



Siemens PLM Software

HEEDS MDO 2019.1 Windows Installation Guide

www.redcedartech.com

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Introduction

Your HEEDS® MDO installation download contains files for installing the license server, the HEEDS MDO software, and the product documentation. How you install them depends on whether you are running a single-user installation or installing on a network.

System Requirements

The computer(s) on which you intend to run HEEDS® MDO must meet the following minimum requirements for a Windows installation:

Component	Requirements
Operating system	x86-64: Windows Vista, 7, 10 Note: While the versions listed above are the officially supported versions of Windows, HEEDS MDO may run on other versions as well.
Platform	x86-64
Processor	Pentium 550 MHz
RAM	128 MB for HEEDS MDO and whatever is needed for your analysis software to run. Consult your analysis software manuals for these requirements.
Disk space	At least 200 MB of free disk space.

Licensing

All HEEDS MDO installations require a license, which you need to obtain from Siemens PLM Software. This license is monitored by the license manager, which is part of the license server:

- **If you are installing a single-user system (node-locked license)**, the license server and the HEEDS MDO product must be installed on the same system. You will only be able to run HEEDS MDO on that one computer.
- **If you are installing on a network**, one copy of the license server must be installed on the network. It can be placed on any machine which is reachable from the machine(s) where you intend to run HEEDS MDO.
- **If you have a network license**, the HEEDS MDO product itself can be installed on any machine in your network. It does not matter how many copies you install. However, you will only be able to simultaneously run the number of copies for which you are actually licensed.

Required Microsoft Visual C++ Libraries

In order for HEEDS MDO to run, the Microsoft Visual C++ 2013 Redistributable package must be installed.

- On Windows 64-bit, both the x86 and the x64 version need to be installed.

These packages will be installed automatically by the HEEDS MDO installer. In the unlikely event of this installation process failing, they can be downloaded from the URLs below and installed manually.

<http://www.microsoft.com/en-us/download/details.aspx?id=40784>

Requirements for the ANSYS WorkBench Portal

The following steps need to be performed only once on a given computer, before any HEEDS MDO project using the ANSYS Workbench portal is run:

1. In your Web browser, go to the URL below:
<http://www.microsoft.com/download/en/details.aspx?id=17657>
2. Click the **Download** button. This will download the **rktools.exe** file.
3. Login to your computer as a user with administrative privileges.
4. Run **rktools.exe**. It will extract and run the installer for the *Windows Server 2003 Resource Kit Tools*.
5. Click through the installer using the default settings.

Technical Support

Siemens PLM Software offers technical support from 9:00 a.m. to 6:00 p.m. Eastern Time, Monday through Friday.

To obtain technical support:

- **Phone:** 1.517.664.1137
- **Email:** support@redcedartech.com

Installing the Software

Before running the HEEDS MDO installer, complete the following steps to ensure the download is not corrupt:

1. Download the checksum utility from the website (<https://www.microsoft.com/en-us/download/details.aspx?id=11533>).
2. To run the checksum utility on the HEEDS installer, run the following command at the prompt:

```
Microsoft Windows [Version 10.0.14393]
(c) 2016 Microsoft Corporation. All rights reserved.

C:\Users\cd5nxc\Downloads>"C:\Temp\fciv.exe" "C:\Users\cd5nxc\Downloads\install_HEEDS-MDO_2017.10_Win64.exe"
```

You must get a similar output as follows:

```
Microsoft Windows [Version 10.0.14393]
(c) 2016 Microsoft Corporation. All rights reserved.

C:\Users\cd5nxc\Downloads>"C:\Temp\fciv.exe" "C:\Users\cd5nxc\Downloads\install_HEEDS-MDO_2017.10_Win64.exe"
//
// File Checksum Integrity Verifier version 2.05.
//
dfd90a41404c2c4959db06b17f3cdd39 c:\users\cd5nxc\downloads\install_heeds-mdo_2017.10_win64.exe
```

For HEEDS 2017.10 Windows installer, the starting string on the last line as seen in the above image must be dfd90a41404c2c4959db06b17f3cdd39 if the downloaded installer is not corrupt. Any mismatch in the string value indicates a corrupt installer download. This string is referred to as MD5Sum value.

In the software downloads section on the customer portal this value is specified for the different flavors of the HEEDS installers. For example, for 2017.10 it is specified as shown below:

HEEDS MDO v2017.10 Software Files

» **HEEDS MDO 2017.10 Installer (64-bit) for Windows [English] [829 MB]**

Checksum 667518131 870116180

MD5Sum dfd90a41404c2c4959db06b17f3cdd39

» **HEEDS MDO 2017.10 Installer (64-bit) for Linux [English] [455 MB]**

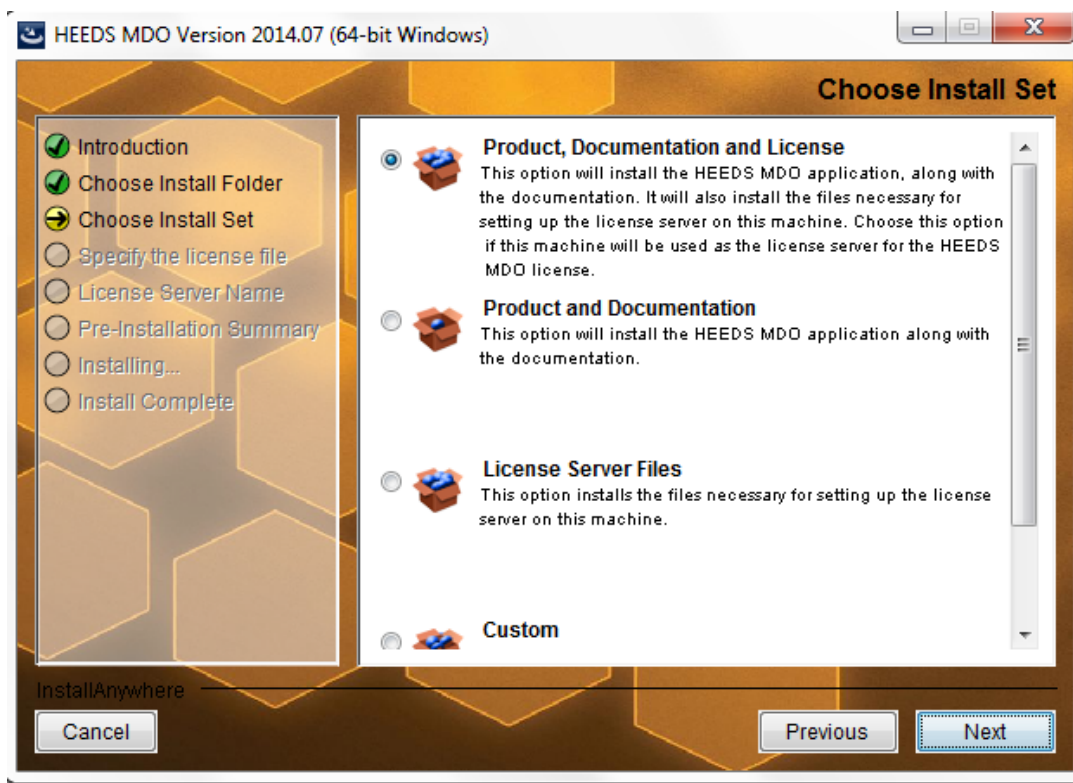
Checksum 2884098570 477774527

MD5Sum a1c7b487f358420d66ac4a422110b6a3

If you find that the installer is corrupt, download the installer and launch it again.

► Installing the software

When you install HEEDS MDO, you can choose one of four setups, depending on your needs:



- The **Product, Documentation and License** setup installs the HEEDS MDO software, documentation and the license server at the same time. This is the easiest way to install a single-user installation. If you want to use this setup, see *Product, Documentation and License Installation* on page 4 for instructions.
- The **Product and Documentation** installs only the product and documentation. This is the option chosen when there is a network license available on a different machine from where HEEDS is being installed. If you want to use this setup, see *Product and Documentation Installation* on page 5 for instructions.
- The **License Server Files** setup only installs the license server. This is the best option if you are placing the license server on a network server or on a machine where you are not going to install a copy of HEEDS MDO. If you want to use this setup, see *License Server Files Installation* on page 6 for instructions.
- The **Custom** setup lets you select the product components you wish to install.

It is not necessary to be logged in with administrative privileges to install HEEDS MDO, however, in this case the Start menu shortcuts will only be installed for the current user at install time.

Product, Documentation and License Installation

If this is the first time you have installed HEEDS MDO and are setting up a single-user installation, this option is the easiest way to install it. It will place both HEEDS MDO and the license server in the same directory.

► To download and install files from the Web

1. Download the installer from www.redcedartech.com. Contact us for instructions.
2. Navigate to the directory that contains your installation file.
3. Double-click on the **install_HEEDS-*<version>*_<platform>.exe** file to begin the installation process.
4. Some introductory text and installation recommendations will appear. Once read, click **Next**.
5. A default directory name will appear. You can accept the default, or click **Browse** and select another.
6. Click **Next**, and select **Product, Documentation and License**.

7. Click **Next**, and you be prompted to browse to the license file. Use the browser to select the license file that you received for the installation of the license server. Click **Next** after making the file selection.
8. The next screen will prompt you to enter the license server name. It is of the format port@hostname, where port is the port number used for communicating with the license server and hostname is the name of your machine. The default port number used in the license files generated by RCT is 27027. If you are not sure about the port number, you can just enter @hostname. Enter the requested data in the field.
9. Click **Next**, and you will see a summary of your installation choices and the components that will be installed.
10. Click **Install** to begin your install.
11. Once complete, click **Finish** to complete your install.

Once the installation completes, you will be ready to start using the product.

Product and Documentation Installation

The instructions in this section apply both to new installations and to upgrades. Follow them to install HEEDS MDO on multiple computers or to install an upgrade to your existing product.

If you are installing a single-user system and have already installed the license server, you must install HEEDS MDO on the same machine. It is recommended that you install it in the directory where the folder containing the license server files is located.

Note: If you have an existing license server from an earlier version of HEEDS, you must upgrade the license server to the latest version. Your existing license file will work with the new licensing tools.

► To download and install files from the Web

1. Download the installer from www.redcedartech.com. Contact us for instructions.
2. Navigate to the directory that contains your installation file.
3. Double-click on the **install_HEEDS-MDO_<version>_<platform>.exe** file to begin the installation process.
4. Some introductory text and installation recommendations will appear. Once read, click **Next**.
5. A default directory name will appear. You can accept the default, or click **Browse** and select another.
6. Click **Next**, and select **Product and Documentation**.
7. Click **Next**, and the new screen will prompt you to enter the license server name. It is of the format *port@hostname*, where *port* is the port number used for communicating with the license server and *hostname* is the name of the machine where the license server is installed. The default port number used in the license files generated by RCT is 27027. If you are not sure about the port number, you can just enter *@hostname*. Enter the requested data in the field.
8. Click **Next**, and you will see a summary of your installation choices and the components that will be installed.
9. Click **Install** to begin your install.
10. Once complete, click **Finish** to complete your install.

Once the installation completes, you will be ready to start using the product.

Using HEEDS in Japanese

To use the Japanese version of the HEEDS MDO, you must enable the “**Will you be using HEEDS MDO in Japanese?**” option during the installation. When this option is enabled, the shortcuts installed in the programs menu (as well as on the desktop, if that option is selected) will be updated to launch HEEDS MDO in Japanese. In this case, only the Japanese version of the documentation is installed.



Note: If you start HEEDS MDO by double-clicking the *HEEDSMDO.exe* file in the installation directory, HEEDS starts in English. You must start the program from the installed shortcut to launch the Japanese version.

VCollab Product Installation

HEEDS POST uses a third party software tool, VCollab, to visualize the results of CAE simulation data within the HEEDS POST environment. The use of this feature requires the visualization license to be purchased with HEEDS MDO. By default, when you install HEEDS MDO product files, the VCollab product files for version 2013 will also be installed. The installation of the VCollab files is initiated by launching the VCollab installer after the HEEDS MDO product files have been installed. Please follow the instructions in the VCollab installer window to complete the installation of the VCollab product. If you do not wish to install VCollab, you can deselect “VCollab” by picking the Custom installation option in the main HEEDS MDO installer or by selecting Cancel on the VCollab installer window.

License Server Files Installation

If you are installing HEEDS MDO on a network, you will need to install one copy of the license server. It can be located on either your network server or on another machine in your network, as long as it is accessible from all machines that will be running HEEDS MDO.

► To download and install files from the Web

1. Download the installer from www.redcedartech.com. Contact us for instructions.
2. Navigate to the directory that contains your installation file.
3. Double-click on the **install_HEEDS-MDO_<version>_<platform>.exe** file to begin the installation process.
4. Some introductory text and installation recommendations will appear. Once read, click **Next**.
5. A default directory name will appear. You can accept the default, or click **Browse** and select another.
6. Click **Next**, and select **License Server Files**.
7. Click **Next**, and you be prompted to browse to the license file. Use the browser to select the license file that you received for the installation of the license server. Click **Next** after making the file selection.
8. Click **Next** and you will see a summary of your installation choices and the components that will be installed.
9. Click **Install** to begin your install.
10. Once complete, click **Finish** to complete your install.

Once all of the components have been installed, you will need to configure the license server and link HEEDS MDO to the license file. See *Linking to the License File* on page 12 for instructions.

Environment Variables

When you install the HEEDS MDO software, the following environment variables should have been created. If the installation was done without administrative privileges, the variables may not be set. In this case, set the variables based on the information in the table below:

Variable	Description	Default Setting
RCTECH_LICENSE_FILE	Tells HEEDS where to find the license file or license server. Can take the form of a path to the license file (i.e., "port@hostname," "port@IPAddress," "@hostname," or "@IPAddress.") Examples: 27001@SERVER @SERVER @192.168.1.153 27000@192.168.1.153	27027@localhost
PRO_COMM_MSG_EXE	Only needed for the Creo portal. Points to a separate program called pro_comm_msg.exe located in the Creo installation. This path cannot be robustly inferred from the Creo installation path and it has to be set correctly for the Creo portal to operate correctly.	None
HEEDS_SIMCENTER3D_MRRCMD	Only needed for Simcenter 3D and Simcenter 3D Motion portals. The Simcenter 3D and the Simcenter 3D Motion portals both use the MRR (Motion Results Reader) to process motion results (.mres) files. MRR is not a part of either the SC or HEEDS installation. The value for this variable points to the reader executable file: "LMSMotionResultsReader.exe".	None

Problems Connecting to the License Server

If you get a “license server connection problem” error after installation and the `RCTECH_LICENSE_FILE` environment variable is set (see *Linking to the License File* on page 12), most likely there is a problem with the firewall or security settings on the license server machine:

1. Try turning off the *Windows Firewall* and any network security software that is running.
2. Attempt to connect from the client machine again.
3. If this works, you'll need to set exceptions for the **Imgrd.exe** and **RCTECH.exe** executables in the **C:\HEEDS\License** folder.

► To set Windows Firewall exceptions for the Imgrd.exe and RCTECH.exe executables

1. Make sure that you are a user in either the *Network Configuration Operators* or *Administrators* group.
2. Navigate to the *Control Panel* and open the **Network Connections** category.
3. Right-click on the **Local Area Connection**, and choose **Properties**.



Note: If you are unable to complete Step 3, your user account probably does not have the necessary privileges, and you will need to contact your IT department.

4. Click on the **Advanced** tab, and click the **Settings** button.
5. Click on the **Exceptions** tab.
6. Click the **Add Program** button.
7. Browse to **C:\HEEDS\License\Imgrd.exe**, and click **OK**.
8. Repeat steps 5 and 6 for **C:\HEEDS\License\RCTECH.exe**.
9. Click **OK**.
10. Click **OK** again.

The *Windows Firewall* will now allow the license server to be contacted.



Note: You may also need to contact your IT department to add exceptions to your network security software.

Using the License Server

The license server manages all HEEDS MDO activity. You can use the license server to start, stop, and monitor this activity on your system. After you install the license server, you need to obtain a license file, start the license server, and link HEEDS MDO to the license file.

How HEEDS MDO Licensing Works

HEEDS MDO manages usage via a token system. When your company purchased HEEDS MDO, it purchased the number of tokens that will support the anticipated activity for your company. The tokens are allotted as follows:

Component	Tokens
HEEDS MDO Modeler	1 "modeler" token per running copy
HEEDS MDO	1 "heeds" token
HEEDS POST	1 "heedsPOST" token
HEEDS MDO with PARALLEL	1 "heeds" token for the job 1 "heedsMPD" token for the job 1 "unlimited_EVALS" token
HEEDS CAE portal 1	"*_portal" token for each new analysis tool in the process, where * will be the abbreviation for the portal type (e.g., aba_portal for Abaqus). If an analysis tool is used multiple times in the process, only 1 token of its portal feature will be used.

Obtaining the License File

After you install the license server, you must obtain a license key from Siemens PLM Software. To give you a license, Siemens PLM Software needs some information:

1. Start a command prompt (**Start** menu->**Run**->**cmd**).
2. Change the directory to the HEEDS License Directory. The default location is:

C:\HEEDS\License

Type **lmutil lmhostid** after the prompt. Output similar to the following will appear on the prompt screen:

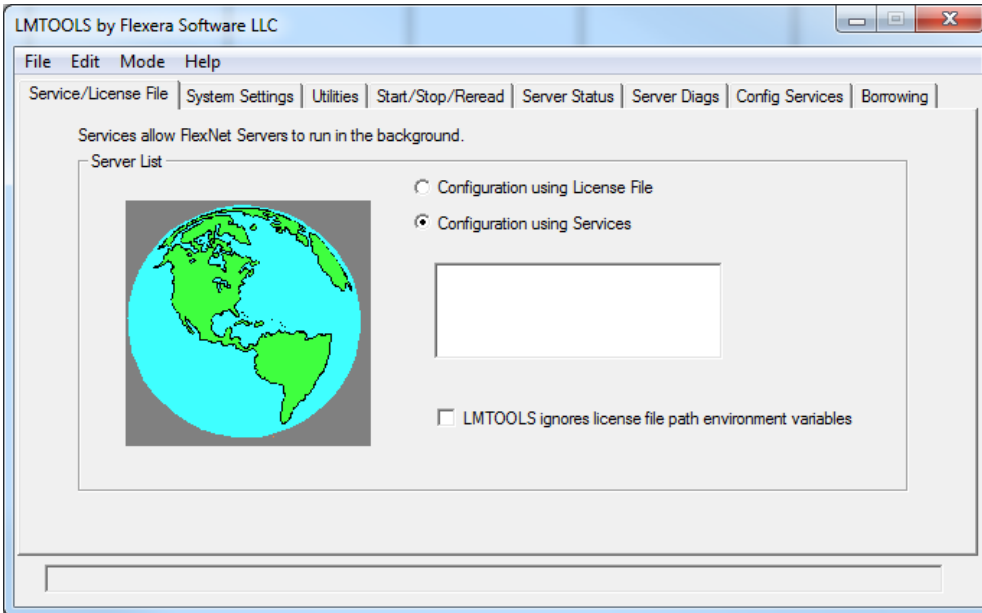
**lmutil - Copyright (c) 1989-2014 Flexera Software LLC. All Rights Reserved.
The FlexNet host ID of this machine is "003668bc8blb"**

3. Write down the **host ID**.
4. Type **hostname** after the new prompt. Write down the host name that appears after the prompt.
5. E-mail the **host ID** and **host name** to Siemens PLM Software. Upon receipt, Siemens PLM Software will issue you a license file.

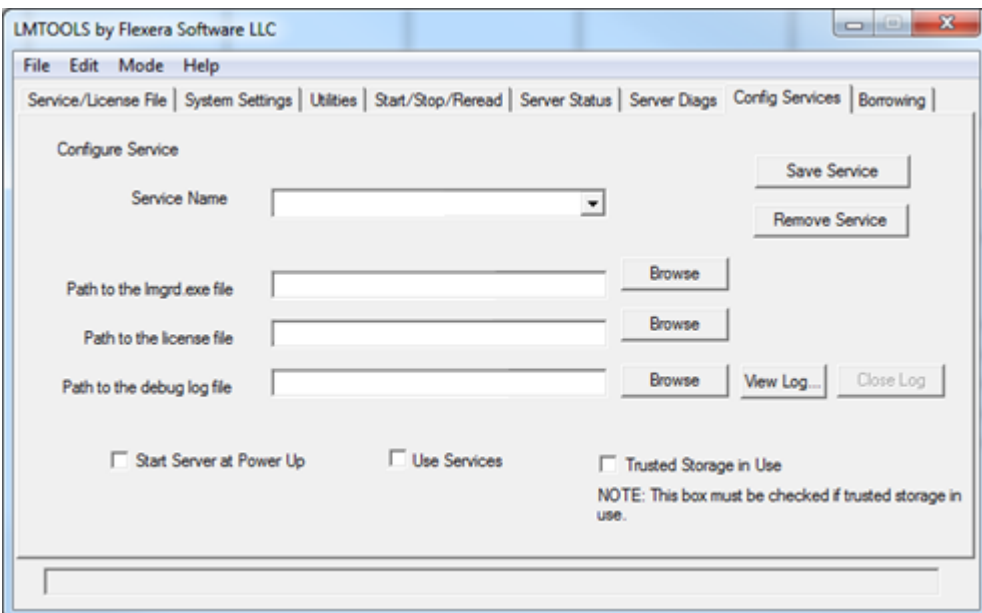
Manually Configuring the License Server

If you did not use the installer to setup the license server, use the instructions in this section to setup the server manually. After you get your license file, you need to configure the license server. To do so, the following steps must be performed by a user with admin administrative access:

1. Place the license file in the **HEEDS\License** directory.
2. In the *License* folder, open on **lmtools.exe** to open *LMTOOLS*. This must be run as an account with Administrative privileges. On Windows Vista and higher, right-click and choose **Run as administrator**.



3. Click on the **Config Services** tab. The following screen appears:



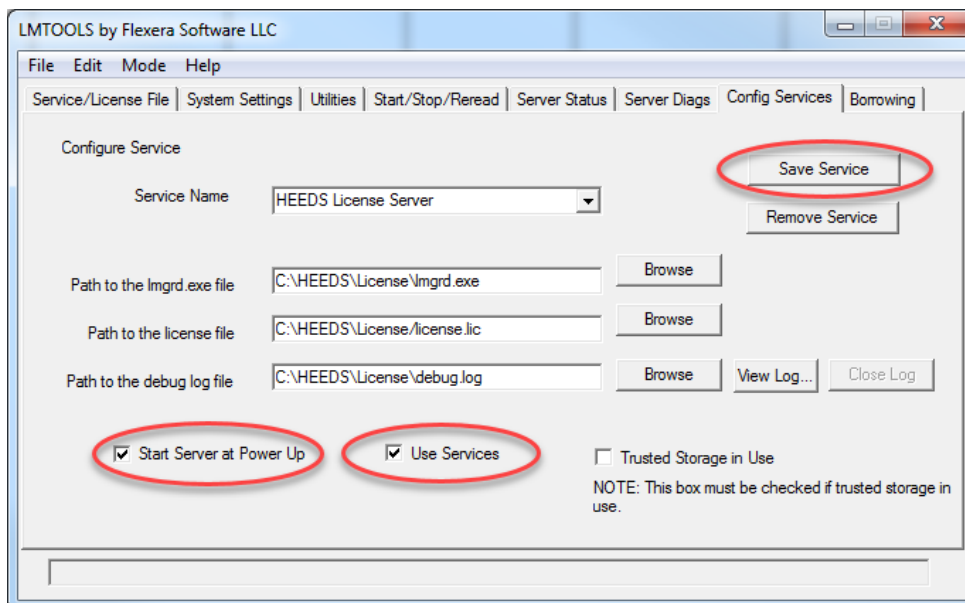
4. In the **Service Name** field, enter **HEEDS License Manager**. If another service is already listed, typing in this field will create a new service.
5. Next to the **Path to the lmgrd.exe file** box, click the **Browse** button:
 - a. Navigate to **HEEDS\License**.
 - b. Double-click on **lmgrd.exe**.

6. Next to the **Path to the license file** box, click the **Browse** button:
 - a. Navigate to **HEEDS\License**.
 - b. Double-click on the license file.
7. Next to the **Path to the debug log file** box, click the **Browse** button:
 - a. Navigate to **HEEDS\License**.
 - b. Enter **debug.log** in the **File name** field.
 - c. Click **Open**. The dialog will close and the path to **debug.dat** (or debug.log) will be placed in the field on the **Config Services** tab.

The debug log file will be created automatically the first time it is needed.

8. Check the **Use Services** box at the bottom of the window.
9. Check **Start Server at Power Up** if you want the license server to start automatically when the machine is booted.

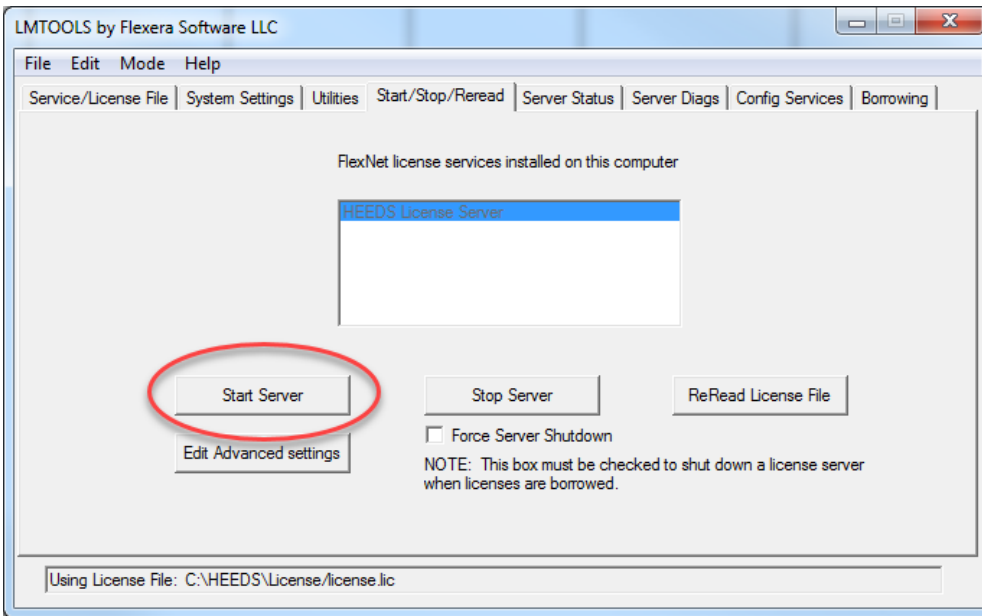
The completed screen is shown below:




10. Click on the **Save Service** button in the top right section of the window to save your selections.

Starting the License Server

1. If you have more than one service installed in the license server, display the **Server/License File** tab, and select **HEEDS License Manager**.
2. Click on the **Start/Stop/Reread** tab. The following screen will appear:
3. Select **HEEDS License Manager** from the *Flexlm license services* box:



4. Click on **Start Server** to start the license server.
5. Click  in the upper right corner of the screen to close the license manager.

Linking to the License File

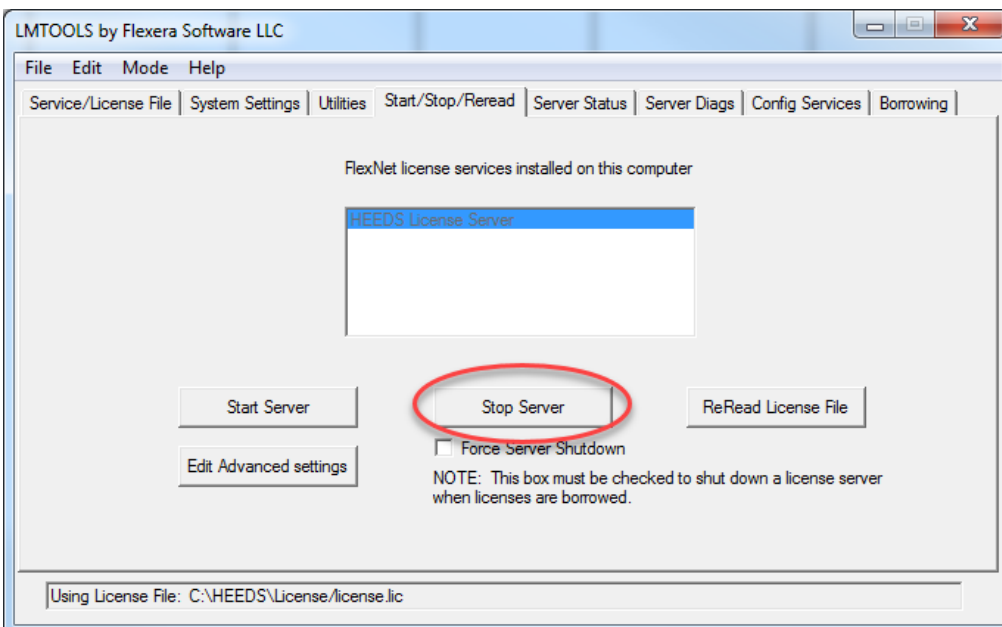
To link to the license file, set the **RCTECH_LICENSE_FILE** environment variable to **port@hostname** or **@hostname**. For example: **27027@licserv** or **@licserv**

For more information, see *Environment Variables* on page 7.

Shutting down the License Server

The license server will shut down automatically when you shut down the system. To shut it down while the system is still running, do the following:

1. Click the **Start/Stop/Reread** tab. The following screen appears:



2. Click **Stop Server**.

Updating the License File

► To replace your license file with a new one

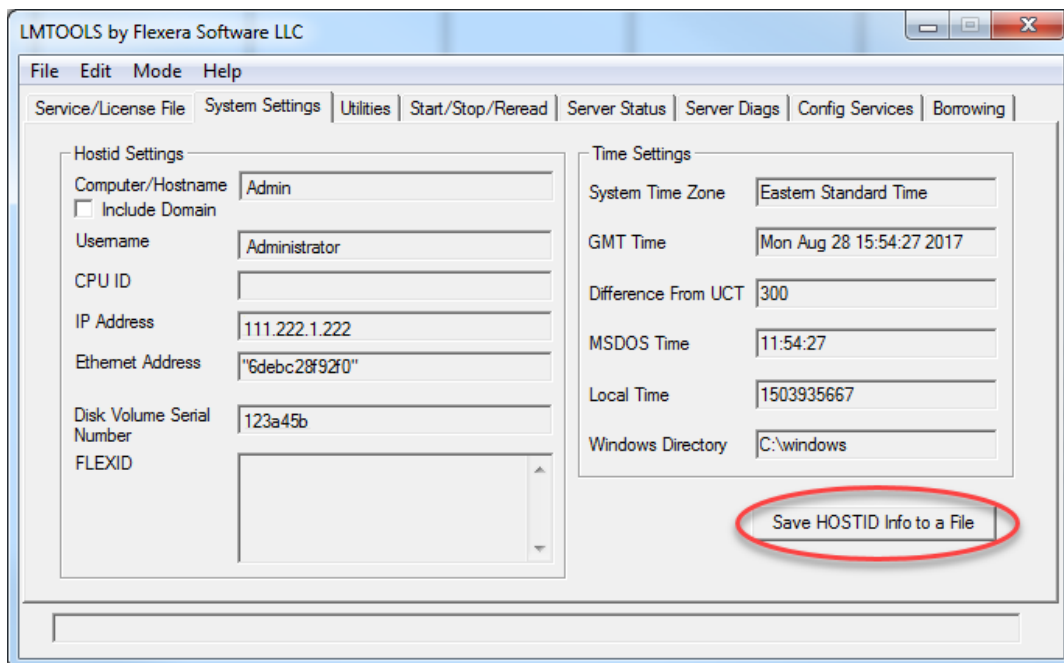
1. Navigate to the **HEEDS\License** directory.
2. Double-click on **Imtools.exe** to open **Imtools**.
3. Click **Stop Server** on the **Start/Stop/Reread** tab.
4. Return to **HEEDS\License**, and replace your existing **License.dat** file with the new one.
5. On the **Start/Stop/Reread** tab, click **Start Server** to restart the license server.

License Manager Tools

The license manager has a number of tools that are available to display information about the license manager. All can be accessed through LMTTOOLS. We will look at a few of them below. The other tabs are either not particularly useful or not applicable to HEEDS MDO installations.

System Settings

The **System Settings** tab displays the **HostID** (server) settings for your machine:

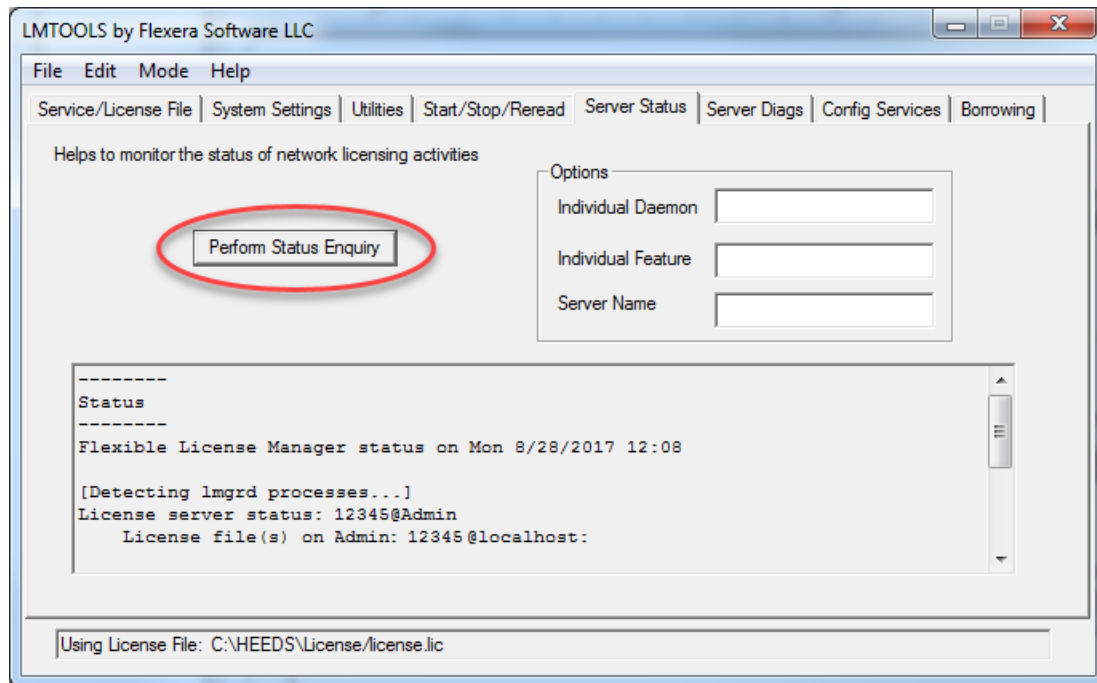


► To save the Host ID information to a text file for future reference

1. Click **Save HOSTID Info to a File**. A Save As dialog box will appear.
2. Navigate to the location where you want to save the file.
3. Enter the name and extension for the file, and click **Save**.

Server Status

The **Server Status** tab allows you to check the current status of HEEDS MDO on the network:

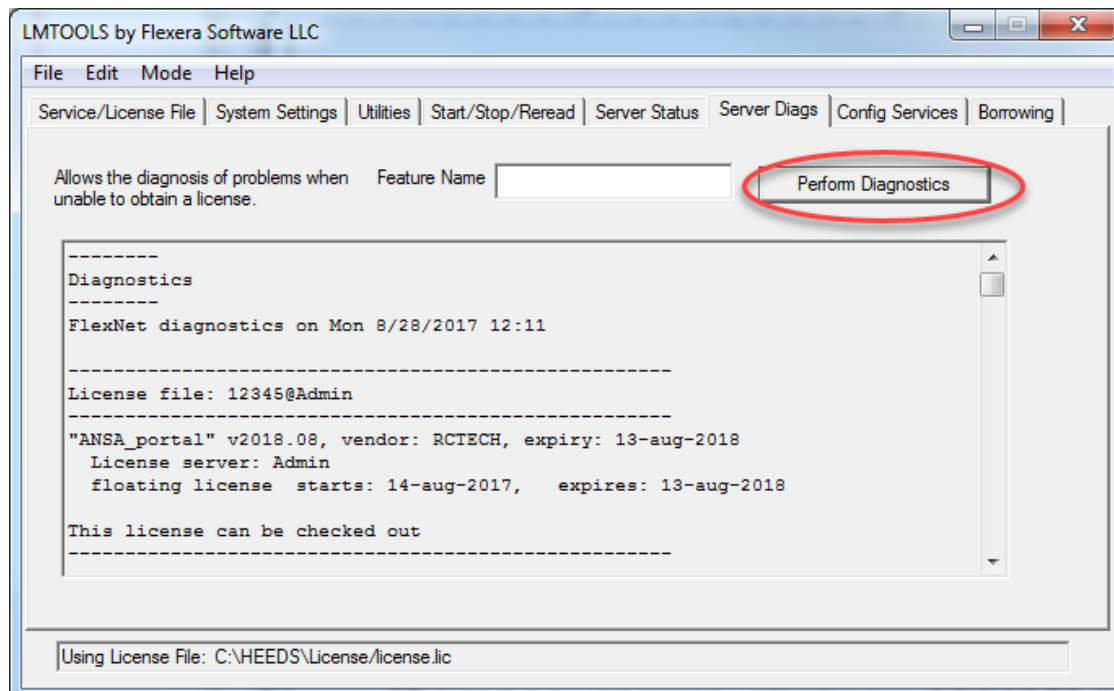


To find out whether the server is running and which machines are signed on, do the following:

1. Click the **Perform Status Inquiry** button.
2. The current status of the system will be displayed in the bottom portion of the screen.

Server Diags

The primary purpose of the **Server Diags** tab is to aid in diagnosing a license problem. However, it also provides you with other information about the license file, including when your license expires:



To display information about your license, do the following:

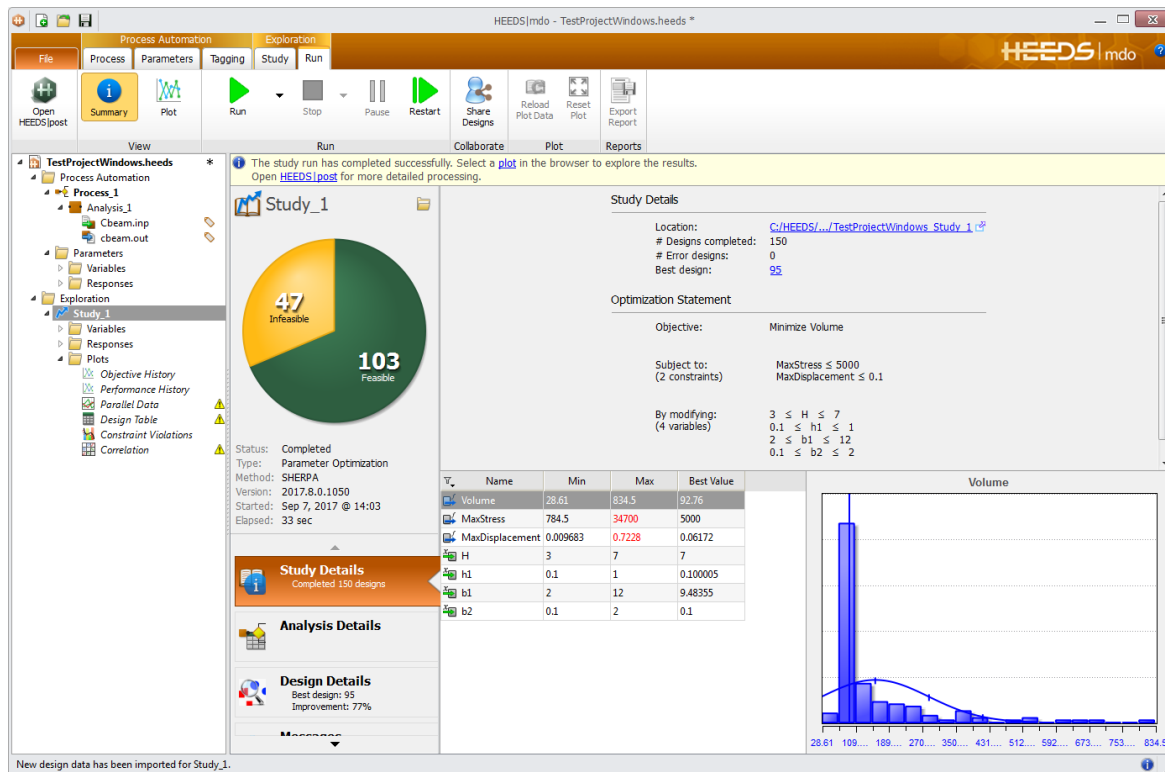
1. Click **Perform Diagnostics**.
2. Information about the license file will be displayed on the screen.

Verifying the Installation

After you install the HEEDS MDO software and license, you can open and run an included installation test project to verify that everything installed correctly.

► To open and run the installation test project

1. Select the **HEEDS MDO** from the **Start** menu.
2. When the product launches, select **Open** from the **File** menu to open a project.
3. Browse to the `<path to HEEDS install>\MDO\<version>\Examples\ProjectForInstallationTest` folder within the main HEEDS MDO installation folder. By default, it will be at **C:\HEEDS\MDO\<version>\Examples\ProjectForInstallationTest**.
4. Select the **TestProjectWindows.heeds** file to open.
5. Go to the **Run** tab.
6. Click on the **Run** button.
7. Within a few seconds you will see a summary of the run in the **Run** tab. The pie chart should update with the number of feasible vs. infeasible designs. Note, the numbers shown below may not match your run exactly. The entire run should take less than one minute to complete.



8. Contact customer support if you have trouble with any of these steps or if the run does not start.

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About Siemens PLM Software

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