License Manager Objects (LMO) README

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Introduction and Features

License Manager Objects (LMO) is an object-oriented application programming interface that allows a third-party application to manage users, application licensing, and other objects in Directory Server. It is the same API used by the Directory Server configuration website.

A .NET assembly file called **LicenseManagerObjects.dll** is included as part of the **Directory Server** installation. After adding a reference to **LicenseManagerObjects.dll** in your project, LMO classes will be available through the **Laserfiche.LicenseManager.LMO** namespace.

Recommended uses

- Automating group creation and management in Directory Server
- Leveraging Forms and Workflow for user-facing sign up
- Workflow custom scripting to automate user creation

License Manager Objects Requirements

Minimum System Requirements

- **CPU:** Dual-core processor
- **Memory:** 2 GB RAM

Laserfiche Directory Server Requirements

- The version of LMO attached assumes Directory Server 10.4.3 or later
- Detailed class information was generated from Directory Server 10.4.5

Supported 64-bit Operating Systems

License Manager Objects is only supported on 64-bit versions of Microsoft Windows.

- Windows 7 Service Pack 1
- Windows 8.1
- Windows 10
- Windows Server 2008 R2 Service Pack 1
- Windows Server 2012

- Windows Server 2012 R2
- Windows Server 2016
- Windows Server 2019

Microsoft Windows Components

- .NET Framework 4.7.2 or later.
- IIS 7.5 or later.
- HTTPS

Supported Versions of Microsoft SQL Server

- Microsoft SQL Server 2008 (Service Pack 3)
- Microsoft SQL Server 2008 R2 (Service Pack 2)
- Microsoft SQL Server 2012 (Service Pack 2)
- Microsoft SQL Server 2014
- Microsoft SQL Server 2016
- Microsoft SQL Server 2017
- Microsoft SQL Server 2019

Supported Browsers for the Web Administration Console

- Internet Explorer 11
- Microsoft Edge (latest version)
- Firefox (latest version)
- Chrome (latest version)

General Information

By default, the following files are located in the location specified below:

- LicenseManagerObjects.dll is in C:\Program Files\Laserfiche\Directory Server\Web\LFDS\bin
- Newtonsoft.Json.dll is in C:\Program Files\Laserfiche\Directory Server

The .chm files must be on a local drive, not a network drive.

- **LicenseManagerObjects.chm** contains code samples such as registering an active directory user in Laserfiche Directory Server
- **LicenseManagerObjectsReference.chm** contains additional information on **LicenseManagerObjects.dll** and will be loaded by **LicenseManagerObjects.chm**
- **LicenseManagerObjects.dll v10.4.4.1** and **Newtonsoft.Json.dll v11.0.2** (dependency for LicenseManagerObjects) are included in this download

DLL File Location Placement

When using LMO in Workflow custom activities, do the following:

- Navigate to the Workflow install folder. Example path: C:\Program Files\Laserfiche\Laserfiche Workflow 10.4
- Create a sub-folder called **NewtonSoft**

- Place both DLLs in the **NewtonSoft** subfolder:
  - LicenseManagerObjects.dll v10.4.4.1
  - Newtonsoft.Json.dll v11.0.2
    Note: These DLLs should be placed in a location that a custom script can reference. For more information, see [KB1014149](#)

⚠ **Warning**: Do not replace or reference the existing **NewtonSoft.Json.dll** in the Workflow install. The versions are not identical.

This documentation was generated for use with Directory Server 10.4.3 and 10.4.4. Most information applies to Directory Server 10.4.0+.

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