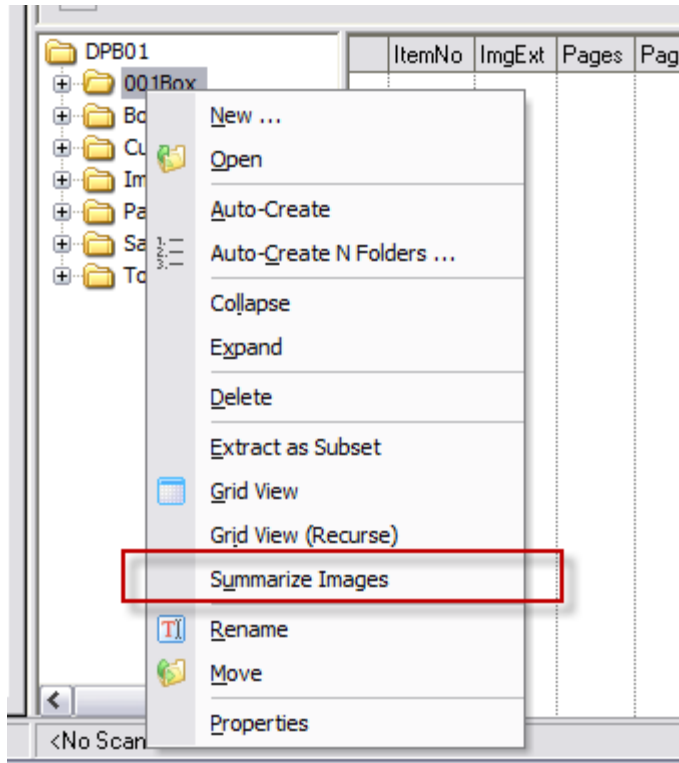
The folder summary report analyses a folder and generates a count of the following:

- Documents scanned in a folder.
- Total number of pages contained within the folder.
- Total area of images.

 Summarizing images at the folder level will often take longer than other summaries because of the area of all images must be totalled. The total area is often used for billing of oversized images.

To create a folder summary

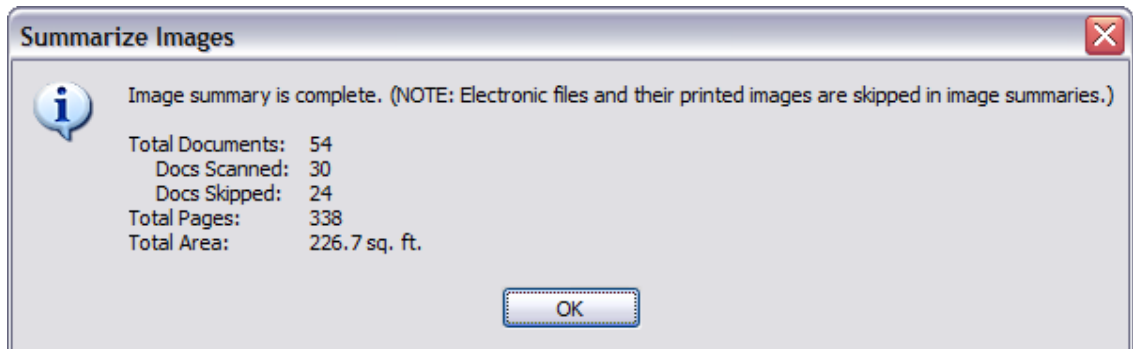
1. In the main window, within the tree-view, select a folder to summarize.
2. Do one of the following:
 - In the main window, on the **Folder** menu click **Summarize Images**.
 - Or right-click the tree-view and then select **Summarize Images**.



A status bar appears in the window title bar that tracks the progress of the image summary operation.

- If necessary, press **ESC** to cancel.

When complete, a **Summarize Images** dialog appears.



3. Take note of the folder statistics you need and then click **OK**.

The **Summarize Images** dialog closes.

Page Properties Report

CloudNine™ LAW can capture the source, size, and color information at a page level for images in a case. The reporting tool utilizes this information to provide tallies of each property for the images in a case and output the data to the Page Properties report.

Report options

In addition to the Global Settings, the following options are available for the Page Properties report:

- **Document Range** - When the range is set to All Documents, the report will span the entire LAW case. The Current Record Set option will only be available if one of the grid displays are active when launching from File > Administration or when launching from the standalone grid display's Tool menu (View Reports).
- **Group By Field (Primary)** - Choose from one of the following options: Page Source, Page Size, or Page Color. The report will be grouped by the selected field.
- **Group By Field (Y-Axis)** - Choose from one of the following options: Page Source, Page Size, or Page Color. The values in the selected field will appear in the Y-axis. The same field cannot be selected for both the Primary and Y-Axis grouping options.

Report contents

The report layout will vary depending on the fields selected for the primary and Y-axis grouping.

Since the above report is grouped by color, the primary sections are listed as Black & White, Color, and Unknown Color, as those were the colors found in this particular case. Within these sections, the Y-axis holds the various page sizes that were found in the LAW case. Totals for the page sizes or Y-axis fields are located at the end of the row (down the right side of the report). The Source data (i.e. Feeder) and totals are listed horizontally in each section.



- 📌 For more information on Page Properties report data see [Tracking Page Source, Size, and Color](#).

Tally Report

The Tally report can be used to produce a report listing the unique values present in a system field or in a user-defined index field followed by the total number of times that unique value exists in the selected index field.

Report options

In addition to the Global Settings, the following options are available for the Tally report:

- **Display Custodian Details** - When set to True, the Tally report will be grouped by any custodians that exist in the current case.
-  If the current case is not ED-enabled, Display Custodian Details will not be available.
- **Document Range** - When the range is set to **All Documents**, the report will span the entire CloudNine™ LAW case. The **Current Record Set** option will only be available if one of the grid displays are active when started from the **File** menu, **Administration** item, or when launching from the standalone grid display's Tool menu (View Reports).
- **Field To Tally** - Select the field to be tallied in the report from this drop-down list. Most system fields and user-defined fields will be listed here - the following types of fields are excluded from this list: page-level fields, fields with the Unique property applied, auto-increment fields, and any field starting with the character "_" (underscore). Field values containing delimited lists such as "A; B; C" will be tallied as a single unique value rather than individual items.
-  While memo fields are included in the Field To Tally list, the data will automatically be truncated to 255 characters in the report.
- **Number of Columns** - The data in the report can be displayed in 1, 2, or 3 columns on each page of the report.
- **Sort Field** - The following two options are available for sorting the data in the report: Field Value or Totals. If Field Values is selected, the data will be sorted alphabetically based on the values located in the selected tally field. If Totals is selected, the data will be sorted based on the tally results for each field value.
- **Sort Order** - This option is used to sort the data in the "Sort Field" Ascending or Descending in the report. Choose None to avoid applying a specific sort order.

Report contents

The following Tally report sample is set to display custodian details and the tally field is set to DocExt, as indicated in the header below the LAW case name.

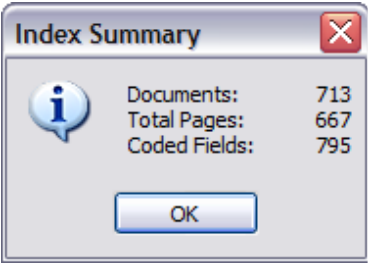
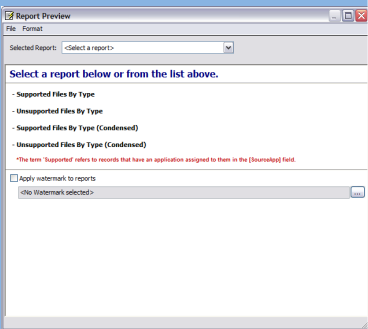
The number next to the custodian indicates the number of unique field values for that custodian. The number to the right in the heading indicates the total number of field values in the tally field for each custodian. The count of each unique value is displayed to the right of the value below the section heading. For example, in the above report, five records exist with a value of "CustodianA" in the Custodian field and a value of "doc" in the DocExt field. If the tally field does not contain a value for any of the selected documents, the report will include a <Null> entry.

Using Grids for Reporting

You can use the standalone grid to generate reports that apply to coding and to the results of queries in general. You can also use grids to create reports of the import results from ED Loader sessions or Turbo Imports.

To generate reports from standalone grids

If you need more detail than the Case Summary report provides, consider using either of the following reports:

Report type	Description	Steps to run
<p>The summary function in the standalone grid display</p> 	<p>Provides the number of fields coded and/or a summary on a specific set of documents that can be identified by a query.</p>	<ol style="list-style-type: none"> 1. In the main window, on the Tools menu, click Display All Records. 2. The standalone grid opens. 3. In the grid on the Tools menu, click Summary.
<p>ED Reports in the standalone grid</p> 	<p>Provides electronic discovery reports based on data loaded via ED Loader or Turbo Import.</p>	<ol style="list-style-type: none"> 1. In the main window, on the Tools menu, click Display All Records. 2. The standalone grid opens. 3. In the grid on the Tools menu, click ED Reports.

CloudNine™ LAW

Administration Guide

Reference Information

Chapter

3

Reference Information

Languages

LAW can recognize the languages that exist in imported documents. For more information see: Text Extraction. The languages recognized are listed in the following table:

Supported Languages			
LANG_AFIKAANS	LANG_FRENCH	LANG_LUXEMBOURGISH	LANG_SOMALI
LANG_ALBANIAN	LANG_FRISIAN	LANG_MACEDONIAN	LANG_SORBIAN
LANG_ALSATIAN	LANG_FULFULDE	LANG_MALAY	LANG_SOTHO
LANG_AMHARIC	LANG_GALICIAN	LANG_MALAYALAM	LANG_SPANISH
LANG_ARABIC	LANG_GEORGIAN	LANG_MALTESE	LANG_SWAHILI
LANG_ARMENIAN	LANG_GERMAN	LANG_MANIPURI	LANG_SWEDISH
LANG_ASSAMESE	LANG_GREEK	LANG_MAORI	LANG_SYRIAC
LANG_AZERI	LANG_GREENLANDIC	LANG_MAPUDUNGUN	LANG_TAGALOG
LANG_AZERI_CYRILLIC	LANG_GUARANI	LANG_MARATHI	LANG_TAJIK
LANG_AZERI_LATIN	LANG_GUJARATI	LANG_MOHAWK	LANG_TAMAZIGHT
LANG_BASHKIR	LANG_HAUSA	LANG_MONGOLIAN	LANG_TAMIL
LANG_BASQUE	LANG_HAWAIIAN	LANG_NEPALI	LANG_TATAR
LANG_BELARUSIAN	LANG_HEBREW	LANG_NORWEGIAN	LANG_TELUGU
LANG_BENGALI	LANG_HINDI	LANG_NORWEGIAN_BOKMAL	LANG_THAI
LANG_BRETON	LANG_HUNGARIAN	LANG_NORWEGIAN_NYNORS K	LANG_TIBETAN
LANG_BULGARIAN	LANG_IBIBIO	LANG_OCCITAN	LANG_TIGRIGNA
LANG_BURMESE	LANG_ICELANDIC	LANG_ORIYA	LANG_TSONGA
LANG_CAMBODIAN	LANG_IGBO	LANG_OROMO	LANG_TSWANA

Supported Languages			
LANG_CATALAN	LANG_INDONESIAN	LANG_PAPIAMENTU	LANG_TURKISH
LANG_CHEROKEE	LANG_INUKTITUT	LANG_PASHTO	LANG_TURKMEN
LANG_CHINESE	LANG_IRISH	LANG_POLISH	LANG_UIGHUR
LANG_CHINESE_SIMPLIFIED	LANG_ITALIAN	LANG_PORTUGUESE	LANG_UKRAINIAN
LANG_CHINESE_TRADITIONAL	LANG_JAPANESE	LANG_PUNJABI	LANG_URDU
LANG_CORSICAN	LANG_KANNADA	LANG_QUECHUA	LANG_UZBEK
LANG_CROATIAN	LANG_KANURI	LANG_ROMANSH	LANG_UZBEK_CYRILLIC
LANG_CZECH	LANG_KASHMIRI	LANG_ROMANIAN	LANG_UZBEK_LATIN
LANG_DANISH	LANG_KAZAK	LANG_RUSSIAN	LANG_VENDA
LANG_DARI	LANG_KICHE	LANG_SAMI	LANG_VIETNAMESE
LANG_DIVEHI	LANG_KINYARWANDA	LANG_SANSKRIT	LANG_WELSH
LANG_DUTCH	LANG_KONKANI	LANG_SERBIAN	LANG_WOLOF
LANG_EDO	LANG_KOREAN	LANG_SERBIAN_CYRILLIC	LANG_XHOSA
LANG_ENGLISH	LANG_KYRGYZ	LANG_SERBIAN_LATIN	LANG_YAKUT
LANG_ESTONIAN	LANG_LAOTHIAN	LANG_SINDHI	LANG_YI
LANG_FAEROESE	LANG_LATIN	LANG_SINHALESE	LANG_YIDDISH
LANG_FARSI	LANG_LATVIAN	LANG_SLOVAK	LANG_YORUBA
LANG_FINNISH	LANG_LITHUANIAN	LANG_SLOVENIAN	LANG_ZULU

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: Load er	ED: TIFF	Endor se	Full Text Indexi ng	Near- Duplic ate & Email Threa d Analysi s	OCR	OCR Exper OpenR TK	OC R 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
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
	EXISTING PAGE(S)				X														X
	E-DOCUMENT(S) *requires both Edit and ED Loader					X		X											
	SCANNED DOCUMENT					X													X
	DELETE					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	X
LAST PAGE	X	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	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	X
PROPERTIES	X	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	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	X
OCR											X	X	X		
TIFF CONVERSION							X								
UPDATE PAGE DATA	X	X	X	X	X	X	X	X	X		X	X	X	X	X
DISTRIBUTED BATCH	X	X	X	X	X	X	X	X	X		X	X	X	X	X

	PROCESSING														
	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

Field Descriptions - LAW

For a downloadable copy of Field Descriptions, see [CloudNine™_LAW_Field_Descriptions](#).

Field Name	Field Description	Possible Values/Examples	Scope	Field Type	Table
_DocCat	Numeric value indicating type of document. Attributes may be easily searched using the Query Builder in CloudNine™ LAW.	ex: 521	Doc	Numeric	tblDoc
_DupID	Child duplicates have ID value of parent dup. Parents have their own ID value (from LAW ID for ED Loader cases, EDA ID for Turbo Import cases, or external deduplication database tblDupLog.DupID), allowing grouping of the field to locate dup families. Records that are not duplicates or not tested will have a value of 0 in this field.	0=Not dup or not tested >0=Dup or parent dup	Doc	Numeric	tblDoc
_DupMethod	Indicates which key, or hash, was used when testing the dup state of the record.	1=MD5Hash 2=Sha1Hash 129=MD5Hash - Deduplicated using Inter-Case Deduplication utility 130=Sha1Hash - Deduplicated using Inter-Case Deduplication utility	Doc	TinyInt	tblDoc
_FTIndex	Displays status of full text indexing using numeric values.	0=No text is available for indexing 1=Document's text is ready for indexing	Doc	TinyInt	tblDoc

Field Name	Field Description	Possible Values/Examples	Scope	Field Type	Table
		2=Record was flagged for reindexing, but has not yet been reindexed 3=Document's text has been indexed.			
_GUID	<p>The globally unique identifier (GUID) for a document in CloudNine™ LAW.</p> <p>The GUID field is populated when a file is imported into LAW using the ED Loader, Turbo Import, LAW case, or load file import.</p> <p>During imports using ED Loader or Turbo Import, each file is automatically assigned a unique GUID.</p> <p>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.</p>	B389E85F-8026-4247-AF95-019DEB696CFF 37CA99B2-3A38-4793-8B6F-C4331DCEDA4B	Doc	Text	tblDoc

Field Name	Field Description	Possible Values/Examples	Scope	Field Type	Table
	<p>GUIDs can also be generated and populate the _GUID field using the Generate document GUIDs function on the Tools menu on the main form. (Populating the _GUID Field)</p> <p>The GUID value cannot be modified.</p>				
_PS_ARCX	Numeric success/failure indicator tied to archive extraction process.	<p>0=Not executed.</p> <p>1=Successfully executed.</p> <p>2=Error occurred, see ErrorMsg field.</p>	Doc	TinyInt	tblDoc
_PS_ATTX	Numeric success/failure indicator tied to attachment extraction process (set for parent and child).	<p>0=Not executed.</p> <p>1=Successfully executed.</p> <p>2=Error occurred, see ErrorMsg field.</p>	Doc	TinyInt	tblDoc
_PS_DIGESTX	Numeric success/failure indicator tied to process of hashing native file.	<p>0=Not executed.</p> <p>1=Successfully executed.</p> <p>2=Error occurred, see ErrorMsg field.</p>	Doc	TinyInt	tblDoc
_PS_EMBEDX	Numeric success/failure indicator tied to extraction of embedded images in e-mail.	<p>0=Not executed.</p> <p>1=Successfully executed.</p>	Doc	TinyInt	tblDoc

Field Name	Field Description	Possible Values/Examples	Scope	Field Type	Table
		2=Error occurred, see ErrorMsg field.			
_PS_MDX	Numeric success/failure indicator tied to metadata extraction process.	0=Not executed. 1=Successfully executed. 2=Error occurred, see ErrorMsg field.	Doc	TinyInt	tblDoc
_PS_NATIVE	Numeric success/failure indicator tied to native file extraction process.	0=Not executed. 1=Successfully executed. 2=Error occurred, see ErrorMsg field.	Doc	TinyInt	tblDoc
_PS_OLEX	Numeric success/failure indicator tied to OLE extraction process (set for parent and child).	0=Not executed. 1=Successfully executed. 2=Error occurred, see ErrorMsg field.	Doc	TinyInt	tblDoc
Application Name	Application Name field value pulled from metadata of the native file.	ex: Microsoft Office Word	Doc	Text	tblDoc
Attach	Populates parent records with original filenames of all attached records, separated by semi-colons.	ex: Attach1.doc;Attach2.xls	Doc	Memo	tblDoc
AttachLvl	Numeric values indicate if a record is a parent, attachment, or neither.	0=Indicates parent record, record that does not have attachments, or	Doc	Numeric	tblDoc

Field Name	Field Description	Possible Values/Examples	Scope	Field Type	Table
		record that is not an attachment. 1=Indicates record is an attachment.			
Attachmt	Populates parent records with BegDoc# of each attached record, separated by semi-colons.	ex: ABC0002;ABC0003	Doc	Text	tblAttach
AttachPID	Populates parent records and attachments with the ID number of the parent record.	0=Indicates record is not a parent and not an attachment. >0=Any value greater than zero will indicate that a record is either a parent or an attachment. The value is equal to the ID value of the parent record, so parents and their attachments will have the same value.	Doc	Numeric	tblDoc
AttRange	Stores BegDoc# of parent record and EndDoc# of last attachment record, separated by a hyphen. Populated for all records in the family (parent and attachment(s)).	ex: ABC0001 - ABC0008	Doc	Text	tblAttach
Author	Author field value pulled from metadata of the native file.		Doc	Text	tblDoc

Field Name	Field Description	Possible Values/Examples	Scope	Field Type	Table
BatchStation	Name of the computer that ran a batch process on a document.	ex: Laptop01	Doc	Text	tblDoc
BatesRng	(Exports only - does not exist in LAW case database) Lists the PageID of the first page of a document and the PageID of the last page of a document, separated by a hyphen.	ex: ABC0001 - ABC0005	Doc	N/A	N/A
BCC	Recipient(s) of "Blind Carbon Copies" of the e-mail message.		Doc	Memo	tblDoc
BegAttach	Displays BegDoc# of parent record. When exported, the values will match the field used as the Image Tag.	ex: ABC0001	Doc	Text	tblAttach
BegDoc#	Displays page ID of first page in a document.	ex: ABC0001	Doc	Text	tblDoc
Bookmark Name	Names of bookmarks in an Adobe Acrobat PDF file.		Doc	Text	tblDoc
Categories	Category field value pulled from metadata of the native file.	ex: Software	Doc	Memo	tblDoc
CC	Recipient(s) of "Carbon Copies" of the e-mail message.		Doc	Memo	tblDoc
Comments	Comments field value pulled from the metadata of the native file.		Doc	Memo	tblDoc
Conversation	Normalized subject of e-mails.		Doc	Memo	tblDoc
ConversationIndex	E-mail thread identification.	ex: 01C72AC4CB0F C3953C5FA8E1	Doc	Memo	tblDoc

Field Name	Field Description	Possible Values/Examples	Scope	Field Type	Table
		49389B522EFF 595EF9FB			
Created	Stores date and time the record was created in CloudNine™ LAW.		Doc	Date	tblDoc
Custodian	Lookup field, displays textual value of custodian assigned by user in ED Loader or Turbo Import.		Doc	Lookup	tblCustodians.Name
DateAccessed	Stores the last accessed date from the properties of the file. Note: Many functions will cause this value to be updated by Windows (e.g., viewing file properties, dragging and dropping) and therefore this date will often reflect the current date. To avoid this situation, run the DisableLastAccessUpdate.reg file located in the \LAW50 folder (same folder as law50.exe) prior to handling the data (requires reboot after running). This will prevent updates to this value (applies to LAW TimeAccessed field also) by Windows. To re-enable the registry setting, run the EnableLastAccessUpdate.reg file located in the same folder.		Doc	Date	tblDoc
DateAppEnd	Appointment end date for calendar items.		Doc	Date	tblDoc
DateAppStart	Appointment start date for calendar items.		Doc	Date	tblDoc

Field Name	Field Description	Possible Values/Examples	Scope	Field Type	Table
DateCreated	Creation date of the native file.		Doc	Date	tblDoc
DateLastModified	Date the native file was last modified.		Doc	Date	tblDoc
DateLastPrinted	Date the native file was last printed (Office documents).		Doc	Date	tblDoc
DateReceived	Received date of an e-mail message.		Doc	Date	tblDoc
DateSent	Sent date of an e-mail message.		Doc	Date	tblDoc
DelivReceipt	Delivery receipt request notification.	Y=Yes (delivery receipt requested) N=No <null>=Attachments and e-docs will have null value.	Doc	Text	tblDoc
DocExt	File extension of native file. May show original extension or suggested extension, depending on state of "auto-assign ext." option in ED Loader or Turbo Import.	ex: DOC	Doc	Text	tblDoc
DocID	For files imported using ED Loader or Turbo Import, the Document ID value assigned during import. Starting number specified by user in DocID Seed field in Sources tab in ED Loader or Turbo Import. For files imported using CloudNine™ Explore using the LAW Direct	ex: ID00001 ex: 00000150	Doc	Text	tblDoc

Field Name	Field Description	Possible Values/Examples	Scope	Field Type	Table
	export, the Numbering Seed value automatically assigned by CloudNine™ Explore during the process.				
DocOrder	Numeric value indicating order of documents in each folder.	ex: 3	Doc	Text	tblDoc
DupCustNames	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.	FirstCustodianName; SecondCustodianName	Doc	Memo	tblDoc
DupCustPaths	Source path to each duplicate version of the original record. Populated for parent/original records only (DupStatus=P) after running Tools > Apply Duplicate Relationships.	D:\Docs\; E:\Docs2	Doc	Memo	tblDoc
DupParentName	Custodian name of the original record. Populated for duplicate records only (DupStatus=G or C) after running Tools > Apply Duplicate Relationships.	ParentCustodianName	Doc	Memo	tblDoc
DupParentPath	Name of the custodian containing the original record. Populated for duplicate records only (DupStatus=G or C) after running Tools > Apply Duplicate Relationships.	C:\Docs\	Doc	Memo	tblDoc

Field Name	Field Description	Possible Values/Examples	Scope	Field Type	Table
DupStatus	Displays dedup status with single character value (see dedup documentation for more info).	N=Not a duplicate G=Global-level duplicate C=Custodian-level duplicate P=Parent duplicate	Doc	Text	tblIDoc
EdaID	Populated for parent items exported from CloudNine™ Explore or Turbo Import. Pulled from InventoryItems.ID in the CloudNine™ Explore case database.	0=Indicates non-CloudNine™ Explore record or not a Turbo Import. >0=ID of record in the CloudNine™ Explore case. Attachments in LAW will have the same EDA ID of the parent record. If a Turbo Import, the EDAIDs are non-sequential.	Doc	Numeric	tblIDoc
EDFolder	Full path to source files (if e-docs or loose e-mail) or folder path contained with a mail store (if NSF or PST).	ex(1): Personal Folders\Inbox ex(2): C:\EDOCS	Doc	Lookup	tblFolders.Name
EDPages	Stores the number of printed pages following the e-Print batch process.	ex: 75	Doc	Numeric	tblIDoc
EDSession	For ED Loader imports, stores session name, as assigned by user in ED Loader's Session Label field.	ED Loader ex: Session Created On 1/4/2007 12:48:23 PM	DocB	Lookup	tblSessions.Title

Field Name	Field Description	Possible Values/Examples	Scope	Field Type	Table
	For imports from CloudNine™ Explore LAW Direct export or Turbo Import, field is populated with: [export name] on [Explore case name] (YYYY/MM/DD HH:MM:SS). The export session time is based on the local timezone of the machine performing the export. In Version 7.2+ Turbo Import sets will reflect the Import Name in this field.	LAW Direct export ex: LDE Export - 001 on Explore Case Name (2015/09/30 2:30:02 PM)			
EDSource	Fully qualified original path to the source folder, files, and/or mail stores.	ex(1): C:\Mail\Outlook.pst ex(2): C:\Edocs\Spreadsheets	Doc	Lookup	tblEDSources.SourcePath
EMailClient	Email client used to send the email message (information not always available).	ex: MS Outlook ex: Outlook Express ex: Lotus Notes	Doc	Text	tblDoc
EMail_Subject	Subject of the e-mail message.	ex: FW: CloudNine™ LAW	Doc	Memo	tblDoc
EndAttach	EndDoc# of last attached document in family. When exported, the values will match the field used as the Image Tag.	ex: ABC0003	Doc	Text	tblAttach
EndDoc#	Page ID of last page in a document.	ex: ABC0003	Doc	Text	tblDoc
EntryID	Unique identifier of e-mails in mail stores.	ex: 1322C3C03649	Doc	Memo	tblDoc

Field Name	Field Description	Possible Values/Examples	Scope	Field Type	Table
		D4418625711400748A13			
EP*	Any field preceded by EP indicates a field that contains extended property or EP metadata. EP metadata can come from user defined fields added to original PDFs, Office files, and EXIF metadata for TIFF and JPEG image files. Any custom metadata found is placed into a special field designated as a an extended property.	ex: if a Word document contains a value of <i>Jones</i> in its <i>Typist</i> field, upon import of the file, LAW creates a new field for the case called <i>EPTypist</i> and populate the field for that document with the value <i>Jones</i> .	Doc	Text	Extended
ErrorMsg	Displays error or warning messages, if any occurred during ED Loader import, Turbo Import, or TIFF conversion.		Doc	Memo	tblDoc
ET_Conversations	The names of all senders and recipients mentioned in the From, To, CC, and BCC fields found in the entire email, based on reading the headers of any quoted messages as well as the primary message itself.	Enron Announcements, confadmin@ect.enron.com	Doc	Memo	tblDoc
ET_Inclusive	Flags a minimal set of documents which can be viewed in order to read the email message thread's entire conversation. In the simplest case this will simply be the last message in the thread,	N=No, Y=Yes	Doc	Text	tblDoc

Field Name	Field Description	Possible Values/Examples	Scope	Field Type	Table
	<p>since it will quote all the previous messages.</p> <p>Note that inclusiveness is calculated based on message bodies, and does not consider metadata, such as an email's subject.</p> <p>The ET_Inclusive field only flags email messages. It does not flag attachments.</p>				
ET_InclusiveReason	<p>If ET_Inclusive field is set to Y, ET_InclusiveReason field indicates why the email is inclusive.</p> <p>If the email message contains message content that is not copied in any of its subsequent replies or forwards, Message is displayed.</p> <p>If the email message has attachments that are not included in any of its subsequent replies or forwards, Attachment is displayed.</p> <p>If the email message has both new message content and new attachments not included in any of its subsequent replies or forwards, Message, Attachment is</p>	Message, Attachment	Doc	Text	tblDoc

Field Name	Field Description	Possible Values/Examples	Scope	Field Type	Table
	displayed. If ET_Inclusive field is set to N, ET_InclusiveReason field is blank.				
ET_Indent	Indicates the indent level of the email message in relation to the first email in the email thread associated with the email message.	0=First email in the email thread 1=Replies to first email 2=Replies to replies to first email 3=Replies to replies to replies to first email...and so on.	Doc	Numeric	tblDoc
ET_IsMessage	Indicates whether the document was recognized as an email message ('Y'), or some other kind of document ('N').	N=No, Y=Yes	Doc	Text	tblDoc
ET_MessageId	A unique ID that is assigned to each message. If several documents have the same Message ID, it is because they were recognized as separate copies of the same email message.	00001004	Doc	Text	tblDoc
ET_MetaUpdate	Indicates whether the email metadata was populated from analyzed text by the Near-Duplicate & Email Thread Analysis utility.	N=No, Y=Yes	Doc	Text	tblDoc

Field Name	Field Description	Possible Values/Examples	Scope	Field Type	Table
ET_ParentId	The immediate parent of the current email in the thread. For the first message, this will be blank. For each subsequent one, it will be the ID of the email which it replies to or is a forward of.	00002766	Doc	Text	tblDoc
ET_Thread Id	A unique ID assigned to each message thread.	00001701	Doc	Text	tblDoc
ET_Thread Index	<p>Is composed of a base ID, plus a unique number for each message within the thread, and if there are attachments, the letter A plus the unique number for the attachment within the thread. For example, A1, A2, A3.</p> <p>Uses the format: [base ID].[unique number for message].A[unique attachment number]</p> <p>The base ID is the same as the thread ID without the leading zeros. The thread index for the root message of the thread will just be this.</p>	<p>1701.1</p> <p>1701.1.A1</p> <p>1701.1.A2</p>	Doc	Text	tblDoc
ET_Thread Modified	Equal to the timestamp of the most recent "process data" operation that made any additions to the thread.	9/27/2013 1:06:59 PM	Doc	Date	tblDoc
ET_Thread Size	The total number of unique messages (not documents -- see	1, 3, 10	Doc	Numeric	tblDoc

Field Name	Field Description	Possible Values/Examples	Scope	Field Type	Table
	'IsMessage' above) in the thread.				
ET_Thread Sort	A sort order which follows the chain of conversation, from first message to most recent. If a conversation splits into multiple branches, ET_ThreadSort will keep each of the branches together.	640, 641, 642	Doc	Numeric	tblDoc
FileAccuracy	Accuracy rating generated by file engine during file validation.	0=Unidentified 1=Low 2=Medium 3=High	Doc	TinyInt	tblDoc
FileDescription	Description of native file type, as listed in file type database.	ex: MS Word for Windows Document	Doc	Text	tblDoc
Filename	Original filename of native file. Contains subject of e-mail message for e-mail records.	ex(1): Estimates.xls ex(2): FW: Monday Meeting	Doc	Memo	tblDoc
Filesize	Size of native file, in bytes.	ex: 27739	Doc	BigInt	tblDoc
FileType	ID number associated with file type, as listed in file type database.	ex: 229	Doc	Numeric	tblDoc
FolderRng	(Exports only - does not exist in LAW case database) Lists the PageID of the first page of the first document in a folder and the last PageID of the last document in a folder, separated by a hyphen.	ex. ABC0001 - ABC0011	Doc	N/A	N/A

Field Name	Field Description	Possible Values/Examples	Scope	Field Type	Table
Footer	Displays size of footer value if image was endorsed in CloudNine™ LAW.	0=Unendorsed 25=Contains 1/4 in. footer. 50=Contains 1/2 in. footer. and so on. Values are displayed in increments of .25 inches.	Page	Numeric	tblPage
From	Author of the e-mail message.		Doc	Text	tblDoc
HasAnnotations	Annotations are applied to document.	Y=Yes N=No	Doc	Text	tblDoc
HasBookmarks	Adobe Acrobat PDF file contains bookmarks.	Y=Yes N=No	Doc	Text	tblDoc
HasComments	Microsoft Word, Excel or PowerPoint document contains comments or PDF document contains sticky notes.	Y=Yes N=No	Doc	Text	Extended
HasExtProps	Indicates whether extended property fields (e.g. HasComments) exist within the document. The actual values of the extended property fields (e.g. a "Y" or "N" in HasComments) have no bearing on the HasExtProps value.	Y=Yes N=No	Doc	Text	Extended
HasHiddenRowCol	Microsoft Excel document contains one or more hidden rows or columns.	Y=Yes N=No	Doc	Text	Extended

Field Name	Field Description	Possible Values/Examples	Scope	Field Type	Table
HasHiddenSheet	Microsoft Excel document contains one or more hidden worksheets.	Y=Yes N=No	Doc	Text	Extended
HasPageLimit	<p>Microsoft Excel, Adobe Acrobat PDF, Law PDF, or text file document contains page limits for printing or converting the document to TIFF or PDF.</p> <p>Note: If the total number of pages for a specific document is greater than the page limit value, and the page limit check box is enabled for the document's file type under the General category in the e-Print Options or TIFF Conversion Options dialog box, the HasPageLimit field will be set to Y.</p> <p>Note: 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 .</p>	Y=Yes N=No	Doc	Text	tblDoc
HasRedaction	Redactions are applied to document.	Y=Yes N=No	Doc	Text	tblDoc
HasTrackChanges	Microsoft Word or Excel document contains tracked changes.	Y=Yes N=No	Doc	Text	Extended

Field Name	Field Description	Possible Values/Examples	Scope	Field Type	Table
Header	Displays size of header value if image was endorsed in CloudNine™ LAW.	0=Unendorsed 25=Contains 1/4 in. header 50=Contains 1/2 in. header and so on. Values are displayed in increments of .25 inches.	Page	Numeric	tblPage
Headers	Contents of the header in an e-mail message.		Doc	Memo	tblDoc
HiddenSlides	PowerPoint document contains hidden slides.	Y=Yes N=No	Doc	Text	Extended
HiddenText	True if document contains hidden text, otherwise False.		Doc	Boolean	tblDoc
ID	Unique ID value assigned to all records in CloudNine™ LAW, starting with 1.	ex: 1	Doc	Numeric	tblDoc
ImageExt	File extension of image records in LAW (applies to docs imported as raw images or via load file, scanned images, and files converted to TIFF in CloudNine™ LAW).	ex: TIF	Doc	Text	tblDoc
Importance	Importance field extracted from an e-mail message.	Low Normal High None Note: The SQL database codes these values as	Doc	Text	tblDoc

Field Name	Field Description	Possible Values/Examples	Scope	Field Type	Table
		numbers. Low is 0, Normal is 1, High is 2, and None is 3.			
ImportSet	For imports from CloudNine™ Turbo Import, in version 7.2+ Turbo Import sets will reflect the Import Name in this field.	Import Set 001	Doc	Text	Importsessions
ImportStation	Name of the computer that imported a document.	ex: Laptop01	Doc	Text	tblDoc
InReplyToID	IntMsgID of the e-mail replied to.		Doc	Memo	tblDoc
IntMsgID	Internet Message ID assigned to an e-mail message by the outgoing mail server.		Doc	Memo	tblDoc
IsRedacted	Redaction is merged on the page.	Y=Yes (merged redaction exists) <blank>= Page does not contain a merged redaction	Page	Text	tblPage
Keywords	Keywords extracted from the metadata of the native file.	ex: LAW	Doc	Memo	tblDoc
Language	Lists the first 5 languages found in the document.	ex: English; Japanese; Spanish	Doc	varchar (SQL) or text (Access)	tblDoc
LastAuthor	Last Saved By field value pulled from metadata of the native file.	ex: Joe L. Author	Doc	Text	tblDoc

Field Name	Field Description	Possible Values/Examples	Scope	Field Type	Table
MailStore	(Exports only - does not exist in LAW case database) Fully qualified original path to mail store (including filename).	ex: D:\MailStores\Sample.pst	Doc	N/A	N/A
MD5Hash	Unique identifier, similar to a "fingerprint", extracted from all files imported via ED Loader or Turbo Import. Uses 128-bit encryption. May be used for deduping purposes.	ex: D564668821C34200FF3E32C9BFDCCC80	Doc	Text	tblDoc
MsgClass	Outlook bound property indicating type of entry in store.	ex: IPM.Note	Doc	Text	tblDoc
NativeFile	Not currently utilized in LAW for electronic discovery cases, except for native files imported into a LAW case from CloudNine™ Explore using the LAW Direct export.	<p>N/A for all files except files imported from LAW Direct export.</p> <p>For files imported into an existing LAW case: ... \Cases\[LAW case name] \ \$EDD\ \$Native Files\</p> <p>For files imported into a LAW case created by a LAW Direct export: ... \Cases\[ED Loader case name]</p>	Doc	Memo	tblDoc

Field Name	Field Description	Possible Values/Examples	Scope	Field Type	Table
		\\\$EDD\Native Files\			
ND_ClusterID	A unique ID for each near-duplicate document cluster. Documents in a cluster may be similar, but not as closely related as documents in the near-duplicate family, and some documents in a cluster may not be similar, but are connected by a chain of relationships between documents.	ex: 00000017	Doc	Text	tblDoc
ND_ContentHash	Identifies exact duplicates. If documents have the same hash value in the ND_ContentHash field, they share the exact same text, even if the documents have different metadata or file formats.	ex: 230554D8C9CB9A 4BCDD6E2B49244 D91BBFB6A8DC	Doc	Text	tblDoc
ND_FamilyID	A unique ID for each near-duplicate document family. All documents within the same near-duplicate family will have the same ID in the ND_FamilyID field. The ND_FamilyID value matches the master document's ID value, but is padded to eight digits. For example, if the master ID = 1. The corresponding ND_FamilyID value = 00000001.	ex: 00000112	Doc	Text	tblDoc

Field Name	Field Description	Possible Values/Examples	Scope	Field Type	Table
ND_IsMaster	<p>Indicates whether the document is the master document.</p> <p>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.</p> <p>Note: Documents that are not part of a near-duplicate family will also have a Y (Yes) value in the field.</p>	<p>Y=Yes</p> <p>N=No</p>	Doc	Text	tblDoc
ND_Result Set	<p>Used for internal tracking purposes by the near-duplicate processing utility. Indicates the near-duplicate index revision that the ND_* fields for the current record represent.</p>	ex: 2	Doc	Text	tblDoc
ND_Similarity	<p>Displays the percentage of similarity between the document and its master document.</p> <p>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.</p>	ex: 85, 100	Doc	Numeric	tblDoc
ND_Sort	A document's sort order ID. The Near-Duplicate Analysis utility sorts documents based on	ex: 2284, 2285, 2330, 2286	Doc	Numeric	tblDoc

Field Name	Field Description	Possible Values/Examples	Scope	Field Type	Table
	document similarity. The closer documents are to one another, the closer their sort order ID will be to each other.				
NumAttach	(Exports only - does not exist in LAW case database) Total number of records attached to the document. Value will always be 0 (zero) for actual attachment records.	ex: 2	Doc	N/A	N/A
OcrAccuracy	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.	ex: 10, 99, 100	Doc	Numeric	tblDoc
OcrFlag	Page-level OCR status of each page in a document.	Y=Page flagged for OCR N=Page not flagged C=Page is complete E=Error occurred OCRing page	Page	Text	tblPage
OcrStatus	Doc-level OCR status of a document.	Y=One or more pages flagged for OCR N=No pages flagged C=OCR complete on document I=OCR was cancelled	Doc	Text	tblDoc

Field Name	Field Description	Possible Values/Examples	Scope	Field Type	Table
		E=Error occurred OCRing document P=Processing (special flag used by LAW during OCR)			
Organization	Company field extracted from metadata of native file.	ex: CloudNine	Doc	Memo	tblDoc
OrigExt	Original file extension of native file, if "auto-assign ext." option was enabled and file was suspect.	ex: PDF	Doc	Text	tblDoc
Page	Page number of each page in a document.		Page	Numeric	tblPage
Page ID	ID number assigned by user to pages of documents (images only).	ex: ABC0001	Page	Text	tblPage
PageColor	Stores the color information at a page level for scanned and imported images, as well as images created during a TIFF conversion. See the following Help topic for more information: Administration->Tracking Page Source, Size, and Color.	Black & White (1) Color (2) Grayscale (3)	Page	Lookup	tblPage.ColorID
PageFilename	Path to TIFF image or PDF file that was a result of a TIFF conversion in CloudNine™ LAW. Path is relative to \$ImageArchive folder, located in case folder.	ex: 00\00\00\01.tif	Page	Text	tblPage

Field Name	Field Description	Possible Values/Examples	Scope	Field Type	Table
PageHeight	Stores the height of an image at a page level for scanned and imported images, as well as images created during a TIFF conversion. See the following Help topic for more information: Administration->Tracking Page Source, Size, and Color.	ex: 11.50	Page	Numeric	tblPage
PageSize	Stores the page size of an image at a page level for scanned and imported images, as well as images created during a TIFF conversion. See the following Help topic for more information: Administration->Tracking Page Source, Size, and Color.	Letter (1) Legal (2) Double Letter (3) Oversized (4)	Page	Lookup	tblPage. PageSizeID
PageSource	Stores the source of an image at a page level for scanned and imported images, as well as images created during a TIFF conversion. See the following Help topic for more information: Administration->Tracking Page Source, Size, and Color.	Feeder (1) Flatbed (2) Imported (3) TIFF Conversion (4) Manual TIFF Conversion (5)	Page	Lookup	tblPage. SourceID
PageWidth	Stores the width of an image at a page level for scanned and imported images, as well as images created during a TIFF conversion. See the following Help topic for more information:	ex: 8.5	Page	Numeric	tblPage

Field Name	Field Description	Possible Values/Examples	Scope	Field Type	Table
	Administration->Tracking Page Source, Size, and Color.				
ParentID	(Exports only - does not exist in LAW case database) Populated only for attachments, this field will display the Image Tag field value of the attachment record's parent. For example, if the Image Tag is set to "DocID", the parent record's DocID value will be listed as the ParentID for the attachments.	ex: ID00001	Doc	N/A	N/A
Path	Folder path for LAW records, relative to root case folder, as shown in the tree view in CloudNine™ LAW's main interface. Physical files may not exist in this path in Windows, depending on how the files were imported or scanned into CloudNine™ LAW. For more information on storage locations, please see the Help topics under Acquiring Documents.	001Source\001 Box	Doc	Text	tblDoc
PgCount	Number of pages in a document (image records).	ex: 250	Doc	Numeric	tblDoc
Placeholder_Name	Determines whether a document placeholder image is generated instead of a document image if LAW attempts to convert the document to a TIFF file.	Blank or a predefined or custom document placeholder template name. Custom	Doc	List	tblDoc

Field Name	Field Description	Possible Values/Examples	Scope	Field Type	Table
		placeholder templates are created from the Separator Page Options dialog box.			
PrevErrMsg	If a record is successfully converted to TIFF or PDF, the ErrorMessage field is cleared and any existing value in that field is prepended to the PrevErrMsg field for reference.		Doc	Memo	
PrintJobName	Displays the name of the job in the print spooler for TIFF conversions. This field allows additional errors to be logged if multiple jobs are detected in the spooler for a conversion or the name of the job in the spooler does not match the expected job name for a document. *NOTE: Special attention must be given to any errors prefixed with "Multiple jobs detected" or "Print job name does not match expected format" to inspect the captured image against the original for correctness.	0DB7AC7F42A84562A2749BF95483F43B_5_05.ntv.xls	Doc	Text	tblDoc
ReadReceipt	Read receipt request notification for e-mail messages.	Y=Yes (read receipt requested) N=No <null>=Attachments and e-	Doc	Text	tblDoc

Field Name	Field Description	Possible Values/Examples	Scope	Field Type	Table
		docs will have null value.			
RecordType	(Exports only - does not exist in LAW case database) Lists the record type for each entry in the load file.	IMAGE; LOOSE E-MAIL; E-MAIL; E-DOC; IMAGE ATTACHMENT; LOOSE E-MAIL ATTACHMENT; E-MAIL ATTACHMENT; E-DOC ATTACHMENT; LOOSE E-MAIL ATTACHMENT (E-MAIL); E-MAIL ATTACHMENT (E-MAIL); E-DOC ATTACHMENT (E-MAIL)	Doc	N/A	N/A
Revision	Revision number extracted from metadata of native file.	ex: 18	Doc	Text	tblDoc
Sensitivity	Sensitivity field extracted from e-mail messages.	ex: Private	Doc	Text	tblDoc
Sha1Hash	Unique identifier, similar to a "fingerprint", extracted from all files imported via ED Loader or Turbo Import. Uses 160-bit encryption. May be used for deduping purposes.	ex: B68F4F57223C A7DA3584BAD 7ECF111B8044 F8631	Doc	Text	tblDoc
SourceApp	Source application assigned to the native file, as specified in the file type database. This application will be used to print the file during the e-Print and TIFF	<No Source Specified> Adobe Acrobat AutoVue Suite	Doc	List	tblDoc

Field Name	Field Description	Possible Values/Examples	Scope	Field Type	Table
	Conversion batch processes.	Binary/Hex Printer Corel WordPerfect eDrawings Viewer Image Printer Internet Explorer IrfanView Law PDF Microsoft Excel Microsoft Outlook Microsoft PowerPoint Microsoft Project Microsoft Visio Microsoft Word Native PDF Printer Quick View Plus Shell Printer Snapshot Viewer Text/RTF Printer VoloView Express			
SourceFile	Fully qualified original path (including filename) to original loose e-mail message. Field is blank for all other types.	ex: D:\001\test.msg	Doc	Memo	tblDoc

Field Name	Field Description	Possible Values/Examples	Scope	Field Type	Table
SpeakerNotes	PowerPoint document contains speaker notes.	Y=Yes N=No	Doc	Text	Extended
Subject	Subject field value extracted from metadata of native file. Subject field is for e-docs only. EMail_Subject field is for e-mail messages.	ex: LAW	Doc	Text	tblDoc
SuspectExt	Flagged with "Y" value for files deemed suspect during the validation process, meaning the original file extension did not represent the true file type.	Y=Considered suspect N=Not a suspect file	Doc	Text	tblDoc
SuspectOLE	Document suspected to contain embedded files.	Y=Contains embedded files. N=Does not contain embedded files.	Doc	Text	tblDoc
Template	Template field value pulled from metadata of the native file.	ex: Normal.dot	Doc	Text	tblDoc
TextFilePath	Full path to the linked text file associated with a document imported using the load file import. This field is populated when load files are imported into a case with the "Link to source files in place when importing load files" check box selected on the Preferences tab in the Options dialog box (Tools > Options).	ex: C:\Docs\Vol001\007\00011157.txt	Doc	Memo	tblDoc

Field Name	Field Description	Possible Values/Examples	Scope	Field Type	Table
TextPStatus	Status of text extraction that occurs as files are converted to TIFF images or PDF files (TIFF Conversion batch process). "Save text with images" must be enabled in order for the TIFF engine to attempt text extraction.	C=Text was extracted during TIFF conversion. N=No text was extracted during TIFF conversion.	Doc	Text	tblDoc
TextXStatus	For files imported using ED Loader or Turbo Import, the status of native text extraction that occurs during the import. For files exported from CloudNine™ Explore using the LAW Direct export, the status of native text extraction for the file in CloudNine™ Explore when the file is exported.	C=Text extracted successfully from native file. N=No text was extracted. E=Error occurred extracting text, see ErrorMessage field.	Doc	Text	tblDoc
ThreadID	Tracks e-mail threads imported via ED Loader or Turbo Import from Outlook stores and from loose MSG files. Attachments to e-mails receiving a value for the ThreadID are populated with the ThreadID of the corresponding parent e-mail.	Populated with the leftmost 22 characters of ConversationIndex field.	Doc	Text	tblDoc
TiffStatus	Status of TIFF conversion. Note: Values in this field will not control which files are converted to TIFF files, and which are not. Any files selected for TIFF conversion in	Y=Flagged for converting to TIFF (any files with a valid source app assigned will be flagged after ED import)	Doc	Text	tblDoc

Field Name	Field Description	Possible Values/Examples	Scope	Field Type	Table
	<p>the Batch Process form will be converted to TIFF or given a placeholder (if enabled) regardless of this field.</p>	<p>C=File was converted to TIFF file</p> <p>E=Error occurred and was logged during TIFF or PDF conversion(see ErrorMsg field)</p> <p>W=Warning was logged during TIFF or PDF conversion</p> <p>N=File not flagged for converting to TIFF (no valid source app assigned during ED import, <No Source Specified> value is assigned)</p> <p>P=Placeholder printed for the document</p>			
TimeAccessed	<p>Stores the last accessed time from the properties of the file. Note: Many functions will cause this value to be updated by Windows (e.g., viewing file properties, dragging and dropping) and therefore this time will often be inaccurate.</p> <p>To avoid this situation,prior to handling the data, run the DisableLastAccessUpdat</p>		Doc	Text	tblDoc

Field Name	Field Description	Possible Values/Examples	Scope	Field Type	Table
	e.reg file located in the \LAW50 folder (same folder as law50.exe) (requires reboot after running). This will prevent updates to this value (applies to LAW DateAccessed field also) by Windows while the file is being handled throughout the project. To re-enable the registry setting, run the EnableLastAccessUpdate .reg file located in the same folder.				
TimeAppEnd	Appointment end time for calendar items.		Doc	Text	tblDoc
TimeAppStart	Appointment start time for calendar items.		Doc	Text	tblDoc
TimeCreated	Creation time of the native file.		Doc	Text	tblDoc
TimeLastModified	Time native file was last modified.		Doc	Text	tblDoc
TimeLastPrint	Time native file was last printed (Office documents).		Doc	Text	tblDoc
TimeRcvd	Time the e-mail message was received.		Doc	Text	tblDoc
TimeSent	Time the e-mail message was sent.		Doc	Text	tblDoc
TimeZoneProc	Time zone where item was first processed.		Doc	Text	tblDoc
Title	Title field value extracted from the metadata of the native file.		Doc	Text	tblDoc
To	Main recipient(s) of the e-mail message.		Doc	Memo	tblDoc

Field Name	Field Description	Possible Values/Examples	Scope	Field Type	Table
Unread	E-mail has not been read.	Y=Yes N=No	Doc	Text	tblDoc
UserId	Not currently utilized in CloudNine™ LAW.	N/A	Doc	Numeric	tblDoc
Volume	Stores volume ID, as listed in tblVolume in LAW case database.		Doc	Numeric	tblVolume

Explore API Integration

The Explore API Integration Library is a Microsoft .NET assembly that enables you to programmatically access limited sets of data and functionality that are available in CloudNine™ Explore and/or LAW.

Currently there are 4 versions of the API documentation available online. Please select the one that matches the version of Explore you are working with.

- [Explore API Integration Library version 7.2](#)
- [Explore API Integration Library version 7.3](#)
- [Explore API Integration Library version 7.5](#)
- [Explore API Integration Library version 7.6](#)

Unicode Support

The general requirements and supported functionality for Unicode are listed as follows:

- CloudNine™ LAW versions 5.2 and higher support the Unicode® Standard.
- Proper language packs must be installed for the associated Unicode characters to render correctly.
- To print Unicode text files, use either Microsoft Word or the Shell Printer as the source application. The Text/RTF Printer can print RTF with Unicode, however it cannot print Unicode text files.
- 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.
- The ExperVision and TextBridge OCR engines do not currently support Unicode.

- Supported languages for OCR can be found in the **Language** drop-down list located in the **OCR** tab in **Tools** -> **Options**.
- Printed and extracted text will contain Unicode data if it exists in the original file and can be displayed, provided the proper language pack(s) are installed on the system.

To view Unicode in a grid

- In a grid view, rest the mouse pointer over a cell that contains Unicode characters.

The text appears in a pop-up text box.

Unicode in names for files, cases, and fields

- Files with Unicode file names or residing in a Unicode path may be imported using the ED Loader or Turbo Import. These Unicode paths can be retained and displayed in the main folder view and any other applicable folder view in the application. Unicode existing in the metadata will be retained and can be displayed in the Index display.
- Unicode is not supported in case names. While the rest of the case path can contain Unicode, it is recommended the case paths do not contain Unicode characters to avoid potential issues with 3rd party applications.
- Index field names cannot contain Unicode characters.

Exporting Unicode data

Unicode data can be sent to the export file when exporting field data from a grid.

- In the **Save Results As** dialog box, in the **Save as type** list, select **Unicode Text (Tab delimited)(* .csv)**.

Exporting Unicode

Export Formats

Unicode data is supported in the Export Utility in the following export formats:

- **CaseLogistix** - Unicode is automatically included if present in the exported data.
- **Delimited Text** - Unicode data will be included only if the **Allow Unicode data (UCS-2 format)** option is enabled in this format's configuration settings.
- **EDRM XML 1.0** - Unicode is automatically included if present in the exported data.

- **EDRM XML 2.0** - Unicode is automatically included if present in the exported data.
- **Concordance Direct DCB** - Unicode data will be included only if CloudNine Concordance 10 or above is installed on the computer and **Create Concordance 10.0 database (supports Unicode)** is enabled in the configuration settings for that format.
- **Concordance** - Unicode data will be included only if **Allow Unicode data (UCS-2 format)** is enabled in this format's configuration settings.

Export Utility Restrictions

When using the Export Utility, if you export to a format that does not support Unicode characters:

- Do not use the **Mirror Original** folder naming scheme if Unicode folders exist in the case.
- Ensure the export path does not contain Unicode characters. Unicode paths and filenames may prevent the target applications from opening associated images, text, or native files.

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

Key	Function
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
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

Key Combination	Action
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
SHIFT+BACKSPAC E	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

Key	Action
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

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