Keysight i3070 In-Circuit Test Software

Single/Triple-Redundant Network License Server

Notices

Edition

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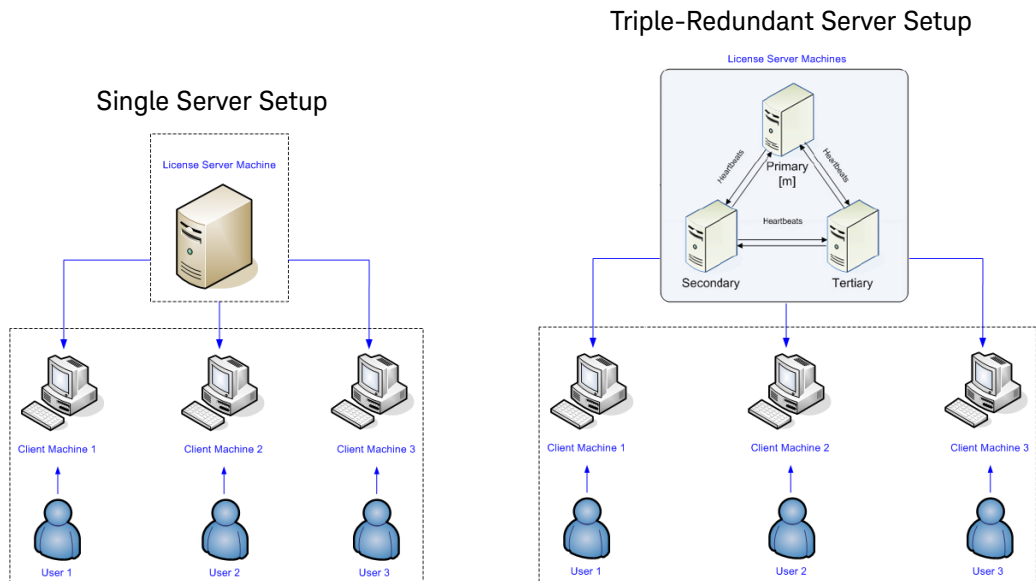
Keysight i3070 In-Circuit Test Software

i3070 License Server Setup

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Overview

Floating licenses reside on a license server and are checked out for use on individual workstations, then returned when no longer needed so that they can be used on another workstation.

You can have a single license server or a triple server setup. Configuring triple-redundant license servers (three servers on the same network) allows your licensed products to continue to operate even if one of the servers goes down.

Triple-Redundant Server Setup

Single Server Setup

To set up the floating license server(s), you must have the appropriate license files issued for either single server or triple server machines, based on the host IDs that you provided when redeeming the licenses.

Obtaining the Host ID

To obtain the host ID, type `getmac /v /fo list` in a Command Prompt window. The host ID is listed as the Physical Address of the Ethernet network adapter.

```
C:\>getmac /v /fo list

Connection Name:  Ethernet
Network Adapter:  Intel(R) Ethernet I210-T1 GbE NIC
Physical Address: 68-05-CA-8D-59-2B
Transport Name:   \Device\Tcpip_{5A595A44-C6A9-4A79-A9E9-09BF2E4A599D}
```

License Server Requirements

Identify the machine(s) to be set up as network license servers.

- Make sure they are stable.
- Do not use systems that are frequently rebooted or shut down.
- When setting up triple-redundant servers, it is best to obtain host IDs of the same type for all three machines. Issues can arise if different host ID types are used in the license server configuration.

  Ensure that the servers can communicate with each other. The setup will fail if machine communication cannot be established. (For example, you may need to check the firewall settings.)

Hardware requirements
- Minimum 4 GB memory
- Minimum 500 GB disk space

Software requirements: Single server

Pathwave License Manager is supported on:
- Windows 11
- Windows 10 (x64), version 20H2 or later

Software requirements: Triple servers

Keysight license server software (lmgrd.exe and agileesofd.exe) is supported on:
- Windows 11
- Windows 10 (64-bit, x64)

NOTE

Installation Notes

- Be sure the machine is not already set up as a server machine for any other products. Do not use the same machine as a floating license server for different products.

  You can use an existing server machine only if is a server for other i3070 licenses but not any other products. Determine the version and location of the license server software before you proceed.

- Do not put the license file on a network file server. If you do this, you lose the advantages of having failover protection because the file server becomes a possible single point of failure.

- The license server manager cannot start vendor daemons from multiple software publishers in a triple-redundant server setup. If any system must run more that one vendor daemon, then the license administrator must run separate instances of the license server to support the other vendor daemons. Make sure that the port numbers do not clash.

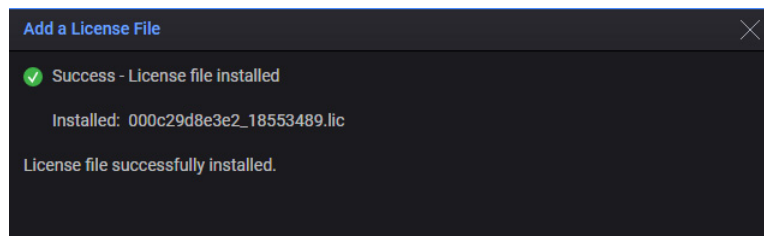# Setting Up a Single License Server

If any the following software are installed, remove them first:

- Keysight Network License Manager,
- Keysight License Manager 5,
- Keysight License Manager 6, or
- Keysight Floating License Manager.

Then use Pathwave License Manager to set up a single license server.

1   Copy your i3070 license file(s) to a temporary folder on the server machine.

2   Install Pathwave License Manager by running
    `PathWaveLicenseManager-7.4.0-windows` (found in `LicenseSoftware` folder on
    the Keysight i3070 installation disk). Follow the instructions to complete the
    installation.

3   Launch Pathwave License Manager from the desktop shortcut.

4   Click **Add a License File**.

5   Click **Browse** to find and select your license file. Then click **Add Now**.

    You should see the following status:

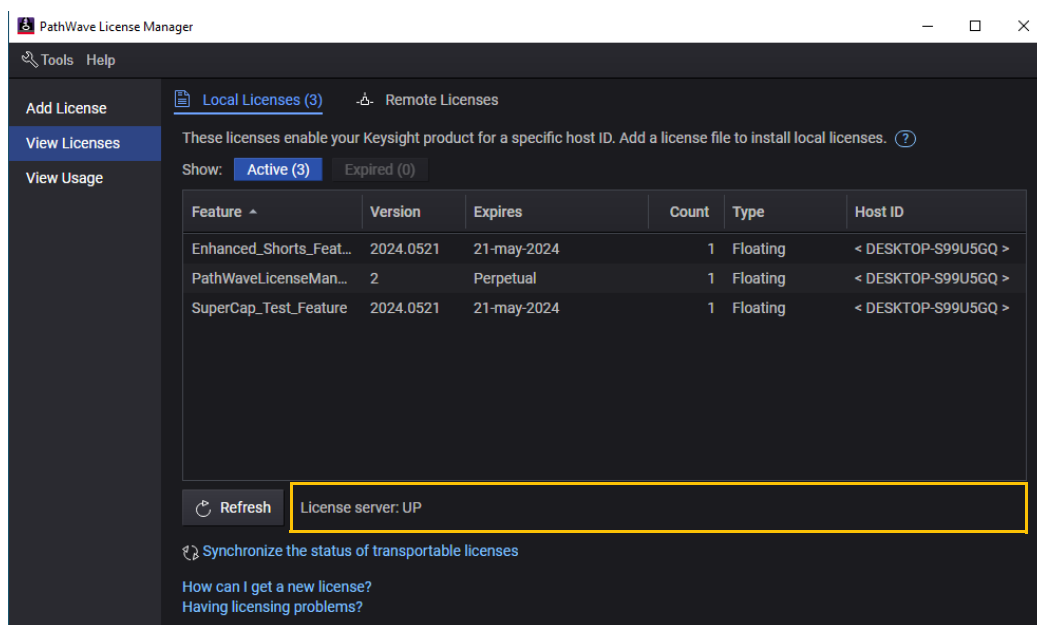You can view the licenses on the **View Licenses** tab.

Once the server setup is done, set up the client machines which will access the
floating licenses. See the *i3070 Software Installation Guide*.

Troubleshooting

If the floating licenses cannot be detected on the client system, follow these steps:

1 Check the license server status on the **View Licenses** tab. The status should be **UP**.

2 If the status is **NOT STARTED**, click **Repair Windows Service**, and check the status again.

3 Restart the server if the problem persists.

Figure 1   License server status

Setting Up Triple-Redundant Servers

Determine location of license server software and i3070 licenses, if any

License server software version

If the intended server machine is already running the Keysight license server software, ensure that the software version is 2023.03.23 or later, to be compatible with i3070 In-circuit Software release 11.10p and later.

1   Locate the ReadMe file in `C:\Program Files\Common Files\Keysight\Agileesofd` and look for the **file version** under **Keysight Licensing agileesofd Vendor Daemon**.

2   If the Keysight license server software is an earlier version, update it to 2023.03.23 which is included in the i3070 11.10p installation disk.

Location of license server software and i3070 licenses

Then determine the executable and license file locations on the server machine as described below.

1   Run **Task Manager** and look for an **agileesofd** process that is running. It may be listed as **VendorDaemon agileesofd**.

2   Right-click the process in Task Manager and select **Properties**. Take note of the full path, shown in the **Location** field.

3   In a Command Prompt window, go to that location and run `lmtools.exe`.

   a   In the LMTOOLS window, select the **Config Services** tab and take note of the path to the license file. This is where you should place any new licenses.

   b   Close LMTOOLS.

4   In Task Manager, right-click the **agileesofd** process and select **End Task**.

| NOTE | Use the existing paths you've found for the executable and license files, instead of the recommended locations in the server setup procedures that follow. |

Step 1: Copy license and options files

1 Edit each i3070 license file to change the following SERVER line properties:

   - Hostname for the three servers.

   - Port number, which can be changed if needed (between 0 and 64000). However, ensure that the same port number is specified for all three servers.

   - If you have multiple license files for the product, also ensure that they all specify the same port number.

   Example:
   ```
   SERVER PrimaryServer 17003456 27009 PRIMARY_IS_MASTER
   SERVER SecondaryServer 17004355 27009
   SERVER TertiaryServer 17007ea8 27009
   ```

NOTE	Do not change the host ID as the license file is issued to the server machines based on their host IDs.

2 Use a text editor to create an options file named `agileesofd.opt` in the same folder. Enter the following command in the file and save it:
   `TIMEOUTALL 1800`

3 Copy the i3070 license files and the agileesofd.opt file to a license folder on each of the three server machines, for example,
   `C:\ProgramData\Keysight\Licensing\Licenses\Server`

Step 2: Install Keysight license server software

The license server software can be found on the Keysight i3070 installation disk:
`LicenseSoftware\agileesofd_2024.07.17_win64.zip` (for 64-bit Windows)

1 On the server machine, extract the files to the folder
   `C:\Program Files\Common Files\Keysight\Licensing\Agileesofd`

2 Add (or locate) the system environment variable `AGILEESOFD_DEBUG_MODE` and set its value to `ON`.

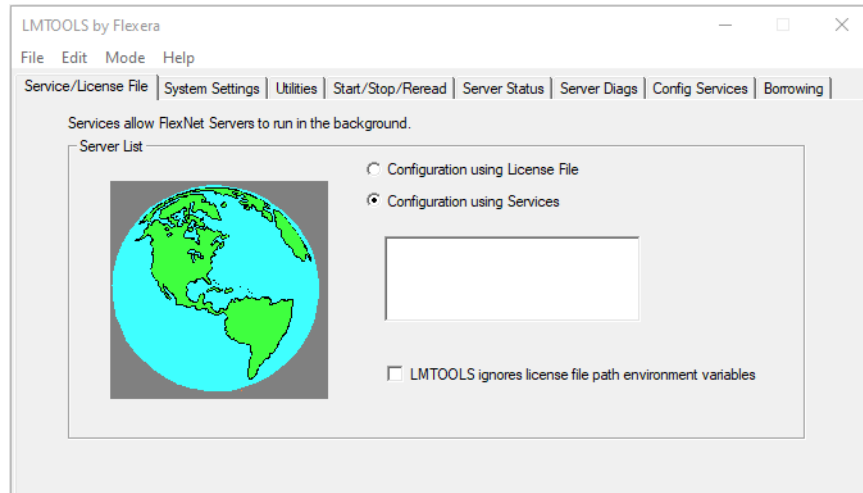Configure Windows service to start license server software

Configure a Windows service to automatically start the Keysight license server manager (lmgrd) and Keysight vendor daemon (agileesofd). You must have administrator privileges to configure a Windows service.

However, the service will run under the local system account as the special Local Server user, which does not have special system privileges. Therefore, ensure that:

- The log file is in a location that is writable by all users. Otherwise, the service will immediately exit, and will not indicate any errors even when there are.
- The license files are in a location that is readable by all users. Otherwise the log file will contain an error indicating that the license file could not be found.

Configure the Windows service

1 In a Command Prompt window, run `lmtools.exe` from
`C:\Program Files\Common Files\Keysight\Licensing\Agileesofd`

2 On the **Service/License File** tab, select **Configuration using Services**.

3 On the **Config Services** tab:

a Select a **Service Name** such as **Keysight License Server**.

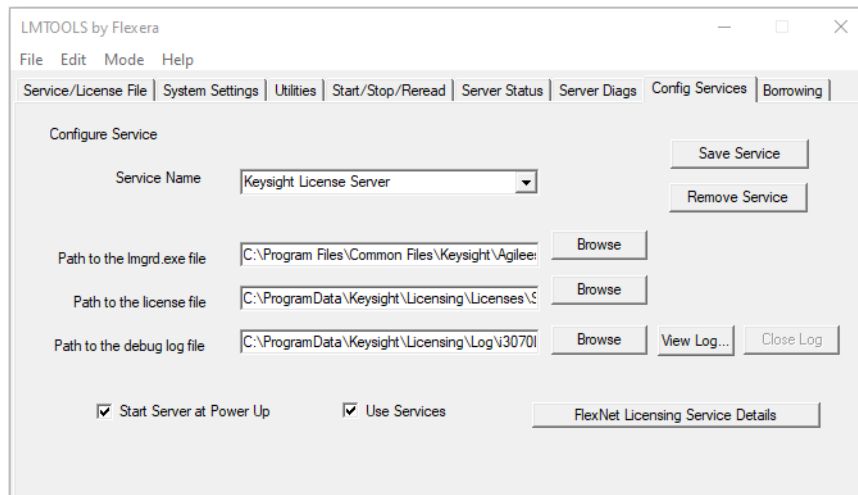b Click the **Browse** buttons to specify the paths to the following files.

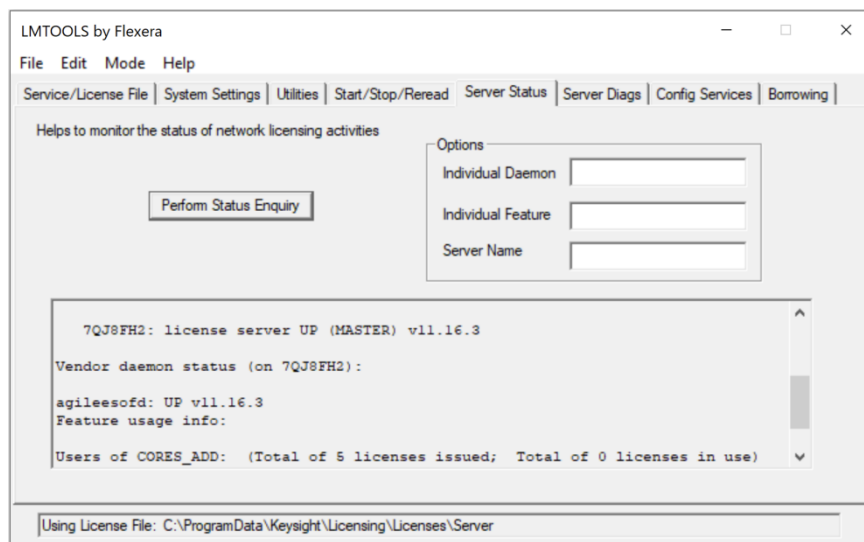|	Example:
lmgrd.exe	C:\Program Files\Common Files\Keysight\Licensing\Agileesofd\lmgrd.exe
license file	C:\ProgramData\Keysight\Licensing\Licenses\Server\license.lic
	If you have license files for multiple Keysight products, include them all.
debug log	C:\ProgramData\Keysight\Licensing\Log\i3070LicenseServer.log

c Also select **Start Server at Power Up** and **Use Services**.

d Click **Save Service**.

4   On the **Start/Stop/Reread** tab, check that the new license service is listed.

5   Repeat the above steps to set up the Windows service on the other servers.

Start the license servers

1   On the **Start/Stop/Reread** tab, click **Start Server** to start the license servers in the following order: primary, secondary, and then tertiary (follow the order as they appear in the license files). Ensure that you start the designated primary server first.

2   To verify that the license server manager and Keysight vendor daemon are running, select the **Config Services** tab again and click **View Log**. The log window will display the status.

3   To verify that the licenses have been successfully installed, select the **Server Status** tab. Click **Perform Status Enquiry**.

Once the server setup is done, set up the client machines which will access the floating licenses. See the *i3070 Software Installation Guide*.

Stopping the License Server

In a Command Prompt window, run the following command from
`C:\Program Files\Common Files\Keysight\Licensing\Agileesofd`:

`lmutil lmdown -c <license folder>`

where `<license folder>` is the location of the license files

For example:

`lmutil lmdown -c C:\ProgramData\Keysight\Licensing\Licenses\Server`

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