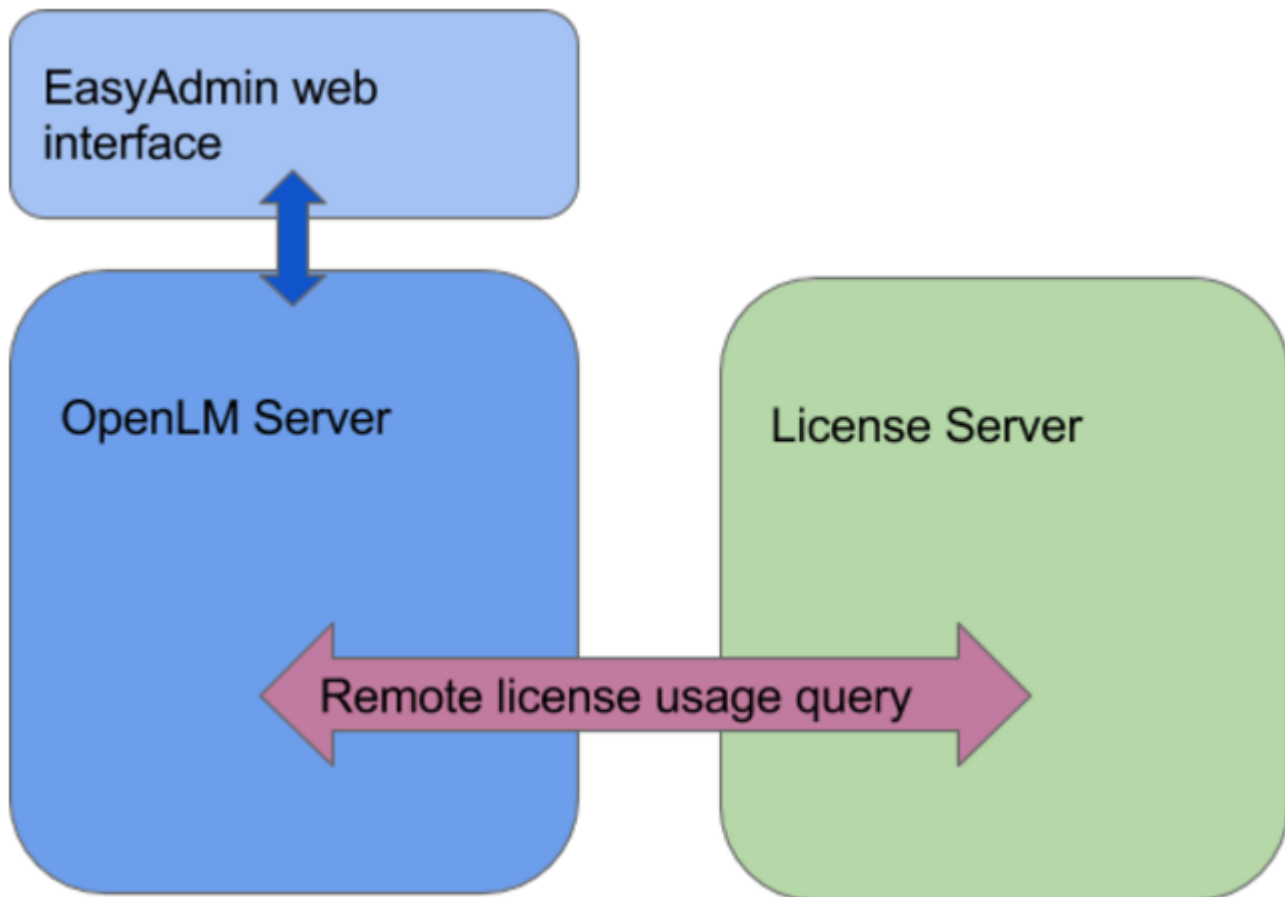


Scope

[FlexLM, AKA FlexNET publisher](#) is a popular license management software, accommodating a wide variety of licensed applications in multiple disciplines. This application note elaborates the steps required to configure OpenLM to interface the FlexLM license manager, to monitor license usage and obtain license usage statistics. There are two options to query the License Server:

1. **Quick method:** Remotely query the license server from the OpenLM Server. This method facilitates reporting of license usage information in EasyAdmin report windows.
2. **Enhanced method:** Query the license server locally by the OpenLM Broker and propagate the information back to the OpenLM Server. This option provides:
 - Additional information, such as license denials and borrowed licenses.
 - Administrative capabilities, such as options files management, and
 - System robustness, overcoming network and security issues.

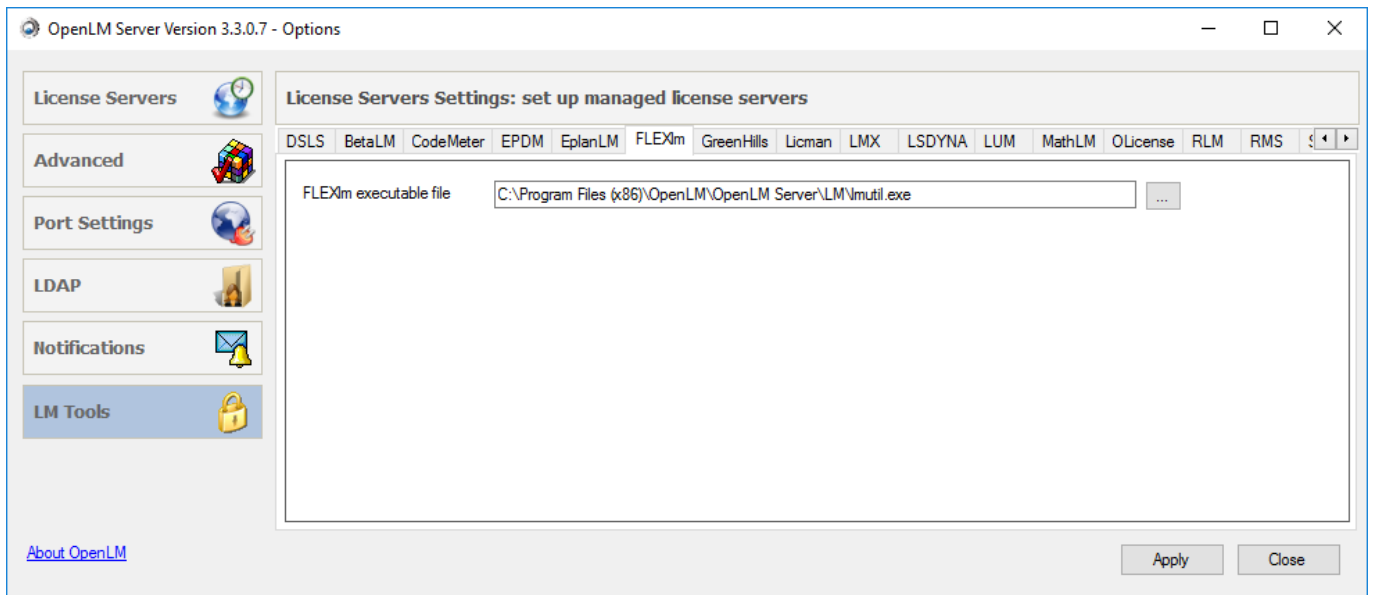
Quick method - Without the OpenLM Broker



[After installing the OpenLM Server](#), Click the Windows Start → “All Programs” → OpenLM → “Configure OpenLM Server-Start here”. The OpenLM Server configuration tool opens.

“LM Tools” tab:

1. Select the “LM Tools” tab, located on the left side.
2. Select the FlexLM tab.
3. Copy the “lmutil.exe” license server query program to the “C:\Program Files (x86)\OpenLM\OpenLM Server\LM” folder, if it is not already there.
4. Type in the full path of the executable file, e.g.: “C:\Program Files (x86)\OpenLM\OpenLM Server\LM\lmutil.exe” in the “FLEXlm executable file” text box.
5. Click the ‘Apply’ button and the consequent “Restart now” button.



“License Servers” tab

After enabling the OpenLM configuration tool to interface a FlexLM license manager as described above, introduce a new FlexLM server under the License Servers tab:

1. Select the “License Servers” tab, and click the ‘Add’ button.
2. From the **Type** drop-down menu, select FlexLM.
3. Type a descriptive name in the **Description** text box.
4. Set the **Time Zone** to where the License Server physically resides (e.g.: Pacific UTC-08:00).
5. Type in the license server’s **Hostname** and **Port number**. In the example below, these are autodesk_server and 27000 respectively. In order to find the Server name and port please [refer to this post](#).
6. **Is Triad Configuration**: OpenLM supports multiple server redundancy configurations for several types of license servers (e.g. FlexLM, DSLS, IBM LUM). In the case of FlexLM, such servers are referred to as a ‘triad’. [Check “Triad configuration instructions” for more information](#).

- **Checked** : The OpenLM server will monitor the activity of all FlexLM servers of the

triad.

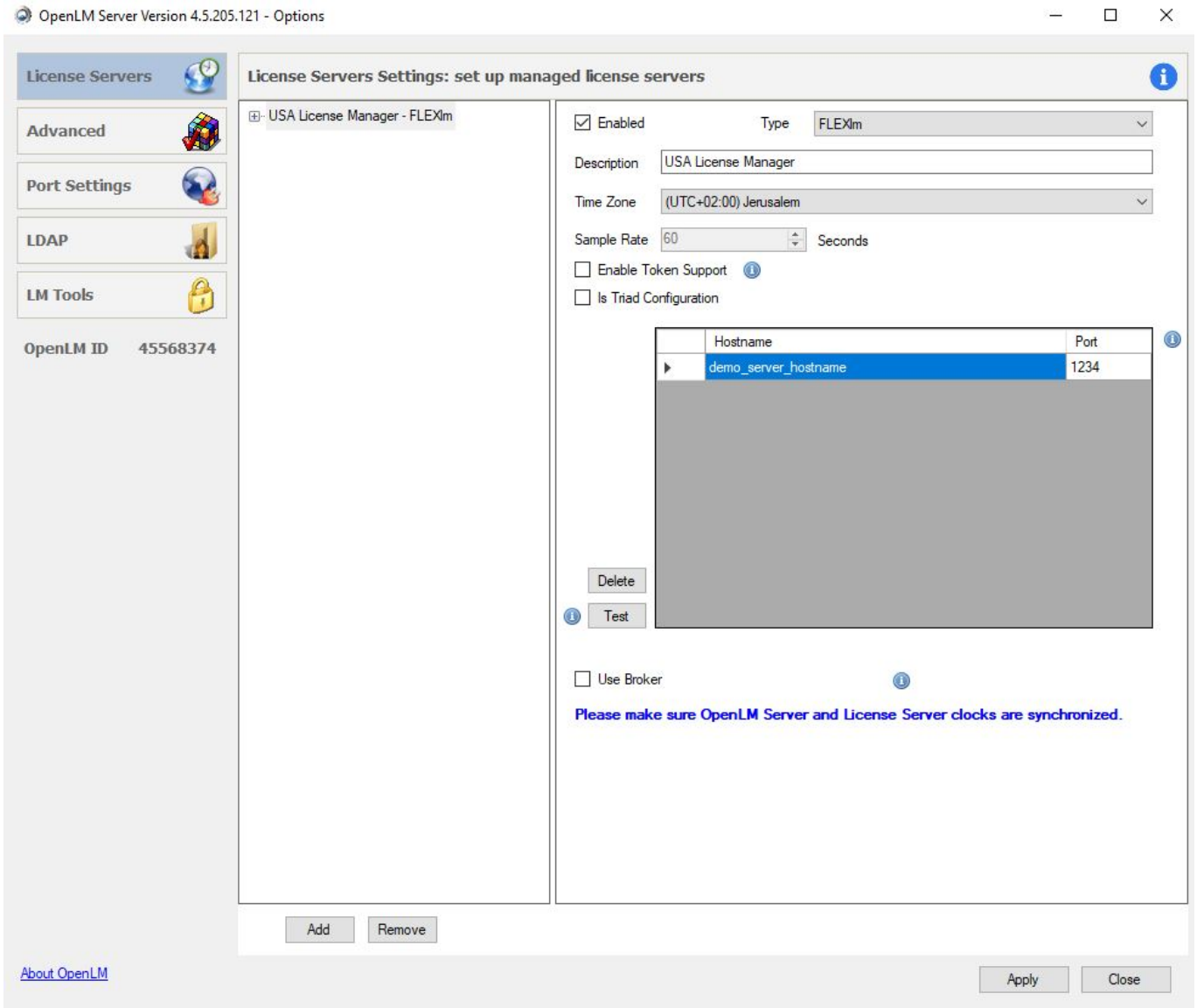
- Unchecked (Default): The OpenLM server will only monitor the activity of a single FlexLM license server

7. **Use Broker** check box:

- Unchecked (Default): The OpenLM Server actively queries the license manager. Keep this configuration when not employing the OpenLM Broker.
- Checked: Usage information is obtained solely by the OpenLM Broker installation on the License manager machine.

8. Read license file: This function is an advanced setting, and requires the installation of a broker (see below).

9. Click '**Apply**'.



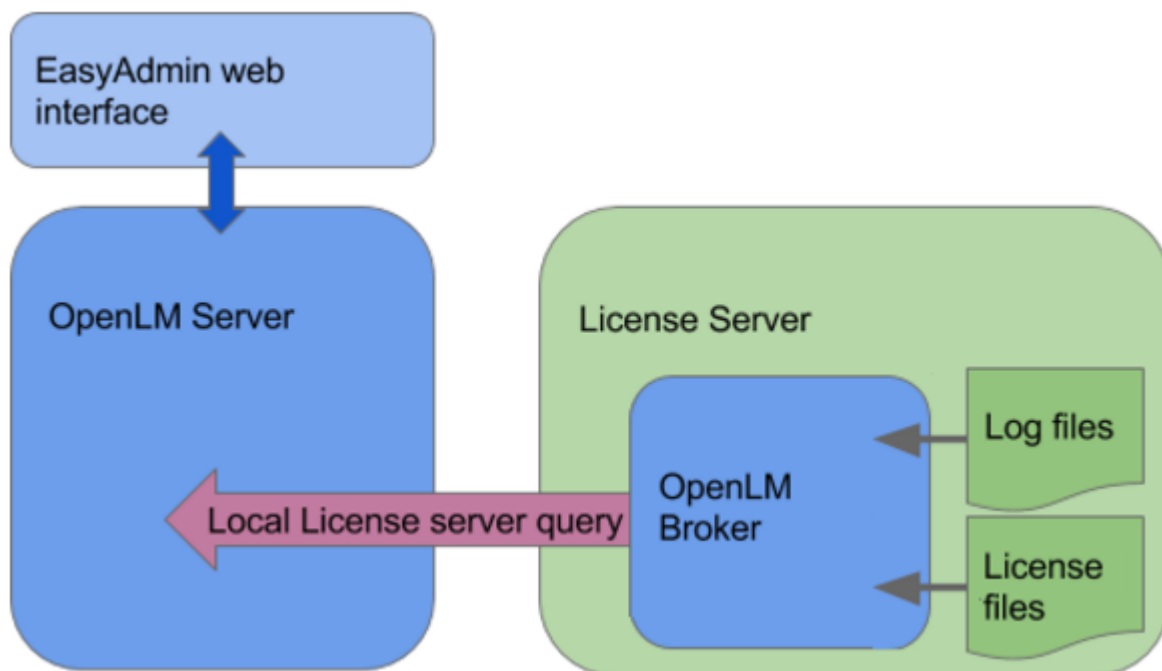
Thats it !

The OpenLM Server is now set to monitor the FlexNet license manager. Check the License Server's activity by clicking the 'Test' button. A text would follow. This text is a query of the License server. It indicates whether a connection to that server is established, and the License server is active.

More informative method - with the OpenLM Broker:

The OpenLM Broker is an optional component. Configuring the OpenLM Server is usually enough for monitoring licensed applications.

In order to produce more informative FLEXlm license usage reports it is highly recommended to install the OpenLM Broker on the FLEXlm license manager machine. The OpenLM Broker will query the license server machine locally, and propagate the response to the OpenLM Server.



The Broker provides:

- Accurate license statistics, in 1 second resolution
- Facilitates robust, buffered communication between the OpenLM Server and the License manager, overcoming security restrictions and network failure
- License Borrowing information
- License denial information
- License pool: multiple pools, node-locked and named users' information
- License packaging information
- Automatic maintenance of FlexLM Options files
- Importing of license files from remote license servers
- uploading license files to remote license servers.

The following paragraphs describe the configuration and utilization of the OpenLM Broker, to achieve the said benefits.

OpenLM Broker installation

Download and install the latest OpenLM Broker version.

Follow the installation and configuration instructions on either one of:

- [OpenLM Broker installation Guide: Quick Reference](#) or
- [OpenLM Broker Installation Guide: Comprehensive](#)

OpenLM Server configuration for FlexLM

The OpenLM Server configuration will be exactly the same as performed in the previous method, i.e. without the Broker, except that the “OpenLM Server remotely queries license manager” check box should be cleared.

OpenLM Broker configuration for FlexLM

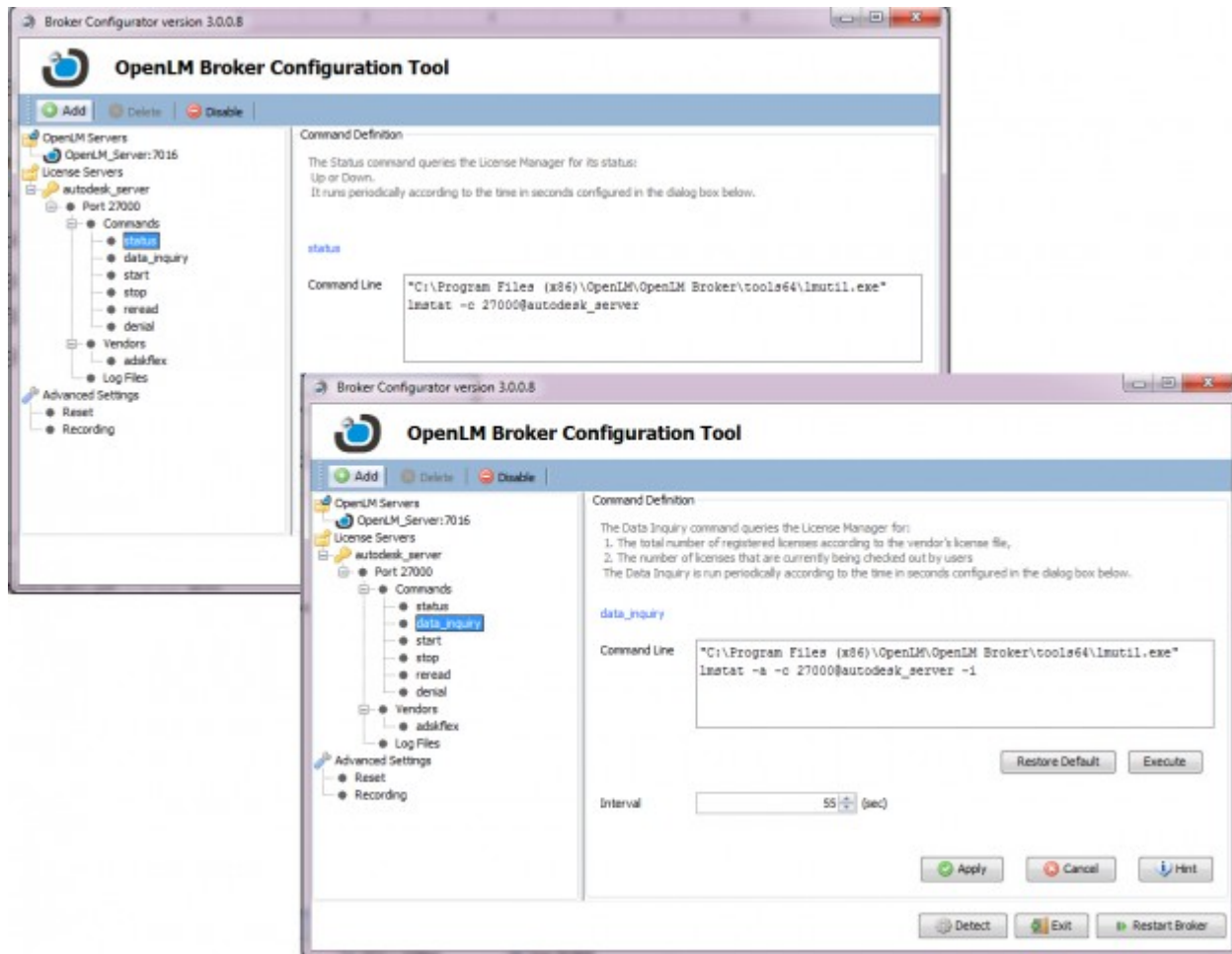
Configure The OpenLM Broker to interface the license server and the OpenLM Server.

1. The license server name and port number should be configured exactly as they were on the OpenLM Server configuration tool.
2. The OpenLM hostname and port (e.g. OpenLM_Server and the default 7016)
3. The vendor name should be set correctly (e.g. “adskflex”)
4. Inspect the ‘status’ and “data_inquiry” commands. Verify the correctness of their full path (in this example: C:\Program Files (x86)\OpenLM\OpenLM Broker\tools64\lmutil.exe) and click the ‘Execute’ button to check their functionality.

When Using FlexNet Publisher

1. Due to the fact that FlexNet Publisher does not use the imutil.exe and lmgrd.exe utilities, the path in “status” and “data_inquiry” tabs should remain the default lmutil that comes with the OpenLM Broker installation, which can be found at: C:\Program Files (x86)\OpenLM\OpenLM Broker\tools64\lmutil.exe.

2. Note that for FlexNet Publisher, the main license manager port needs to be set (27000 by default) instead of the vendor port.



The OpenLM System is now configured to query the license server locally via the OpenLM Broker and present license usage on the OpenLM EasyAdmin web application.

License denials and accurate usage reporting

In order to obtain license denials and second - exact usage information, the OpenLM Broker needs to be configured to read the FlexLM debug log file.

1. Highlight the "Log files" node, and click the 'Add' button. Select "log file". The "log file definition" dialog opens.
2. Select the "FlexLM Debug Log File" type

3. Add a descriptive name (e.g. "my_autodesk_log")
4. Fill in the full path for the FlexLM debug log file.
5. Click 'Apply' and "Restart Broker".

For more on FlexLM license denial reporting, [please refer to this Application Note](#).

Obtaining License file information

License file information may be obtained for FlexLM managed licenses that employ license files (as opposed to applications that employ trusted storage). This will enable OpenLM to present usage according to license pools, associate featured licenses with their packages, provide accurate license expiration etc. In order to so:

1. On the OpenLM Server configuration tool check the "Read license file" box.
2. Click 'Apply' and "Restart Now".
3. On the OpenLM Broker configuration tool click the Port node, and expand the 'Advanced' section. Set the path to the license file, and check the "Watch license file" box.
4. Click 'Apply' and "Restart Broker".

Multiple-pool license files information

OpenLM is able to present license usage according to specific FlexLM license pools, and distinguish between Floating licenses, named licenses, node locked licenses.

For more information on this capability, please refer to this article: "[Multiple FlexLM license pool monitoring](#)"

Importing files, and uploading FlexLM license files

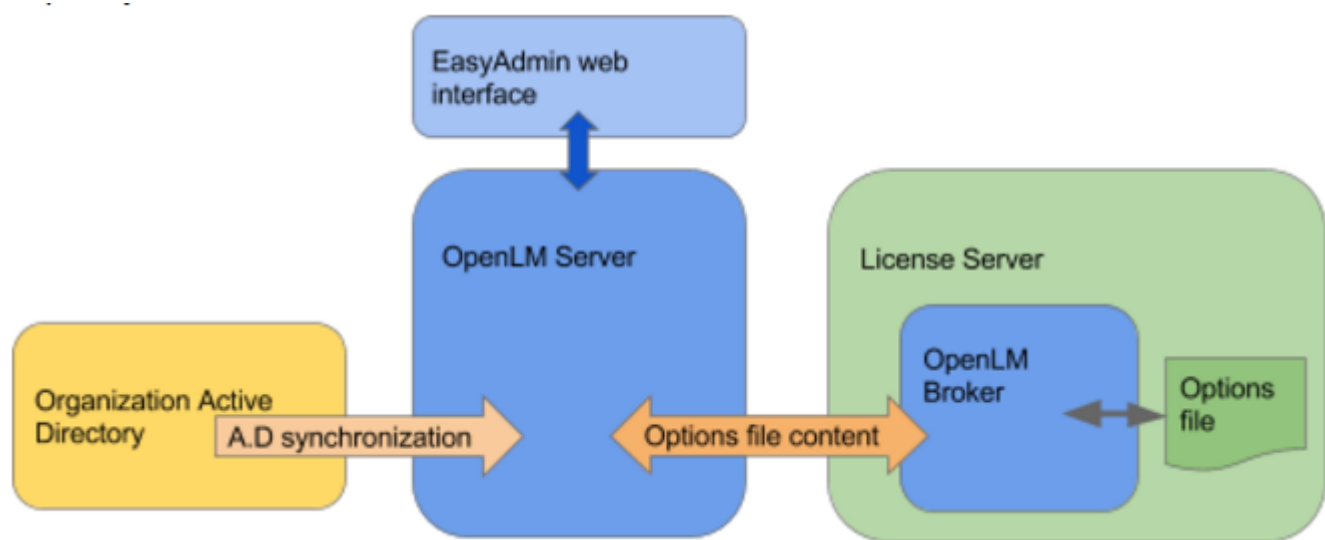
OpenLM EasyAdmin users are able to:

- import FlexLM Options files from remote license servers
- import log files from remote license servers
- import FlexLM license files from remote license servers
- Edit and upload the said license files back to the remote license server, and

- Apply a 'restart' or 're-read' action to have the changes take effect on the remote license server.

For more information on this functionality - please refer to this article: "[Downloading files from, and uploading files to the license server machine](#)"

FlexLM Options files management



The OpenLM solution incorporates various capabilities for maintaining FlexLM Options files.

1. The EasyAdmin web application enables administrators to easily edit Options files, and apply changes to FlexLM license allocations and restrictions
2. OpenLM integrates these Options file maintenance capabilities with synchronization of the organization's Active Directory. This enables OpenLM to keep the FLEXlm Options file up-to-date as users leave or join the organization, or move between groups.
3. OpenLM facilitates the import of user and group entities into its database by means of reading Options files.

For more information on these options - please refer to the following articles:

- [Options File management Using OpenLM EasyAdmin](#)
- [Importing users and groups via the Options files reading mechanism](#)

Monitoring License borrowing information (and ESRI special case)

License Borrowing is a method of linking a specific workstation to a single license instance from within the license pool. This procedure marks a license as being perpetually used on the license manager (LM), enables users to borrow a product license for a designated time period, and to operate the licensed application without connecting to the license manager. OpenLM presents license 'borrow' data in the EasyAdmin "License Servers" window.

ESRI license administrators have long noticed that license borrowers are not identified by license server querying, i.e. by running `lmutil -lmstat` commands. Instead, the borrowed user is identified as "Activated License(s)", which isn't very helpful in understanding who is taking the license you need now. By combining information from multiple sources, the OpenLM Server is able to determine the identity of license borrowers: Usage information is provided by License server querying, while the cross reference between the borrowed license and the user identity is provided by the ESRI Audit log. For more information on this capability, please refer to this article: "[Monitoring ESRI ArcGIS borrowed licenses](#)".

FlexLM indications in EasyAdmin

To check to see if the FlexLM License Server interface is working correctly, please

1. Open the EasyAdmin web application.
2. Click EasyAdmin Start → Widgets → License servers. The License Servers window appears. Verify that the configured license managers appear on the list. A green circle node indicates an active connection to a license server.
3. FlexLM denials will be presented in the EasyAdmin web application → Reports → Denials. Note that they should be acquired from the debug log from the moment of the OpenLM Broker configuration. They will not appear retroactively.