Ensim® WEBppliance™ Pro 3.5 for Linux® (LS) Installation and Upgrade Guide

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About this guide

Introduction

This guide provides instructions for installing or upgrading to Ensim® WEBppliance™ Pro 3.5 for Linux® on a Red Hat® Linux 7.3 server using the Ensim Operating System Installer (OSI).

> **Note:** For simplicity and convenience, we refer to Ensim WEBppliance Pro 3.5 for Linux as WEBppliance Pro and the Ensim Operating System Installer as OSI throughout this document.

Chapters in this guide include:

- Chapter 1, "About OSI"
- Chapter 2, "Installing WEBppliance Pro"
- Chapter 3, "Upgrading to WEBppliance Pro".
- Appendix A, "Log files"

Intended audience

This document is designed to aid service providers in installing or upgrading to WEBppliance Pro. The document intends to be a complete resource for novices as well as technically conversant users.

Printer-friendly version

This document is presented in HTML and PDF formats. If you are viewing this document in HTML format and want to print it in a book style with numbered pages, use the Adobe® PDF version.

Related documentation

The following documents provide additional information on WEBppliance Pro. You can find them on the Web at http://www.ensim.com/support/wpls/index.html

- Ensim WEBppliance Pro 3.5.0 for Linux Release Notes
- Manually installing Red Hat Linux 7.3 for Ensim WEBppliance Pro
- WEBppliance for Linux Appliance Administrator's Help
- WEBppliance for Linux Reseller Administrator's Help
- WEBppliance for Linux Site Administrator's Help
- WEBppliance for Linux User Administrator's Help
- Ensim knowledge base articles

  You can find the knowledge base articles on the Web at
  http://onlinesupport.ensim.com/kb_search.asp?product=lwp

Document conventions

Throughout this guide, specific fonts are used to identify computer input, output, and interface elements. Table 1 lists the typographic conventions used in this guide.

Table 1. Typographic conventions

Appearance of text	How it is used
Narrow bold text (sans serif font)	Used for button names, column names, field names, file names, keystrokes, menu items, and path names. *Example:* From the **File** menu, choose **Delete**, and then click **OK**.
Bold, italic text (serif font)	Used for information you type. *Example:* Enter **cd** *<directory name>* on the command line.
Courier (typewriter-style) font	Used for system messages and screen text. *Example:* The following message appears: `The server has been added.`

Key information is sometimes displayed using special headings and formats to make it stand out from regular text. The following special headings are used in this guide:

Tip: Information to help you perform procedures

Note: Supplemental information about tasks or concepts

Important: Supplemental information that is more important than a note

Caution: Warnings about potential damage to data or systems

Feedback and comments

To take advantage of Ensim's support tools or to find technical information quickly, visit the Ensim support page at http://support.ensim.com

To obtain the latest product documentation or to contact Ensim support, visit the Ensim product support page at http://www.ensim.com/support/wpls/index.html

To obtain additional online support, or to provide feedback about Ensim documentation, visit https://onlinesupport.ensim.com

ENSIM WEBPPLIANCE PRO 3.5 FOR LINUX (LS) INSTALLATION AND UPGRADE GUIDE

About OSI

Introduction

OSI is an Ensim utility that automates the installation of WEBppliance Pro or upgrades your existing WEBppliance to WEBppliance Pro. It encapsulates complex installation and manual configuration tasks using an interactive command line interface.

OSI's versatility offers a solution for various operating environments.

- Scenario 1: You have a general-purpose server, but you do not have the Red Hat Linux operating system or WEBppliance Pro installed on it. You will need instructions for installing Red Hat Linux 7.3 and WEBppliance Pro. See "Using OSI to install Red Hat Linux 7.3 and WEBppliance Pro" on page 1-2 for an overview and Chapter 2, "Installing WEBppliance Pro" for more information and detailed instructions.

- Scenario 2: You have a Red Hat Linux 7.3 server, but you do not have WEBppliance Pro installed on it. You will need instructions for installing WEBppliance Pro. See "Using OSI to install WEBppliance Pro on a Red Hat Linux 7.3 server" on page 1-3 for an overview and Chapter 2, "Installing WEBppliance Pro" for more information and detailed instructions.

- Scenario 3: You have a Red Hat Linux 7.1/7.2 server with WEBppliance installed on it, but it is an older version. You will need instructions for upgrading your current version to WEBppliance Pro. See "Using OSI to upgrade an older version of WEBppliance to WEBppliance Pro" on page 1-3 for an overview and Chapter 3, "Upgrading to WEBppliance Pro" for more information and detailed instructions.

Using OSI to install Red Hat Linux 7.3 and WEBppliance Pro

You can use OSI to install Red Hat Linux 7.3, the required Red Hat updates, and WEBppliance Pro.

The OSI installation disk:

- Enables optimized installation of the Red Hat Linux 7.3 operating system. The installation disk installs only those operating system files that are essential to the functioning of WEBppliance Pro. This sets the foundation for a clean and efficient operational environment.

- Installs the required Red Hat Linux 7.3 updates. Applying Red Hat Linux 7.3 patches and updates indiscriminately can lead to compatibility problems with WEBppliance Pro. The installation disk has built-in intelligence that downloads only those updates that are compatible with WEBppliance Pro.

- Installs the latest version of WEBppliance. After successful installation of the Red Hat Linux 7.3 operating system and the requisite updates, the installation disk installs WEBppliance Pro on the specified server.

Types of OSI installation disks

Depending on the hardware profile of your server, you can choose to create one of the following:

- **Standard Red Hat Linux 7.3 disk**. The Standard Red Hat Linux 7.3 kickstart disk is qualified by a default set of drivers that is considered suitable for most servers. Standard kickstart installation is strongly recommended if your server uses commonly available hardware. Custom kickstart installation, in such cases, may fail due to incompatibilities between the custom drivers and server hardware.

- **Custom Red Hat Linux 7.3 disk**. The Custom Red Hat Linux 7.3 kickstart disk consists of a set of drivers that suit rare or uncommon hardware such as the 3com3509 Network Interface Card. If your server has any such rare hardware, a custom kickstart installation is recommended.

Note: Ensim does not guarantee the proper functioning of OSI if the hardware profile of your server does not meet the compatibility requirements set by Red Hat. To find out the hardware compatibility requirements set by Red Hat, visit http://hardware.redhat.com/hcl

Using OSI to install WEBppliance Pro on a Red Hat Linux 7.3 server

You can use OSI to install WEBppliance Pro on a pre-installed Red Hat Linux 7.3 server. OSI performs a system compatibility check to validate Red Hat updates and other software installed on the server and then installs WEBppliance Pro.

Important: If the current Red Hat Linux operating system installed on your server is 7.1 or 7.2, you must upgrade it to Red Hat Linux 7.3, before installing WEBppliance Pro, otherwise the installation will fail.

Using OSI to upgrade an older version of WEBppliance to WEBppliance Pro

You can use OSI to upgrade an older version of WEBppliance to WEBppliance Pro. OSI upgrades WEBppliance from the following versions:

- Version 3.0.x (3.0.0, 3.0.3)
- Version 3.1.x (all versions from 3.1.0 to 3.1.8)

OSI's built-in intelligence primes your system with the required upgrade environment. If you have Red Hat Linux 7.1 or 7.2 installed on your server, OSI upgrades your operating system to Red Hat Linux 7.3, downloads and installs the required RPMs, then upgrades your WEBppliance.

Known limitations of OSI

OSI is limited by the following constraints.

- You will be unable to connect to the virtual consoles in your hosting environment when the Red Hat Linux updates are in progress.
- You can not create the OSI disk on Windows XP as it is currently not supported.
- Root and "admin" user passwords that contain more than six consecutive space characters are not recognized as valid passwords by OSI.

Installing WEBppliance Pro

Introduction

This chapter provides instructions for installing WEBppliance Pro using the OSI installation disk, then setting it up so you can log on as the Appliance Administrator and access the WEBppliance Appliance Administrator control panel.

Topics include:

- "Installation requirements" on page 2-2
- "Minimum system requirements for creating the OSI disk" on page 2-3
- "Web browser requirements" on page 2-4
- "Creating the OSI installation disk" on page 2-9
- "Installing WEBppliance using the OSI installation disk" on page 2-36
- "Installing WEBppliance on a pre-installed Red Hat Linux 7.3 server" on page 2-38
- "Troubleshooting installation issues" on page 2-43
- "Setting up and logging on to the WEBppliance control panel" on page 2-45

Installation requirements

This section describes how to prepare your environment for the installation of WEBppliance Pro.

System requirements

The system requirements for installing WEBppliance Pro are as follows.

Base requirements

- An Intel Pentium® II or III processor, class 500 MHz or above or any Intel-compatible CPU of 500 MHz speed or above

- Hard disk with at least 20 GB capacity

- At least 256 MB RAM (512 MB and above is recommended if you plan to use the Tomcat application)

- A CD-ROM drive (if you choose to install WEBppliance using the CD-ROM installation option - see "Option 1: CD-ROM" on page 2-16 for more information).

- A floppy disk drive

- Network connectivity with access to Internet

- DNS server on network

- Mouse (optional)

To create an OSI installation disk

- Windows® 98/Windows 2000/Windows NT/Linux

- Internet connectivity to download OSI

- Floppy disk drive

To install WEBppliance using OSI (without creating an installation disk)

The minimum system requirements for installing WEBppliance Pro using OSI (without creating a disk) are:

- A server running Red Hat Linux 7.3 operating system

- Internet connectivity

Software requirements

- IP address with netmask (of the target server)

- IP address of gateway (for the target server)

- IP address of DNS (for the target server)

- Set of Red Hat Linux 7.3 CD-ROMs (if you choose the CD-ROM installation option - see "Option 1: CD-ROM" on page 2-16 for more information)

- NFS server exporting Red Hat Linux installer tree (if you choose the NFS installation option - see "Option 2: NFS" on page 2-20 for more information)

- FTP server serving Red Hat Linux installer tree (if you choose the FTP installation option - see "Option 3: FTP" on page 2-21 for more information)

- HTTP server serving Red Hat Linux installer tree (if you choose the HTTP installation option - see "Option 4: HTTP" on page 2-22 for more information)

Important: The IP addresses for the above fields must be valid IP addresses. Further, the IP address of the target server must resolve to a valid DNS entry; otherwise, the WEBppliance installation will fail. Contact your network administrator for more details.

Minimum system requirements for creating the OSI disk

The minimum system requirements for creating the OSI disk are:

- Windows® 98/Windows 2000/Windows NT/Linux

- Internet connectivity to download OSI

- Floppy disk drive

The minimum system requirements for installing WEBppliance using OSI (without creating a disk) are:

- A server running Red Hat Linux 7.3 operating system

- Internet connectivity

Note: You cannot create the OSI disk on Windows XP as it is currently not supported by OSI.

Web browser requirements

In order to administer the installed WEBppliance, it is recommended that you use one of the following browsers.

- Microsoft® Internet Explorer, version 5.0 or higher

Important: If you are using Internet Explorer, version 6.0, please verify that you have set your security settings (under Internet Options) to **medium;** otherwise some pages may not display properly.

- Netscape®, version 6.2 or higher

Suggested additional configurations

This section explains how to customize disk partitioning to manage the available disk resources on your target server.

Customizing disk partitioning

If the target server where you install WEBppliance Pro has single and medium capacity hard disks (typically 40 GB and less) the default partitioning scheme of /boot = 50 MB, swap = twice the amount the RAM, and /= rest of the hard disk space will suffice.

However, for disks with a capacity of 40 GB and above or for systems with more than one hard disk, the above scheme is not feasible. In such cases, a custom partitioning scheme must be specified.

If the target server has high capacity hard disks or multiple hard disks, it is recommended that you customize disk partitioning so as to have multiple partitions on your hard disks.

Disk partitioning schemes for WEBppliance Pro

If the capacity of the hard disk is greater than 40 GB, or if the number of hard disks exceed one, the following partitions can be used:

- /= 5 GB
- /boot = 101 MB
- swap = 1 GB and above or multiple swap partitions
- /var = at least 5 GB
- /home = largest

If the target server has only one hard disk, you can opt for the above partitioning scheme on the same disk. However, if the target server has more than one hard disk (for example, two), the above scheme can be spread across the two disks as follows:

First disk (40 GB):

- / = *<remaining disk space>*
- /boot = 101 MB
- swap = 1024 MB
- /var = 20 GB
- /tmp = 2 GB

Second disk (40 GB):

- swap = 1024 MB
- /home = *<remaining disk space>*

Customizing the ks.cfg kickstart file

You need to modify the ks.cfg file present on the OSI disk to customize disk partitioning.

For more details on configuring the kickstart installation of Linux, refer to http://www.redhat.com/docs/manuals/linux/RHL-7.3-Manual/custom-guide/s1-kickstart2-options.html

Procedure: To modify the ks.cfg file on the installation disk:

1 Open the file ks.cfg in a regular text editor, for example, Notepad.

2 Locate the following text in the file:

```
part /boot --fstype ext3 --size=50

part swap --size=512 --grow --maxsize=1024

part /    --fstype ext3 --size=2048 –grow
```

The above lines correspond to the partitioning scheme of **/boot, /**, and **swap**.

3 Modify the values as required.

The format of the command for the above lines is:

```
part <mount_point_name> --fstype <filesystem_type> --size=<size>
\--maxsize=<size> --ondisk=<disk_name> --grow(if required)
```

Where

- ❑ `<mount_point_name>` is the name of the mount point, for example: /boot or /home or /var etc
- ❑ `<filesystem_type>` is ext
- ❑ `<size>` represents the disk space (in MB)
- ❑ `<disk_name>` is the device name of the hard disk, for example, had or hdb

The following are some recommended configurations.

Example: 1

This example creates a boot partition of 50 MB, a swap partition of 512 MB with the assumption that the main **/** partition will fill in the remaining disk space. If there is more than one hard disk, the disk used is determined by the kickstart program.

```
part /boot --fstype ext3 --size=50

part swap --size=512 --grow --maxsize=1024

part /  --fstype ext3 --size=2048 --grow
```

Example: 2

If there are two IDE hard disks, you can determine the location of the partitions.

This example creates a boot partition of 50 MB on the first hard disk, a swap partition of 1024 MB on the first hard disk with the assumption that the main **/** partition will fill in the entire disk space for the second hard disk.

```
part /boot --fstype ext3 --size=50 --ondisk=hda

part swap --size=512 --grow --maxsize=1024 --ondisk=hda

part /  --fstype ext3 --size=2048 --grow --ondisk=hdb
```

Example: 3

Example 2 could waste disk space on the first hard disk if the hard disk is large.

This example puts **/home** onto the entire second hard disk and keeps / on the first hard disk in the remaining space.

```
part /boot --fstype ext3 --size=50 --ondisk=hda

part swap --size=512 --grow --maxsize=512 --ondisk=hda

part /  --fstype ext3 --size=2048 --grow --ondisk=hda

part /home --fstype ext3 --size=2048 --grow --ondisk=hdb
```

Setting up WEBppliance Pro to use multiple partitions

To allow the server's root user to configure where WEBppliance temporary files are created, change the path name to the temporary files by editing the file **/etc/virtualhosting/tmpdirs**. WEBppliance essentially makes changes to files located under **/etc** and **/home/virtual**.

Important: You must not edit the file **tmpdirs** until you finish installing WEBppliance Pro. If you attempt to create the directories as detailed below prior to installing WEBppliance Pro, the installation will fail. This is because the installation checks for the existence of **/etc/virtualhosting** and **/home/virtual**.

Additionally, any changes made in the file **tmpdirs** are overwritten during the installation process.

When you change the path name to the temporary files, each line in the **tmpdirs** file should use the following format.

```
<path-prefix>:<directory>
```

where `<path-prefix>` matches the beginning of file path names whose associated temporary file locations you want to modify, and <directory> is a path to an existing directory that lies on the same partition as `<path-prefix>`.

For security purposes, <directory> should be root-owned, with no permissions for either group or other (for example, 0700), and all path components leading to this directory should not be editable by anyone other than root. If this file is empty, then by default all temporary files will be created in **/var/cache**.

Important: You have to restart WEBppliance to complete this configuration process. To restart WEBppliance, type the following command at the command prompt.

/etc/rc.d/init.d/webppliance restart

Assume the disk partitioning of the server is as follows:

- **/** is on **/dev/hda**1
- **/var** is on **/dev/hda2**
- **/home** is on **/dev/hda3**

Since **/var** is on its own partition, it cannot be used as a location for temporary files for either **/etc** or **/home/virtual**, which means that the default setting will not work. In addition, since **/home** and **/etc** are on different partitions, two separate directories will need to be specified. So, **/etc/virtualhosting/tmpdirs** would contain the following:

- **/etc:/etc/safedir**
- **/home:/home/virtual/FILESYSTEMTEMPLATE/safedir**
- **/usr:/usr/safedir**

Using this configuration, all files under **/etc** that WEBppliance attempts to modify would have their temporary files created in **/etc/safedir**. Similarly, all files that WEBppliance attempts to modify under **/home** would have their temporary files created in **/home/virtual/FILESYSTEMTEMPLATE/safedir**. All other path names would use temporary files in **/var/cache** (the default).

These directories would be created as follows:

- **mkdir -m 0700 /etc/safedir; chown root.root /etc/safedir**
- **mkdir -m 0700 /home/virtual/FILESYSTEMTEMPLATE/safedir; **
- **chown root.root /home/virtual/FILESYSTEMTEMPLATE/safedir**
- **mkdir -m 0700 /usr/safedir; chown root.root /usr/safedir**

Note: For more details on Linux partitions, please contact Ensim Support at https://onlinesupport.ensim.com

Creating the OSI installation disk

This section provides instructions for creating the OSI installation disk on a system running the Linux or Windows operating system.

Note: If you are upgrading WEBppliance or have a pre-installed Red Hat Linux 7.3 server, you can disregard the following section.

Topics include:

Generating the installation disk on a Linux server

This section provides instructions for creating an installation disk on a server running the Red Hat Linux operating system.

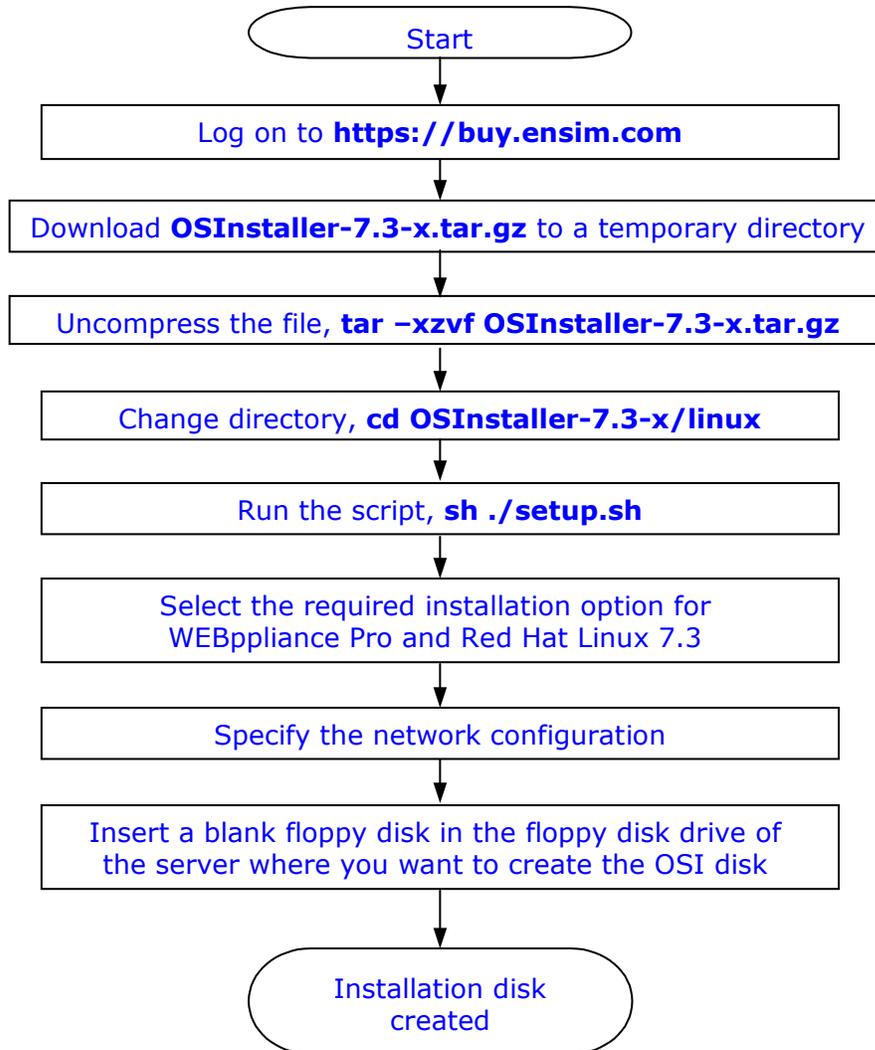Figure 2-1 provides a graphical overview of the installation process.

Figure 2-1. *Overview of the installation process - creating the installation disk on a Linux server*

Procedure: To generate the installation disk:

1 Log on to https://buy.ensim.com and download the compressed file **OSInstaller-7.3-x.tar.gz**.

Note: The variable **x** used in the file name represents the build number and must be replaced by the actual build number of the utility.

2 Create a temporary directory (for example, **/tmp/osi**) to download the compressed file, **OSInstaller-7.3-x.tar.gz**.

3 Download the compressed file, **OSInstaller-7.3-x.tar.gz**, to the temporary directory created in step .

4 Change to the directory (cd) where you have downloaded the compressed file.

5 Uncompress the file, **OSInstaller-7.3-x**, by using the command:

tar -xvzf OSInstaller-7.3-x.tar.gz

6 Change to the Linux sub-directory under OSInstaller-7.3-x, by using the command:

cd OSInstaller-7.3-x/linux

Important: You must log in as the root user to run the installation commands successfully.

Review your choices carefully before running the installation commands. The installation process can not be rolled back to a previous step, if you have entered incorrect information. To rectify any errors, you need to stop the process and restart.

Installation steps that prompt for a response have a default value contained in square brackets [ ]. If you press **Enter** without specifying a value, the default will be automatically selected.

Important: When you specify a directory path, always provide the absolute path and not the relative path. For example, **/home/admin/installer**

Do not prefix FTP or HTTP urls with **ftp://** or **http://** respectively.
Follow the convention as given below:
Example:
FTP URL: ftp.abc.com, **not** ftp://ftp.abc.com
HTTP URL: www.acd.com, **not** http://www.acd.com

7   Enter the following command.

./setup.sh

A brief note about the OSI utility and its capabilities displays.

Note: The instructions in **bold** convey the installation instructions as they appear on the installation screen. Text in `Courier` font indicates the messages that appear on the screen when you run an installation step.

8   **Press <ENTER> to continue, or ^C to abort.**

a   Press **Enter** to continue.

b   Press **Ctrl + C** to stop the process.

   If you choose to continue, the following message displays.

   `Downloading required data from Ensim's ftp server ...`

Note: OSI attempts to connect to Ensim's FTP server to download the data for the FTP and HTTP installation options. If it is unable to connect, it defaults to locally available data. This process takes some time. Please wait before proceeding.

9 **Is this the target server for installing/upgrading Linux Webppliance? [y]**

Enter **N**.

Note: Choosing **Y** will directly install or upgrade WEBppliance on the target server. If OSI detects a previous version of WEBppliance it performs an upgrade, otherwise it initiates a new installation. If you have WEBppliance already installed and want to upgrade it, disregard this chapter and refer to Chapter 3, "Upgrading to WEBppliance Pro" to upgrade your WEBppliance to WEBppliance Pro.

A new installation presumes that your server is pre-installed with the Red Hat Linux 7.3 operating system. If you have a pre-installed Red Hat Linux 7.3 server, disregard this chapter and refer to "Installing WEBppliance on a pre-installed Red Hat Linux 7.3 server" on page 2-38 to install WEBppliance Pro.

10 **Press <ENTER> to continue, or ^C to abort.**

a Press **Enter** to continue.

b Press **Ctrl + C** to stop the process.

If you have chosen to continue, a warning message displays.

Important: When you choose to create an installation disk, please remember that **ALL** partitions on the target computer are **DELETED. The Master Boot Record of the primary hard disk is also overwritten. Do not use this floppy to boot a system that has useful data on it.**

11 **Press <ENTER> to continue, or ^C to abort.**

a Press **Enter** to continue.

b Press **Ctrl + C** to stop the process.

12 Please enter the network configuration of the target machine.

❑   Hostname

Enter the fully qualified domain name of the target server (for example, myhost.mydomain.)

❑   IP Address

Enter the IP address of the target server.

❑   Netmask

Enter the netmask of the target server.

❑   Gateway IP address

Enter the IP address of the gateway.

❑   DNS Server IP Address [Primary]

Enter the IP address of the primary DNS server.

❑   Specify secondary name server(s) (if any). Type 0 or <ENTER> to end.

a   Enter **0** or press **Enter** if you do not want to specify a secondary name server.

b   DNS server IP Address (2)

Enter the name or IP address of the secondary DNS server.

13 Is the above correct? [y]

Enter **Y** to confirm that the information entered is correct.

The following message displays.

```
If you have a saved configuration data file that you would like to
use, you can bypass the following questions which gather
information about your target system.
```

14 Do you have a saved configuration data file? [n]

Note: If you have a saved configuration file (that was created when you created the installation disk the first time), specify the name of the configuration file and continue from step 17.

a   Enter **Y** if you have a saved configuration data file.

Please enter the file pathname of the saved configuration file. Kindly specify absolute path for the file.

Enter the absolute path to the file that contains the saved configuration data. The License and Warranty Agreement displays.

     b Enter **N** if you do not have a saved configuration data file. This option is recommended if you are a first-time user.

15 **Please select the RedHat Linux 7.3 boot floppy.**

```
1 Standard Red Hat Linux boot floppy
2 Custom Red Hat Linux boot floppy
```

Enter the number corresponding to your choice.

Note: The Red Hat Linux 7.3 operating system installation (performed by the OSI-Standard Red Hat Linux Boot Floppy) installs with a default set of hardware drivers that has been found suitable for most servers. If these drivers are not adequate for your server, create a custom kickstart disk with the drivers appropriate for your server.

16 **Please select the method for installing RedHat Linux 7.3. You have the following installation options.**

```
1 CD-ROM (a Red Hat 7.3 CD-ROM is required)
2 NFS (an NFS server exporting the Red Hat 7.3 installation tree)
3 FTP (an FTP server serving the Red Hat 7.3 installation tree)
4 HTTP (a Web server serving the Red Hat 7.3 installation tree)
```

Select an option from the four available installation options:

❑ **CD-ROM** - requires three Red Hat Linux 7.3 CD-ROMs

CD-ROM is the most common method of installation. It is fast as the installation is local and not constrained by remote access issues. The installation media consists of three Red Hat Linux 7.3 CD-ROMs. See "Option 1: CD-ROM" on page 2-16 for instructions.

❑ **NFS** - requires an NFS server to export the Red Hat Linux 7.3 installation tree

NFS is a remote installation ideal for corporate networks and large data centers. The installation files reside as a shared file on a remote NFS server. See "Option 2: NFS" on page 2-20 for instructions.

❑ **FTP** - requires an FTP server to serve the Red Hat Linux 7.3 installation tree

FTP is a remote installation process that you can use when you do not have access to the installation files through a CD-ROM or an NFS server. The installation files reside as a shared file on a remote FTP server. See "Option 3: FTP" on page 2-21 for instructions.

❑ **HTTP** - requires a Web server to serve the Red Hat Linux 7.3 installation tree

HTTP is a remote installation process that you can use when you do not have access to the installation files through a CD-ROM or an NFS server. The installation files reside as a shared file on a remote HTTP server. See "Option 4: HTTP" on page 2-22 for instructions.

Option 1: CD-ROM

The OSI disk created will use the Red Hat Linux CD-ROMs to install Red Hat Linux 7.3.

1 Please enter the number corresponding to your choice.

Enter **1,** and press **Enter**.

Important: You must insert the Red Hat Linux 7.3 CD (disk 1) in the CD-ROM drive BEFORE you restart the target server using this disk. Also, ensure that the server is set to boot from the floppy disk in the CMOS setup.

By default, the installation creates the following partitions on the primary hard disk of the target machine:

* /boot: size 50 MB
* swap: 256 MB [recommended value is 2 times the size of RAM on your target server]
* root[/]: remaining disk space

2 Max Size of swap partition you want [in MB]?

Enter the maximum size of the swap partition you want on your target server.

3 Do you want to clear all partitions from the target machine? [y]

Enter **Y** to clear all partitions from the target server. This option is recommended if your target server has both Windows and Linux installed on separate partitions.

Important: If you have Windows installed on the target server, you must enter **Y** to clear all partitions on the target server. Note that this will erase existing partitions and data from the hard disk.

4 Please select the bootloader that the computer will use.

```
[1] Use GRUB as the bootloader.
[2] Use LILO as the bootloader.
```

Note: A bootloader is a program on the system's primary hard drive that knows how to load the operating system. GRUB is recommended as it provides an authentication mechanism to ensure that no arbitrary boot options are sent to the kernel.

Enter the number corresponding to your choice.

a Enter **1** to select the GRUB bootloader.

❑ **Use a GRUB password? [y]**

Enter **Y** to set the password for GRUB.

Note: Set a password to ensure that no arbitrary boot options are sent to the kernel. The password must be at least 6 characters long.

❑ Enter a password.

❑ Confirm the password.

b Enter **2** to select LILO as the bootloader.

The following message displays.

```
Default language for the installed system is US English.
WEBppliance for Linux currently supports US English only.
```

5 Default system keyboard type is US. Is this choice correct? [y]

a Enter **Y** to select US as the default system keyboard.

b Enter **N** if you want to select the keyboard. Press **Enter** to view the list of keyboards. Enter the number corresponding to your choice, and press **Enter**.

6 Default mouse type for the installed system is 'none' (no mouse). Is this choice correct? [y]

a Enter **Y** to choose the default mouse type, 'none' (no mouse).

b Enter **N** to select the mouse type. Press **Enter** to view the list of mouse types. Enter the number corresponding to your choice, and press **Enter**.

7   Default timezone for the installed system is US/Pacific. Is this choice correct? [y]

    a   Enter **Y** to select the default time zone, US/Pacific.

    b   Enter **N** if you want to select the time zone. Press **Enter** to view the list of time zones. Select the number corresponding to your choice, and press **Enter**.

8   Enter the root password for the target machine.

Enter the root password for the target server.

Note: Passwords must be at least 6 characters in length.

9   Confirm the root password for the target machine.

Confirm the root password for the target server.

10   Enter the password for the user admin on the target machine.

Enter the password for the user admin of the target server.

11   Confirm the password for the user admin on the target machine.

Confirm the password.

12   Do you want to pass extra options to the kernel at the boot prompt? [n]

    a   Enter **Y** to pass additional options to the kernel while starting the system.

Note: If your system has a motherboard with an Intel 440GX chipset, it is necessary that you pass additional options to the kernel when you start the system. This is because a Linux interrupt routing problem causes the default Red Hat Linux 7.3 kickstart installation to fail causing the server to freeze with the message, `Loading aic7xxx driver.`

    b   Enter **N** if you do not want to provide additional boot options to the kernel.

13   Please enter the email for receiving error logs.

Enter the email address to which error logs can be sent.

Note: You must specify a valid email address.

14 Is the above correct? [y]

Enter **Y** to confirm the email address.

The following message displays.

```
If you wish to be able to use this configuration information again
without having to answer the above questions, you should save it to
a file.
```

15 Do you wish to save the configuration to a file? [y]

a Enter **Y** to save the configuration information to a file.

> **Note:** Saving the configuration information to a file allows you to skip the preceding steps so that when you generate an OSI disk with the same configuration again, you do not have to repeat the installation steps. OSI reads the information from the configuration file.

> **Please enter the file pathname to save the configuration. Kindly specify absolute path for the file.**

Enter the absolute path to the file in which you want to save the configuration information.

b Enter **N** if you do not want to save the configuration information.

The License and Warranty Agreement displays.

16 Review the agreement before you proceed to create the installation disk.

17 Do you agree to the terms of the license? [y/n]: [y]

Enter **Y** to agree to the terms of the license.

```
You have the following options now:
   [1] Copy the RedHat Installation Floppy Image to a diskette.
   [2] Save the RedHat Installation Floppy Image to a file.
```

18 Please enter the number corresponding to your choice.

Enter the number corresponding to your choice.

a Enter **1** to copy the Red Hat installation image to a floppy disk, insert the floppy disk into the floppy disk drive on your computer, and press **Enter** when you are ready. The installation disk is successfully created.

The following message displays: `Creating Red Hat Installation Floppy Image.`

    b   Enter **2** to save the RedHat installation image to a file.

Please enter the file pathname to save the floppy image. Kindly specify absolute path for the file.

Enter the absolute path to the file, and press **Enter**.

A message conveying successful creation of the image displays.

Press <ENTER> to finish.

Press **Enter** to conclude the process.

Congratulations! You have successfully created the OSI disk.

Use the OSI disk to install Red Hat Linux 7.3 and WEBppliance. See Chapter 2, "Installing WEBppliance Pro" for instructions.

Note: The CD-ROM and the installation disk created must be inserted into the target server and the target server must be restarted.

Option 2: NFS

The OSI disk created will use the Red Hat Linux installation tree exported by a NFS server to install Red Hat Linux 7.3.

1   **Please enter the number corresponding to your choice.**

Enter **2** and press **Enter**.

2   **Please specify the NFS server (name or IP address) and the directory exported by the server that contains the RedHat7.3 Installation tree.**

    ❑   NFS Server

Enter the name or IP address of the NFS server that contains the Red Hat installation tree.

    ❑   Exported Directory

Enter the directory exported by the server that contains the Red Hat installation tree and press **Enter**.

3   **Is this correct? [y]**

Enter **Y** to confirm that the information entered is correct.

4   Continue the sequence of installation steps as enumerated in **Option [1] CD-ROM**: **Max Size of swap partition you want [in MB]?** on page 2-16.

Option 3: FTP

The OSI disk created uses the Red Hat Linux installation tree exported by a FTP server to install Red Hat Linux 7.3.

1   Please enter the number corresponding to your choice.

Enter **3,** and press **Enter**.

A list of FTP sites displays.

```
Please enter the number corresponding to the FTP server you wish to
install RedHat from:
1   [XXX]     your choice    /path/to/RH7.3/installation/tree
2   [USA]     ftp.redhat.com /pub/redhat/linux/7.3/en/os/i386
              (anonymous)
3   [Europe]  ftp.gmd.de   /mirrors/redhat.com/redhat/linux/7.3/en/os/i386
              anonymous)
4   [USA]     rufus.w3.org            /linux/redhat/7.3/en/os/i386
              (anonymous)
5   [USA]     ftp.rpmfind.net         /linux/redhat/7.3/en/os/i386
              (anonymous)
```

2   FTP location [Default is 1]

Enter the number corresponding to the FTP server from where you want to install the Red Hat Linux installation tree and press **Enter**.

Please specify the FTP server (name or IP address) and the directory that contains Red Hat 7.3 installation tree.

❏   FTP Server

   Enter the name or IP address of the FTP server.

❏   Directory [Specify the absolute paths]

   Enter the name of the directory that contains the Red Hat Linux 7.3 installation tree.

Is this correct? [y]

Enter **Y** to confirm that the information entered is correct.

Please enter a username and password to access the above FTP url.

❏ FTP username [enter "ftp" for anonymous FTP]

Enter the user name for the FTP server. If you want to access the FTP server as an anonymous user, enter ftp as the user name.

Is the above correct? [y]

Enter **Y** to confirm the information.

Note: If you want to access the selected FTP as an anonymous user, enter **FTP**.

3 Continue the sequence of installation steps as enumerated in **Option [1] CD-ROM**: **Max Size of swap partition you want [in MB]?** on page 2-16.

Option 4: HTTP

The OSI disk created uses the Red Hat Linux installation tree exported by a HTTP server to install Red Hat Linux 7.3.

1 **Please enter the number corresponding to your choice.**

Enter **4** and press **Enter**.

The following message displays.

```
Please enter the number corresponding to the HTTP server you wish to
install RedHat from:
1   your choice                    /path/to/RH7.3/installation/tree
```

2 **HTTP location [Default is 1]**

Enter **1** to install the Red Hat Linux 7.3 updates from the HTTP server of your choice and press **Enter**.

Please specify the HTTP server (name or IP address) and the directory that contains the RedHat7.3 installation Tree.

❏ HTTP Server

Enter the name or IP address of the HTTP server.

❏ Directory

Enter the name of the directory that contains the Red Hat Linux 7.3 installation tree.

Is this correct? [y]

Enter **Y** to confirm that the information entered is correct.

3 Continue the sequence of installation steps as enumerated in **Option [1] CD-ROM**: **Max Size of swap partition you want [in MB]?** on page 2-16.

Generating the installation disk on a Windows machine

This section provides instructions for creating an installation disk on a computer running the Microsoft Windows operating system.

Figure 2-2 provides a graphical overview of the installation process.

```
                    ┌─────────────────────┐
                    │        Start        │
                    └─────────────────────┘
                              │
                              ▼
          ┌───────────────────────────────────────────┐
          │   Log on to https://buy.ensim.com         │
          └───────────────────────────────────────────┘
                              │
                              ▼
      ┌───────────────────────────────────────────────────┐
      │ Download OSInstaller-7.3-x.zip to a temporary      │
      │                 directory                          │
      └───────────────────────────────────────────────────┘
                              │
                              ▼
          ┌───────────────────────────────────────────┐
          │  Unzip the file, OSInstaller-7.3-x.zip     │
          └───────────────────────────────────────────┘
                              │
                              ▼
          ┌───────────────────────────────────────────┐
          │ Change directory, cd OSInstaller-7.3-x/    │
          │                    windows                 │
          └───────────────────────────────────────────┘
                              │
                              ▼
          ┌───────────────────────────────────────────┐
          │       Run the script, setup.js             │
          └───────────────────────────────────────────┘
                              │
                              ▼
          ┌───────────────────────────────────────────┐
          │  Select the required installation option   │
          │    for WEBppliance Pro and Red Hat Linux   │
          │                    7.3                     │
          └───────────────────────────────────────────┘
                              │
                              ▼
          ┌───────────────────────────────────────────┐
          │     Specify the network configuration      │
          └───────────────────────────────────────────┘
                              │
                              ▼
          ┌───────────────────────────────────────────┐
          │ Insert a blank floppy disk in the floppy   │
          │ disk drive of the server where you want to │
          │           create the OSI disk              │
          └───────────────────────────────────────────┘
                              │
                              ▼
                    ┌─────────────────────┐
                    │  Installation disk  │
                    │      created        │
                    └─────────────────────┘
```

Figure 2-2. *Overview of the installation process - creating an installation disk on a Windows machine*

Procedure: To generate the installation disk

1 Log on to https://buy.ensim.com to download the zipped file **OSInstaller-7.3-x.zip**.

Note: The variable **x** used in the file name represents the build number and must be replaced by the actual build number of the utility.

2 Create a temporary directory (for example, **C:\osi_temp**) to download the zipped file, **OSInstaller-7.3-x.zip**.

3 Download the zipped file **OSInstaller-7.3-x.zip** to the temporary directory created in step 2 on page 2-24.

4 Switch to the directory (cd) where you have downloaded the zipped file.

5 Unzip the file **OSInstaller-7.3-x.zip**.

Important: Review your choices carefully before running the installation commands. The installation process cannot roll back to a previous step if you enter incorrect information. To rectify any errors, you will need to stop and restart the process.

Installation steps that prompt for a response have a default value contained in square brackets [ ]. If you press **Enter** without specifying a value, the default will be automatically selected.

Do not prefix the FTP or HTTP URLs with **ftp://** or **http://**. Follow the conventions listed below:

FTP URL: ftp.abc.com, **not** ftp://ftp.abc.com
HTTP URL: www.acd.com, **not** http://www.acd.com

6 Follow these steps.

    a Change to the **OSInstaller-7.3-x** directory where you have unzipped the **OSInstaller-7.3-x.zip** file.

    b Locate the Windows sub-directory.

    c Double click the file **setup.js.**

Alternatively, use the instructions below to access and run the setup.js file.

    a Click **Start**.

    b Select **Run** from the Start menu.

    c Enter the absolute path of the **setup.js** script file in the **Open** text field.

        or

        ❑ Click **Browse**. The Browse dialog box opens.

        ❑ Click the arrow in the **Files of Type** field, and select **All Files**.

        ❑ Locate the directory where you have unzipped the **OSInstaller-7.3-x.zip** file.

        ❑ Locate the **Windows** directory in the directory that contains the extracted files.

        ❑ Double click the file **setup.js.**

    d Click **Ok**.

You can also use the Windows Command Prompt to access and run the setup.js file.

    a Click **Start**.

    b Select **Programs** from the Start menu.

    c Select **Accessories** from the Programs menu.

    d Select **Command Prompt** from the Accessories menu.

    e Switch to the Windows directory (using the cd command) containing the **setup.js** script.

    f Enter **cscript.exe setup.js** at the command line, and press **enter**.

The following message appears: Tmp directory already exists, using tmp.... This is because OSI uses the existing tmp directory to store files generated during the installation. If the directory does not exist, it creates a **tmp** directory.

A brief note about OSI and its capabilities displays.

Important: Before generating an installation disk on Windows, ensure that no anti-virus application is active. This is because anti-virus applications screen the **setup.js** script (used to create the OSI disk) as a potential virus and stop the script from functioning.

Also, if you have an anti-virus application installed, running the **setup.js** script may invoke a warning message, `Malicious script detected`.

To override this alert, disable or stop the anti-virus application before you create the OSI disk.

Note: The instructions in **bold** convey the installation instructions as they appear on the OSI screen. Text in `Courier` font indicates the messages that appear on the screen when you run an installation step.

---

7 **Press <ENTER> to continue, or ^C to abort.**

   a   Press **Enter** to continue.

   b   Press **Ctrl + C** to stop the process.

   A warning message displays.

Important: When you choose to create an installation disk, please remember that **ALL** partitions on the target computer are **DELETED. The Master Boot Record of the primary hard disk is also overwritten. Do not use this floppy to boot a system that has useful data on it.**

---

8 **Press <ENTER> to continue, or ^C to abort.**

If choose to continue, the following message appears.

```
Downloading the list of http and ftp sites having the RedHat
installation tree from ftp.ensim.com...
```

> **Note:** OSI attempts to connect to Ensim's FTP server to download data for the FTP and HTTP-based installations. If it is unable to connect, it will default to locally available data. This process takes some time. Please wait before proceeding.

Once the list of HTTP and FTP sites are downloaded from ftp.ensim.com, you are requested to specify the location from where you want to download the WEBppliance installer.

9 Please enter the network configuration of the target machine.

- ❑ Hostname

  Enter the fully qualified domain name of the target server (for example, myhost.mydomain.

- ❑ IP Address

  Enter the IP address of the target server.

- ❑ Netmask

  Enter the netmask of the target server.

- ❑ Gateway IP address

  Enter the IP address of the gateway.

- ❑ DNS Server IP Address [Primary]

  Enter the IP address of the primary DNS server.

- ❑ Specify secondary name server(s) (if any). Type 0 or <ENTER> to end.

  a Enter **0** or press **Enter** if you do not want to specify a secondary name server.

  b DNS server IP Address (2)

  Enter the name or IP address of the secondary DNS server.

10 Is the above correct? [y]

Enter **Y** to confirm that the information entered is correct.

The following message displays.

```
If you have a saved configuration data file that you would like to
use, you can bypass the following questions which gather
information about your target system.
```

11 Do you have a saved configuration data file? [n]

Note: If you have a saved configuration file (created when you create an installation floppy for the first time), specify the name of the configuration file and continue from step 17.

a Enter **Y** if you have a saved configuration data file.

Please enter the filename to save the configuration.

Enter the name of the file that contains the configuration data.

The License and Warranty Agreement displays.

b Enter **N** if you do not have a saved configuration data file. This option is recommended if you are a first-time user.

12 Please select the RedHat Linux 7.3 boot floppy.

```
1 Standard Red Hat Linux boot floppy
2 Custom Red Hat Linux boot floppy
```

Enter the number corresponding to your choice.

Note: The Red Hat Linux 7.3 operating system installation (performed by the OSI-Standard Red Hat Linux Boot Floppy) installs a default set of hardware drivers that has been found suitable for most servers. If these drivers are not adequate for your server, create a custom kickstart disk with the drivers appropriate for your server.

13 Please select the method for installing RedHat Linux 7.3. You have the following installation options.

```
1 CD-ROM (a Red Hat 7.3 CD-ROM is required)
2 NFS (an NFS server exporting the Red Hat 7.3 installation tree)
3 FTP (an FTP server serving the Red Hat 7.3 installation tree)
4 HTTP (a Web server serving the Red Hat 7.3 installation tree)
Select an option from the four available installation options:
```

❑ **CD-ROM** - requires three Red Hat Linux 7.3 CD-ROMs

CD-ROM is the most common method of installation. It is fast as the installation is local and not constrained by remote access issues. The installation media consists of three Red Hat Linux 7.3 CD-ROMs. See "Option 1: CD-ROM" on page 2-29 for instructions.

❑ **NFS** - requires an NFS server to export the Red Hat Linux 7.3 installation tree

NFS is a remote installation ideal for corporate networks and large data centers. The installation files reside as a shared file on a remote NFS server. See "Option 2: NFS" on page 2-33 for instructions.

❑ **FTP** - requires an FTP server to serve the Red Hat Linux 7.3 installation tree

FTP is a remote installation process used when one does not have access to the installation files via a CD-ROM or an NFS server. The installation files reside as a shared file on a remote FTP server. See "Option 3: FTP" on page 2-34 for instructions.

❑ **HTTP** - requires a Web server to serve the Red Hat Linux 7.3 installation tree

HTTP is a remote installation process used when one does not have access to the installation files via a CD-ROM or an NFS server. The installation files reside as a shared file on a remote HTTP server. See "Option 4: HTTP" on page 2-35 for instructions.

Option 1: CD-ROM

The OSI disk created will use the Red Hat Linux CD-ROMs to install Red Hat Linux 7.3.

1 Please enter the number corresponding to your choice.

Enter **1,** and press **Enter**.

Important: You must insert the Red Hat Linux 7.3 CD-ROM (disc 1) in the CD-ROM drive BEFORE you restart the target server using this disk. Also, ensure that the computer is set to boot from the floppy disk in the CMOS setup.

By default, the installation creates the following partitions on the primary hard disk of the target machine:
* /boot: size 50 MB
* swap: 256 MB [recommended value is 2 times the size of RAM on your target server]
* root[/]: remaining disk space

2 Max Size of swap partition you want [in MB]?

Enter the maximum size of the swap partition you want on your target server.

3 Do you want to clear all partitions from the target machine? [y]

Enter **Y** to clear all partitions from the target server. This option is recommended if your target server has both Windows and Linux installed on separate partitions.

Important: If you have Windows installed on the target server, you must enter **Y** to clear all partitions on the target server. Note that this will erase existing partitions and data from the hard disk.

4 Please select the bootloader that the computer will use.

```
[1] Use GRUB as the bootloader.
[2] Use LILO as the bootloader.
```

Note: A bootloader is a program on the system's primary hard drive that knows how to load the operating system. GRUB is recommended as it provides an authentication mechanism to ensure that no arbitrary boot options are sent to the kernel.

Enter the number corresponding to your choice.

a Enter **1** to select the GRUB bootloader.

❑ **Use a GRUB password? [y]**

Enter **Y** to set the password for GRUB.

Note: Set a password to ensure that no arbitrary boot options are sent to the kernel. The password must be at least 6 characters long.

❑ Enter a password.

❑ Confirm the password.

b Enter **2** to select LILO as the bootloader.

```
Default language for the installed system is US English.
WEBppliance currently supports US English only.
```

5   Default system keyboard type is US. Is this choice correct? [y]

    a   Enter **Y** to select US as the default system keyboard.

    b   Enter **N** if you want to select the keyboard. Press **Enter** to view the list of keyboards. Enter the number corresponding to your choice and press **Enter**.

6   Default mouse type for the installed system is 'none' (no mouse). Is this choice correct? [y]

    a   Enter **Y** to select the default mouse type, 'none' (no mouse).

    b   Enter **N** to select the mouse type. Press **Enter** to view the list of mouse types. Enter the number corresponding to your choice and press **Enter**.

7   Default timezone for the installed system is US/Pacific. Is this choice correct? [y]

    a   Enter **Y** to select the default time zone, US/Pacific.

    b   Enter **N** if you want to select the time zone. Press **Enter** to view the list of time zones. Select the number corresponding to your choice and press **Enter**.

8   Enter the root password for the target machine.

Enter the root password for the target server.

> **Note:** Passwords must be at least 6 characters in length.

9   Confirm the root password for the target machine.

Confirm the root password for the target server.

10   Enter the password for the user admin on the target machine.

Enter the password for the user admin of the target server.

11   Confirm the password for the user admin on the target machine.

Confirm the password.

12   Do you want to pass extra options to the kernel at the boot prompt? [n]

    a   Enter **Y** to pass additional options to the kernel while starting the system.

> **Note:** If your system has a motherboard with an Intel 440GX chipset, it is necessary that you pass additional options to the kernel when you start the system. This is because a Linux interrupt routing problem causes the default Red Hat Linux 7.3 kickstart installation to fail causing the server to freeze with the message, Loading aic7xxx driver.

    b   Enter **N** if you do not want to provide additional boot options to the kernel.

13 **Please enter the email for receiving error logs.**

Enter the email address to which error logs can be sent.

Note: You must specify a valid email address.

14 **Is the above correct? [y]**

Enter **Y** to confirm the email address.

```
If you wish to be able to use this configuration information again
without having to answer the above questions, you should save it to
a file.
```

15 **Do you wish to save the configuration to a file? [y]**

    a   Enter **Y** to save the configuration information to a file.

Note: Saving the configuration information to a file allows you to skip the preceding steps so that when you generate an OSI disk with the same configuration again, you do not have to repeat the installation steps. OSI reads the information from the configuration file.

        Please enter the filename to save the configuration.

        Enter the name of the file that will store the configuration information. Do not specify the complete path.

    b   Enter **N** if you do not want to save the configuration information.

The License and Warranty Agreement displays.

16 Review the agreement before you proceed to create the installation disk.

17 **Do you agree to the terms of the license? [y/n]: [y]**

Enter **Y** to agree to the terms of the license.

```
The RedHat Installation Floppy Image must be copied to a diskette.
```

```
Please insert a blank diskette in the floppy drive.
```

18 Press <ENTER> when you are ready to copy the installation image...

Insert the disk into the disk drive of the computer where you are creating the installation disk, and Press **Enter**.

The dialog box, Windows script host, with the message `Click Ok to begin creation of the kickstart floppy` opens.

19 Click OK.

The following message displays: `This will take a few minutes.`

20 Click OK.

Congratulations! You have successfully created the OSI disk.

Use the installation disk to install Red Hat Linux 7.3 and WEBppliance. See Chapter 2, "Installing WEBppliance Pro" for more information.

Note: The CD-ROM and the installation disk created must be inserted in the target server and the server must be restarted.

Option 2: NFS

The OSI disk created will use the Red Hat Linux installation tree exported by the NFS server to install Red Hat Linux 7.3.

1 Please enter the number corresponding to your choice.

Enter **2,** and press **Enter**.

2 Please specify the NFS server (name or IP address) and the directory exported by the server that contains the RedHat7.3 Installation tree.

❑ NFS Server

Enter the name or IP address of the NFS server that contains the Red Hat installation tree.

❑ Exported Directory

Enter the directory exported by the server that contains the Red Hat installation tree, and press **Enter**.

3 Is this correct? [y]

Enter **Y** to confirm that the information entered is correct.

4 Continue the sequence of installation steps as enumerated in Option [1] CD-ROM: Max Size of swap partition you want [in MB]? on page 2-29.

Option 3: FTP

The OSI disk created uses the Red Hat Linux installation tree exported by the FTP server to install Red Hat Linux 7.3.

1   Please enter the number corresponding to your choice.

Enter **3,** and press **Enter**.

A list of FTP sites displays.

```
Please enter the number corresponding to the FTP server you wish to
install RedHat from:
1   [XXX]     your choice    /path/to/RH7.3/installation/tree
2   [USA]     ftp.redhat.com /pub/redhat/linux/7.3/en/os/i386
                (anonymous)
3   [Europe]  ftp.gmd.de /mirrors/redhat.com/redhat/linux/7.3/en/os/i386
                anonymous)
4   [USA]     rufus.w3.org /linux/redhat/7.3/en/os/i386
                (anonymous)
5   [USA]     ftp.rpmfind.net /linux/redhat/7.3/en/os/i386
                (anonymous)
```

2   FTP location [Default is 1]

Enter the number corresponding to the FTP server, from where you want to install the Red Hat Linux installation tree and press **Enter**.

Please specify the FTP server (name or IP address) and the directory that contains Red Hat 7.3 installation tree.

❑   FTP Server

Enter the name or IP address of the FTP server.

❑   Directory [specify the absolute paths]

Enter the name of the directory that contains the Red Hat Linux 7.3 installation tree.

Is this correct? [y]

Enter **Y** to confirm that the information entered is correct.

Please enter a username and password to access the above FTP url.

❑   FTP username [enter "ftp" for anonymous FTP]

Enter the user name for the FTP server. If you want to access the FTP server as an anonymous user, enter ftp as your user name.

Is the above correct? [y]

Enter **Y** to confirm the information.

3   Continue the sequence of installation steps as enumerated in **Option [1] CD-ROM**: **Max Size of swap partition you want [in MB]?** on page 2-29.

Option 4: HTTP

The OSI disk created uses the Red Hat Linux installation tree exported by the HTTP server to install Red Hat Linux 7.3.

1   **Please enter the number corresponding to your choice.**

Enter **4** and press **Enter**.

```
Please enter the number corresponding to the HTTP server you wish
to install RedHat from:
1   your choice                    /path/to/RH7.3/installation/tree
```

2   **HTTP location [Default is 1]**

Enter **1** to install the Red Hat Linux 7.3 updates from the HTTP server of your choice, and press **Enter**.

Please specify the HTTP server (name or IP address) and the directory that contains the RedHat7.3 installation Tree.

❑   HTTP Server

Enter the name or IP address of the HTTP server.

❑   Directory

Enter the name of the directory that contains the Red Hat Linux 7.3 installation tree.

Is this correct? [y]

Enter **Y** to confirm that the information entered is correct.

3   Continue the sequence of installation steps as enumerated in **Option [1] CD-ROM**: **Max Size of swap partition you want [in MB]?** on page 2-29.

Installing WEBppliance using the OSI installation disk

The following procedure provides instructions on installing WEBppliance Pro using the OSI disk.

Procedure: To install WEBppliance Pro using the OSI disk:

1   Insert the installation disk in the disk drive of the target server where you want to install Red Hat Linux 7.3 and WEBppliance Pro.

2   Start the server.

> **Important:** When your start the server, you must set the option **First Boot Device** to **Floppy** in the CMOS Setup Utility area.
>
> To set the option:
> 1. Open CMOS Setup from the setup screen.
> 2. Locate the boot sequence setting field.
> 3. Change the default entry, to set **Floppy** as the first boot device.
> 4. Save settings, and exit CMOS Setup.

3   The server automatically restarts.

> **Note:** In certain older systems, you may need to eject the floppy disk after the first restart, otherwise the installation will not proceed.

> **Important:** If your system has a motherboard with an Intel 440GX chipset, it is necessary that you pass additional options to the kernel when you start the system. This is because a Linux interrupt routing problem causes the default Red Hat Linux 7.3 kickstart installation to fail causing the server to freeze with the message, `Loading aic7xxx driver.`
>
> To resolve this, provide an alternate routing infrastructure, by:
> 1. Installing the SMP kernel even on uniprocessor systems.
> 2. Entering the command **linux apic** at the **boot:** prompt.
>
> Choosing to pass additional options to your kernel instructs OSI to include the SMP package in the list of packages to be installed and prompts you to enter the required options during the kickstart installation.

4   The WEBppliance installation begins.

> **Note:** The installation may take anywhere from a few minutes to a few hours, depending on the hardware configuration of the server and the network speed.

Congratulations! You have successfully installed WEBppliance. To set up WEBppliance Pro, see "Setting up and logging on to the WEBppliance control panel" on page 2-45.

Installing WEBppliance on a pre-installed Red Hat Linux 7.3 server

The following procedure provides instructions on installing WEBppliance Pro on a pre-installed Red Hat Linux 7.3 server.

📄

Important: If you do not have Red Hat Linux 7.3 installed on your server, you must upgrade to Red Hat Linux 7.3 before you use OSI to install WEBppliance Pro, otherwise the installation will fail.

The file **/etc/hosts** should contain the host name and IP address of your server (see the following example). If it does not, use an editor to modify the file.

Example:
```
---/etc/hosts begin file--
127.0.0.1 localhost.localdomain localhost
1.2.3.4 myhost.mydomain.com myhost
---/etc/hosts end file--
```
where 1.2.3.4 is the IP address of myhost.mydomain.com

Procedure: To install WEBppliance Pro on a pre-installed Red Hat Linux 7.3 server:

1 Log on to https://buy.ensim.com and download the compressed file **OSInstaller-7.3-x.tar.gz**.

✏️

Note: The variable **x** used in the file name represents the build number and must be replaced by the actual build number of the utility.

2 Create a temporary directory (for example, **/tmp/osi**), to download the compressed file, **OSInstaller-7.3-x.tar.gz**.

3 Download the compressed file **OSInstaller-7.3-x.tar.gz** to the temporary directory created in step 2 on page 2-38.

4 Change to the directory (cd) in which you have downloaded the compressed file.

5 Uncompress the file **OSInstaller-7.3-x** using the command:

tar -xvzf OSInstaller-7.3-x.tar.gz

6 Change to the Linux sub-directory under **OSInstaller-7.3-x** by using the command:

cd OSInstaller-7.3-x/linux

Important: You must log on as the root user to run the installation commands successfully.

Review your choices carefully before running the installation commands. The installation process cannot roll back to a previous step if you enter incorrect information. To rectify any errors, you will need to stop and restart the process.

Installation steps that prompt for a response have a default value contained in square brackets [ ]. If you press **Enter** without specifying a value, the default will be automatically selected.

When you specify a directory path, always provide the absolute path and not the relative path. For example: **/home/admin/installer**

Do not prefix the FTP or HTTP URLs with **ftp://** or **http://**. Follow the conventions listed below:

FTP URL: ftp.abc.com, **not** ftp://ftp.abc.com
HTTP URL: www.acd.com, **not** http://www.acd.com

7 Enter the following command.

./setup.sh

A brief note about the OSI utility and its capabilities is displayed.

Note: The instructions in **bold** convey the installation instructions as they appear on the OSI screen. Text in `Courier` font indicates the messages that appear on the screen when you run an installation step.

8 Press <ENTER> to continue, or ^C to abort.

   a Press **Enter** to continue.

   b Press **Ctrl + C** to stop the process.

If you choose to continue, the following message displays.

```
Downloading required data from Ensim's ftp server ...
```

Note: OSI attempts to connect to Ensim's FTP server to download the data for the FTP and HTTP installation options. If it is unable to connect, it defaults to locally available data. This process takes some time. Please wait before proceeding.

9 Is this the target server for installing/upgrading Linux Webppliance? [y]

Enter **Y** to confirm.

A warning message is displayed.

Important: During installation, OSI installs and updates various RPMs on the server. This could affect applications that are active on the server. Once installed, WEBppliance Pro cannot be uninstalled.

10 Press <ENTER> to continue, or ^C to abort.

   a Press **Enter** to continue.

   b Press **Ctrl + C** to stop the process.

11 Please enter the email for receiving error logs.

Enter the email address to which error logs can be sent.

Note: Please specify a valid email address.

12 Is the above correct? [y]

Enter **Y** to confirm the email address.

OSI performs the following actions to prepare your system for the installation.

❑ Downloads the WEBppliance installer RPMs, **lwpinstaller** and **ensim-parser,** required to install WEBppliance Pro.

❑ Before installing the files, it performs a pre-install check to ensure that your server provides a compatible environment for installation of the WEBppliance installer RPMs.

❑ Once the pre-install check completes successfully, OSI installs the required installer RPMs. On successful installation of these RPMs, the following message is displayed:

```
Success: installing the tool.
```

13 Do you want to upgrade to the latest version of the kernel? [Y]

a Enter **N** if you do not want to upgrade the kernel.

b Enter **Y** if you want to upgrade to the latest version of the kernel.

Important: When you upgrade the kernel, any customizations you have made to the kernel are lost.

The key messages that follow and their interpretation are as follows.

❑ `Querying installed rpms ...`

OSI checks installed RPMs and generates the metadata of the RPMs currently installed on the server.

❑ `Configuring...`

Configures the **/etc/apt/sources.list** file to point your WEBppliance server to the FTP server from where the required RPMs will be downloaded.

❑ Refreshing the package index files from Ensim's FTP server...

Downloads the metadata of RPMs required for installation from the FTP server

Performs a pre-installation check to ensure that your system has the required system resources and compatible software mandatory for successful installation.

While the system check is in progress, the following messages (some of which are shown here) are displayed on the screen.

```
Running check_shadowpwd...  OK  ]
Running check_base...  OK  ]
Running check_essential...  OK  ]
```

Note: If `check_base or check_essential` fails, OSI downloads and installs these RPMs.

When the pre-install system check succeeds, the following message is displayed:
`Preinstall checks suceeded`

❑ Checking whether the system is sane...

Checks for unsatisfied system dependencies that could potentially fail the installation.

If no such dependencies are detected, OSI proceeds to verify the installed RPMs and identify the RPMs required for installing on your WEBppliance server.

❑ Querying for installed rpms ...

Checks installed RPMs again, to check for any new RPMs installed (new RPMs will be installed if the pre-install system check fails).

❑ Downloads the latest version of the RPMs required to install WEBppliance Pro.

On successful download, the following message is displayed.

`Successfully downloaded the required rpms ...`

❑ Downloading the Webppliance rpms needed ...

Downloads the additional RPMs required to install WEBppliance Pro.

After the download is complete, the following message displays.

`The required rpms are successfully downloaded.`

❑   `Determining RPMs which need upgrade/installation...`

Determines the RPMs required to install WEBppliance Pro.

❑   `Installing...`

OSI installs WEBppliance Pro on your server. Please refer to the **setup.log** file located at **/var/log/appliance/** for more details.

Important: Do not disconnect if the installation has been initiated over a remote connection, using Telnet or SSH. However, if you get disconnected due to technical reasons, before the installation completes, reconnect to your server and run the following command: **ps -ax**

If there are RPM processes active, the command will list out the RPMs. Running RPM processes indicate that the installation is in progress. Do not interrupt the installation. After the installation completes successfully, restart WEBppliance manually using the command: `/etc/rc.d/init.d/webppliance restart`

The final step involves upgrading your kernel to the latest Red Hat version.

❑   `Downloading rpms from the ftp server...`

OSI downloads and installs the latest version of the kernel RPMs.

On successful installation, the following message displays.

```
Your system has been updated to the latest kernel update. You
will need to reboot your system for the changes to take effect.
Please shutdown all processes and reboot your system.
```

Restart your server for the changes to take effect.

Congratulations! You have successfully installed WEBppliance Pro.

Troubleshooting installation issues

If you encounter problems that you cannot troubleshoot or resolve using the information in Table 2-1, contact Ensim for online support at https://onlinesupport.ensim.com

Table 2-1.   Troubleshooting installation issues (OSI)

Problem	Solution
The host name of the server is incorrect.	Check the file **/etc/sysconfig/network**. The host name must be the full name. See the following example. **Incorrect:** myhost **Correct:** myhost.mydomain.com

Table 2-1. Troubleshooting installation issues (OSI)

Problem	Solution

The host file is incorrect.	The file **/etc/hosts** should contain the host name and IP address of your server (see the following example). If it does not, use an editor to modify the file.
	Example
	`---/etc/hosts begin file--`
	`127.0.0.1 localhost.localdomain local-`
	`host`
	`1.2.3.4 myhost.mydomain.com myhost`
	`---/etc/hosts end file--`
	where 1.2.3.4 is the IP address of myhost.mydomain.com

The host name is set to local-host.localdomain value.	Check the IP address of the target server. The IP address of the target server must be a valid DNS entry. You will need to create an OSI disk again. Refer to the **updates.log** file located at: **/var/log/ensim/**
Failed to download the metadata from ftp.ensim.com Error initializing setup Unable to connect to Ensim's FTP server.	Ensure that you are connected to the Internet. Refer to the **updates.log** file located at: **/var/log/ensim/**
Error downloading/installing updates.	The error log contains a list of all the updates that could not be downloaded. Download these updates and install them on the server, before re-starting the server to install WEBppliance. Refer to the **updates.log** file located at: **/var/log/ensim/**
Error downloading WEBppliance.	Ensure that you are connected to the Internet. Refer to the **updates.log** file located at: **/var/log/ensim/**
Error downloading WEBppliance.	Ensure that you are connected to the Internet. Refer to the **setup.err** file located at: **/var/log/appliance/**

Setting up and logging on to the WEBppliance control panel

This section explains how to set up WEBppliance Pro and log onto WEBppliance as the Appliance Administrator.

Topics include:

- "Setting up WEBppliance" on page 2-45
- "Accessing WEBppliance as the Appliance Administrator" on page 2-49

Setting up WEBppliance

After you install WEBppliance Pro, you can set up it up by registering your license with Ensim, choosing an Appliance Administrator user name and password, and logging on as the Appliance Administrator to perform appliance-related tasks.

Procedure: To set up WEBppliance:

1   Start a Web browser.

2   In the **Address** field of the browser, enter the following URL.

http://*<server host name (or IP address)>*

where *<server host name (or IP address)>* is the host name of the Private Server or Dedicated Server on which you installed WEBppliance.

3   On the *WEBppliance Manager* welcome page, click **here**.

4 On the *Step 1: License Agreement* page, click **I Accept**.


```
WEBppliance Setup
Step 1. WEBppliance License Agreement
You must accept the license agreement in order to utilize your WEBppliance

This Agreement is between you, your principals, officers, directors, employees, agents and/or successors ("You") and Ensim Corporation
("Ensim"), and sets forth the terms and conditions governing your access to and use of the Ensim WEBppliance computer programs
including, without limitation, the WEBppliance license key(s), software and source code, and information, services, products, features
and materials included therewith (collectively, "WEBppliance"). As a convenience to You, this WEBppliance distribution also includes
third-party software products, and Your use of each included third-party product is subject to separate licensing agreements included
therewith. Among other things, this Agreement describes your responsibilities and limits Ensim's liabilities. Please read it carefully
before accepting. BY PRESSING THE "I ACCEPT" BUTTON AND/OR DOWNLOADING, COPYING OR USING WEBPPLIANCE, YOU
ACCEPT, WITHOUT LIMITATION OR QUALIFICATION, ALL OF THE TERMS AND CONDITIONS IN THIS AGREEMENT. If you have
any questions about these terms and conditions, please contact Ensim at webppliance@ensim.com or 1-866-ENSIM-33 (International:
1-408-541-4498).

1. Use of WEBppliance; License. Subject to all the terms and conditions of this Agreement, Ensim grants to You a personal, royalty-
free, nonsublicensable, nontransferable, nonexclusive license to use WEBppliance on a single network server during the term of this
Agreement. You may make one archival copy of WEBppliance, and You agree that You will not otherwise copy or reproduce,
distribute, or modify WEBppliance or any portion thereof. Ensim expressly reserves the right to monitor Your usage of WEBppliance for
compliance with the terms and conditions of this Agreement. Except to the extent that the following restriction is prohibited by
applicable law, if any, You shall not reverse assemble, reverse compile or reverse engineer any software source code or other
components of WEBppliance, or otherwise attempt to discover any underlying Proprietary Information (as that term is defined below).

2. Ownership. Except as expressly licensed in Section 1 above, as between the parties, Ensim owns all right, title and interest in and to
WEBppliance and Proprietary Information. Ownership of included third-party products remains with their respective holders.

12. Entire Agreement; Amendment; Waiver. This Agreement constitutes the entire agreement between the parties pertaining to the
subject matter hereof, and supercedes any and all written or oral agreements heretofore existing between the parties. No waiver or
modification of this Agreement will be binding upon either party unless made in a writing signed by both parties and no failure or
delay in enforcing any right will be deemed a waiver.

                    [ I Accept ]      [ I Do Not Accept ]
```

Important: The setup will fail if you do not accept the license agreement.

5 On the *Step 2: WEBppliance License File* page, register your WEBppliance license using one of the following options: **Upload License File** or **Copy and Paste License File**.

❑ **Upload License File**: This option allows you to upload your license to WEBppliance.

Note: It is recommended that you transfer the license file in binary mode.

❑ **Copy and Paste License File**: This option allows you to copy and paste the text from your license file onto WEBppliance.

To **upload** your license file:

a On the *Step 2: WEBppliance License File* page, click **Upload License File**.

The Step 3: Upload License File page opens.

    b   In the **Upload License** field, click **Browse** to locate your license file on your local system, then click **Upload**.

Your license is registered with Ensim Corporation.

To **copy and paste** your license file:

    a   Save your license file to your local system.

    b   Using a text editor, open your license file.

    c   Copy the entire text to your system clipboard.

    d   Return to the WEBppliance Setup pages.

    e   On the *Step 3: Copy and Paste License File* page, paste the license text in the WEBppliance Setup license text box, then click **Save**.
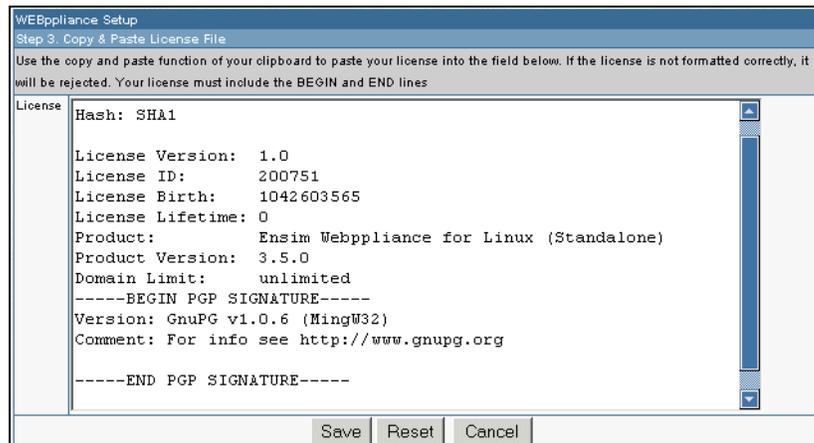
Your license is registered with Ensim Corporation.

6   On the *Step 4: Login and Password for Appliance Administrator* page, in the **Administrator Username** field, enter a user name for the Appliance Administrator.
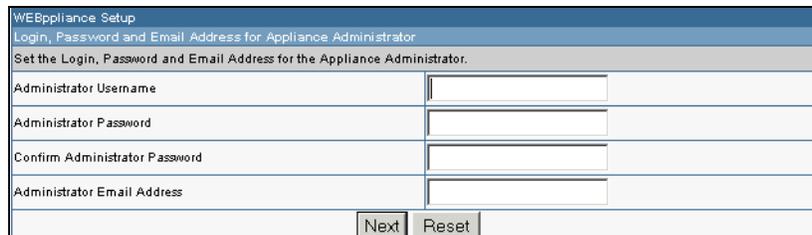
7 In the **Administrator Password** field, enter a password for the Appliance Administrator.

8 Confirm the password in the **Confirm Administrator Password** field.

9 Enter an email address for the Appliance Administrator in the **Administrator Email Address** field.

10 Click **Next**.

The *Setup Complete* page opens.
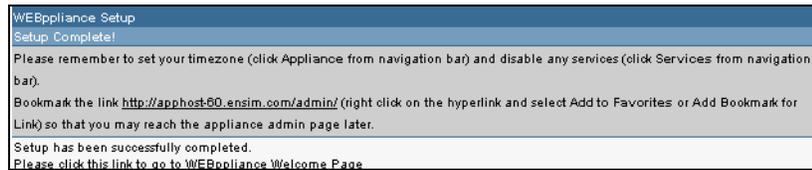
Congratulations! You have successfully set up WEBppliance.

If you want to go directly to the Appliance Administrator home page, click **WEBppliance Start Page**. If you want to open a new session of WEBppliance and log on as the Appliance Administrator, see "Accessing WEBppliance as the Appliance Administrator" on page 2-49 for instructions.

Accessing WEBppliance as the Appliance Administrator

Now that you have completed the setup process, you can log on to the WEBppliance as the Appliance Administrator to perform your tasks.

Procedure: To log in as the Appliance Administrator:

1 Open your Web browser.

2 In the **Address** field of your browser, enter the following URL.

http://<*server host name (or IP address*)>/admin

The WEBppliance welcome page opens.
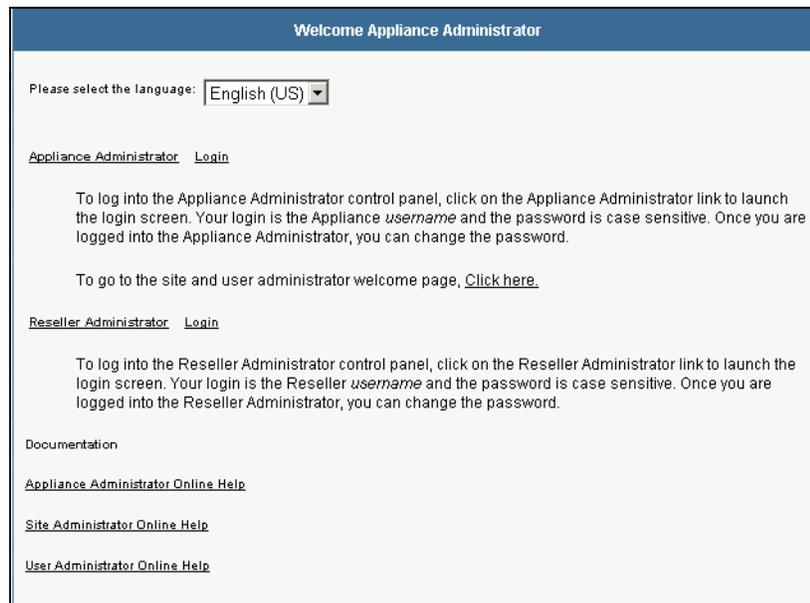
3 In the **Please select the language** field, click the arrow to select the language.

4 Click the **Click here** link.

The Appliance Administrator Login window opens.

5 In the **Login** field, enter your Appliance Administrator user name.

6 In the **Password** field, enter your Appliance Administrator password, then click **Login**.

Note: The password is case-sensitive. To protect your account, we recommend that you change your password after you log on.

The Appliance Administrator Shortcuts page opens. This page provides links to important tasks that you will perform at the appliance level. Use the Shortcuts page to quickly view and perform these tasks.
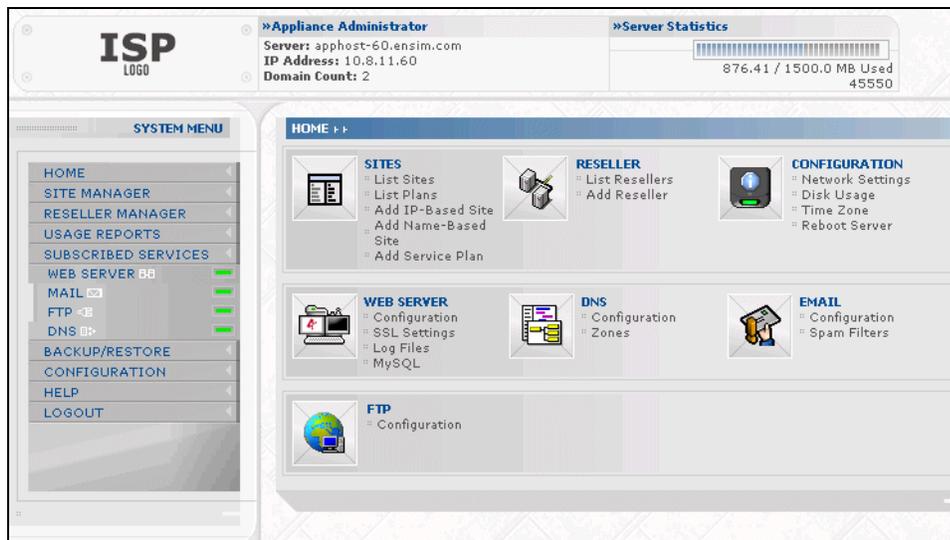
Note: The Appliance Administrator Shortcuts page automatically displays when you log on as an Appliance Administrator, but you can also access these tasks from the Appliance Administrator left navigation bar.

For instructions or help in completing tasks, click **Help** on the left navigation bar.

Upgrading to WEBppliance Pro

Introduction

This chapter provides instructions for upgrading your existing version of WEBppliance to WEBppliance Pro. If you have Red Hat Linux 7.1 or 7.2 installed on your server, OSI upgrades your operating system to Red Hat Linux 7.3, downloads and installs the required RPMs, then upgrades your WEBppliance.

Important:
* Sites hosted on the WEBppliance server are accessible during the upgrade and services such as Web, FTP, and Email will continue to function. However, the WEBppliance control panels will be inaccessible during the length of the upgrade. This could typically range from a few minutes to a few hours depending on the number of sites hosted on the server.

* Files previously backed up on WEBppliance 3.0 or 3.1 are incompatible with WEBppliance Pro. Please ensure that you perform a FULL backup on WEBppliance Pro immediately following the upgrade.

Topics include:

Upgrade checklist

Before you start, verify that you have:

- Backed up the entire hard disk
- Allocated time to perform the upgrade during a period of low activity.
- Ensured that all your sites are in a consistent state.

    To ensure that all sites are consistent:

    a Log on as the Appliance Administrator.

    b Select **Site Manager** from the left hand navigation bar.

    c In the Display field at the bottom of the page, click the arrow and select **All Sites**.

    Sites that are inconsistent display the message: `This site is currently in an inconsistent state. This may be the result of an active or failed edit.`

    See "Sites left in an inconsistent state" on page 3-10 for information on restoring a site to a consistent state.

- Ensured that Microsoft® FrontPage® is consistent on all your sites.
- Made a list of all WEBppliance customizations. See "Impact of customizations on the upgrade process" on page 3-4 for information on handling customizations.

Introducing the WEBppliance Pre-upgrade Checker

This section provides a brief overview of the WEBppliance pre-upgrade checker used by OSI to ascertain the compatibility of an existing WEBppliance server for upgrade, and explains the results of the pre-upgrade check.

Introduction

Customers sometimes customize WEBppliance to meet the unique needs and complexities of their hosting environment. An upgrade process, however, adversely impacts these customizations, and require appropriate actions to retain them during an upgrade or recover them after the upgrade. Such customizations also have the potential to fail the upgrade.

The WEBppliance Pre-upgrade Checker is a tool that evaluates the compatibility of customizations (on an existing WEBppliance server) with WEBppliance Pro. The tool provides a report that conveys possible conflicts and ways to resolve them. The Pre-upgrade Checker ensures that existing WEBppliance servers can be efficiently upgraded to WEBppliance Pro.

OSI automatically runs the Pre-upgrade Checker before upgrading an existing WEBppliance server to WEBppliance Pro. At the end of the check it displays the number of errors or warnings encountered. The results of the pre-upgrade check (list of checks, status of each check and details about errors or warnings) are logged in the **/var/log/ensim/installer.err** log file.

Interpreting the results of the pre-upgrade check

As the Pre-upgrade Checker performs each check, it displays the name and brief description of the check and the outcome of the check.

The outcome can be any of the following:

- **SKIPPED.** Displayed when the check is not run (it was either disabled by default or explicitly on the command line)
- **OK.** Displayed when the check is successful
- **WARNING.** Displayed when the check encounters an exception that **may** interfere with the upgrade process
- **ERROR.** Displayed when the check encounters an exception that **will** interfere with the upgrade process and cause it to fail

When the outcome of the check is a warning or an error, details about the exception are provided. More details can be found in the report.

The report provides:

- A detailed list of exceptions observed on sites hosted on the WEBppliance
- A detailed list of exceptions observed on the server
- Recommended actions to be performed before the upgrade
- Recommended actions to be performed after the upgrade

Note: The actions recommended provide broad solutions for the resolution of the observed exceptions. You need to determine if these actions are appropriate for your server and execute them as necessary. After performing the recommended pre-upgrade actions, you must restart the upgrade by typing the following command: **./setup.sh**

Finally, a one-line summary of the results is displayed, which has the following format:

```
SUMMARY for <hostname>: <n> error(s), <m> warning(s), <k> domain(s)
with issues
```

Where:

`<hostname>` is the name of your WEBppliance server

`<n>` indicates the number of errors

`<m>` indicates the number of warnings

`<k>` indicates the number of domains for which exceptions have been observed

Impact of customizations on the upgrade process

A complex software such as WEBppliance Pro lends itself to customization in numerous ways and some of these customizations may interfere with the upgrade process. The following sections lists additional customizations that need to be addressed before or after the upgrade.

> **Important:** If you have customized WEBppliance, we recommend that you contact Ensim Support to verify the impact of these customizations on the upgrade process. Ensim provides professional services that help you with the upgrade process. To avail the WEBppliance Upgrade Assistance Packages, visit https://buy.ensim.com/items.asp?skus=csps

The following is a list of:

- Customizations that do not require pre-upgrade or post-upgrade actions
- Customizations that require pre-upgrade or post-upgrade actions

Customizations that do not require pre-upgrade or post-upgrade actions

The following customizations do not require any pre-upgrade or post-upgrade actions.

- Files added to **/usr/lib/opcenter/fastcgi/extras**
- Customization files added to **/usr/lib/ensim_python/site-packages/vh3/custom/**
- Files modified in **/etc/virtualhosting/ipranges**
- Files modified in **/etc/appliance/customization**
- Files modified in /**etc/virtualhosting/templates** that do not belong to SquirrelMail

Customizations that require pre-upgrade or post-upgrade actions

The following customizations require either pre-upgrade or post-upgrade actions.

- *<SITEROOT>*/**var/www/squirrelmail/config/config.php** file modified by Appliance or Site Administrators

    ❑ Pre-upgrade action required?

    No

    ❑ Post-upgrade action required?

    Yes. There may be errors in the SquirrelMail control panel and/or the control panel may not function properly. To resolve this issue, copy **/etc/virtualhosting/templates/ sqmail/var/www/squirrelmail/config/config.php** to the affected site's **var/www/ squirrelmail/config/config.php** file, then merge any customizations back to the site's **var/www/squirrelmail/config/config.php** file.

- Files modified in **/usr/lib/opcenter/bind/named_conf_zone.tmpl**

    ❑ Pre-upgrade action required?

    Yes. Back up your **named_conf_zone.tmpl** file.

    ❑ Post-upgrade action required?

    Yes. Your modifications may be lost after the upgrade. To resolve this issue, re-apply your changes back into **/usr/lib/opcenter/bind/named_conf_zone.tmpl**.

- DTML modifications to files under **/usr/lib/opcenter**

    ❑ Pre-upgrade action required?

    Yes. Back up your custom dtml files.

    ❑ Post-upgrade action required?

    Yes. Your modifications may be lost after the upgrade. To resolve this issue, re-deploy your custom dtml files to **/usr/lib/opcenter.**

Note: Some DTML files may have changed since WEBppliance 3.1. This will cause problems when you restore the WEBppliance 3.1 (or higher) DTML files onto WEBppliance. Verify the changes in the new WEBppliance DTML and re-implement your changes.

- PHP binaries installed over files owned by the PHP RPMs

    ❑ Pre-upgrade action required?

    No.

    ❑ Post-upgrade action required?

    Yes. Your custom PHP binaries may be replaced with binaries from the (possibly older) PHP RPM shipped with WEBppliance during the upgrade. To resolve this issue, either obtain, or build, a PHP RPM that is compatible with Red Hat 7.3, and place the PHP RPM in the **/tmp/oem/extrarpms** directory before you run **./setup.sh**.

- MySQL installed with InnoDB support binaries over files owned by the MySQL RPMs

    ❑ Pre-upgrade action required?

    No.

    ❑ Post-upgrade action required?

    Yes. Even with a successful upgrade, sites may be left in an inconsistent state and MySQL may fail to start. To resolve this issue, either obtain, or build, a MySQL RPM with InnoDB support and place the RPM in the **/tmp/oem/extrarpms** directory before you run **./setup.sh**.

- Modifications made to the file **/usr/lib/opcenter/fastcgi/httpd-tmpl.conf**

    ❑ Pre-upgrade action required?

    Yes. Back up your **httpd-tmpl.conf** file.

    ❑ Post-upgrade action required?

    Yes. Your modifications may be lost after the upgrade. To resolve this issue, re-apply your changes to **/usr/lib/opcenter/fastcgi/httpd-tmpl.conf**.

- Modifications made to the file **/etc/httpd/conf/httpd_app.conf to enable mod_gzip**

    ❑ Pre-upgrade action required?

    No.

    ❑ Post-upgrade action required?

    Yes. Tomcat and other new WEBppliance Web features may not work until you upgrade the Apache conf file **httpd_app.conf.** To resolve this issue, refer to "Upgrading the Apache configuration file" on page 3-26.

- Modifications made to the non-config files owned by the RPM database

  ❑ Pre upgrade action required?

    Yes. Back up the binaries.

  ❑ Post-upgrade action required?

    Yes. Custom-compiled files owned by an RPM (which is part of the WEBppliance service or part of the Red Hat Linux 7.3 upgrade—if you are upgrading from WEBppliance 3.1) are replaced during the upgrade.

    To see if a file is owned by an RPM, run the command **rpm -qf <full_path_of_binary>**. If the command returns the name of a RPM, then the file will be replaced during the upgrade. Do not restore the file as the file may not be compatible with the new upgraded WEBppliance/Red Hat 7.3 environment.

    For example, if you have compile a binary that is linked against libcrypto.so.1 (a library file provided by WEBppliance/Red Hat Linux 7.2), and then upgraded your WEBppliance/Red Hat Linux 7.2 to WEBppliance/Red Hat Linux 7.3, the binary is unusable, as libcrypto.so.1 is replaced with libcrypto.so.2 in the new environment.

    To ensure compatibility, recompile your binaries under a Red Hat Linux 7.3 system, or obtain the appropriate RPMs/source-rpms that are compatible with Red Hat Linux 7.3.

- Upgraded or replaced MySQL RPM (Red Hat RPM)

  ❑ Pre-upgrade action required?

    Yes. Running **./setup.sh** may fail with the following RPM conflicts.

    ```
    MySQL conflicts with mysql-3.23.54a-3.73

    MySQL-devel conflicts with mysql-devel-3.23.54a-3.73

    MySQL-server conflicts with mysql-server-3.23.54a-3.73
    ```

    To resolve these conflicts, add mysql, mysql-devel, and mysql-server to the **/tmp/oem/extrarpms/exclude.list** file.

- OpenSSH upgraded to a version higher than version 3.1

  ❑ Pre-upgrade action required?

    Yes. Running **./setup.sh** may fail with the following RPM dependency errors.

    ```
    openssh = 3.1p1-6 is needed by openssh-askpass-3.1p1-6

    libcrypto.so.1   is needed by openssh-3.4p1-1

    libcrypto.so.1   is needed by openssh-clients-3.4p1-1

    libcrypto.so.1   is needed by openssh-server-3.4p1-1
    ```

    To resolve these dependency errors, do one of the following:

❑ Either obtain, or build, an OpenSSH RPM with a version number compatible with Red Hat 7.3 and newer than the one provided by WEBppliance. Then place the OpenSSH RPM in the **/tmp/oem/extrarpms** directory before you run **./setup.sh**.

or

❑ Place the following files in **/tmp/oem/extrarpms/exclude.list** file
```
openssh
openssh-askpass
openssh-clients
openssh-server
```

- Modifications made to the file **/var/www/html/index.shtml**

   ❑ Pre upgrade action required?

   Yes. Back up the file **/var/www/html/index.shtml**.

   ❑ Post-upgrade action required?

   Yes. Modifications made to the WEBppliance root level file**/var/www/html/index.shtml** may be lost after the upgrade. To resolve this issue, re-apply your changes to the file **/var/www/html/index.shtml**.

- Modifications made to the file **/etc/php.ini**

   ❑ Pre-upgrade action required?

   Yes. Back up the file **/etc/php.ini**

   ❑ Post-upgrade action required?

   Yes. Modifications made to the **/etc/php.ini** file may be lost after the upgrade. To resolve this issue, re-apply your changes to the file or restore from your backup.

- Modifications made to the files **/etc/httpd/conf/virtual/site<*n*>**

   ❑ Pre-upgrade action required?

   Yes. Back up changes to any of the **/etc/httpd/conf/virtual/site<*n*>** files.

   ❑ Post-upgrade action required?

   Yes. Modifications made to any of the **/etc/httpd/conf/virtual/site<*n*>** files may be lost after the upgrade (your changes will be lost even when performing an enable/disable). For information on customizing these configuration files, see "Customizing services" on page 3-29.

- Modifications made to the files **/etc/proftpd/site<*n*>** or **/etc/proftpd/site<*n*>.anonftp**

  ❑ Pre upgrade action required?

  Yes. Back up your changes to any of the **/etc/proftpd/site<*n*>** or **/etc/proftpd/ site<n>.anonftp** files.

  ❑ Post-upgrade action required?

  Yes. Modifications made to the files **/etc/proftpd/site<*n*>** and **/etc/proftpd/ site<*n*>.anonftp** will be lost after the upgrade (your changes will be lost even when performing an enable/disable). For information on customizing these configuration files, see "Customizing services" on page 3-29**.**

- Modifications made to the file **/etc/logrotate.conf**

  ❑ Pre-upgrade action required?

  Yes. Back up the file **/etc/logrotate.conf**.

  ❑ Post-upgrade action required?

  Yes. Modifications to the WEBppliance root level file **/etc/logrotate.conf** may be lost after the upgrade. To resolve this issue, re-apply your changes back to the file or restore from your backup.

- Modifications made to default Service Plans

  ❑ Pre-upgrade action required?

  Yes. Save the settings of your default Service Plan.

  ❑ Post-upgrade action required?

  Yes. The WEBppliance upgrade will overwrite the default Service Plan. To resolve this issue, reapply your default Service Plan settings.

- Latest version of kernel-headers (compatible with Red Hat Linux 7.3) RPM package not installed

  ❑ Pre-upgrade action required?

  Yes. Running **./setup.sh** may fail with the following RPM dependency errors.

  ```
  kernel-headers   is needed by glibc-devel-2.2.4-24

  kernel-headers >= 2.2.1 is needed by glibc-devel-2.2.4-24
  ```

  To resolve the dependency errors:

  a Obtain the latest version for kernel-headers (compatible with Red Hat 7.3).

  b Place the kernel-headers RPM in the **/tmp/oem/extrarpms** folder before you run **./setup.sh**.

- File conflict error

    ❑ Pre-upgrade action required?

    Yes.

    ```
    /usr/bin/curl from curl conflicts with the file from
    package curl-ssl
    ```

    This error occurs because curl-ssl is present on the system. When **./setup.sh** tries to install curl and curl-devel packages, it conflicts with the files provided by curl-ssl.

    To resolve this issue, place the entries for curl and curl-devel in the file **/tmp/oem/extrarpms/exclude.list**.

- Sites left in an inconsistent state

    ❑ Pre-upgrade action required?

    No.

    ❑ Post-upgrade action required?

    Yes. When sites go into an inconsistent state, the following error message appears.

    ```
    The document root of the web server where you are trying to
    install the server extensions already contains a disk-based
    web.
    ```

    To resolve this issue:

    a Open the file **/home/virtual/<domain>/var/www/html/_vti_pvt/service.cnf**

    b Remove the following lines.

    ```
    vti_httpdversion:SX|FrontPage DBW
    ```

    ```
    vti_webservertype:SR|diskweb
    ```

    c Save your changes.

Upgrading to WEBppliance Pro

The following sections provide information and instructions for upgrading to WEBppliance Pro.

System requirements

The minimum system requirements for upgrading WEBppliance are:

- An Intel Pentium II or III processor, class 500 MHz or above or any Intel-compatible CPU of 500 MHz speed or above
- Hard disk with at least 20 GB capacity
- At least 256 MB RAM (512 MB and above is recommended if you plan to use the Tomcat application)
- Network connectivity with access to the Internet
- DNS server on network
- "root"user access

Web browser requirements

WEBppliance is a Web-based control panel that requires you to use one of the following browsers:

- Microsoft® Internet Explorer, version 5.0 or higher

Important: If you are using Internet Explorer, version 6.0, please verify that you have set your security settings (under Internet Options) to **medium**; otherwise some pages may not display properly.

- Netscape®, version 6.2 or higher

Upgrading to WEBppliance Pro

Note: OSI verifies your current server environment and performs necessary pre-upgrade checks before proceeding with the upgrade. If your current version of WEBppliance runs on Red Hat Linux 7.1 or Red Hat Linux 7.2, OSI upgrades the operating system to Red Hat Linux 7.3, downloads the required RPM updates, and then upgrades WEBppliance.

Procedure: To upgrade to WEBppliance Pro:

1 Log on to https://buy.ensim.com and download the compressed file **OSInstaller-7.3-x.tar.g**z.

Note: The variable x used in the file name represents the build number and must be replaced by the actual build number of the utility.

2 Create a temporary directory (for example, **/tmp/osi**), to download the compressed file, **OSInstaller-7.3-x.tar.gz**.

3 Download the compressed file, **OSInstaller-7.3-x.tar.gz**, to the temporary directory created in step 2 on page 3-12.

4 Change to the directory (cd) in which you have downloaded the compressed file.

5 Uncompress the file, **OSInstaller-7.3-x**, by using the command:

tar -xvzf OSInstaller-7.3-x.tar.gz

6 Change to the Linux sub-directory under **OSInstaller-7.3-x** by using the command:

cd OSInstaller-7.3-x/linux

Important: You must log on as the root user to run the installation commands successfully.

Review your choices carefully before running the installation commands. The installation process cannot roll back to a previous step if you enter incorrect information. To rectify any errors, you will need to stop and restart the process.

Installation steps that prompt for a response have a default value contained in square brackets [ ]. If you press **Enter** without specifying a value, the default will be automatically selected.

When you specify a directory path, always provide the absolute path and not the relative path. For example: **/home/admin/installer**

Do not prefix the FTP or HTTP URLs with **ftp://** or **http://**. Follow the conventions listed below:

FTP URL: ftp.abc.com, **not** ftp://ftp.abc.com
HTTP URL: www.acd.com, **not** http://www.acd.com

7   Enter the following command.

./setup.sh

A brief note about the OSI utility and its capabilities is displayed.

Note: The instructions in **bold** convey the installation instructions as they appear on the OSI screen. Text in `Courier` font indicates the messages that appear on the screen when you run an installation step.

8 **Press <ENTER> to continue, or ^C to abort.**

   a Press **Enter** to continue.

   b Press **Ctrl + C** to stop the process.

     If you choose to continue, the following message displays.

```
Downloading required data from Ensim's ftp server ...
```

Note: OSI attempts to connect to Ensim's FTP server to download the data for the FTP and HTTP installation options. If it is unable to connect, it defaults to locally available data. This process takes some time. Please wait before proceeding.

9 **Is this the target server for installing/upgrading Linux Webppliance? [y]**

Enter **Y** to confirm.

A warning message is displayed.

Important: During installation, OSI installs and updates various RPMs on the server. This could affect applications that are active on the server. Once installed, WEBppliance cannot be uninstalled.

10 **Press <ENTER> to continue, or ^C to abort.**

Press **Enter**.

11 **Please enter the email for receiving error logs:**

Enter the email address to which error logs can be sent.

Note: You must specify a valid email address.

12 Is the above correct? [y]

Enter **Y** to confirm the email address.

OSI performs the following actions to prepare your system for upgrade.

❑ Downloads the WEBppliance installer RPMs, **lwpinstaller** and **ensim-parser** required to upgrade your WEBppliance.

❑ Before installing the files, it performs a pre-install check to ensure that your server provides a compatible environment for installation of the WEBppliance installer RPMs.

❑ Once the pre-install check completes successfully, OSI installs the required upgrade RPMs. On successful installation of these RPMs, the following message displays:

```
Success: installing the tool.
```

❑ OSI identifies the existing version of WEBppliance on your server and displays the following message:

```
Previous installation detected...
```

```
Currently you have Linux WEBppliance <version_no> installed.
```

Where:

❑ *version_no* is the current version of WEBppliance on your server

13 Upgrade to Ensim WEBppliance Pro for Linux version 3.5.0? [y]

Enter **Y**.

A message prompting you to obtain a new license before upgrading displays.

Important: Ensure that you have obtained a new license from the Ensim storefront, https://buy.ensim.com before upgrading. You will be prompted for a new license when you log into the Appliance Administrator control panel after upgrading.

14 Press <Enter> to continue ...

Press **Enter**.

OSI performs the following actions during the upgrade:

❑   Determines the set of RPMs needed to upgrade the Red Hat RPMs installed on your server to the latest Red Hat version.

❑   Downloads and updates the Red Hat RPMs. It also downloads and installs the Pre-upgrade Checker RPMs and any other RPMs used by OSI for upgrading WEBppliance.

On successful update, the following message is displayed:
`Success: Updated the tools needed for upgrade .`

Note: The RPMs are downloaded and installed only when an upgrade is attempted for the first time.

15 Do you want to upgrade to the latest version of the kernel ? [Y]

a   Enter **N** if you do not want to upgrade the kernel.

b   Enter **Y** if you want to upgrade to the latest version of the kernel.

Important: When you upgrade the kernel, any customizations you have made to the kernel are lost.

The key messages that follow and their interpretation are as follows.

❑   `Querying installed rpms ...`

OSI checks installed RPMs and generates the metadata of the RPMs currently installed on the server.

❑   `Configuring...`

Configures the **/etc/apt/sources.list** file to point your WEBppliance server to the FTP server from where the required RPMs will be downloaded.

❑ `Refreshing the package index files from Ensim's FTP server...`

Downloads the metadata of RPMs required for upgrade from the FTP server

Performs a pre-installation check to ensure that your system has the required system resources and compatible software mandatory for successful upgrade.

While the system check is in progress, the following messages (some of which are shown here) are displayed on the screen.

```
Running check_shadowpwd...  OK  ]
Running check_base...  OK  ]
Running check_essential...  OK  ]
```

Note: If `check_base or check_essential` fails, OSI downloads and installs these RPMs.

When the pre-install system check succeeds, the following message is displayed:
`Preinstall checks succeeded`

❑ `Checking whether the system is sane...`

Checks for unsatisfied system dependencies that could potentially fail the upgrade.

If no such dependencies are detected, OSI proceeds to verify the installed RPMs and identify the RPMs required for upgrading the WEBppliance server.

❑ `Querying for installed rpms ...`

Checks installed RPMs again, to check for any new RPMs installed (new RPMs will be installed if the pre-install system check fails).

❑ Performs a pre-upgrade check using the Pre-upgrade Checker to check for potential incompatibilities in your existing WEBppliance environment.

At the end of the check it displays the number of errors and warnings encountered during the pre-upgrade check. For more details, refer to the **/var/log/ensim/ installer.err** log file.

When the Pre-upgrade Checker encounters warnings or errors, it provides you with the option to stop or continue the upgrade.

If OSI has encountered warnings, it displays the following:

Ignore warnings, continue with the upgrade?[y]

Note: Warning messages will not fail the upgrade. You may continue with the upgrade.

Enter **Y**.

If OSI has encountered errors, it displays the following:

Ignore errors, continue with the upgrade?[y]

Note: Errors have the potential to fail the upgrade. If you encounter an error, abort the upgrade process and complete the suggested workaround. Details of the error and the appropriate workarounds can be found in the log file, **/var/log/ ensim/installer.err** file.

Enter **N**.

Important: After resolving the error, you will need to restart the upgrade by running **./setup.sh**.

❑ Downloads the latest version of the RPMs required to upgrade to WEBppliance Pro.

On successful download, the following message is displayed.

```
Successfully downloaded the required rpms ...
```

❏ `Downloading the Webppliance rpms needed ...`

Downloads the additional RPMs required to upgrade to WEBppliance Pro.

After the download is complete, the following message displays.

The required RPMs are successfully downloaded.

❏ `Your system is ready for upgrade ...`

OSI checks whether the correct version of the "rpm" RPM (required for upgrade) is installed.

❏ `Determining RPMs which need upgrade/installation...`

Determines the RPMs required to upgrade to WEBppliance Pro.

❏ `Starting upgrade. This may take several minutes to hours depending on the number of sites...`

It determines the final list of RPMs required to upgrade to WEBppliance Pro.

Important: Do not disconnect if the upgrade has been initiated over a remote connection, using Telnet or SSH. However, if you get disconnected due to technical reasons, before the upgrade completes, reconnect to your server and run the following command: **ps -ax**

If there are RPM processes active, the command will list out the RPMs. Running RPM processes indicate the upgrade is in progress. Do not interrupt the upgrade. After the upgrades completes successfully, restart WEBppliance manually using the command: `/etc/rc.d/init.d/webppliance restart`

❏ `Upgrading... (this may take several minutes to hours)`

OSI upgrades your WEBppliance server. This may take some time depending on the number of sites hosted on your WEBppliance server. Please refer to the setup.log file located at **/var/log/appliance/** for more details.

❑ Upgrade to Linux Webppliance 3.5.0-42 [OK]. Services RPMs
   installed successfully.

Note: All the services and add-ons that were installed on your WEBppliance
server are automatically upgraded to the version required by WEBppliance Pro.

The upgrade completes successfully and WEBppliance restarts. The following
message displays.

Success: Your system has been successful upgraded

The final step involves upgrading your kernel to the latest Red Hat version.

❑ Downloading rpms from the ftp server...

OSI downloads and installs the latest version of the kernel RPMs.

On successful installation, the following message displays.

Your system has been updated to the latest kernel update. You
will need to reboot your system for the changes to take effect.
Please shutdown all processes and reboot your system.

Restart your server for the changes to take effect.

Congratulations! You have successfully upgraded your WEBppliance. You now need to
complete certain post-upgrade tasks.

Important: After the WEBppliance server is upgraded, please upload the new
license obtained from the storefront, https://buy.ensim.com, onto the server.
Note that after an upgrade, you do not require to set up WEBppliance Pro.

Accessing WEBppliance Pro as the Appliance Administrator

Once the upgrade completes successfully, you can access WEBppliance Pro as the Appliance Administrator, by entering the host name of your WEBppliance Pro server in the Address field of the browser.

Important: You may be able to access your sites, but you cannot perform any appliance-related tasks until you upload the new license onto your WEBppliance server. The new license can be obtained from the Ensim storefront, https://buy.ensim.com

Procedure: To access and log on as the Appliance Administrator:

1 Open your Web browser.

2 In the **Address** field of your browser, enter the following URL.

http://<*server host name (or IP address*)>/admin

The WEBppliance welcome page opens.

3 Click the **Appliance Administrator** link. The License page opens.

4 You will need to register your WEBppliance Pro license using one of the following options: **Upload License File** or **Copy and Paste License File**.

Important: WEBppliance Pro requires you to upload the new license. If you attempt to upload the license of a previous version of WEBppliance, the upload will fail with an error.

❑ **Upload License File**: This option allows you to upload your license to WEBppliance Pro.

Note: We recommend that you transfer the license file in binary mode.

❑ **Copy and Paste License File**: This option allows you to copy and paste the text from your license file onto WEBppliance Pro.

To **upload** your license file:

a Click **Upload License File**.

The Step 3: Upload License page opens.

Attention: License Invalid

Somehow your license has become invalid. This may have resulted from any of the following: the license may have become corrupted, it may have expired, or the domain allowance may have been exceeded. Regardless of which situation has occured, a license must now be uploaded once again. Please upload a valid license by following the steps below.

Upon uploading a valid license you will be redirected to the welcome page to relogin.

Upload License

Upload the standard ASCII text file containing your license. If the license is not fomratted correctly, it will be rejected.

Upload License [   ] Browse...

Upload   Reset   Cancel

b In the **Upload License** field, click **Browse** to find your license file on your local system, then click **Upload**.

Your license is registered with Ensim Corporation.

To **copy and paste** your license file:

a Save your license file to your local system.

b Using a text editor, open your license file.

c Copy the entire text to your system clipboard.

d Return to the WEBppliance Setup pages.

e Paste the license text in the **License** text box, then click **Paste License**.

Attention: License Invalid

Somehow your license has become invalid. This may have resulted from any of the following: the license may have become corrupted, it may have expired, or the domain allowance may have been exceeded. Regardless of which situation has occured, a license must now be uploaded once again. Please upload a valid license by following the steps below.

Upon uploading a valid license you will be redirected to the welcome page to relogin.

Copy & Paste License

Use the copy and paste function of your clipboard to paste your license into the field below. If the license is not formatted correctly, it will be rejected. Your license must include the BEGIN and END lines.

License

```
License Lifetime: 0
Product:          Ensim Webppliance for
Linux (Standalone)
Product Version:  3.5.0
Domain Limit:     unlimited
-----BEGIN PGP SIGNATURE-----
Version: GnuPG v1.0.6 (MingW32)
Comment: For info see
http://www.gnupg.org

-----END PGP SIGNATURE-----
```

Paste License   Reset   Cancel

Your license is registered with Ensim Corporation.

Once your license is registered with Ensim Corporation, you will receive a message that you have been successfully logged out. Close the browser, then open a new browser and type in the following:

http://<*server host name (or IP address)*>/admin

The Appliance Administrator Login window opens.

Appliance Administrator Login:

Your Login is the Appliance *username*.
These fields are case sensitive.

Language: English (US) ▼

Login: |

Password:

Login

5 In the **Login** field, enter your Appliance Administrator user name.

6 In the **Password** field, enter your Appliance Administrator password, then click **Login**.

Note: The password is case-sensitive. To protect your account, change your password after you log on.

The Appliance Administrator Shortcuts page opens. This page provides links to important tasks that you will perform at the appliance level. Use the Shortcuts page to quickly view and perform these tasks.
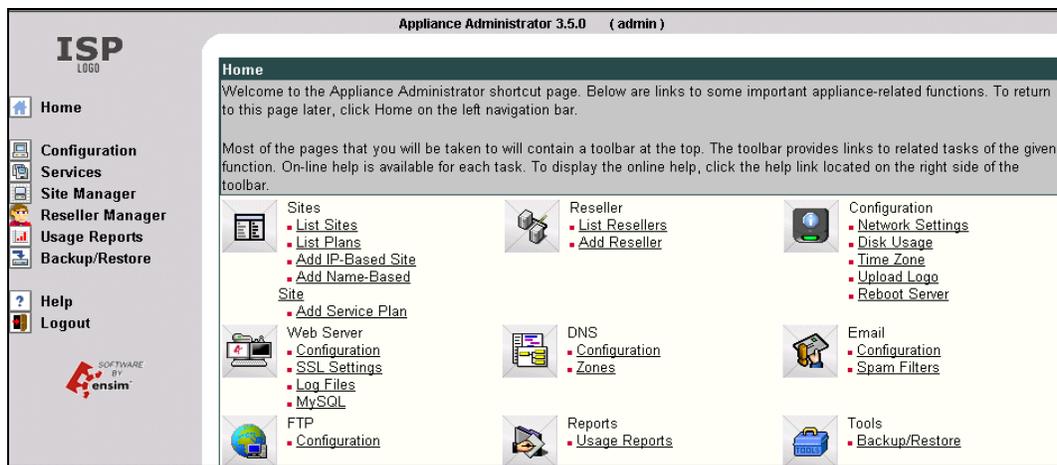
Note: The Appliance Administrator Shortcuts page automatically displays when you log on as an Appliance Administrator, but you can also access these tasks from the Appliance Administrator left navigation bar.

For instructions or help in completing tasks, click **Help** on the left navigation bar.

Post-upgrade tasks

WEBppliance requires you to complete certain post-upgrade tasks.

Upgrading the Apache configuration file

WEBppliance leaves the **httpd_app.conf** file untouched during upgrade, as it may contain changes made by you or other installed Web-based applications. The **httpd_app.conf** file is preserved so that custom modifications are not lost. However, because of this, some of the new Web-based features will not be available to the upgraded sites.

In order to take advantage of the new features, you will need to merge your custom configuration changes with the template **httpd_app.conf** provided by WEBppliance.

Procedure: To upgrade the Apache file **httpd_app.conf**

1   Back your existing **/etc/httpd/conf/httpd_app.conf**. file.

2   Copy the file **/usr/lib/opcenter/apache/install/httpd_app.conf** to **/etc/httpd/conf/httpd_app.conf**.

3   Replace all instances of LOCALIP and LOCALHOST in **/etc/httpd/conf/httpd_app.conf** with the WEBppliance server IP address and the host name, respectively.

4   Edit the **/etc/httpd/conf/httpd_app.conf** file and add your custom configuration parameters.

5   If you upgraded from WEBppliance 3.0.x, add the following line to the merged httpd_app.conf file. This will allow Tomcat 3 to work

```
LoadModule jk_module modules/mod_jk-eapi.so
```

6   Restart Apache by using the following command.

```
/etc/rc.d/init.d/httpd restart
```

Upgrading the SquirrelMail file config.php

After the upgrade, some sites are unable to access SquirrelMail. To resolve this, you will need to upgrade the SquirrelMail file **config.php**.

Procedure: To upgrade the SquirrelMail file **config.php**:

1 Backup the original **config.php** file located in **/etc/virtualhosting/templates/sqmail/var/www/squirrelmail/config/config. php**.

2 Copy the **config.php** file located in **/etc/virtualhosting/templates/sqmail/var/www/squirrelmail/config/config. php** to the broken site's directory (**/home/virtual/<domain>/var/www/squirrelmail/config/config.php**).

3 After copying the file, change the file owner and group to match that of the original file.

4 If the original config.php file has been modified by Site Administrators, then they should merge the old and new **config.php** files.

Migrating MySQL databases to the site's file system

After upgrade, the MySQL databases continue to remain under the ownership of the Appliance Administrator leading to the following functional snags.

- Disk space consumed by the databases does not count toward consumption of the site's disk quota.

- Existing databases are not listed when you attempt to view the list of databases from the Site Administrator control panel.

  To resolve these, you need to migrate the MySQL databases of a site from the file system of the appliance to the file system of the site. You will need to stop the MySQL service and run the following command as the root user.

  ```
  mysqlmig.py < -f | -m | -h | -u > < -a | <Database name> <domain
  name>>
  ```

  where:

  -f: Adds an entry for the database to the list of databases owned by <domain name>

  Existing databases cannot be viewed from the Site Administrator control panel after an upgrade. To resolve this, the -f option must be used. You will be required to stop mysql and restart it for the change to take effect. This action is recommended during a period of low activity.

-m: Moves the database to the `<domain name>`

The -m option moves the database into the site's file system. You will be required to stop MySQL and restart it. This action is recommended during a period of low activity.

-u: Adds entry from localhost and localhost.localdomain for users

For 3.1 Compatibility or High Security sites, your database users will be unable to connect to their databases as the localhost and localhost.localdomain entries are not present in the MySQL database. This can be resolved by using the -u option after you have moved your databases to the site's file system.

-a: Indicates that the action (depending on the other parameters selected, -f, -m) be performed on all the sites

-h: Displays this help.

`<Database name>:` Name of the database to be migrated

Note: To synchronize a single database, specify the `<Database name>`. If this argument is not given, the default value will be used. The default value is formed by replacing every "." in the domain's name with "_". For example, for the domain name "ensim.com" the default database will be "ensim_com". Do not use the -a parameter if your are synchronizing a single database.

`<domain name>:` Name of the domain to which the database is migrated

Example:

- mysqlmig.py -f example_com example.com

  Lists the `example_com` database for the `example.com` site in the Site Administrator control panel

- mysqlmig.py -f -a

  Lists all the database for all the sites in the Site Administrator control panel

- mysqlmig.py -m example_com example.com

  Moves the `example_com` database to the `example.com` site's file system

- mysqlmig.py -m -a

  Moves all the database to the respective site's file system

- mysqlmig.py -u example.com

   Adds the localhost and localhost.localdomain entry for the site into the mysql database

Enabling Poprelay

WEBppliance installs Poprelay but does not enable it for a site. If the service was not enabled before the upgrade, you need to manually enable it by running the following commands.

```
m4 /usr/lib/opcenter/sendmail/install/sendmail.mc > /etc/sendmail.cf

/etc/rc.d/init.d/sendmail restart
```

Customizing services

To customize services, access the custom.py file specific to each service, located under the folder, **/usr/share/doc/webppliance-SERVICENAME-SERVICEVERSION/**

Important: Do not modify the original copy of the custom.py file.

The customization can either be global or site-specific. The list of the services that can be customized is as follows:

- ❑ anonftp
- ❑ openssl
- ❑ apache
- ❑ proftpd
- ❑ cgi
- ❑ ssi
- ❑ subdomain (global only)

Global customizations

Global customizations affect the way certain services (such as Apache) are configured for all sites on the WEBppliance server. For example, in the case of Apache, you can customize the way the VirtualHost container is written.

Each service that can be globally customized has a file explaining its variables in the file, **/usr/share/doc/webppliance-<servicename>/custom.py**.

To globally customize any service, you must copy the file **/usr/share/doc/webppliance-<servicename>/custom.py** into **/usr/lib/ensim-python/site-packages/vh3/custom/<servicename>.py**

For example, to globally modify the behavior of the Apache service on WEBppliance Pro, you must run the following command:

```
cp /usr/share/doc/webppliance-apache-3.5.0/custom.py /usr/lib/ensim-
python/site-packages/vh3/custom/apache.py
```

You must then modify the file **/usr/lib/ensim-python/site-packages/vh3/custom/apache.py** as required. The significance of each of the customizable variables is given in the **custom.py** file.

Global customizations are retained when you back up and subsequently restore the WEBppliance server.

Procedure: To apply global customizations:

1 Copy **/usr/share/doc/webppliance-<SERVICENAME>/custom.py** as **/usr/lib/ensim-python/site-packages/vh3/custom/<SERVICENAME>.py**

In the **<SERVICENAME>** field enter the name of the service you want to customize.

For example to customize the anonftp service, copy **/usr/share/doc/webppliance-anonftp/custom.py** as **/usr/lib/python2.1/site-packages/vh3/custom/anonftp.py**.

2 Modify the file **<SERVICENAME>.py** as per your requirements.

3 Save the file.

4 To restart WEBppliance, type the command
`/etc/rc.d/init.d/webppliance restart`.

Site-specific customizations

Site-specific customizations affect the way services (such as Apache) are configured for a particular site on the WEBppliance server.

Each service that can be customized for a site has a file explaining its variables in the file, **/usr/share/doc/webppliance-<servicename>/custom.py**.

To customize any service for a site, you must copy the file **/usr/share/doc/webppliance-<servicename>/custom.py** into **/home/virtual/site<n>/info/custom/<servicename>.py**, where **<n>** represents the unique site number.

For example, to modify the behavior of the Apache service for a site, you must run the following command:

```
cp /usr/share/doc/webppliance-apache-3.5.0/custom.py /home/virtual/
site12/info/custom/apache.py
```

You must then modify the file **/home/virtual/site12/info/custom/apache.py** as required. The significance of each of the customizable variables is given in the **custom.py** file.

Procedure: To apply site-specific customizations:

1 Copy **/usr/share/doc/webppliance-<*SERVICENAME*>/custom.py** as **/home/virtual/site<*n*>/info/custom/<*SERVICENAME*>.py**

where:

n in **site<*n*>** stands for the site-specific number and **<*SERVICENAME*>** refers to the name of the service you want to customize.

For example, to customize the anonftp service, copy **/usr/share/doc/webppliance-anonftp/custom.py** as **/home/virtual/site1/info/custom/anonftp.py**.

2 Modify the file **<*SERVICENAME*>.py** as per your requirements.

3 Save the file.

4 To restart WEBppliance, type the command /etc/rc.d/init.d/webppliance restart.

Log files

Introduction

Log files are a record of actions performed on a computer. They are important pointers to aberrations or fault points encountered while running a process.

OSI creates the following log files:

- updates.log file
- updates.err file
- upgrader.log file
- upgrader.err file
- installer.log file
- installer.err file
- setup.log file
- setup.err file

The log files are emailed to the specified email address.

updates.log file

The updates.log file is located at: **/var/log/ensim/**

The updates.log file maintains a list of actions recorded during the following processes:

- Downloading and installing the WEBppliance installer RPMs. Both successful and unsuccessful events are recorded in this file.

Refer to this log file to obtain a fact file of the events that qualified the download and installation process.

It contains the following information:

- Name of the event
- Status of the event—whether the event was completed with success or encountered warnings or errors.

updates.err file

The updates.err file is located at: **/var/log/ensim/**

The updates.err file is an error log that maintains a list of unsuccessful events that occurred during the download and installation of the WEBppliance installer RPMs. Only error messages are recorded in this file.

Refer to this log file to determine the cause of failure of the download and installation process.

It contains the following information:

- A brief description of the error
- Action to be taken to resolve the error

upgrader.log file

The upgrader.log file maintains a list of actions recorded during the following processes:

- Downloading and installing the latest version of "rpm" RPMs. Both successful and unsuccessful events are recorded in this file.
- Downloading the latest version of the RPMs required to upgrade to WEBppliance Pro.
- Downloading the additional RPMs required to upgrade to WEBppliance Pro.

Refer to this log file to obtain a fact file of the events that qualified the above processes.

It contains the following information:

- Name of the event
- Status of the event—whether the event was completed with success or encountered warnings or errors.

upgrader.err file

The upgrader.err file is located at: **/var/log/ensim/**

The upgrader.err file is an error log that maintains a list of unsuccessful events that occurred during the download and installation of the following:

- Downloading and installing the latest version of "rpm" RPMs. Both successful and unsuccessful events are recorded in this file.
- Downloading the latest version of the RPMs required to upgrade to WEBppliance Pro.
- Downloading the additional RPMs required to upgrade to WEBppliance Pro.

Only error messages are recorded in this file.

Refer to this log file to determine the cause of failure of the above processes.

It contains the following information:

- A brief description of the error
- Action to be taken to resolve the error

installer.log file

The installer.log file is located at: **/var/log/ensim/**

The installer.log file presents a cumulative summary of the following log files:

- upgrader.log
- updates.log

In addition to the above log information, the installer.log file maintains a list of actions recorded during the upgrade of the WEBppliance server. Both successful and unsuccessful events are recorded in this file. The results of the pre-upgrade check performed by OSI are also logged in this file.

Refer to this log file to obtain a fact file of the events that qualified the upgrade process.

It contains the following information:

- A brief description of the error
- Cause of the error

installer.err file

The installer.err file is located at: **/var/log/ensim/**

The installer.err file presents a cumulative summary of the following log files:

- upgrader.err
- updates.err

In addition to the above log information, the installer.err file maintains a list of unsuccessful events that occurred during the upgrade of the WEBppliance server. Both successful and unsuccessful events are recorded in this file.

The installer.err log file also contains the outcome of the pre-upgrade check performed by OSI before upgrading your server to WEBppliance Pro.

Refer to this log file to obtain a fact file of the events that qualified the upgrade process.

It contains the following information:

- A brief description of the error
- Cause of the error

setup.log file

The setup.log file is located at: **/var/log/appliance/**

The setup.log file maintains a list of actions recorded during the installation of WEBppliance. Both successful and unsuccessful events are recorded in this file.

Refer to this log file to obtain a fact file of the events that qualified the installation process.

It contains the following information:

- A brief description of the error
- Cause of the error

setup.err file

The setup.log file is located at: **/var/log/appliance/**

The setup.err file is an error log that maintains a list of unsuccessful events that occurred during the installation of WEBppliance Pro. Only error messages are recorded in this file.

Refer to this log file to determine the cause of failure of the installation process.

It contains the following information:

- A brief description of the error
- Cause of the error

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