

# HEEDS Professional Windows Installation Guide

Version 5.2



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# 1. Introduction

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Your installation CD contains files for installing the license server, the HEEDS software, and WinRSHD. How you install them depends on whether you are running a single-user installation or are installing on a network. If you plan to run MPD (Multi-Processor Design) projects, you must also install WinRSHD (see *Chapter 4. Installing WinRSHD* on page 23).

## System Requirements

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

Component	Requirements
Operating system	Windows NT4, 2000, XP, or XP x64
Processor	Pentium 550 MHz
RAM	128 MB for HEEDS and whatever is needed for your analysis software to run. Consult your analysis software manuals for these requirements.
Disk space	At least 60 MB of free disk space for the Modeler.

## Licensing

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All HEEDS installations require a license, which you need to obtain from Red Cedar Technology. This license is monitored by the license manager, which is part of the license server:

- **If you are installing a single-user system**, the license server and the HEEDS product must be installed on the same system. You will only be able to run HEEDS on 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 your network server (if you have one) or on another machine in the network. There can only be one installation of the license server.
- **If you have a network license**, the HEEDS 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 the number of copies for which you are actually licensed.

## Technical Support

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Red Cedar Technology offers technical support from 9:00 a.m. to 5:00 p.m. Eastern Time, Monday through Friday.

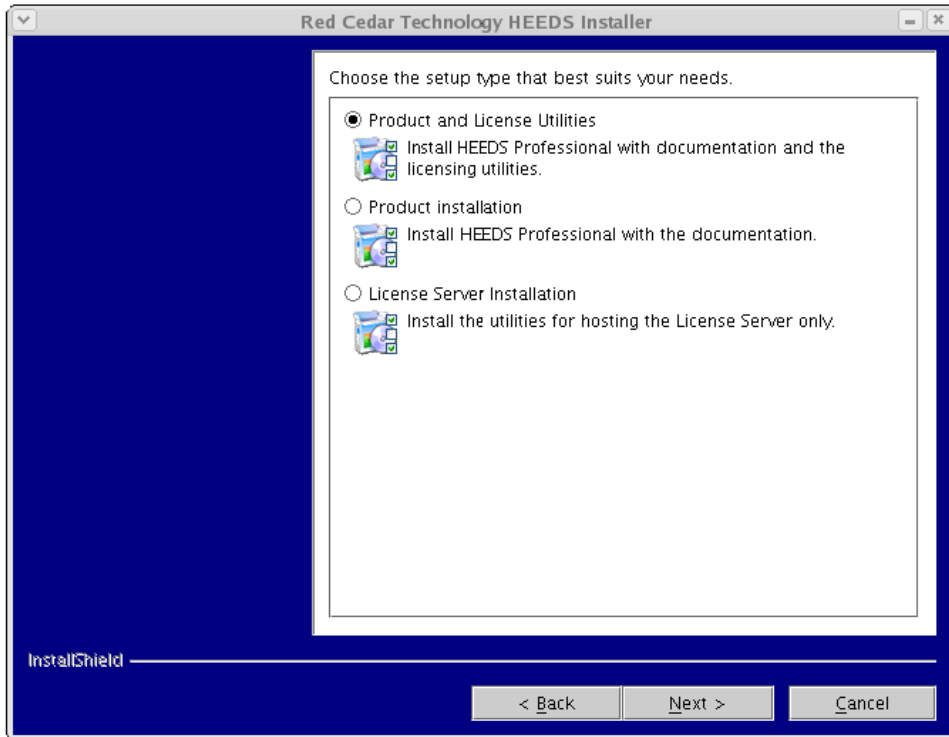
To obtain technical support:

Phone: 1.517.664.1137

Email: [support@redcedartech.com](mailto:support@redcedartech.com)

## 2. Installing the Software

Depending on your needs, when you install the software, you can choose one of three setups:



- The **Product and License Utilities** setup installs the HEEDS Professional software and the license server at the same time. This is probably the easiest way to install a single-user installation. If you want to use this setup, see *Product and License Utilities Installation* on page 4 for instructions.
- The **Product Installation** setup just installs the HEEDS software and documentation. This installation is the best option when you are installing HEEDS on other machines in your network. If you want to use this setup, see *Product Installation* on page 6 for instructions.
- The **License Server Installation** 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. If you want to use this setup, see *License Server Installation* on page 8 for instructions.

Regardless of the setup option you choose, you must be signed on as **Administrator** to install the software.

## Product and License Utilities Installation


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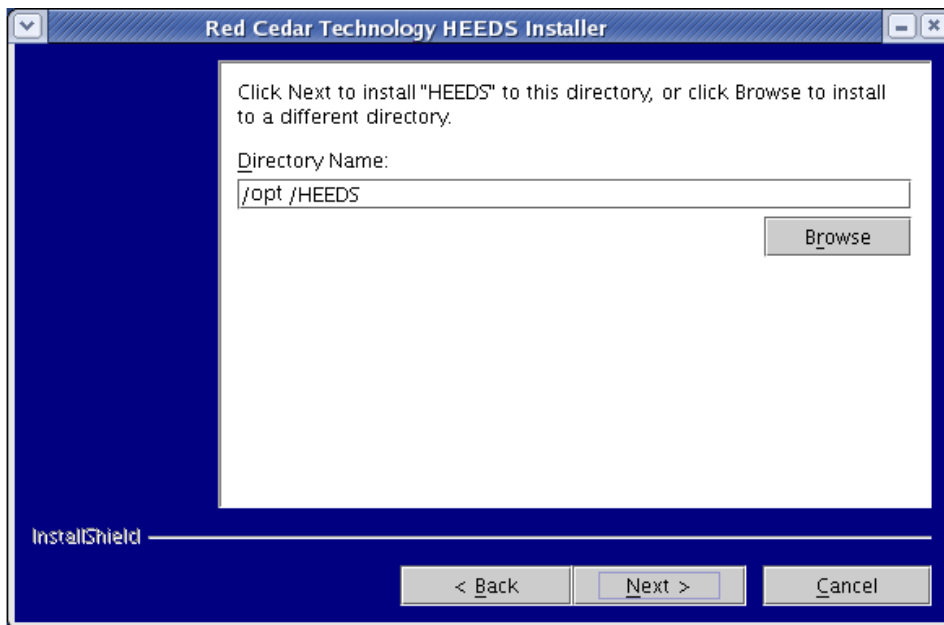
If this is the first time you have installed HEEDS and are setting up a single-user installation, this option is the easiest way to install it. It will place both HEEDS and the license server in the same directory.

### ► To install from CD (Option 1)

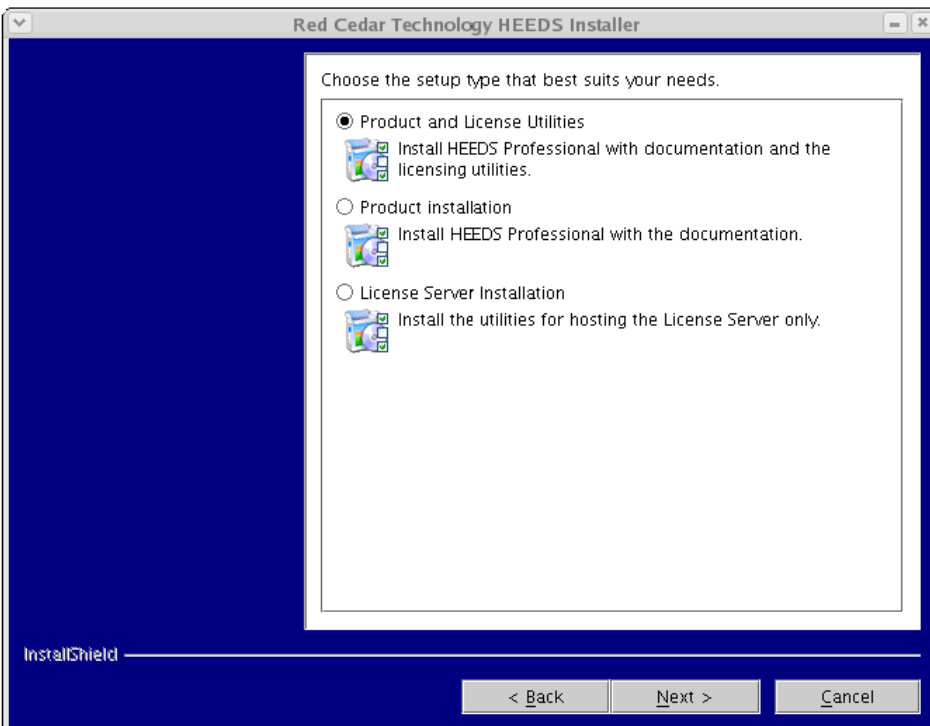
If this is the first time you have installed HEEDS and are setting up a single-user installation, this option is the easiest way to install it. It will place both HEEDS and the license server in the same directory.

To install the license server and HEEDS at the same time, do the following:

1. Load the HEEDS CD into the CD-ROM drive.
2. Open Windows Explorer and navigate to the CD-ROM drive.
3. Navigate to the directory that contains your installation file:
  - **WIN32\HEEDS\_Install\_Files** for 32-bit systems.
  - **WIN64\HEEDS\_Install\_Files** for 64-bit systems.
4. Double-click on the **setupwin.exe** file to begin the installation process.
5. A default directory name will appear. You can accept the default or click  and select another:



6. Click **Next** and select **Product and License Utilities**.



7. Click  and you will see a summary of your installation choices and the components that will be installed.
8. Click  to complete your install.

Once all of the components have been installed, you will need to configure the license server and link HEEDS to the license file. See *Linking to the License File* on page 16 for instructions.

### ► To download and install files from the Web (Option 2)

1. Download the installer from the Red Cedar Technology Web site (contact us for instructions).
2. Navigate to the directory that contains your installation file.
3. Double-click on the **setupwin.exe** file to begin the installation process.
4. A default directory name will appear. You can accept the default or click  and select another.
5. Click  and select **Product and License Utilities**.
6. Click  and you will see a summary of your installation choices and the components that will be installed.
7. Click  to complete your install.

Once all of the components have been installed, you will need to configure the license server and link HEEDS to the license file. See *Linking to the License File* on page 16 for instructions.

## Product Installation

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The instructions in this section apply both to new installations and to upgrades. Follow them to install HEEDS 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 on the same machine. It is recommended that you install it in the directory where the folder containing the license server files is located.

### ► To install from CD (Option 1)

1. Load the HEEDS CD into the CD-ROM drive.
2. Open Windows Explorer and navigate to the CD-ROM drive.

3. Navigate to the directory that contains your installation file:
  - **WIN32\HEEDS\_Install\_Files** for 32-bit systems.
  - **WIN64\HEEDS\_Install\_Files** for 64-bit systems.
4. Double-click on the **setupwin.exe** file to begin the installation process.
5. A default directory name will appear. You can accept the default or click **Browse** and select another.
6. Click **Next** and select **Product Installation**.
7. Click **Next** and you will see a summary of your installation choices and the components that will be installed.
8. Click **Next** to install HEEDS.

Once you have installed HEEDS on your machine, you will need to link HEEDS to the license file. See *Linking to the License File* on page 16 for instructions.

### ► To download and install files from the Web (Option 2)

1. Download the installer from the Red Cedar Technology Web site (contact us for instructions).
2. Navigate to the directory that contains your installation file.
3. Double-click on the **setupwin.exe** file to begin the installation process.
4. A default directory name will appear. You can accept the default or click **Browse** and select another.
5. Click **Next** and select **Product Installation**.
6. Click **Next** and you will see a summary of your installation choices and the components that will be installed.
7. Click **Next** to complete your install.

Once all of the components have been installed, you will need to configure the license server and link HEEDS to the license file. See *Linking to the License File* on page 16 for instructions.

## License Server Installation

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If you are installing HEEDS 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 Professional.

### ► To install from CD (Option 1)

1. Load the HEEDS CD into the CD-ROM drive.
2. Open Windows Explorer and navigate to the CD-ROM drive.
3. Navigate to the directory that contains your installation file:
  - **WIN32\HEEDS\_Install\_Files** for 32-bit systems.
  - **WIN64\HEEDS\_Install\_Files** for 64-bit systems.
4. Double-click on the **setupwin.exe** file to begin the installation process.
5. A default directory name will appear. You can accept the default or click  and select another.
6. Click  and select **License Server Installation**.
7. Click  and you will see a summary of your installation choices and the components that will be installed.
8. Click  to install HEEDS.
9. Once all of the components have been installed, you will need to configure the license server and link HEEDS to the license file. See *Linking to the License File* on page 16 for instructions.

### ► To download and install files from the Web (Option 2)

1. Download the installer from the Red Cedar Technology Web site (contact us for instructions).
2. Navigate to the directory that contains your installation file.
3. Double-click on the setupwin.exe file to begin the installation process.
4. A default directory name will appear. You can accept the default or click  and select another.

5. Click **Next** and select **License Server Installation**.
6. Click **Next** and you will see a summary of your installation choices and the components that will be installed.
7. Click **Next** to complete your install.

Once all of the components have been installed, you will need to configure the license server and link HEEDS to the license file. See *Linking to the License File* on page 16 for instructions.

## Environment Variables

When you install the HEEDS software, a number of environment variables are created:

Variable	Path	Default Setting
HEEDS_ROOT	The path to the HEEDS folder.	C:\HEEDS\Ver5.2
HEEDS_TEMP	The path to the folder where HEEDS will perform the MPD evaluations.	C:\TEMP
PVM_ROOT	The path to the PVM folder.	C:\HEEDS\Ver5.2\Pvm3.4
PVM_ARCH	The path to the WIN32 directory.	WIN32
PVM_TMP	The path to the temp file where PVM scratch files will be created.	C:\TEMP
PVM_DPATH	The path to the pvmd3.exe file.	C:\HEEDS\Ver5.2\Pvm3.4\lib\win32\pvmd3.exe
PVM_RSH	The path to the rsh.exe file in the WinRSHD installation.	C:\Program Files\WinRshd\rsh.exe

HEEDS\_ROOT is used for all installations. The others are used only for MPD projects.

The following paths are added to the Path variable:

- C:\HEEDS\Ver5.2
- C:\HEEDS\Ver5.2\libs
- C:\HEEDS\Ver5.2\Pvm3.4\lib\win32

The first two paths affect all HEEDS installations. The third one is used for MPD.



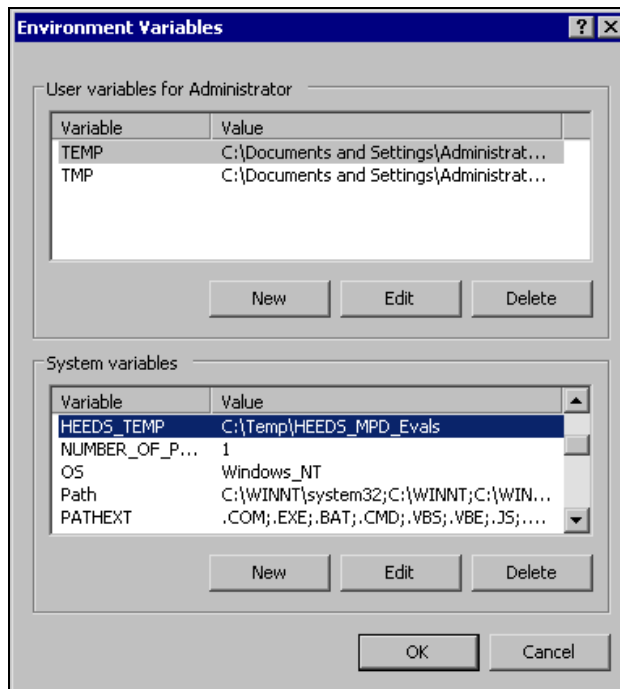
**Important:** If you did not log in as **Administrator** when you installed your software, the environment variables will not be created. If you find they are missing, you can either create them on your own or reinstall HEEDS with an **Administrator** logon.

You may change the path defined in HEEDS\_TEMP if you want the evaluation files for MPD projects placed in a different directory. No other paths should be changed.

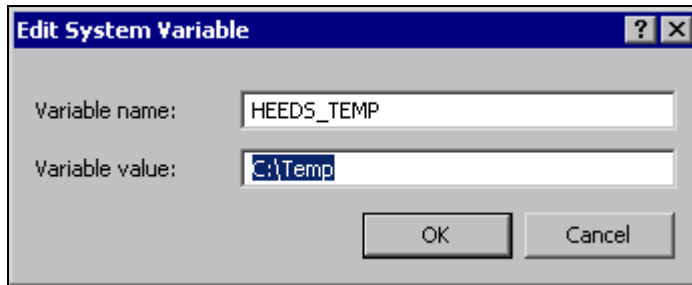
You may change the path to HEEDS\_TEMP if you want the evaluation files for MPD projects placed in a different directory. You will also need to change the PVM\_RSH path if you do not install WinRSHD in the default directory. No other paths should be changed.

► **To change an environment variable path**

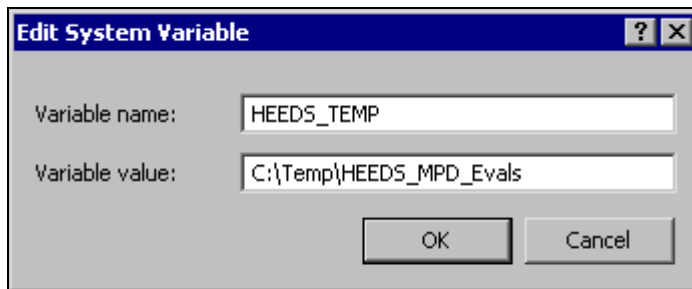
1. Select **Control Panel** from the **Start** menu.
2. Double-click on **System** to display the **System Properties** dialog.
3. Display the **Advanced** tab and click the **Environment Variables** button to display the **Environment Variables** dialog.
4. Select the variable you want to change from the **System variables** table:



- Click **Edit**. The **Edit System Variable** dialog will appear:



- In the **Variable value** field, replace the current path with the path where you want the files placed:



- When you are finished editing the path, click **OK** to close the **Edit System Variable** dialog.
- Click **OK** to close the **Environment Variables** dialog and save your changes.
- Click **OK** to close the **System Properties** dialog.

# 3. Using the License Server

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The license server manages all HEEDS 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 to the license file.

## How HEEDS Licensing Works

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HEEDS manages usage via a token system. When your company purchased HEEDS, it purchased the number of tokens that will support the anticipated activity for your company.

The tokens are allotted as follows:

Component	Tokens
HEEDS Modeler	1 “modeler” token per running copy
HEEDS Professional	1 “heeds” token
HEEDS Professional with MPD	1 “heeds” token for the job 1 “heedsMPD” token for the job 1 “evaluator” token per evaluator
HEEDS CAE portal 1	“*_portal” token per agent group where * will be the abbreviation for the portal type (e.g., aba_portal for Abaqus).

## Obtaining the License File

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After you install the license server, you must obtain a license key from Red Cedar Technology. To give you a license, Red Cedar Technology needs some information:

1. Start a command prompt.
2. Change the directory to the **HEEDS License Directory**. The default location is:

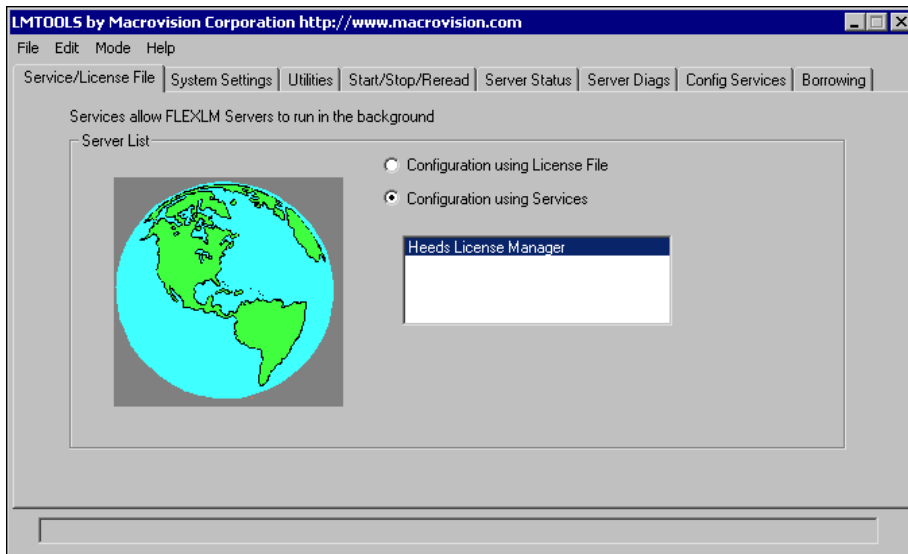
**C:\HEEDS\License**

3. Type **Imhostid** after the prompt. Output similar to the following will appear on the prompt screen:  
  
**Imhostid – Copyright © 1989-2003 by Macrovision Corporation. All rights reserved.  
The FLEXlm host ID of this machine is “003668bc8blb”**
4. Write down the host ID.
5. Type **hostname** after the new prompt. Write down the host name that appears after the prompt.
6. E-mail the host ID and host name to Red Cedar Technology. Upon receipt, Red Cedar Technology will issue you a license key and send you the license file **License.dat**.

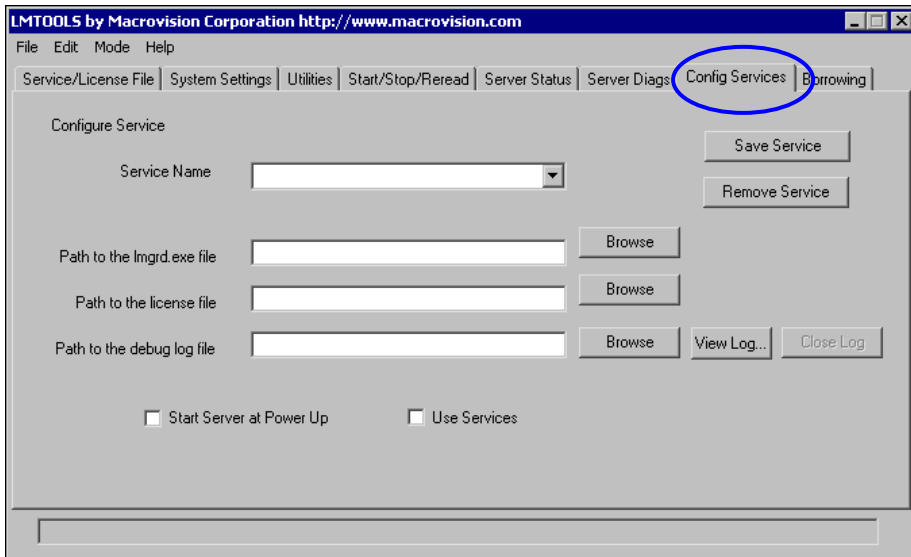
## Configuring the License Server

After you get your license file, you need to configure the license server:

1. Place **License.dat** in the **HEEDS\ License** directory.
2. Double-click on **Imtools.exe** in the **License** folder to open **Imtools**:



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

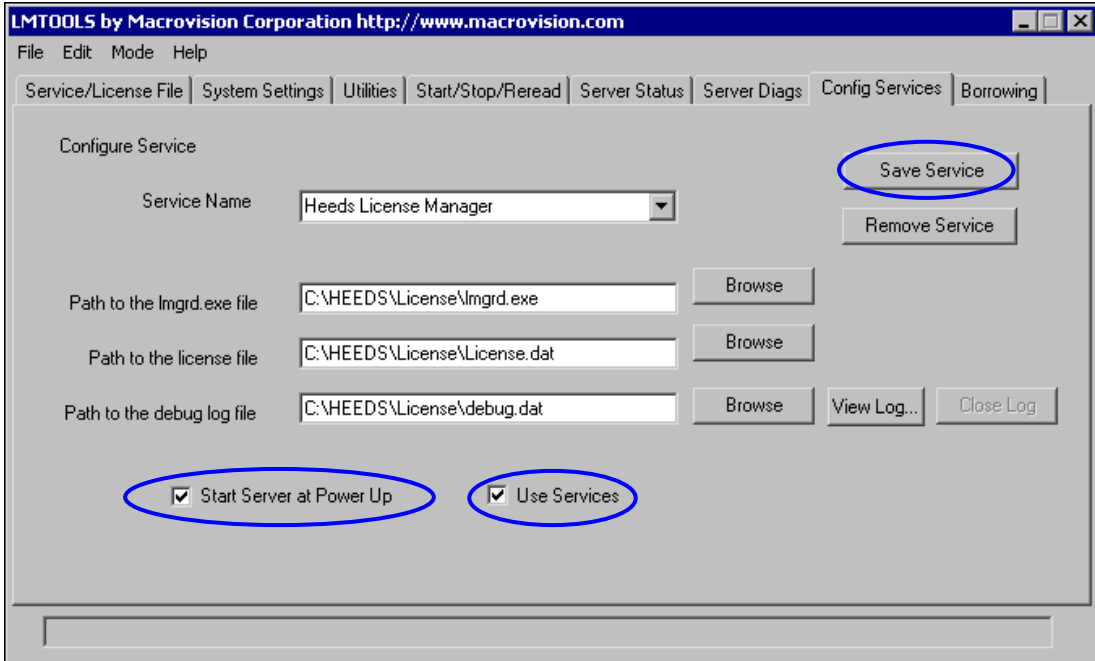


4. Enter **HEEDS License Manager** in the **Service Name** field.
5. Click the **Browse** button to the right of the **Path to the Imgrd.exe file** box:
  - Navigate to **HEEDS\ License**.
  - Double-click on **Imgrd.exe**.
6. Click the **Browse** button to the right of the **Path to the license file** box:
  - Navigate to **HEEDS\ License**.
  - Double-click on **License.dat**.
7. Click the **Browse** button to the right of the **Path to the debug log file** box:
  - Navigate to **HEEDS\ License**.
  - Enter **debug.dat** in the **File name** field.
  - Click **Open**. The dialog will close and the path to **debug.dat** 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:

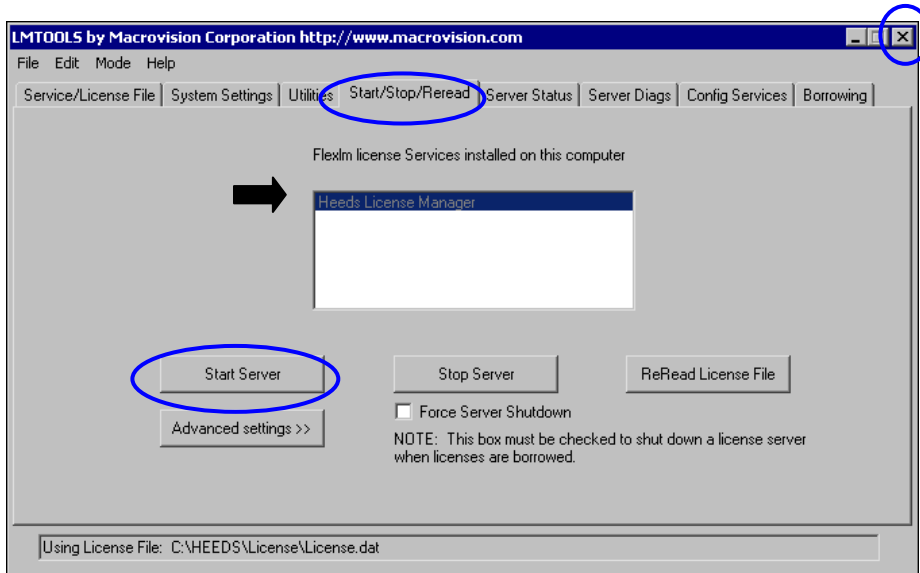


10. Click on the **Save Service** button in the top right section of the window to save your selections.

## Starting the License Server

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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 (see above).
5. Click **X** in the upper right corner of the screen to close the license manager.

## Linking to the License File

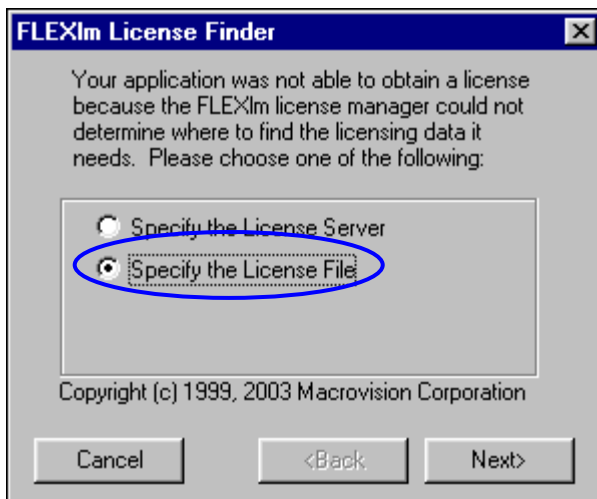
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The first time you use HEEDS, you must tell the HEEDS Modeler where to find the license file. There are two ways you can do this:

- If you can browse to the license file directory, you can link directly with the license file.
- If you cannot browse to the license file directory, you can specify the license server.

If you can browse to the license file directory, do the following:

1. Double-click on the **HEEDSModeler.exe** file to launch the Modeler. You will be prompted for the license file:



2. Select the **Specify the License File** option, and click **Next**. The following dialog will appear:



3. Click **Browse**, navigate to the **HEEDS\License** directory on the server and double-click on the **License.dat** file.

4. Click **Next** to link to the license file.
5. Click **Finish** to return to the HEEDS application.



**Note:** *If you get an error message, there is most likely a problem with the license key. Contact Red Cedar Technology for help.*

If you cannot browse to the license file directory, do the following instead:

1. Double-click on the **HEEDSModeler.exe** file to launch the Modeler. You will be prompted for the license file:



2. Select the **Specify the License Server** option and click **Next**. The following dialog will appear:

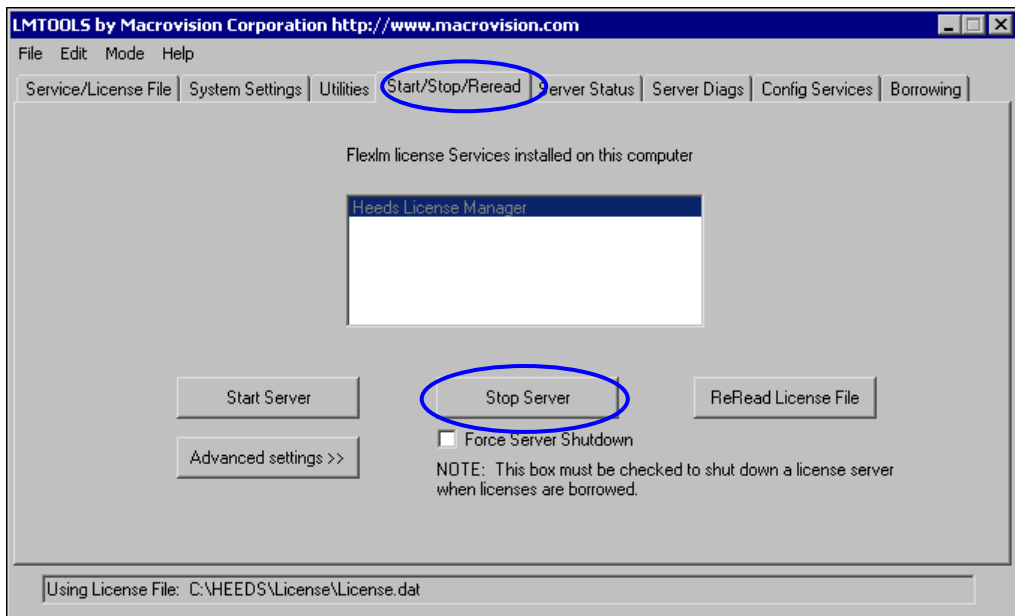


3. Enter either the computer name or the IP address of the computer where the license server is located.
4. Click **Next** to link to the license file.
5. Click **Finish** to return to the HEEDS application.

## 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 will appear:



2. Click **Stop Server**.

## Updating the License File

### ► To replace your license file with a new one

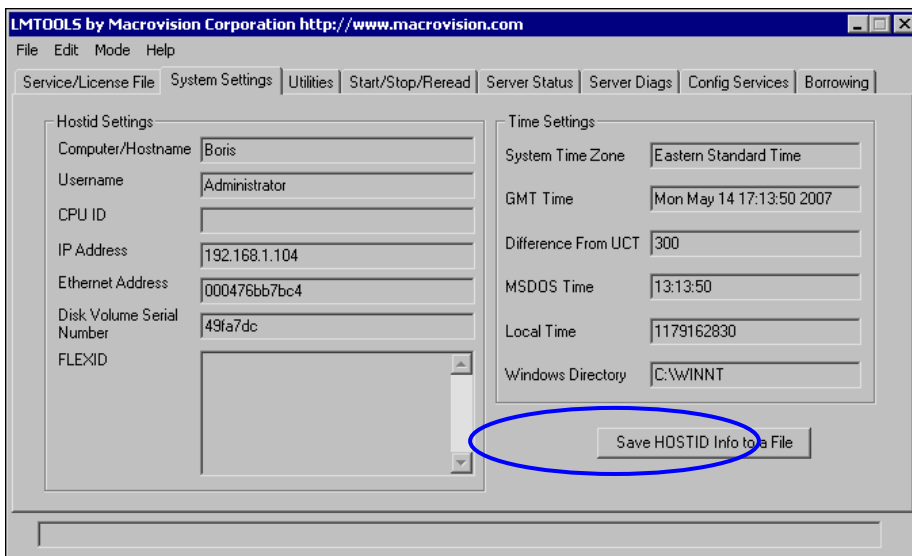
1. Navigate to the **HEEDS\License** directory.
2. Double-click on **Imtools.exe** to open **Imtools**.
3. Click Stop Server on the **Start/Stop/Reread** tab.
4. Return to **HEEDS\License** and replace your existing **License.dat** file with the new one.
5. Click **Start Server** on the **Start/Stop/Reread** tab 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 **Imtools**. We will look at a few of them below. The other tabs are either not particularly useful or not applicable to HEEDS installations.

### System Settings

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

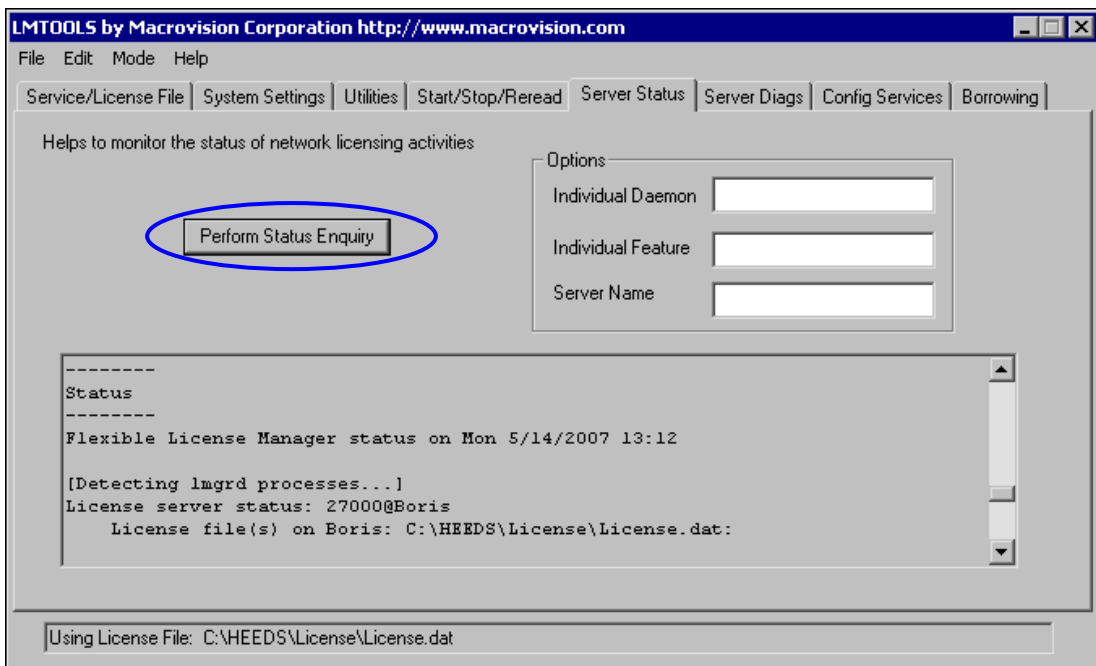


► **To save the Host ID information to a text file for future reference**

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 on the network:

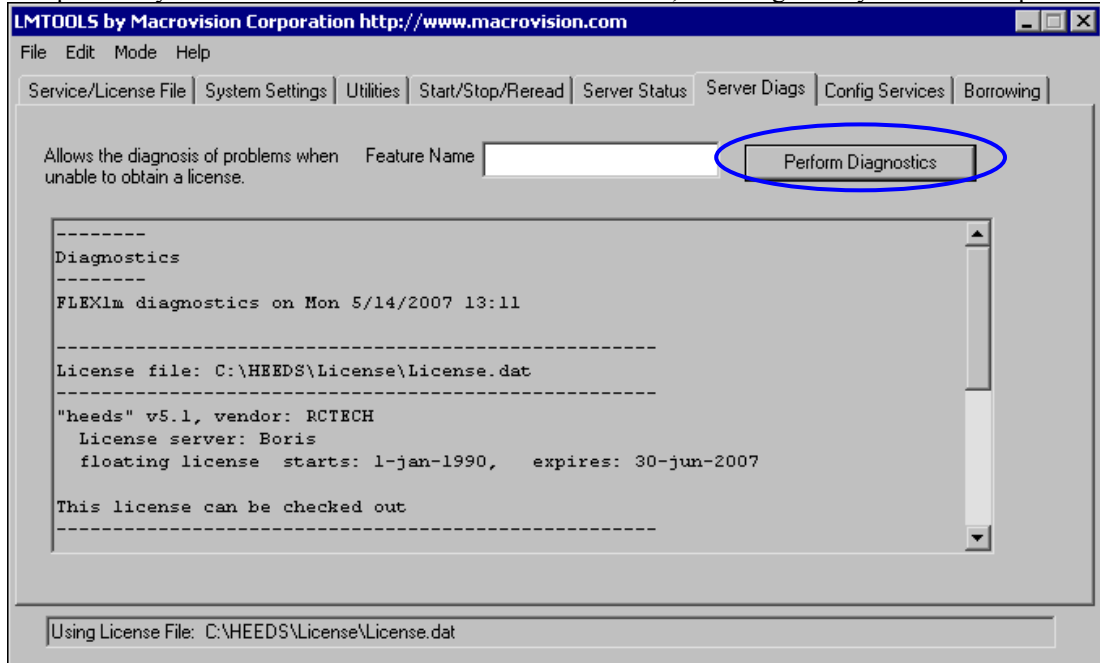


To find out whether the server is running and which machines are signed on, do the following:

1. Click **Perform Status Inquiry** (see above).
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.

# 4. Installing WinRSHD

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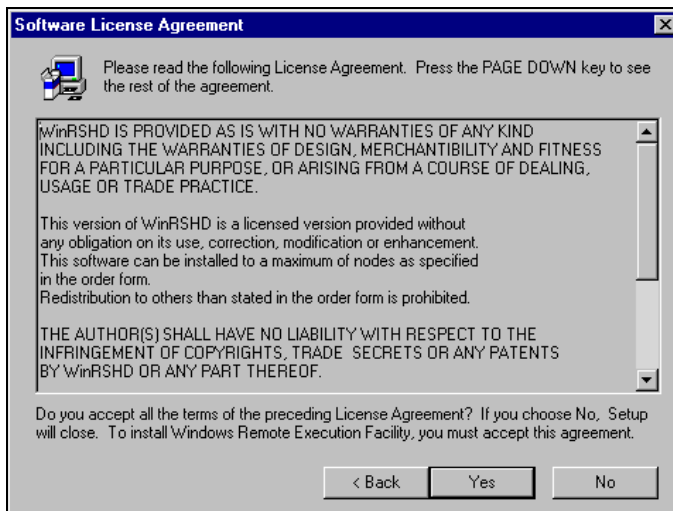
If you plan to use HEEDS for MPD (Multi-Processor Design) projects, you will need to install WinRSHD. This software allows the machines on your network to communicate without intervention. You must install this software on each machine that you plan to use in an MPD run. You must be logged on as Administrator to install WinRSHD.

## Installing WinRSHD

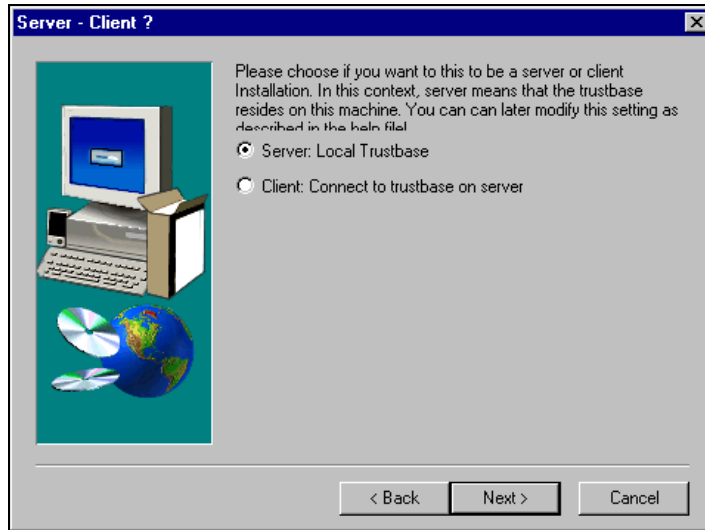
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To install WinRSHD on your machine, do the following:

1. Load the HEEDS CD into the CD-ROM drive.
2. Open Windows Explorer and navigate to the CD-ROM drive.
3. Navigate to the directory that contains your installation file:
  - **WIN32\WinRSHD\_Install\_Files** for 32-bit systems.
  - **WIN64\WinRSHD\_Install\_Files** for 64-bit systems.
4. Double-click on the **SETUP.EXE** file. A welcome screen will appear.
5. Click **Next** and you will be prompted to accept the terms of the license agreement:



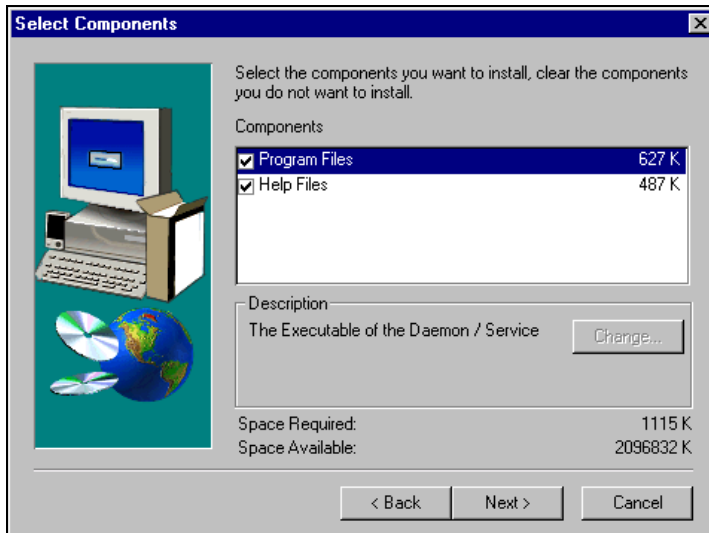
6. Click **Yes** to accept the terms and continue the installation.
7. A default directory will appear for the location of the installation. You can accept the default or click **Browse** and select another.
8. Click **Next** and you will be prompted to choose the installation type:



9. Select **Server** and click **Next**. You will be prompted to choose the **Delegation** setting:

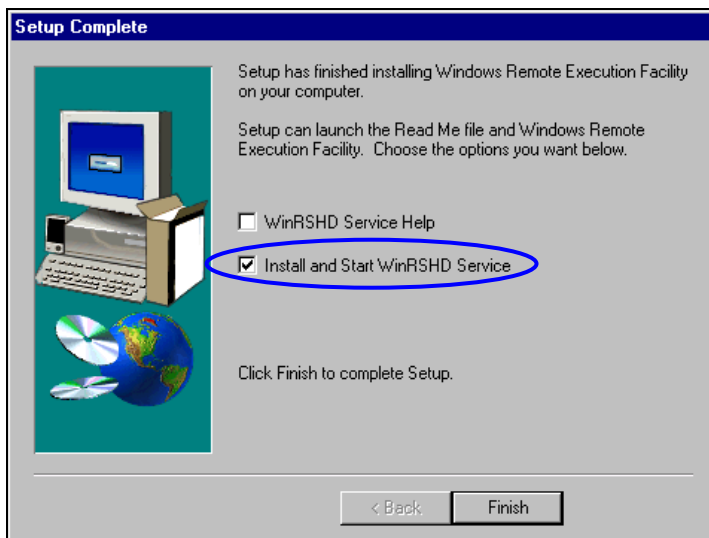


10. Select **ON**, and click **Next**. A list of the installation components will be displayed:



11. Click **Next** to start the install.

12. When the installation is complete, you will see the following screen:



Check the **Install and Start WinRSHD Service** check box and click **Finish** to complete the setup.



**Note:** If you want to look at the help file, you can also check the **WinRSHD Service Help** check box, but you do not have to.

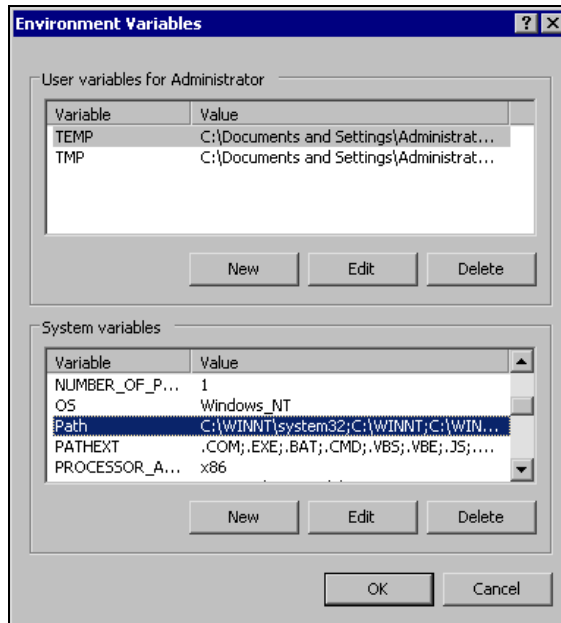



**Note:** After WinRSHD is installed, you may receive a security alert about connecting to other computers. If you get this message, select the recommended option to **Always allow this connection**.

## Modifying the Path Environment Variable

Next, you need to add the WinRSHD folder to the **Path** environment variable. The default folder path is **C:\Program Files\WinRSHD**. If you installed it in a different folder, add that path instead:

1. Select **Control Panel** from the **Start** menu.
2. Double-click on **System** to display the **System Properties** dialog.
3. Display the **Advanced** tab and click the **Environment Variables** button to display the **Environment Variables** dialog:






4. Select **Path** from the **System variables** table and click . The **Edit System Variable** dialog will appear:



5. Place your cursor at the end of the value in the **Variable value** field.
6. Insert a semi-colon followed by the path to the WinRSHD folder. Here is an example if you installed it in the default location:

**C:\Program Files\WinRSHD**

7. Click  to close the **Edit System Variable** dialog.
8. Click  to close the **Environment Variables** dialog and save your changes.
9. Click  to close the **System Properties** dialog.



**Important:** *If you did not install WinRSHD in the default directory, you will need to change the **PVM\_RSH** path (see page 9) to the directory where you installed WinRSHD.*



**Note:** *If you are installing WinRSHD on a Windows NT platform, your dialog box will look a little different. To open it, click on the **Environment** tab instead of the **Advanced** tab. The fields for editing your variables will be at the bottom of the tab instead of in a separate box.*

## Configuring WinRSHD

After you install WinRSHD on a given machine, you need to add the machines that will be used in your HEEDS MPD runs to the equivalence list. This is done through a command prompt. The command syntax is:

```
configure -add remote_user local_user ip_address
```

where

<i>remote_user</i>	is the user ID of the remote machine.
<i>local_user</i>	is the user ID that will be used on the local machine.
<i>ip_address</i>	the IP address of the remote machine. To find the IP address for a machine, type <b>Ping machine_name</b> .

The local machine (a.k.a. “host”) is the machine where you are creating the list. The remote machines are the machines that will be communicating with the local machine.

You must create an equivalence list for each WinRSHD installation. All machines that will be used for MPD runs must be added to this list, including the local machine. Each machine acts as “host” for the machines that are on its equivalence list. This enables two-way communication where each machine can both issue requests and return data.



**Important:** Make sure you add the path to the WinRSHD folder before you configure or the commands will not work.



**Important:** Before you configure your host list, make sure you have set any firewalls that are on your machine to accept **WinRSHD** and its related components:

**rsh**

**pvmd3**

**HEEDSlave5.2**

**HEEDEvaluator5.2**

*Don't forget to set the Windows Firewall on XP machines.*

To add your machines to the equivalence list, do the following:

1. Open a command prompt.
2. Enter the configuration command for each machine on your network, including the local machine:

**configure –add jsmith jsmith 192.168.1.103**

3. You will be prompted for the password. Enter the password used to log on the machine. If you do not use a password, just press **Enter**.



**Hint:** *If all the machines on your network use the same user name and password, you can enable them with one command:*

**`configure -add Administrator Administrator 192.168.1.*`**

After you have configured WinRSHD on a machine, you can test communication with each machine in the equivalence list by doing the following:

1. Open a command prompt.
2. Type the following command:

**`rsh host_name "cmd /c dir"`**

where *host\_name* is the name of the machine you are reading.

3. If the machine is communicating with the specified machine, you will see a list of files from the C: drive of the host machine.