INSTALLATION

This chapter will help you install Enlighten**DSM** on your system. It contains the following sections:

- Pre-installation Considerations
- Mounting the CD-ROM
- Verifying that the CD-ROM is Mounted
- Starting the CDINSTAL Bootstrap
- Installing Enlighten**DSM**
- Starting Enlighten**DSM**

Pre-Installation Considerations

Before installing Enlighten**DSM**, you must collect information about the hosts in your intranet.

- Select the host that will run the Enlighten**DSM** Installation GUI, `enl_xinstall`.

  The machine that you select for the host must have access to a CD-ROM drive and be able to connect through TCP/IP to the hosts where you want to install Enlighten**DSM**.

- Select the host(s) that will run the EMD and/or PEP servers.

  EMD requires 100 Mb of free space on a **local** partition. PEP requires 5 Mb of free space.

  Your EMD host will also be the Enlighten**DSM** license server. Enlighten**DSM** uses flexLM for all license management. The flexLM components are installed in the `FLEXlm` sub-directory of the EMD installation directory.

- Make sure you know the `root` password for each host that will use Enlighten**DSM**.

- Find a suitable partition with enough free space for each host that will use Enlighten**DSM**.

Installing on an NFS-Imported Partition

You should also be aware of the following facts if you're considering installing Enlighten**DSM** on an NFS partition:

- EMD cannot be installed on an NFS-imported partition.

- You must have root write permissions on the NFS partition on which you will install Enlighten**DSM**.

  Enlighten**DSM** runs with root privileges and may create files within the Enlighten**DSM** home directory during its activities. If root write permissions are not enabled on the partition on which Enlighten**DSM** is installed, many of Enlighten**DSM**'s disk monitoring functions will not function. Ensure that you install Enlighten**DSM** on a partition where root write permissions are enabled, such as local disk partitions.

- Writing to NFS filesystems is relatively slow. Consequently, disk snapshots may take three to five times longer to create. This should be taken into consideration even if an NFS partition has root write permissions.

SNMP Management

You will need to consult the documentation that came with your network management application to manage Enlighten**DSM** Events Agent via SNMP. Your management application will need knowledge of our MIB. Some applications require a MIB in ASN-1 format while others require a copy of the MIB that meets the specifications of one or more RFC's. Enlighten**DSM** Events Agent provides both types of MIB formats.

☞ If you want to use the Events snmp daemon, AgentENL, delete any snmpd daemons that are running prior to installing Events on any of your hosts.

Mounting the CD-ROM

This section describes how to mount the CD-ROM on various systems. For all platforms, you must be the root user.

1) Type the following command:

   ```
   su root
   ```

2) Enter the root password when prompted.

3) Mount the CD-ROM for your operating system as specified in the following subsections.

Solaris 2.4, Solaris 2.5, and Solaris 2.5.1

On Solaris 2 systems, the Volume manager, vold, may automatically mount the CD-ROM. If vold does not mount the CD-ROM, type the following commands:

```
mkdir /cdrom
```

```
/etc/mount -r -F hsfs /dev/sr0/cdrom
```

☞ You may need to use the complete device name for the cdrom drive, such as `/dev/dsk/c0t6d0s0.`

Sun OS 4.1.3 (Solaris 1) and Sun OS 4.1.4

Type the following commands:

```
mkdir /cdrom
```

```
/etc/mount -r -t hsfs /dev/sr0 /cdrom
```

HP-UX 9.0X and HP-UX 10.X

Type the following commands:

```
mkdir /cdrom
```

```
/etc/mount -r -u -t cdfs <device name> /cdrom
```

where `<device name>` is the device name and number associated with your local CD-ROM drive (e.g., `/dev/dsk/2s0`).

IBM AIX 4.1 and IBM AIX 4.2

Use SMIT to mount the CD-ROM:

1) Type the following commands:

   ```
   mkdir /cdrom
   ```

   ```
   smit storage
   ```

2) Select `File Systems`

3) Select `Add / Change / Show / Delete File Systems`

4) Select `CD-ROM File Systems`

5) Select `Add a CD-ROM File System`

6) Select the appropriate `DEVICE` name. If a conflict occurs, you may need to delete a previously defined CD-ROM file system.

7) Enter `/cdrom` as the `MOUNT POINT`.

8) Select `Do`.

   Alternatively, press Enter if you are using the ASCII version of SMIT.

9) Exit SMIT.

10) Type the following command:

    ```
    smit mountfs
    ```

11) Select `/dev/cd0`

    Alternatively, select a previously selected device.

12) Select `/cdrom` as the `DIRECTORY to mount.`

13) Select `cdrfs` for the `TYPE of file system.`

14) Select `yes` for `Mount as a READ-ONLY system.`

15) Select `Do`.

Alternatively, press Return for the ASCII version of SMIT.

16) Exit SMIT.

SCO 3.2

Type the following commands:

```
mkdir /cdrom
```

```
/etc/mount -r -f HS /dev/cd0 /cdrom
```

SCO Release 5 and 5.0.2

Type the following commands:

```
mkdir /cdrom
```

```
/etc/mount -r -f HS /dev/cd0 /cdrom
```

SGI IRIX 5.3, 6.2, and 6.4

The Indigo Magic Desktop will mount the CD-ROM to `/CDROM`, and the CD drive icon on your desktop will show an inserted CD. If the CD drive is on another system, use the Remote Directory tool in your Desktop menu bar to locate the system and `/CDROM` directory.

Verifying that the CD-ROM is Mounted

You can verify that the CD-ROM has been mounted correctly by getting a file list of the `root` directory of the CD-ROM. Type the following command:

```
ls /cdrom (or for IRIX, ls /CDROM)
```

You should see the following files in the directory:

- AIX41

- COMMON

- DOC

- HP10X

- IRIX5X6X

- SCO32

- SOL2X

- CDINSTAL

- DEC3240

- EXTRA

- HP904905

- NTsetup

- SCO5X

- SUNOS41X

If these files are not visible, then the CD-ROM was not properly mounted. Try mounting your CD-ROM again. If the CD-ROM still fails to mount, make sure that your cables are connected, that the CD-ROM has a unique SCSI ID, and that the machine was rebooted after you installed your CD-ROM drive.

Starting the CDINSTAL Bootstrap

Once your Window System is running, you can run the CDINSTAL script.

1) Type the following command:

   `/cdrom/CDINSTAL (or for IRIX, /CDROM/CDINSTAL)`

   The Enlighten**DSM** Welcome screen will appear.

2) Press the Return, and answer the questions CDINSTAL asks.

   If this is your first-time installing Enlighten**DSM**, CDINSTAL will only ask for the directory on which you want to install Enlighten**DSM** components. The default Enlighten**DSM** installation directory is `/opt/enlighten` If there isn't enough free space on your `/opt` partition, select another partition with a minimum of 100 Mb of free space. Any partition will suffice, as long as the installation directory will only be used by Enlighten**DSM**.

☞ Don't install in `/usr`; instead, install in the `/usr/enl` or `/usr/enlighten`.

3) The CDINSTAL script will display a list of all the components that it is extracting into the directory you selected in the previous step.

4) When the script completes execution, the Enlighten**DSM** License Agreement dialog will appear (Figure 1).

   Carefully read and follow the instructions in the window. Accept the terms of the Licensing Agreement to continue installing Enlighten**DSM** on your system. If you do not accept the License Agreement, click the **DO NOT ACCEPT** button, and the installation process will quit.
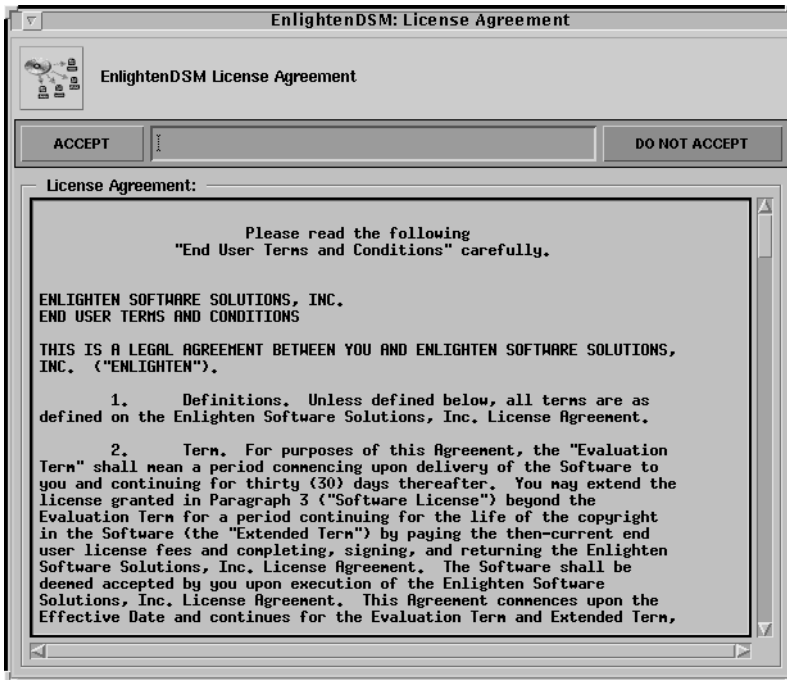
.

Figure 1 Enlighten**DSM** License Agreement window

Installing Enlighten**DSM**

If you accept the License Agreement, the main window will appear (Figure 2).

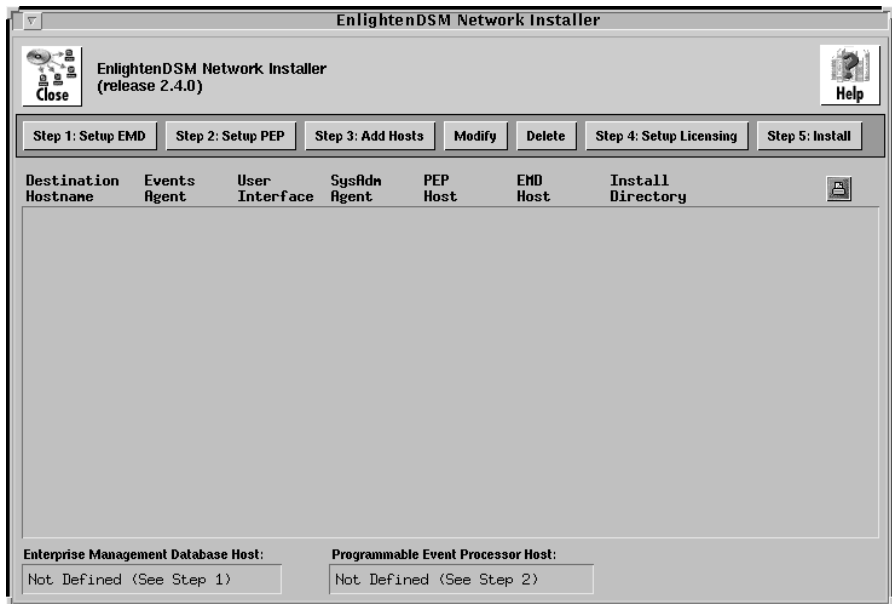

Figure 2 Enlighten Network Installer

Basics

No files are transferred or modified in this installation process until you complete "Step 5: Install" and click the **Start Installation** button. If you make a mistake, just go back and type the correct information. The rest of this section details how to install Enlighten**DSM**.

Your configuration information is verified dynamically; a slow network will cause the installation to run slowly.

☞ The Enlighten**DSM** Network Installer is SIGINT and SIGHUP aware. If you want to delete the Enlighten**DSM** Network Installer or cancel any operation, type <Ctrl>-c in the window where you started this process. Enlighten**DSM** will then prompt you to confirm your action.

Step Window Buttons

For all the following steps, you can always click the **Reset** button to reset the fields to their default values. If you decide not to complete a particular step, simply click the **Cancel** button.

Once you have typed the necessary information for configuring a particular component, click the **OK** button to continue. If all the configuration information was acceptable, the main window will add the appropriate information as an entry in the Main Install List.

Step 1: EMD Setup

Click the **Step 1: EMD Setup** button to configure the Enterprise Management Database (EMD).

The Setup the Enterprise Management Database window will appear, as shown in the example on .

Fields and Toggles

This window contains the following fields and toggles:

EMD

Use this toggle to Install, Upgrade, or Don't Install EMD. Enlighten**DSM** components must have access to both EMD and the Programmable Events Processor (PEP) to function properly.

Install EMD on host

Use this field to specify where to load EMD and the Informix Engine. The default is your local hostname or the location of a previously installed EMD, if available. Depending on your DNS settings, you may need to specify a fully qualified host and domain name.

At most, you may have to type in the IP address of the host.

EMD Install Dir

Use this field to specify the directory that will hold EMD and the Informix SE Engine. This directory **must be** a local partition. The default is /opt/emd.
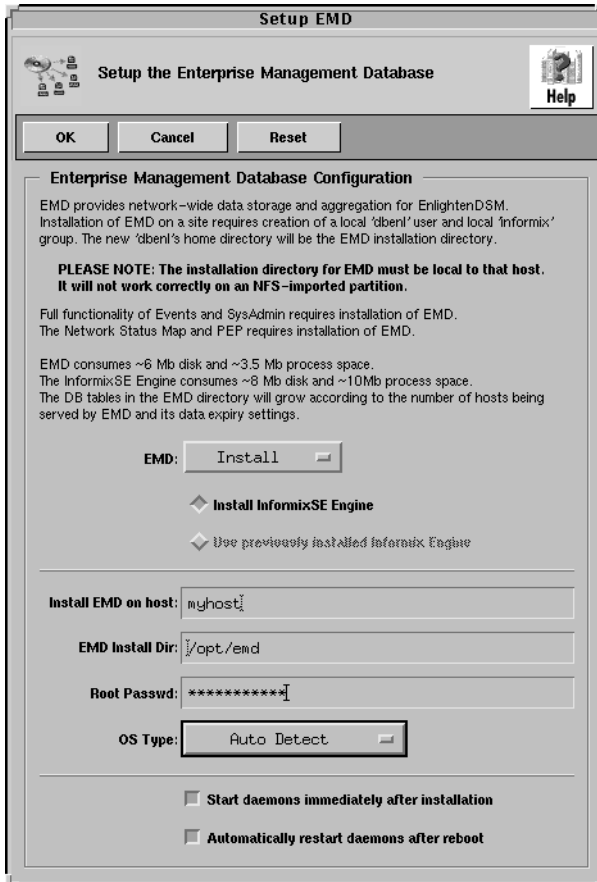

Figure 3 Setup the Enterprise Management Database window

Root Passwd

Use this field to specify the root password for the host shown in the Install EMD on host: field.

OS Type

Use this toggle to specify the O/S type for the EMD host machine.

Start daemons immediately after installation

Ensure that this checkbox is selected (the default) or EMD will not be available for the other Enlighten**DSM** components.

Automatically restart daemons after reboot

Ensure that this checkbox is selected (the default) or EMD will not be available for the other Enlighten**DSM** components.

Step 2: PEP Setup

Click the **Step 2: PEP Setup** button to configure the Programmable Events Processor (PEP). The Setup the Programmable Events Processor window will appear (Figure 4).
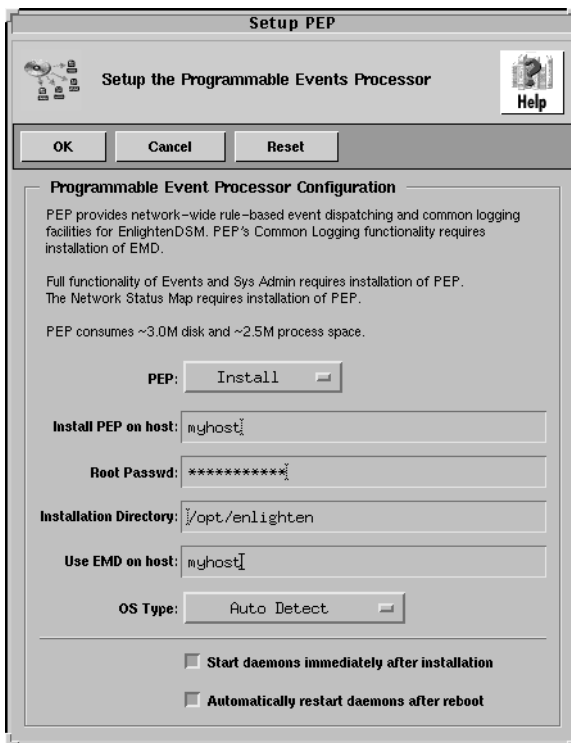

Figure 4 Set Up the Programmable Events Processor window

This window contains the following fields and toggles:

PEP

Use this toggle between `Install`, `Upgrade`, or `Don't Install` PEP. Enlighten**DSM** components must have access to both the Enterprise Management Database (EMD) and PEP to function properly.

Install PEP on host

Use this field to specify where to load PEP (hostname or IP address). The default is your local hostname or the location of a previously installed PEP, if available.

Root Passwd

Use this field to specify the root password for the host shown in the Install PEP on host: field.

Installation Directory

Use this field to specify the directory that will hold PEP.

Use EMD on host

Use this field to specify the hostname (or IP address) of the EMD host. This defaults to the value specified in <u>"Step 1: EMD Setup"</u>.

OS Type

This toggle selects the O/S type for the PEP host machine. You should use the `Auto Detect` option (the default).

Start daemons immediately after installation

Ensure that this checkbox is selected (the default) or PEP will not be available for the other Enlighten**DSM** components.

Automatically restart daemons after reboot

Ensure that this checkbox is selected (the default) or PEP will not be available for the other Enlighten**DSM** components.

Step 3: Add Hosts

Click the **Step 3: Add Hosts** button to configure Enlighten**DSM** for the remainder of the hosts on your intranet. The Setup Enlighten**DSM** Destination Host(s) window will appear (Figure 5).

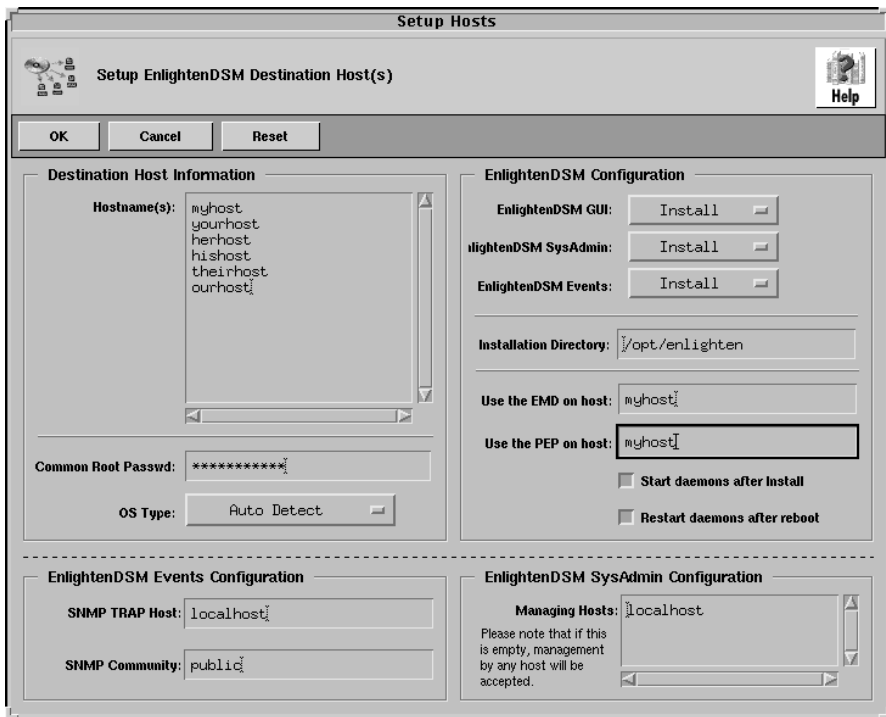☞ To quickly modify the specified EMD and PEP hosts, double-click these entries in the Main Install list.

Figure 5 Set Up Enlighten**DSM** Destination Host(s) window

Destination Host Information

This window contains the following fields and toggles:

Hostname(s)

Use this list box to specify the host(s) where you will install the Enlighten**DSM** components specified in the Enlighten**DSM** Configuration area.

Common Root Passwd

Use this field to specify the common root password for the hosts shown in the Hostname(s): field. If some of the hosts have different root passwords, they will remain in the Hostname(s): field after you complete this step, and then you can enter the root password for those hosts.

OS Type

This toggle selects the O/S type for the host's machine. Use the `Auto Detect` option (the default), especially if you have a heterogeneous intranet.

Enlighten**DSM** Configuration

This area contains the following fields and toggles:

Enlighten**DSM** GUI

Use this toggle to select `Install` or `Don't Install` the Enlighten**DSM** GUI.

Enlighten**DSM** SysAdmin

Use this toggle to select `Install` or `Don't Install` the Enlighten**DSM** Sysadmin Agent.

Enlighten**DSM** Events

Use this toggle to select `Install` or `Don't Install` the Enlighten**DSM** Events Agent.

Installation Directory

Use this field to specify the directory that will hold the Enlighten**DSM** components. A full installation requires 100 Mb of free disk space.

Use the EMD on host

This field defaults to the hostname for your EMD. You should leave this field with its default value.

Use the PEP on host

This field defaults to the hostname for your PEP. You should leave this field with its default value.

Start daemons after install

Ensure that this checkbox is selected (the default) or the Enlighten**DSM** components will not come up automatically.

Restart daemons after reboot

Ensure that this checkbox is selected (the default) or the Enlighten**DSM** components will not come up automatically.

☞ If you want to manually configure your `rc` files, deselect the **Restart daemons after reboot**: button and add the call to `<enlighten install dir>/bin/S92startenl` in your system startup file.

Enlighten**DSM** Events Configuration

This area contains the following fields:

SNMP TRAP host

You can use this field to specify a hostname on your intranet that is running an SNMP-aware system manager. If you don't have such a manager installed, leave this set to `localhost` (the default). This will be replaced by the actual hostname; `localhost` does not need to be defined in the local machine's `/etc/host` database file.

SNMP Community

You can use this field to specify the COMMUNITY name of your SNMP network. The default is `public`.

Enlighten**DSM** SysAdmin Agent Configuration

This area contains the following field:

Managing Hosts

Use this list box to specify the host(s) that will be allowed to connect through the Enlighten**DSM** GUI to manage the hosts shown in the Hostname(s): list box. The default is your `localhost`.

Warning!   If you leave this field blank, **any** host running the Enlighten**DSM** GUI can manage the hosts shown in the Hostname(s): field. You should only use this option if you have a firewalled intranet containing "trusted" hosts.

Modify and Delete

You can click the **Modify** button (in the Main window) to modify a host in the Main Install List. This will take you to the **Step 3: Add Hosts** screen.

Double-clicking a host in the Main Install List is the same as selecting that host and clicking on the **Modify** button. You can also click the **Delete** button (in the Main window) to delete the highlighted host(s) from the Main Install List.

Step 4: Setup Licensing

Once you have completed the previous three steps, click the **Step 4: Setup Licensing** button. The Enlighten**DSM** Configure License File window will appear (Figure 6).
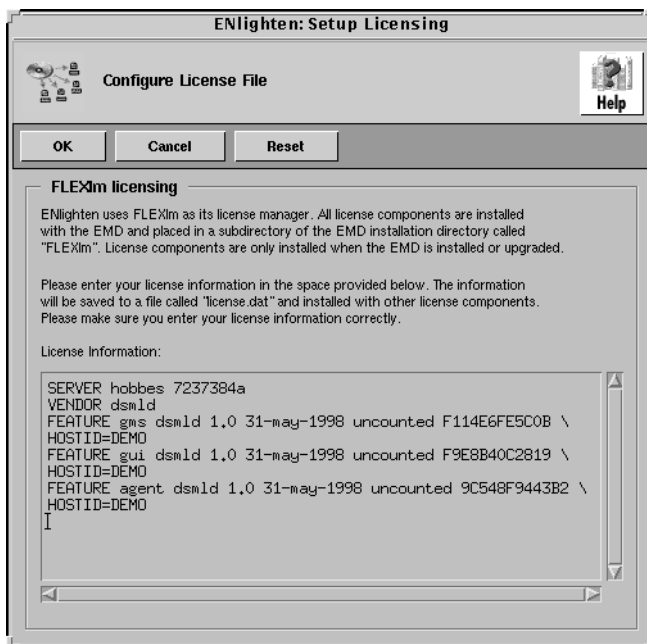

Figure 6 Enlighten**DSM** Configure License File window

If the file `<enlighten install dir>/FLEXlm/license.dat` exists, the contents of that file will be shown in the edit area of the Configure License File window. During installation, the data entered in this window is temporarily stored on the local machine in `<enlighten install dir>/FLEXlm/license.dat`, then copied to the EMD host, and stored in `<emd_dir>/FLEXlm/license.dat`.

This update only occurs when EMD is installed or upgraded. When the license server runs, it will use the file stored on the EMD host, and NOT the temporary copy stored on the installation host. If you need to update your license file and are not upgrading or installing the EMD component, you must manually edit the `<emd_dir>/FLEXlm/license.dat` file on the EMD host.

The first two lines of the license file are values that are determined based on the installation information already provided and should not be changed. They specify where to contact the license server process (which must be the same as the EMD host specified in <u>"Step 1: EMD Setup"</u>) and the name of the Enlighten**DSM** vendor daemon that will also be run on the EMD host.

The remaining entries of the license file must be entered based on the license file details provided by your Enlighten**DSM** vendor. Depending on the license features being activated, you may have already received license keys or you may need to send additional information to your Enlighten**DSM** vendor to receive the properly validated license keys. Please contact your Enlighten**DSM** product vendor for additional information about license keys.

Once the license file has been updated, click OK to continue the installation process.

Warning!   It is important that the *license file be installed correctly with valid license keys or the* Enlighten**DSM** *processes will not run.*

Step 5: Install

1) Click the **Step 5: Install** button to complete the installation process.

   The Install to Local and Remote Hosts window will appear.

2) Click the **Start Installation** button to install Enlighten**DSM** in the configuration(s) you specified in the previous four steps.

   The Installation progress information is written to `/tmp/install.log` and to the Installation Log scrolled text field. Clicking on the **Clear Log** button will only clear the scrolled text field; this will not erase any entries in the `/tmp/install.log` file.

3) Once the installation is complete, click **Close** to exit the Enlighten**DSM** Network Installer interface, and continue with the next section to start the Enlighten**DSM** GUI.

Starting Enlighten**DSM**

1) From a shelltool, xterm, or another such window, type the following commands:

```
cd <your enlighten installation directory>

bin/xenln
```

Alternatively, type the following command if you don't know where Enlighten**DSM** is installed on the local host:

```
cat /etc/enlighten | grep "enlighten="

bin/xenln
```

2) Once you've found the correct directory, the Enlighten**DSM** main menu toolbar will appear on your screen (Figure 7).

Figure 7 Enlighten**DSM** main menu toolbar

Now you can begin using Enlighten**DSM** to help you administer your system and network needs. Refer to the Enlighten**DSM** *Reference Manual* for more details about using the options in this toolbar.

☞   An Enlighten**DSM** Sysadmin Agent daemon must be running on each host that you want to manage.