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License Manager User Manual

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Chapter 1. Overview

The Thunderhead License Manager is required for floating (network) licenses of PyroSim, Pathfinder, or PetraSim. The license manager maintains a pool of licenses that can be checked out from copies of client software installed anywhere on the network. The license manager must be installed onto one computer that will act as a server for the floating licenses. Multiple program installations can then be configured to use the floating license server.

Chapter 2. Install the Floating License Manager

The Thunderhead License Manager should be installed on the computer that will act as the server for the floating licenses. This can be any computer on the local network, including a computer running PyroSim or Pathfinder.

To install the License Manager:

1. Download the License Manager installer. You can download the latest version of the License Manager at the top of this page. You can also download an older version of the License Manager if your installation requires it.

2. Log in to the computer using an account with administrative privileges (or supply administrator credentials when prompted during the install).

3. Double-click the `ThunderheadLM_YYYY-V-MMDD.msi` installation package to begin installation. This will install the main license server (`rlm.exe`), a Thunderhead-specific license server (`theng.exe`), and utilities for managing the server.

4. To enable the floating license server, you must now install a license file.

2.1. License Manager Upgrade

When upgrading the Thunderhead License Manager from version **2017.1.0223** (RLM v12.1) or earlier to version **2020.1.0402** (RLM v14.0) or later, you will need to manually move your license files.

Earlier versions were 32-bit and saved license files to `C:\Program Files (x86)\Thunderhead License Manager`. Beginning with version 2020.1.0402 (64-bit), license files must be stored in `C:\Program Files\Thunderhead License Manager`.

After upgrading from an earlier version, manually copy your license files from the old location to `C:\Program Files\Thunderhead License Manager` and run Restart License Service (run as administrator).

Chapter 3. Install the License File

To activate your floating license, you must install a license file. This license file is generated by Thunderhead Engineering based on your server's Host Name and Host ID.

To find your Host Name and Host ID:

1. On the **Windows Start Menu** (Figure 1), type `Server HostID` **(1)** and click or press **Enter** on that selection **(2)**.
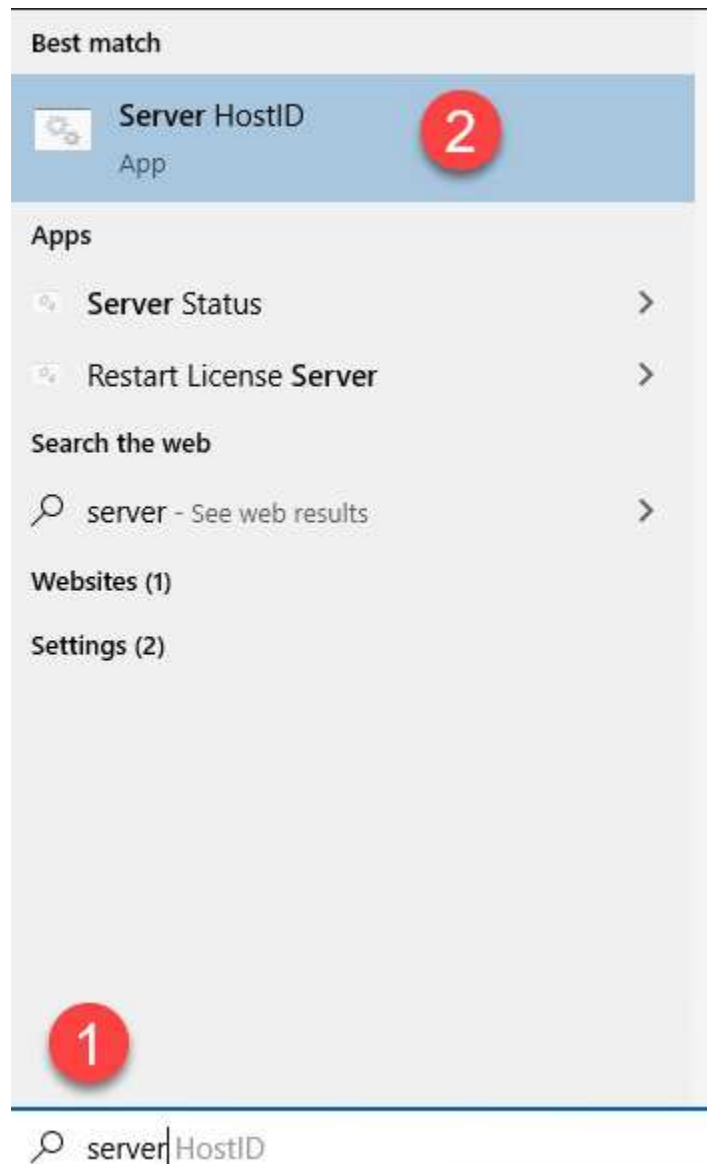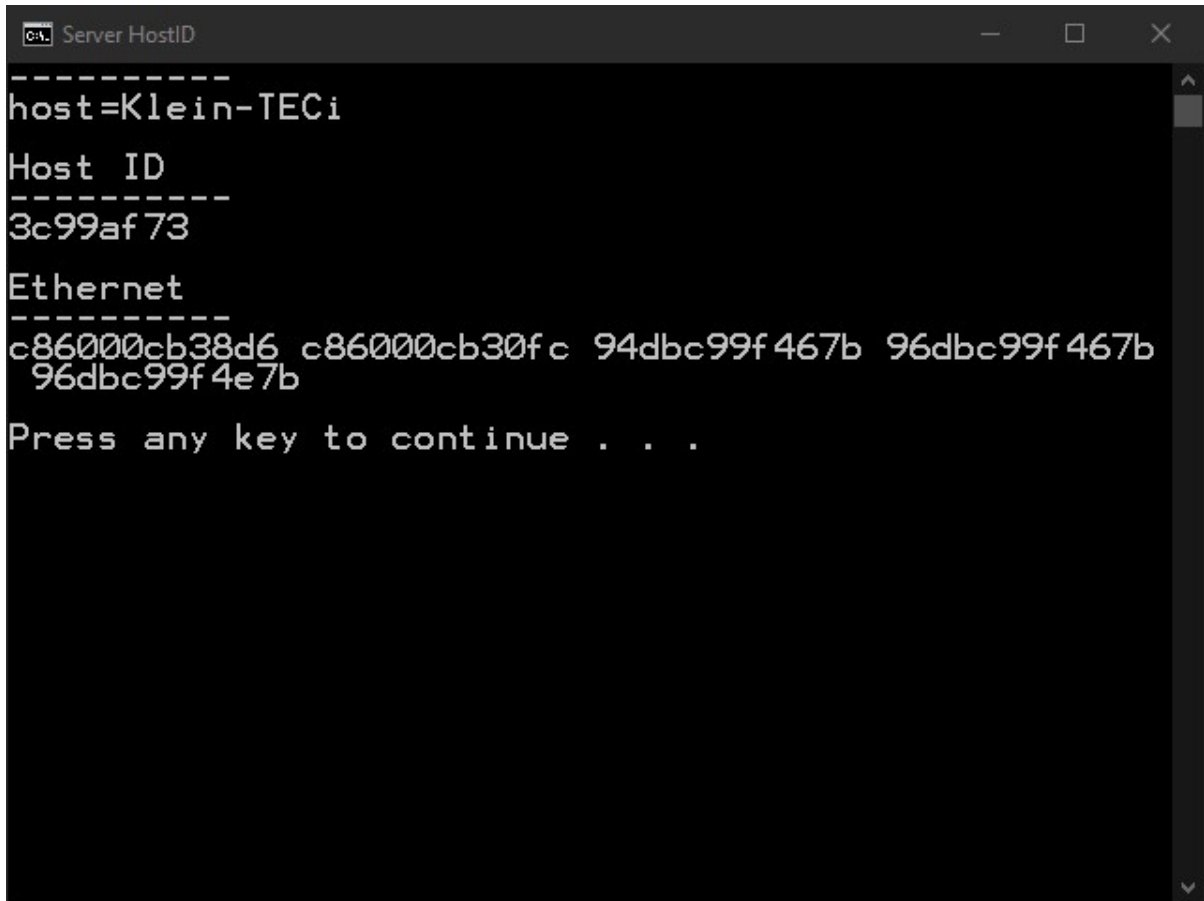

Figure 1. Server HostID option in the Windows Start Menu

2. A command window will appear (Figure 2) that displays the server's Host Name and Host ID.

Figure 2. Server Host Information

3. Send your Host Name and Host ID (not the information in the image above) to Thunderhead Engineering sales@thunderheadeng.com. Also, include your purchasing information to help us know what kind of license you need. Thunderhead Engineering will reply with a license file `*.lic`. where `*` is a timestamp string for when the file was generated.

4. Copy the license file (`*.lic`) to the license manager installation folder, typically `C:\Program Files\Thunderhead License Manager`.

5. In the **Windows Start Menu**, begin typing `Restart License Service` and it should auto-complete to the correct application. You must be an administrator to restart the license service.

6. Right-click the **Restart License Service** shortcut and select **Run as administrator**.

Once the license service has been restarted, the license file will be loaded and the server is ready to provide licenses to client computers.

Chapter 4. Server Configuration

You can check the status of the license server using the Server Status shortcut, which displays a short textual report of server usage, or through the Monitor License Server shortcut, which will displays a simple web interface. Both methods show how many licenses are in use and which users are currently using licenses.

By default your license server uses TCP port 52100. If you are using a personal software firewall or accessing the server across a hardware firewall, you will have to configure the firewall to allow TCP traffic on ports 52100 and 52101. The ports used by the license manager can be configured in the license file by editing the port numbers on the HOST and ISV lines. After changing the port numbers in the license file, you must restart the server for the changes to take effect. Also, any client program installations that were configured using the previous port assignments will need to be updated.

```
HOST {Your Hostname} {Your HostID} 52100
ISV theng theng.exe theng.opt 52101
```

There are several advanced options available to administrators to control the behavior of the license manager. The Thunderhead License Manager is based on the Reprise License Manager (RLM). Please see the RLM End-User Documentation for advanced server administration. The RLM documentation can be found on the administration web page accessed through the Monitor License Server link.

4.1. Firewall Settings

Typically the License Manager is used in LAN configurations on the same network subnet. If they are not on the same LAN and are trying to access from outside the local subnet, the installation program only opens up the Firewall for Local Access, and not for 'Any'.

To update this setting, go into the Firewall configuration for the License Manager computer and change the **Thunderhead LM** application **Scope** setting for **Remote IP address** from **Local subnet** to **Any** (Figure 3).
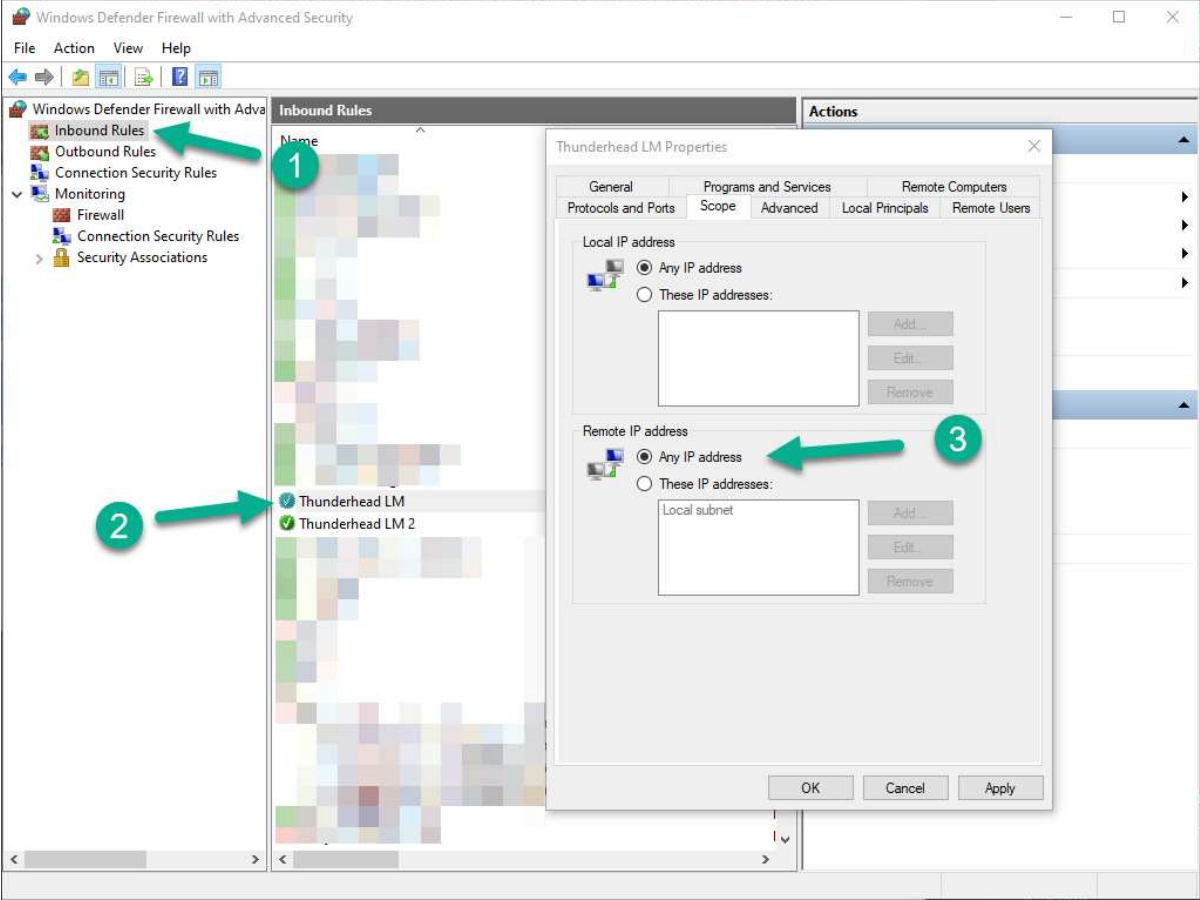
Figure 3. Firewall Settings

Chapter 5. Client Configuration

Your software (PyroSim, Pathfinder or Petrasim) can be configured to locate the floating license server using the **Licensing and Activation** dialog or through a **PROPS** file on each client computer.

5.1. License and Activation Dialog

To configure an installation to use a floating license:

1. Start the program. If the installation is not currently licensed, the Licensing and Activation dialog will automatically appear and you can skip to step 3.

2. On the **Help** menu, click **License**.

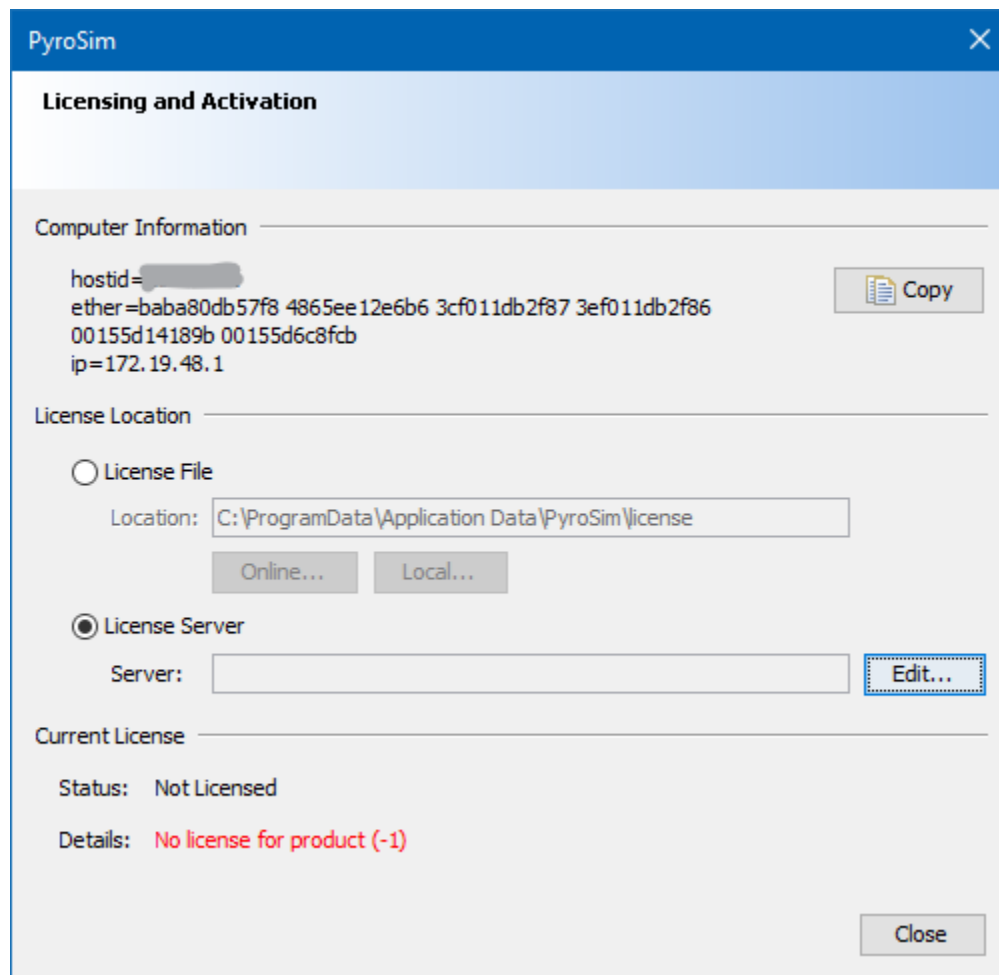3. Under **License Location**, click to select **License Server**

Figure 4. Licensing and Activation Dialog

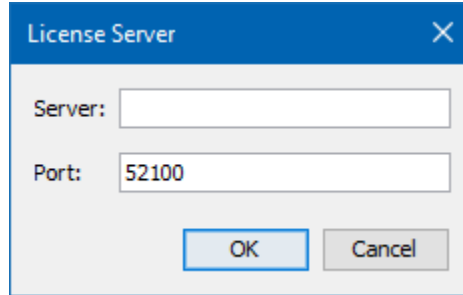4. Click the **Edit** button at the right of the server field to edit the server name and port number.

Figure 5. License Server Dialog

5. In the Server box, type your Host Name.

6. In the Port box, type 52100 (or the number you specified in the license file).

7. Click OK to save the server connection settings and attempt to connect to the license server.

This completes the floating license configuration. This client will now check licenses in and out as needed.

NOTE	The default port number is 52100, if your configuration uses a custom port number on the HOST line of the server license file, use that port number instead.

5.2. Client Settings in PROPS File

The license server location can also be set for the client using the configuration file. For PyroSim, this file is called PyroSim.props and is typically located in %USERPROFILE%\AppData\Roaming\PyroSim\PyroSim.props

The relevant entries are:

```
PyroSim.licenseServer
thunderheadeng.license3.LicenseManager.location
```

You may be able to set up one machine and copy around a modified PROPS file for subsequent network license installs.

Property names in the PROPS file are case sensitive, so the property name must be entered exactly as shown. The procedure is similar for Pathfinder or PetraSim, substituting the program name in the above instructions as appropriate.

Chapter 6. Troubleshooting

Sometimes things don't go as planned, this section walks you through a few different processes to resolve these issues.

6.1. Collect Server Diagnostics

1. From a computer on the local network, go to `http://[HOSTNAME]:5054`. This should bring up the web interface for your license server.

2. Select the Diagnostics screen from the left column

3. Note the output directory location (copy the address) and select Run Diagnostics

4. Retrieve the diagnostics file from the copied location and send this information to support@thunderheadeng.com

6.2. Returning a License to the Server Pool

1. From a computer on the local network, go to `http://[HOSTNAME]:5054`. This should bring up the web interface for your license server.

2. Click the 'Status' link in the left navigation menu. In the ISV Servers table, you should see a running server named 'theng'.

3. Click the 'theng' button under 'Server Status'. This will bring up the status report for the license server.

4. You should see the PyroSim/Pathfinder product in the License pool status table.

5. There is an 'inuse' column. If the value in this column is not zero, then click the usage button at the end of the row to see what host has it checked out. You can then click the **remove** button to force the license to be released back to the pool if the program did not correctly release it.