Keysight i3070 In-Circuit Test Software

Single/Triple-Redundant Network License Server

KEYSIGHT TECHNOLOGIES

Setup Guide

Notices

© Keysight Technologies 2019

No part of this manual may be reproduced in any form or by any means (including electronic storage and retrieval or translation into a foreign language) without prior agreement and written consent from Keysight Technologies as governed by United States and international copyright laws.

Edition

Edition 1, July 2019

Published by:
Keysight Technologies
1400 Fountaingrove Parkway
Santa Rosa, CA 95403-1738
United States

Warranty

THE MATERIAL CONTAINED IN THIS DOCUMENT IS PROVIDED "AS IS," AND IS SUBJECT TO BEING CHANGED, WITHOUT NOTICE, IN FUTURE EDITIONS. FURTHER, TO THE MAXIMUM EXTENT PERMITTED BY APPLICABLE LAW, KEYSIGHT DISCLAIMS ALL WARRANTIES, EITHER EXPRESS OR IMPLIED WITH REGARD TO THIS MANUAL AND ANY INFORMATION CONTAINED HEREIN, INCLUDING BUT NOT LIMITED TO THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE. KEYSIGHT SHALL NOT BE LIABLE FOR ERRORS OR FOR INCIDENTAL OR CONSEQUENTIAL DAMAGES IN CONNECTION WITH THE FURNISHING, USE, OR PERFORMANCE OF THIS DOCUMENT OR ANY INFORMATION CONTAINED HEREIN. SHOULD KEYSIGHT AND THE USER HAVE A SEPARATE WRITTEN AGREEMENT WITH WARRANTY TERMS COVERING THE MATERIAL IN THIS DOCUMENT THAT CONFLICT WITH THESE TERMS, THE WARRANTY TERMS IN THE SEPARATE AGREEMENT WILL CONTROL.

Technology Licenses

The hardware and/or software described in this document are furnished under a license and may be used or copied only in accordance with the terms of such license.

U.S. Government Rights

The Software is "commercial computer software," as defined by Federal Acquisition Regulation ("FAR") 2.101. Pursuant to FAR 12.212 and 27.405-3 and Department of Defense FAR Supplement ("DFARS") 227.7202, the U.S. government acquires commercial computer software under the same terms by which the software is customarily provided to the public. Accordingly, Keysight provides the Software to U.S. government customers under its standard commercial license, which is embodied in its End User License Agreement (EULA), a copy of which can be found at http://www.keysight.com/find/sweula. The license set forth in the EULA represents the exclusive authority by which the U.S. government may use, modify, distribute, or disclose the Software. The EULA and the license set forth therein, does not require or permit, among other things, that Keysight: (1) furnish technical information related to commercial computer software or commercial computer software documentation that is not customarily provided to the public; or (2) relinquish to, or otherwise provide, the government rights in excess of these rights customarily provided to the public to use, modify, reproduce, release, perform, display, or disclose commercial computer software or commercial computer software documentation. No additional government requirements beyond those set forth in the EULA shall apply, except to the extent that those terms, rights, or licenses are explicitly required from all providers of commercial computer software pursuant to the FAR and the DFARS and are set forth specifically in writing elsewhere in the EULA. Keysight shall be under no obligation to update, revise or otherwise modify the Software.

Safety Notices

WARNING

A WARNING notice denotes a hazard. It calls attention to an operating procedure, practice, or the like that, if not correctly performed or adhered to, could result in personal injury or death. Do not proceed beyond a WARNING notice until the indicated conditions are fully understood and met.

CAUTION

A CAUTION notice denotes a hazard. It calls attention to an operating procedure, practice, or the like that, if not correctly performed or adhered to, could result in damage to the product or loss of important data. Do not proceed beyond a CAUTION notice until the indicated conditions are fully understood and met.

i3070 License Server Setup

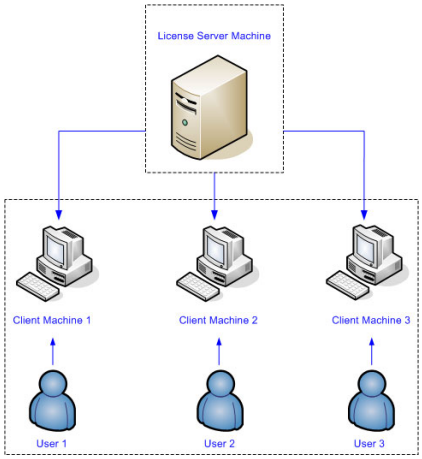
Overview 4
License Server Requirements 5
Setting Up a Single License Server 6
Setting Up Triple-Redundant Servers 8
Troubleshooting Tips 12
Stopping the License Server 13

KEYSIGHT TECHNOLOGIES

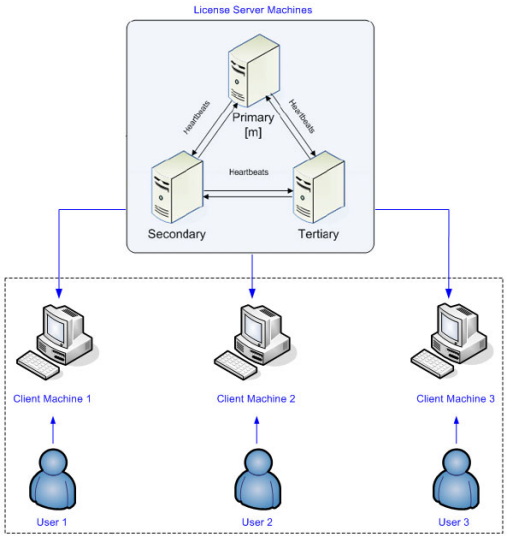
Overview

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.

Single Server Setup



Triple-Redundant 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.

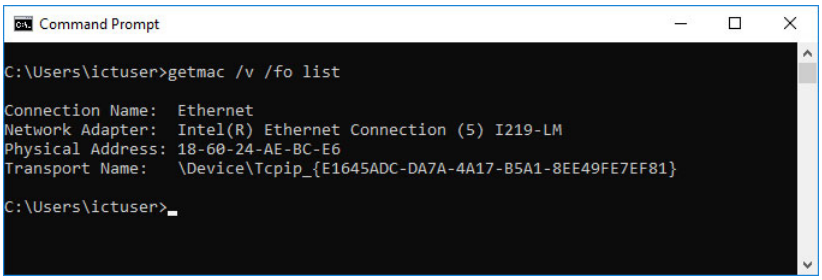
To set up the license server(s), you must have the appropriate license files issued for either single server or triple server machines, based on the host IDs that you provided when redeeming the licenses.

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.

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.



Hardware requirements

- Minimum 4 GB memory
- Minimum 500 GB disk space

Software requirements: Single server

Keysight License Manager 6 is supported on:

- Windows 10 (64-bit)
- Windows 7 (64-bit)

Software requirements: Triple servers

Keysight license server software (lmgrd.exe and agileesofd.exe) is supported on:

- Windows 10 (32-bit and 64-bit)
- Windows 7 (32-bit and 64-bit)

Setting Up a Single License Server

NOTE **If the Keysight Network License Manager is installed on the license server machine, be sure to uninstall it before you proceed.**

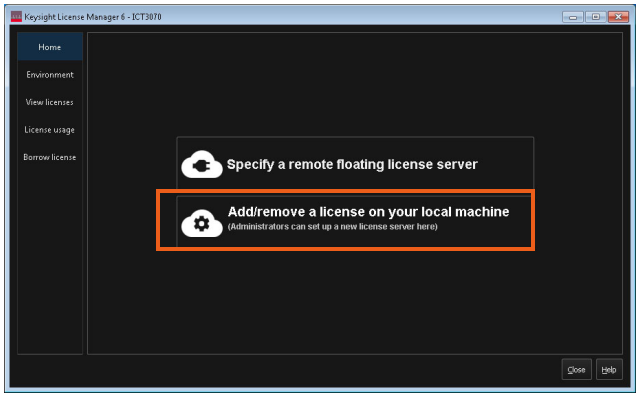
Use Keysight License Manager 6 to set up a single license server. The server machine must be running 64-bit Windows 10 or Windows 7.

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

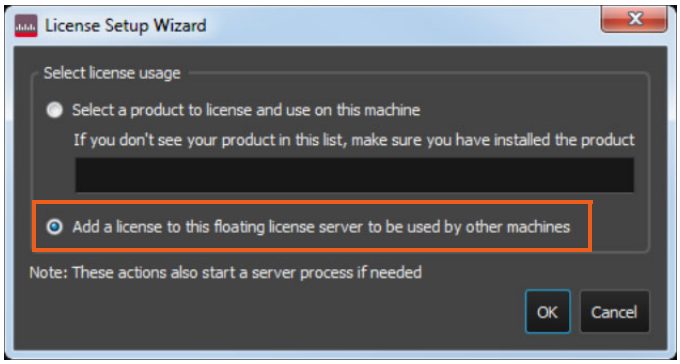
2 Install Keysight License Manager 6:
Run `KeysightLicenseManager-6.0.3-windows.exe` (found in `LicenseSoftware` folder on the Keysight i3070 installation disc). Follow the instructions to complete the installation.

3 Launch Keysight License Manager 6 (**Start** > **All Programs** > **Keysight License Manager 6** > **Keysight License Manager 6**).

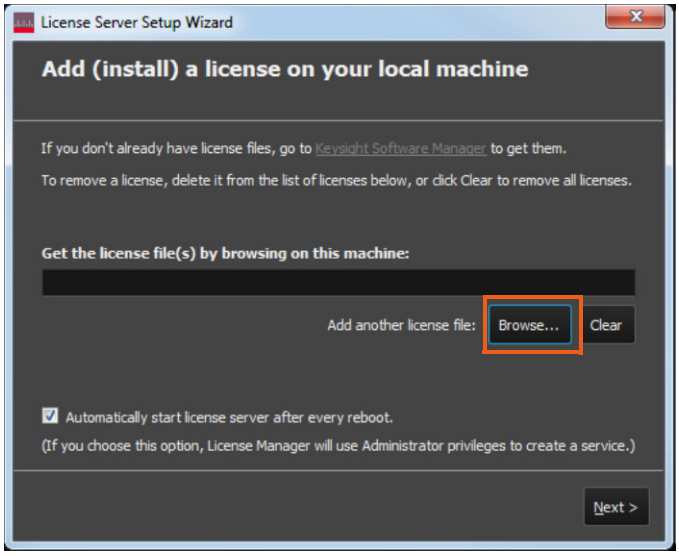
4 Click **Add/remove a license on your local machine**.



5 Select **Add a license to this floating license server to be used by other machines** and click **OK**.



6 Click **Browse** to locate and select the license file(s). Repeat this as many times as needed to select all your license files.



7 Click **Next** to complete the license setup.

Once the server setup is done, set up the test development workstations to access the floating licenses. See the *i3070 Software Installation Guide*.

Setting up licensing on a 32-bit Windows system

If you need to set up a license server that is running 32-bit Windows, you will need to use the Manual Setup procedures found in the *Keysight Licensing Administrator's Guide*.

The administrator's guide and the required software are provided on the Keysight i3070 installation disc (`LicenseSoftware\agileesofd-2018.08.01-win32.zip`).

Setting Up Triple-Redundant Servers

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

If a server machine is already running the Keysight license server software, determine the executable and license file locations on that server.

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 file

1 Edit the license file to change the SERVER line properties:

- Hostname for the three servers.
- Port number can be changed if needed (between 0 and 64000); but 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 pat 17003456 27009
SERVER lee 17004355 27009
SERVER terry 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 Copy the license files to each of the three servers, for example, in the folder `C:\Keysight_License`

3 Start the license servers in the following order: primary, secondary, and then tertiary (that is, in the same order as they appear in the license files). This will ensure that your designated primary server takes the role of master.

Step 2: Install license server software

1 The license server software can be found on the Keysight i3070 installation disc:
   – `LicenseSoftware\agileesofd-2018.08.01-win64.zip` (for 64-bit Windows)
   – `LicenseSoftware\agileesofd-2018.08.01-win32.zip` (for 32-bit Windows)

   Extract the contents of the appropriate zip file to:
   `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**.

Step 3: Configure Windows service to start license server software

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

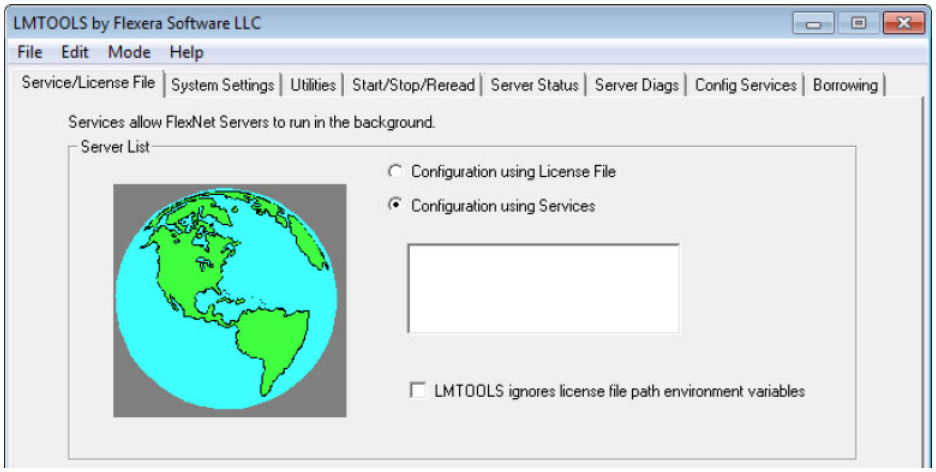
However, the service will run under the local system account as the special Local Server user, which does not have special system privileges. Therefore, ensure that:

- 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.

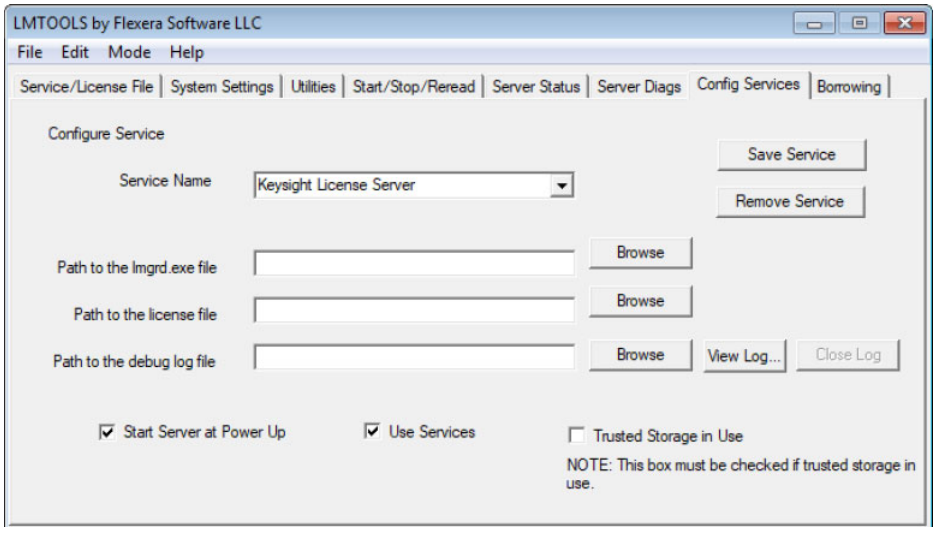
Follow these steps:

1 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, select a **Service Name**. For compatibility with other Keysight products, use the name Keysight License Server.



4 Click the **Browse** buttons to specify the paths to:

- lmgrd.exe, for example,
  `C:\Program Files\Common Files\Keysight\Licensing\Agileesofd\lmgrd.exe`
- license file, for example, `C:\Keysight_License\license.lic`
  If you have license files for multiple Keysight products, include them all.
- debug log, for example, `C:\Keysight_License\LicenseServer.log)`

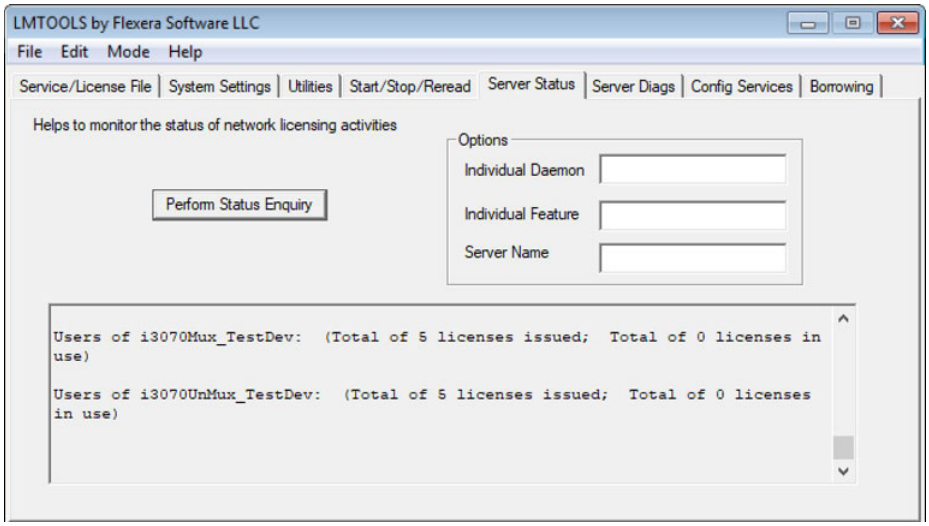
5 Also select **Start Server at Power Up** and **Use Services**.

6 Click **Save Service**.

7 On the **Start/Stop/Reread** tab, check that the new license service is listed. Click **Start Server** to start it.

8 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.

9 To verify that the licenses have been successfully installed, select the **Server Status** tab.



Repeat the setup procedure on the remaining server machines.

Once the server setup is done, set up the test development workstations to access the floating licenses. See the *i3070 Software Installation Guide*.

Troubleshooting Tips

- 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.

Stopping the License Server

If you need to stop the license server, execute the following command:
`lmutil lmdown -c <license folder>`
where `<license folder>` is the location of the license files

For example:
`lmutil lmdown -c C:\Keysight_License`

This information is subject to change without notice.
© 2019 Keysight Technologies
Edition 1, July 2019
www.keysight.com