

How does it work?

OpenLM can monitor the usage level of each FLEXlm feature. When the usage level goes below the preset threshold, OpenLM may gracefully close sessions, starting with the ones that have been idling longer. Once the organizational license usage level drops below the set threshold, OpenLM Server will refrain from closing further idle sessions.

From the end user's point of view, the project is saved and then closed. A pop-up message will announce that the project was closed and will allow the user to reopen the project in a single click. The user can also click OpenLM Agent located on the end user desktop and get the list of all recently closed projects. Such a "Save and Close" capability has been implemented for MATLAB, Autodesk and ESRI ArcGIS applications. This document discusses ESRI ArcGIS as an example.

Other end users may be notified that licenses they have requested for have become vacant.

Discussion

The combination of the usage threshold and the maximum idle time is a simple system that assures that licenses are available for users that need licenses while trying to minimize the number of closed sessions. Since the act of closing idle ArcGIS Desktop sessions can cause some inconvenience, OpenLM minimizes the number such interventions, ensuring that a sufficient number of licenses are made available for new users that may be trying to access the software.

For example

ESRI ArcView Licenses - 100

ESRI ArcInfo Licenses - 10

ESRI ArcGIS Spatial Analyst - 3

The default OpenLM Values are:

Usage threshold - 80%

Maximum idle time - 20 Minutes

- Starting with the ArcView licenses, OpenLM will try to keep 20 licenses free for new users.
- With a total of 10 licenses available, OpenLM will try to keep two free licenses of ESRI ArcInfo ready for new users. Assuming that 8 licenses were already consumed, if more than two users access the ESRI ArcInfo licenses at the same time, some will get a

FLEXlm denial. If two or less users request an ArcInfo license at the same time, their request will be fulfilled and then OpenLM will try to release idle sessions for more new users.

- Because of the low number of Spatial Analyst licenses, OpenLM will only keep one floating license free for new users. This is because when two licenses are in use the usage rate is only 66% (less than 80%). Only when the third floating license is consumed the usage rate will be 100% and OpenLM will try to release one license for new users.

Is there any benefit in applying different timeout values for different features?

Let us assume we have two FLEXlm features with different groups of users for each group: editing users that use ESRI ArcInfo and viewers the use ESRI ArcView.

<u>Feature</u>	<u>Licenses</u>	<u>Users</u>
ArcView	10	40
ArcInfo	10	20

With a threshold of 80% OpenLM will try to keep two (2) free licenses for each FLEXlm feature (ArcView and ArcInfo). Since there are less users that are sharing the ArcInfo FLEXlm feature (10 licenses for 20 users), there are more chances that less than 8 licenses will be concurrently in use. When the usage is below the set threshold, no sessions will be closed by OpenLM and by that, we actually extend the maximum idle time parameter.

If the usage rate of the FLEXlm ArcInfo feature is higher than the preset threshold (80%), a higher time out will not enable OpenLM to release idle licenses. The result would be that we allowed idle users to hold licenses that are required by other users, and by that, avoided them from doing their work. The conclusion is that timeout should be kept minimal and uniform to all features and user groups.

Summary

The timeout mechanism provided by OpenLM for ESRI ArcGIS is based on two parameters, "maximum idle time" and threshold. The combination of these two parameters provides a good solution for FLEXlm features with both high and small number of licenses. The timeout value should be kept minimal (15-20 minutes) for all FLEXlm features and user groups.