# INSTALLATION

This chapter will help you install EnlightenDSM 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 EnlightenDSM
- Starting EnlightenDSM

# **Pre-Installation Considerations**

Before installing EnlightenDSM, you must collect information about the hosts in your intranet.

• Select the host that will run the EnlightenDSM 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 EnlightenDSM.

• 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 EnlightenDSM license server. EnlightenDSM uses flexLM for all license management. The flexLM components are installed in the FLEX1m sub-directory of the EMD installation directory.

- Make sure you know the root password for each host that will use EnlightenDSM.
- Find a suitable partition with enough free space for each host that will use EnlightenDSM.

# Installing on an NFS-Imported Partition

You should also be aware of the following facts if you're considering installing EnlightenDSM 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 EnlightenDSM.

EnlightenDSM runs with root privileges and may create files within the EnlightenDSM home directory during its activities. If root write permissions are not enabled on the partition on which EnlightenDSM is installed, many of EnlightenDSM's disk monitoring functions will not function. Ensure that you install EnlightenDSM 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 EnlightenDSM 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. EnlightenDSM 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 EnlightenDSM Welcome screen will appear.

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

If this is your first-time installing EnlightenDSM, CDINSTAL will only ask for the directory on which you want to install EnlightenDSM components. The default EnlightenDSM 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 EnlightenDSM.



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 EnlightenDSM 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 EnlightenDSM on your system. If you do not accept the License Agreement, click the DO NOT ACCEPT button, and the installation process will quit.

EnlightenDSM: License Agreement				
EnlightenDSM License Agreement				
ACCEPT	DO NOT ACCEPT			
License Agreement:				
Please read the following "End User Terms and Conditions" carefully.				
ENLIGHTEN SOFTWARE SOLUTIONS, INC. END USER TERMS AND CONDITIONS				
THIS IS A LEGAL AGREEMENT BETHEEN YOU AND ENLIGHTEN SOFTMARE SOLUTIONS, INC. ("ENLIGHTEN").				
1. Definitions. Unless defined below, all terms defined on the Enlighten Software Solutions, Inc. License Agre	are as ement.			
2. Term. For purposes of this figreement, the "Ew- Term" shall mean a period commencing upon delivery of the Soft you and continuing for thirty (30) days thereafter. You may ex- license granted in Paragraph 3 ("Software License") beyond the Evaluation Term for a period continuing for the life of the co in the Software (the "Extended Term") by paying the then-curree user license fees and completing, signing, and returning the En Software Solutions, Inc. License figreement. The Software shal deemed accepted by you upon execution of the Enlighten Softwar- Solutions, Inc. License figreement, This figreement commences up Effective Date and continues for the Evaluation Term and Extern	aluation ware to ktend the opyright it end blighten L be bon the ded Term,			

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Figure 1 Enlighten DSM License Agreement window

# Installing EnlightenDSM

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 <u>"Step 5: Install"</u> 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 EnlightenDSM.

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



The EnlightenDSM Network Installer is SIGINT and SIGHUP aware. If you want to delete the EnlightenDSM Network Installer or cancel any operation, type <Ctrl>-c in the window where you started this process. EnlightenDSM 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 page 13 (Figure 3).

#### **Fields and Toggles**

This window contains the following fields and toggles:

#### EMD

Use this toggle to Install, Upgrade, or Don't Install EMD. EnlightenDSM 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.

Setup EMD						
Setup the Enterprise Management Database						
ок	OK Cancel Reset					
👝 Enterpri	Enterprise Management Database Configuration					
EMD provides network-wide data storage and aggregation for EnlightenDSM. Installation of EMD on a site requires creation of a local 'dibeni' user and local 'informix' group. The new 'dibeni's home directory will be the EMD installation directory.						
PLEASE It will no	NOTE: The installa t work correctly on	ation directory fo an NFS-importe	r EMD must be local to that host. Id partition.			
Full function The Networl	ality of Events and S k Status Map and PE	SysAdmin requires EP requires installa	installation of EMD. tion of EMD.			
EMD consumes ~6 Mb disk and ~3.5 Mb process space. The InformixSE Engine consumes ~8 Mb disk and ~10Mb process space. The DB tables in the EMD directory will grow according to the number of hosts being served by EMD and its data expiry settings.						
	EMD: Ir	nstall 💻	]			
	🔷 Ins	tall InformixSE E	ingine			
🔷 Use previously installed Informic Engine						
Install EMD on host: myhost						
EMD Install Dir: Vopt/end						
Root Passwd: ************************						
OS Type: Auto Detect =						
🗖 Start daemons immediately after installation						
🗖 Automatically restart daemons after reboot						

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 EnlightenDSM components.

#### Automatically restart daemons after reboot

Ensure that this checkbox is selected (the default) or EMD will not be available for the other EnlightenDSM 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 (<u>Figure 4</u>).

Setup PEP					
Setup the Programmable Events Processor					
ок	Cancel	Reset	]		
- Programma	able Event Pr	ocessor Confi	guration		
PEP provides network-wide rule-based event dispatching and common logging facilities for EnlightenDSM. PEP's Common Logging functionality requires installation of EMD.					
Full functionalit The Network S	Full functionality of Events and Sys Admin requires installation of PEP. The Network Status Map requires installation of PEP.				
PEP consumes	~3.0M disk and	~2.5M process sp	pace.		
PEP: Install =					
Install PEP o	<b>n host:</b> myhos	stį			
Root Passwd: ************************************					
Installation Dir	Installation Directory: Vopt/enlighten				
Use EMD o	Use EMD on host: myhost]				
05	OS Type: Auto Detect 🖃				
	Start daemons immediately after installation				
Automatically restart daemons after reboot					

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. EnlightenDSM 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 EnlightenDSM components.

#### Automatically restart daemons after reboot

Ensure that this checkbox is selected (the default) or PEP will not be available for the other EnlightenDSM 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.

Setup Hosts					
Setup EnlightenDSM Desti	nation Host(s)	1 Help			
OK Cancel Reset					
Destination Host Information —		EnlightenDSM Configuration			
Hostname(s): myhost		EnlightenDSM GUI: Install 🖃			
yournost herhost hishost		ılightenDSM SysAdmin: Install 🖃			
theirhost ourhost <u>í</u>		EnlightenDSM Events: Install 🚄			
		Installation Directory: Jopt/enlighten			
		Use the EMD on host: Myhost			
		Use the PEP on host: Myhost]			
Common Root Passwd: ************************************		🔲 Start daemons after Install			
OS Type: Auto De	tect =	🔲 Restart daemons after reboot			
EnlightenDSM Events Configurati	on	EnlightenDSM SysAdmin Configuration			
SNMP TRAP Host: localhost		Managing Hosts: 10calhost			
SNMP Community: public		Please note that if this is empty, management by any host will be accepted.			

Figure 5 Set Up EnlightenDSM 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 EnlightenDSM components specified in the EnlightenDSM 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.

# EnlightenDSM Configuration

This area contains the following fields and toggles:

#### EnlightenDSM GUI

Use this toggle to select Install or Don't Install the EnlightenDSM GUI.

#### EnlightenDSM SysAdmin

Use this toggle to select Install or Don't Install the EnlightenDSM Sysadmin Agent.

#### EnlightenDSM Events

Use this toggle to select Install or Don't Install the EnlightenDSM Events Agent.

# **Installation Directory**

Use this field to specify the directory that will hold the EnlightenDSM 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 EnlightenDSM components will not come up automatically.

#### Restart daemons after reboot

Ensure that this checkbox is selected (the default) or the EnlightenDSM 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.

# EnlightenDSM 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.

# EnlightenDSM 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 EnlightenDSM 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<br/>EnlightenDSM GUI can manage the hosts shown in the<br/>Hostname(s): field. You should only use this option if you<br/>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 EnlightenDSM Configure License File window will appear (Figure 6).

ENlighten: Setup Licensing					
Configure License File					
OK Cancel Reset					
- FLEXIm licensing					
ENlighten uses FLEXIm as its license manager. All license components are installed with the EMD and placed in a subdirectory of the EMD installation directory called "FLEXIm". License components are only installed when the EMD is installed or upgraded. Please enter your license information in the space provided below. The information will be saved to a file called "license dat" and installed with other license components. Please make sure you enter your license information correctly. License Information:					
SERVER hobbes 7237384a VENDOR dsmld FEATURE gms dsmld 1.0 31-may-1998 uncounted F114E6FE5COB \ HOSTID=DEMO FEATURE gui dsmld 1.0 31-may-1998 uncounted F9E8B40C2819 \ HOSTID=DEMO FEATURE agent dsmld 1.0 31-may-1998 uncounted 9C548F9443B2 ' HOSTID=DEMO I	<u>ъ</u>				
<u>م</u>					

Figure 6 EnlightenDSM 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 EnlightenDSM 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 EnlightenDSM 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 EnlightenDSM vendor to receive the properly validated license keys. Please contact your EnlightenDSM 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* EnlightenDSM *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 **EnlightenDSM** 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 EnlightenDSM

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 EnlightenDSM is installed on the local host:

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

bin/xenln

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

ENLIGHTEN – Pool: default								
Configure	User User	S Printer	ese se Network	Security	Disk	Archive	System	<b>Events</b>
Copyright (c) 1990-1998 Enlighten Software Solutions, Inc.								

Figure 7 EnlightenDSM main menu toolbar

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



An EnlightenDSM Sysadmin Agent daemon must be running on each host that you want to manage.