



FLEXnet License Timeout Functionality

Product:Pro/ENGINEER and Creo Elements/Pro

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Technical Area:INSTALLATION

FLEXnet License Timeout Functionality

The TIMEOUT Option

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Summary

What does the Timeout feature do?

FLEXnet contains a timeout mechanism which reclaims a client's license in the event that the client application remains inactive for longer than a set period of time. PTC software will periodically communicate with the FLEXnet server and report that the floating license is still actively in use. If the report is not returned to the FLEXnet server before the set time elapses, the floating license may be returned to the server.

What values can the inactivity timeout be set to?

Expressed as a value of *seconds*, the FLEXnet Timeout value can be set from 20 minutes (1200 seconds) to unlimited. The default FLEXnet server Timeout value is 120 minutes (7200 seconds). If Timeout value of less than the minimum of 20 minutes is set the value of the minimum will be used.

How is the Timeout value set?

The TIMEOUT or TIMEOUTALL option is set in the FLEXnet options file which by default is called ptc.opt, and is located in the <FLEXnet loadpoint>\licensing directory. The **DAEMON** line in the *license.dat* file contains the path to this options file.

Options are set in the following format:

TIMEOUT *featurename* **seconds**

Where *featurename* is the name of the license feature and *seconds* is the number of seconds after which inactive license is reclaimed

or

TIMEOUTALL **seconds**

Same as TIMEOUT, but applies to all features.

Example: To set the timeout for feature *f1* to one hour (3600 seconds) the following line would be added to the options file:

```
TIMEOUT f1 3600
```

To set a timeout value, perform the following:

1. **Stop the FLEXnet process.** Run the command "ptcshutdown" in the <FLEXnet loadpoint>\bin directory from a command prompt in Windows or a Unix terminal session. This requires having the same permissions under which the FLEXnet server was installed.
2. **Enter the text as a new line within the ptc.opt file**
3. **Start the FLEXnet process.** Run the command "ptcstartserver" in the <FLEXnet loadpoint>\bin directory from a command prompt in Windows or a Unix terminal session. Again this requires having the proper permissions.

Does the version of Pro/ENGINEER or FLEXnet affect inactivity timeout settings?

Yes. As of Release 2000i2, the FLEXnet timeouts were modified as follows:

	FLEXnet for Pro/ENGINEER release 20.0	FLEXnet for 2000i2 and later	Description
Startup	10 seconds	10 seconds	Upon starting a session, the client machine requests a license and has 10 seconds in which to have the request validated.
Validation	3 minutes	1 minute	After each one-minute interval, the next time the user makes a menu selection, the client machine communicates with the license server asking whether the license is still available. The application has a minimum of 1 minute to validate the license.
Validation Retries	3	None	If a machine cannot validate its license the user interface will "freeze" and the customer is given the Warning dialog box with options: <ul style="list-style-type: none"> • Choose Retry to request a license from an active license server. • Choose Save Files(s) to save the work. • Choose Exit to close the application without saving the file(s).
Inactivity Timeout	120 minutes (default)	120 minutes (default)	This parameter prevents a license from remaining idle. So that the license can be used by another client machine.
Minimum Timeout	120 minutes (default)	20 minutes	
Maximum Timeout	none	none	

What would cause a PTC client to lose its floating license?

Inactivity - If a session of PTC software is left inactive for a long period of time its license may be reclaimed by the license server.

When a floating license is obtained by a client, the client will send information to the FLEXnet License Manager to tell the server that the license is still actively in use. The communication to the server is triggered by menu selections rather than local processes.

The following activities will not register as actively using the software:

- the process of retrieving objects,
- CPU intensive operations such as the creation of plot files or finite element meshing of a model,
- time spent loading a part.

When timeout is exceeded the floating license can be taken away from a client application if:

1. Another user requests a license and there are no free licenses of the feature in question.
2. The `ptcstatus` command is executed by any user which will force the FLEXnet server to reclaim the license from any client which has not communicated with the server for more than the `TIMEOUT` setting for that feature or the `TIMEOUTALL` setting.
3. Another validation check for licenses exceeding the timeout finds that there is still no activity.

Miscommunication - If PTC software detects that it has lost regular contact with the license server it will pause a session.

The client software regularly sends a communication to the license server reporting that the license is actively in use. If the reply to this communication does not return within one minute the client considers this a "miscommunication" and Pro/ENGINEER pauses. A message is generated in the Pro/ENGINEER message window and to the trail file which indicates that the license may be lost. The prompt also has an option allowing the user to attempt to try to regain the license.

If miscommunications occur regularly, the client/server communication should to be adjusted. Consider moving the license server to another machine for example, or identifying the FLEXnet server by the IP address instead of the hostname to avoid needing name resolution. The "`ptcstatus`" command can be used as a tool to determine if timeout is due to miscommunication. At the time of the license loss, execute the "`ptcstatus`" command from the license client. It can generally be concluded that the timeout is due to miscommunication if at least one license of the specified feature is free.

Once a floating license is lost, is Pro/ENGINEER data lost?

When a floating license is lost, a Warning dialog box will appear giving three options.

- Choose Retry to request a license from an active license server.
- Choose Save File(s) to save the work.
- Choose Exit to close the application without saving the file(s).

If the FLEXnet server has no free floating licenses of the feature in use, a license can be made available provided that another Pro/ENGINEER user exit.

In addition, the above Warning Dialog box will not appear if the license is regained prior to the next license heartbeat in which case a dialog box stating "Regained floating license." will appear unless the `config.pro` option '`suppress_license_loss_dialog yes`' is set. If this `config.pro` option is set, the license will be automatically reclaimed if possible and the Warning Dialog box will then only appear when the license cannot be reclaimed.

Summary

The following changes were made after the first shipment of Release 20.0:

- The default timeout was changed from 20 minutes to 120 minutes.
- If a client prematurely exits, FLEXnet will automatically regain the license.
- Setting a higher timeout value causes less interruptions for end users. However licenses from long inactive clients will be unavailable to other users.

- If a licensed client becomes disconnected from the network the user will be prompted with the "Warning dialog" box. However the license will not be reclaimed by the server until the TIMEOUT setting has been reached.
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