



## Sharing Cadence Licenses from Windows Machines with Firewalls Active

Current Windows Desktop Class Operating Systems have incorporated the Windows Firewall application; this is designed to restrict external access to the machine over the network. The default installation of the Cadence License Manager will configure the Windows Firewall to allow the required components for the Cadence license manager service, `lmgrd.exe` and `cdslmd.exe`, network access through the Windows Firewall. Using other network security software would require configuration to allow the required components to communicate with the network.

### Background

Details of the operation of the FlexLM License Manager can be obtained from the FlexLM End Users Guide, `fnp_LicAdmin.pdf`, which is part of the default license manager installation (`LicenseManager\doc\license` directory of the Cadence License Manager installation), or can be downloaded from the vendor site, <http://www.flexera.com>. But, in essence, the machine running the license manager application “listens” to a specific network port for a license request packet and responds with a license token from the vendor daemon, which is using a different network port. In the default configuration, the license manager is on a port fixed during installation, usually 5280 in the case of the Cadence License Manager, and most of the license files issued by Cadence now use port 3000 for the vendor daemon.

(Note that an “unspecified” port for the vendor daemon in the license file will result in a “spare” port being assigned by the Operating System when the license manager service starts. This will work fine for the local machine but a remote machine request needs to be allowed through the firewall, network security, to use networking to get a license token granted. The firewall, network security, could be disabled but, in most cases, this might not be desirable)

Most firewall, network security, applications will allow configuration to permit specific ports, or specific applications, through the firewall, this will need the vendor daemon restricted to a specific port.

### Restricting the Vendor Daemon, `cdslmd`, to a Specific Network Port after License Manager Installation

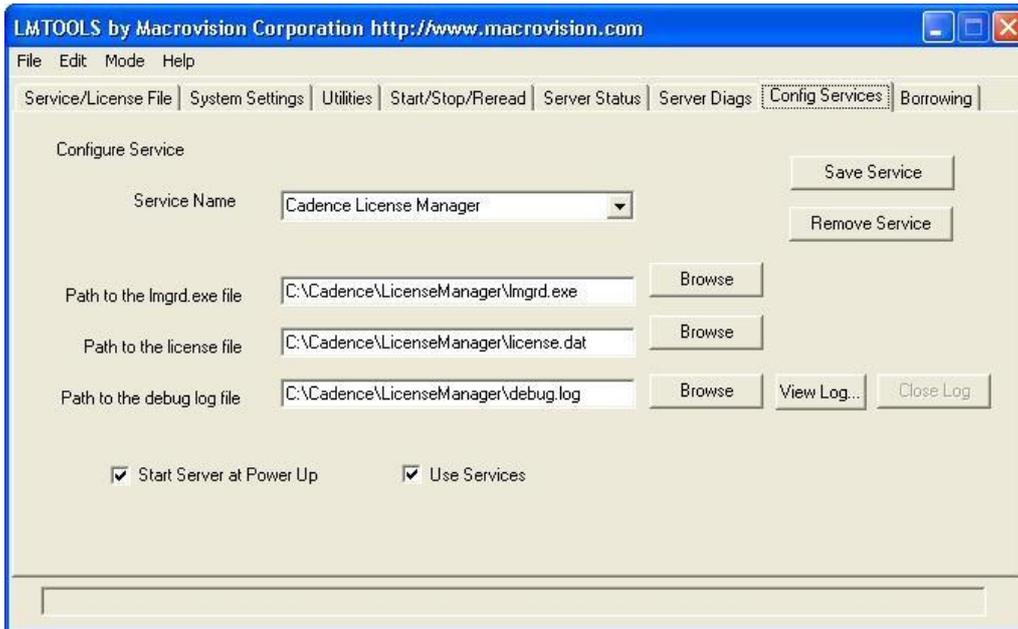
The Vendor Daemon, `cdslmd.exe`, now uses port 3000, set in the license file. To use another port, or specify a port if one is not specified in the license file, the License File, `license.dat`, being used by the License Manager needs to be changed.

### Stopping the Running License Manager

Start the License Manager Tools, `LmTools` application from:

**Start>Programs>Cadence>License Manager>LmTools**

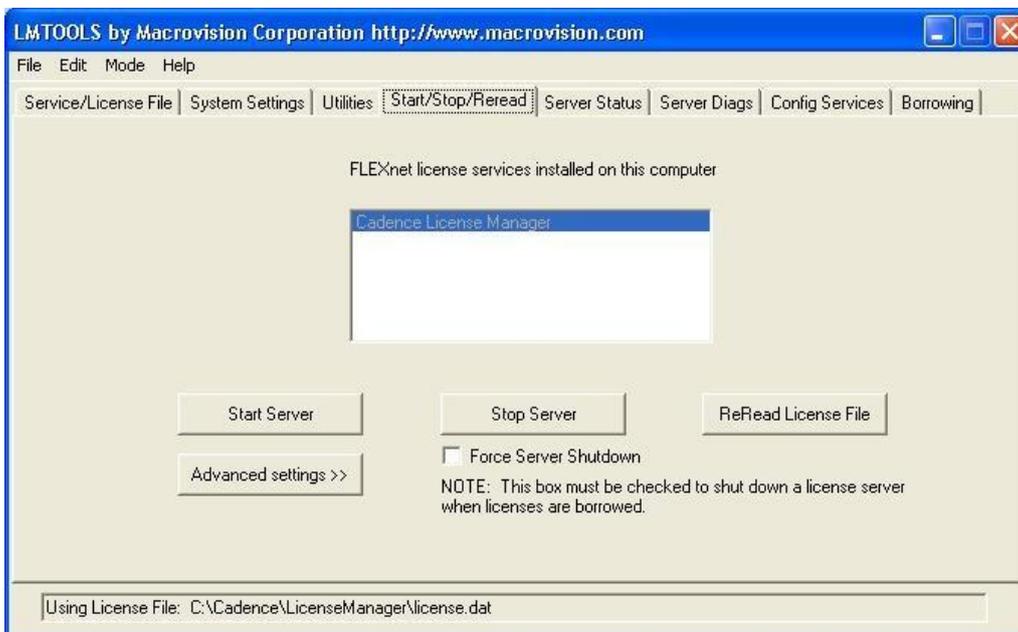
(Note: If User Account Control is enabled, use right-click>Run as Administrator to start `LmTools`, otherwise, regardless of user account rights, you will have insufficient rights to manage the running service)



Left-click on the “Config Services” tab and select the Cadence License Manager service in the list, the default name for this is Cadence License Manager but it is possible that another name may have been selected.

Note the location of the License File from the “Path to the license file” edit box, this is the name of the file that will need to be edited. (This will usually be C:\Cadence\LicenseManager\license.dat)

Left-click on the Start / Stop / Reread tab, near the middle of the tab list and use the Stop Server button to stop the License Manager. Leave the LmTools window open. (Note the status line of “Stopping Server” will remain but the license manager service has been stopped)



### Editing the License File

Start a Text Editor, like Notepad, Notepad++ or similar that will leave the file contents as plain text, and open the license file noted from the Config Services tab. The License file will resemble:

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```
SERVER <YourMachineName> <LockingMechanism> 5280
DAEMON cdslmd <LicenseMangerPath>\cdslmd.exe PORT=3000
USE_SERVER
FEATURE <FeatureName> ...
```

(Default port specified in Cadence provided license file)

```
SERVER <YourMachineName> <LockingMechanism> 5280
DAEMON cdslmd <LicenseMangerPath>\cdslmd.exe
USE_SERVER
FEATURE <FeatureName> ...
```

(Default port not specified)

If the PORT number isn't specified, move the cursor to the end of the DAEMON line and add the following text: "PORT=3000", double quotes are not required, so that the license file then resembles:

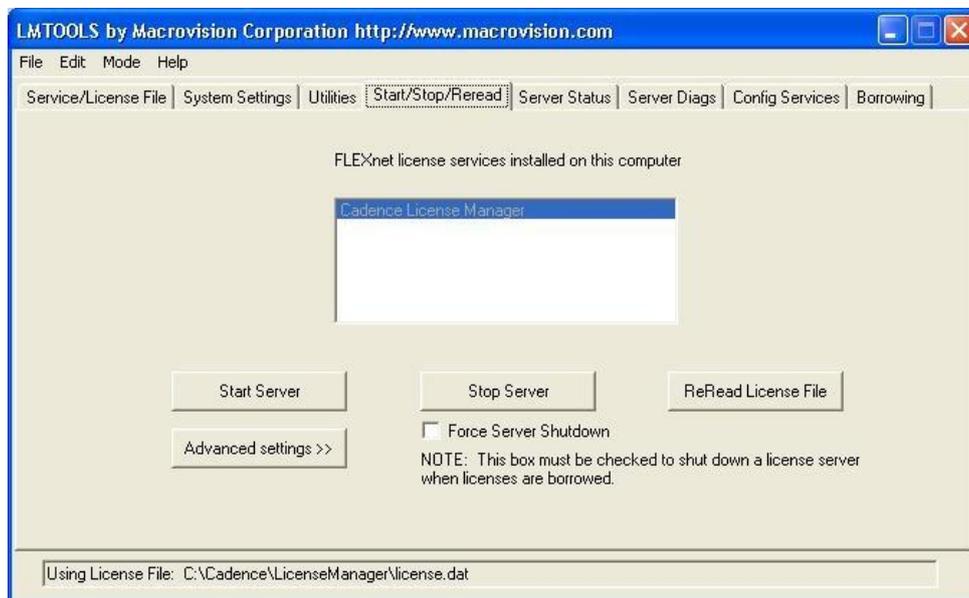
```
SERVER <YourMachineName> <LockingMechanism> 5280
DAEMON cdslmd <LicenseMangerPath>\cdslmd.exe PORT=3000
USE_SERVER
FEATURE <FeatureName> ...
```

(It is not a requirement to use port 3000 but this value will work provided that it has not been previously assigned to another service, or specify a different port number if required))

Save the modified license.dat file, close the Text Editor and check that the file extension is still ".dat", this will usually be the case with Notepad.

### Starting the License Manager with the updated License File

Return to the LmTools window and use the Start Server button to start the server.



With the Firewall running it will take about 30 to 60 seconds for the log file to be updated, so wait for the log file to be updated and return to the "Config Services" tab. Use the "View Log" button at the middle right to open the log file. Scroll to the bottom of the file and check that the time stamp is current and that, near the end of the file is an entry that contains:

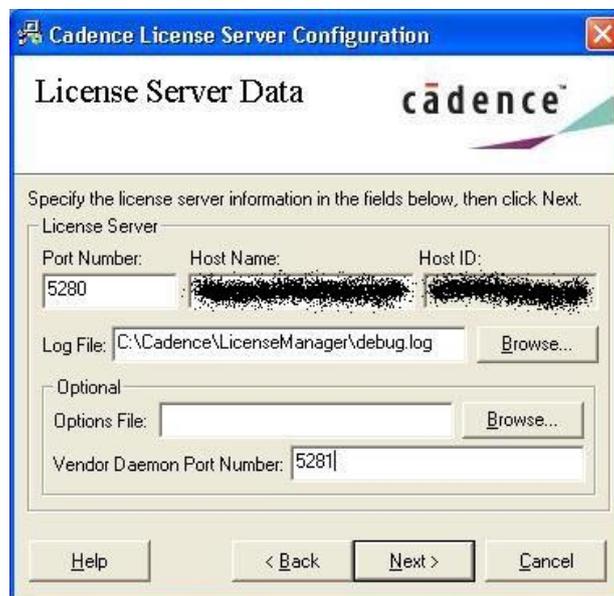
... cdslmd using TCP-port 3000

This will confirm that the license manager changes were effective. (Note: If a port other than 3000 was used on the daemon line in the license file, that value should be reflected in the TCP-port value)

Close the Log File view with the “Close Log” button back on the “Config Services” tab and close the LmTools Application.

### Restricting the Vendor Daemon, cdslmd, to a Specific Network Port during License Manager Installation or when updating the license using the License Server Configuration Utility

In both cases, after selecting the license file that you have been provided with, the “Cadence License Server Configuration” window will open. This will contain the Host Name, determined from the current machine, the Port Number, determined from the last value on the SERVER line in the license file, the HostID, determined from the third value on the SERVER line of the license file, and the default filename and location for the log file. Specify the Vendor Daemon Port Number as shown below:



In this case, 5280 is the License Manager port and 5281 is the Vendor Daemon port.

Continue through and complete the License Manager configuration

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