

Cadence Licensing: Additional hints and tips

License Options File

FlexNet (FlexLm) has the ability to add an options file to the license session. This options file allows various restrictions to be added to the license session which restrict licenses to various users, machines or both. **You should always implement an options file for your licenses** since by default (without an options file) licenses are available to any user or anyone who can access the logical license server ports of your license server.

We suggest that the options file is implemented so that all users are excluded unless explicitly listed. E.g.

```
group EUROPRACTICE johndoe janedoe
INCLUDEALL GROUP EUROPRACTICE
```

This options file has two users; "johndoe" and "janedoe" (where "johndoe" and "janedoe" are their login identifiers on your system). The INCLUDEALL allows all licenses features in your key file to be available to the logins explicitly listed in the EUROPRACTICE group (and by implication, excludes all others).

This example represents the minimum restrictions needed. You may apply more stringent restrictions to the options file (e.g restrictions by hosts, by IP range or by specifying specific features for each user).

To enable your license options file, you need to edit your license key file and add the path to your options file to the DAEMON line for cdslmd. For example:

```
DAEMON cdslmd <path_to_cds_licensing>/cdslmd <path_to_opt>/cdslmd.opt
```

Records of all persons granted access to Cadence Tools

A possible method of accurately recording all persons who have been given access to Cadence tools would be to archive copies of the options file, together with a record of users' full names and email addresses. Comments may be included within the options file by starting the line with #. A copy of the options file should be archived whenever the file is modified (or at least annually) to ensure that dates of access can be traced.

Collecting License log file information

You must always run your Cadence license server in a mode which collects **all** details of your license usage and sessions in a file (license log file). However Cadence also require license log files to be kept for a five years and you need to implement a method which avoids over-writing previous log files and archives your current log file before re-starting the license server. On unix systems, one simple way to achieve this is:

```
<lmgrd_path>/lmgrd -2 -p -c lic.dat -l cds_`date +%Y%m%d-%H%M%S` .log
```

In this example, each time lmgrd is started a log file with a time-date-stamp file name is created and should therefore avoid over-writing the previous license log file.

Also of note is the use of the "-2 -p" switches to lmgrd. These switches prevent unauthorized users of your system issuing shutdown commands to your license server. The use of the "-2 -p" switches restricts license management commands to the unix root account, or if a unix ladmins group is defined on your system, to the accounts within this group. (if you create an ladmins group, then add root to this group's definition).

Restricting access to the Cadence installation and documentation

The Cadence installation (both tools and documentation) installed on your system should be protected from access (read or execute) by any users of your system which are not authorized to do so.

This may be achieved in several ways, by only allowing authorized users logins on your complete system, by creation of a dedicated unix group for cadence users and only allowing access to the cadence installation to members of the group, or by unix access control lists.

Additional Information

Further details about Cadence licensing and lmgrd may be located in the documentation included within your Cadence installation. Please see <install path>/doc/license/license.pdf with the chapter "How to Configure licensing" and the section "Managing licensing" being of particular relevance.

If you have any questions or require assistance to set-up these license mechanisms for your Cadence installation then please contact the Microelectronics Support Centre, email MicroelectronicsCentre@stfc.ac.uk