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## BayRS and Site Manager Software Installation

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This guide describes how to install BayRS™ (router software) and Site Manager software from CD.

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## Before You Begin

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Review this section before using the CD to install, upgrade, or modify router software.

### Installing New Routers and Software

If you received this CD with a new router, you can use the instructions in this guide to install Site Manager from the CD. (BayRS is already installed on your router.) But first you must:

- Install the router as described in its installation guide.
- Create your first network connection with the Quick-Start procedure.

See *Quick-Starting Routers* for the Quick-Start procedure and full Site Manager system requirements and installation instructions. You should be familiar with the full instructions before using the summary in this guide.

### Upgrading and Modifying Router Software

If you received this CD as part of an upgrade, you can use the instructions in this guide to install BayRS and Site Manager software from the CD. But first you must review the upgrade section of the *BayRS Version 12.20 Document Change Notice*.

If you need to reinstall or modify router software, you should review *Configuring and Managing Routers with Site Manager* before using this guide.

## Command Summary

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Use the following command summary only after you read this guide:

### Mounting a CD-ROM Drive (UNIX Only)

SunOS: **mount -r -t hsfs /dev/sr0 /cdrom**

Solaris: If the CD does not mount automatically, see [page 6](#).

HP-UX 10.X: **mount -r -o ro -t cdrfs /dev/dsk/c0t2d0 /cdrom**

AIX: **mount -o ro -v cdrfs /dev/cd0 /cdrom**

### Installing Site Manager Software

For PCs, enter **<CDROM drive>:\ms\_win\setup.exe** in the Run window.

For UNIX workstations:

1. Enter **cd /cdrom** (**cd /cdrom/release\_1220\_620** if automatically mounted).
2. Enter the command to install Site Manager software:  
**./install.sh** for SPARCstations  
**./install.sh** for IBM workstations  
**./"INSTALL.SH;1"** for HP 9000 workstations
3. Add the environment variables to each user's **.cshrc** or **.profile** file.
4. Log off and log on again as the user.
5. Enter **wfchkinst** and **wfchkenv** to verify the installation.

## Loading Router Software onto Your Workstation

For PCs, copy the router files in the *rtr\_1220* directory to a destination folder on your PC.

For UNIX workstations:

- On a SPARCstation, enter: **./copy.sh**
- On an IBM workstation, enter: **./copy.sh**
- On an HP 9000 workstation, enter: **./COPY.SH;1**

## Unmounting a CD-ROM Drive (UNIX Only)

```
cd /  
umount /cdrom  
(eject cdrom if automatically mounted)
```

## Mounting a CD-ROM Drive (UNIX Only)

---

The command for mounting the CD-ROM drive varies depending on the requirements of the system. If the suggested mount command fails, consult your operating system documentation.

To mount a CD-ROM drive:

- 1. Insert the appropriate CD and drive tray into the CD-ROM drive.**
- 2. Log in as root by entering:**  
**su**
- 3. At the password prompt, enter your root password.**
- 4. If a subdirectory or file system does not already exist for the CD, create one by entering the following command:**
  - For SunOS or HP-UX, enter:  
**mkdir /cdrom**
  - For AIX, enter:  
**crfs -v cdrfs -p ro -d'cd0' -m /cdrom -A'no' -t'no'**

## 5. Mount the CD-ROM drive:

- For SunOS, enter:  
**mount -r -t hfs /dev/*sr0* /cdrom**  
*sr0* is the CD-ROM drive's address.
- For Solaris, the Volume Manager automatically mounts the CD onto */cdrom/release\_1220\_620*. If the CD does not automatically mount, stop the *vold* daemon and manually mount the drive.
  - a. **Display the daemon's process ID by entering:**  
**ps -ef | grep vold**
  - b. **If there is a process running for the *vold* daemon, enter:**  
**kill <process\_id>**
  - c. **If a subdirectory does not already exist for the CD, create one by entering:**  
**mkdir /cdrom**
  - d. **Mount the CD-ROM drive by entering:**  
**mount -F hfs -o ro /dev/dsk/*c0t6d0s0* /cdrom**  
*c0t6d0s0* is the CD-ROM drive's address.

- For HP-UX 10.X, enter:  
**mount -r -o ro -t cdrfs /dev/dsk/c0t2d0 /cdrom**  
*c0t2d0* is the CD-ROM drive's address.
- For AIX, enter:  
**mount -o ro -v cdrfs /dev/cd0 /cdrom**  
*cd0* is the CD-ROM drive's address.

## Installing Site Manager

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This section describes how to install Site Manager from the CD in the following sections:

- [Supported Workstations](#)
- [Installing Site Manager on a PC](#)
- [Installing Site Manager on a UNIX Workstation](#)

For the system requirements and full installation instructions before proceeding, see *Quick-Starting Routers*.

If you are upgrading Site Manager, see the upgrade section of the *BayRS Version 12.20 Document Change Notice* before proceeding.

If you are installing a new version of Site Manager, be aware that the installation will overwrite the `c:\windows\siteman.ini` file. If you plan to run multiple versions of Site Manager, copy the existing `siteman.ini` file under a new name, then edit the newly installed `siteman.ini` file with the information from the previous versions.

## Supported Workstations

---

Site Manager software runs on the following workstations:

- 486 PC (Pentium PC recommended)
- Solaris 2.5
- Sun UltraSPARC 30
- Sun SPARCstation 5, 10, or 20
- HP 9000 workstation Series 700 or 800
- IBM RS/6000 340, 370 workstation
- IBM PowerPC 601- or 604-based system

See *Quick-Starting Routers* for other system requirements.

## Installing Site Manager on a PC

---

To install Site Manager software on a PC running Windows® 95 or Windows NT®:

- 1. If you are reinstalling Site Manager, delete existing Site Manager state files, which are created for all Site Manager tools you use. In the Run window, enter:**

```
del c:\wfl*.sts
```

- 2. Insert the Site Manager CD into your CD-ROM drive.**
- 3. Access the Run window by choosing Run from the Start menu.**
- 4. Type the CD-ROM drive, path, and executable file:**

```
<CDROM drive>:\ms_win\setup.exe
```

Drive D is usually the CD-ROM drive.

Alternatively, you can use the Browse button, Windows Explorer, or My Computer to select the CD-ROM drive and the path to the *ms\_win* directory and then click on *setup.exe*.

- 5. Click on OK.**

For Windows NT only, if the TCP/IP services file is not located in the default directory (*C:\WINNT\system32\drivers\etc*), the installation script prompts you for the directory.

The installation script then prompts you for the directory in which you want to install Site Manager.

- 6. Enter the name of the directory where you want to install Site Manager, or accept the default, `c:\w\sf`.**

The Site Manager files are installed in the chosen directory. When the installation is finished, the following prompt appears:

```
Create Windows program group/items automatically?
```

- 7. To add Site Manager as a selection on the Start > Programs menu, click on Yes.**

This option allows you to start Site Manager after installation by choosing Start > Programs > Site Manager > PC\_Site Manager.

The following prompt appears:

```
Do you want to start Site Manager now?
```

- 8. Click on Yes to start Site Manager.**

The Router Connection Options window opens.

- 9. Enter the IP address of the initial router interface and the router's SNMP community that you created during the Quick-Start procedure.**

- 10. Click on OK to display the main Site Manager window.**

After you successfully install and start Site Manager, see *Configuring and Managing Routers with Site Manager* for more information.

## Installing Site Manager on a UNIX Workstation

---

To install Site Manager software:

1. **Review system requirements.**
2. **If you are reinstalling Site Manager, delete existing Site Manager state files, which are created for all Site Manager tools you use.**

To delete the Site Manager state files:

- a. **Log on as the root user by entering:**

```
su
```

- b. **Enter the following command from the home directory of every user account:**

```
rm <home_directory>/l.wf*
```

3. **Mount the CD-ROM drive.**

See [“Mounting a CD-ROM Drive \(UNIX Only\)”](#) on [page 5](#) for instructions.

4. **Edit the workstation’s */etc/services* file to add the following lines at the end of the file:**

```
snmp 161/udp
```

```
snmp-trap 162/udp
```

**5. As root, change to the CD-ROM mountpoint.**

```
cd /cdrom
```

If you use Solaris and are running the *vold* daemon, enter:

```
cd /cdrom/release_1220_620
```

**6. Run the script to load Site Manager software by entering the following command:**

- For Sun SPARCstations, enter:

```
./install.sh
```

- For IBM workstations, enter:

```
./install.sh
```

- For HP 9000 workstations, enter:

```
./"INSTALL.SH;1"
```

When the installation is finished, your workstation displays the message:

```
Site Manager Installation Complete.
```

Additional messages about your SPARCstation environment may appear.

**7. For new installations, create the *builder* directory by entering:**

```
mkdir $HOME/.builder_dir
```

**8. For each user, edit the shell environment (see *Quick-Starting Routers*).**

For example, on a SPARCstation with the C shell (*csh*), add the following lines to *.cshrc*:

```
set path = ($path /usr/wf/bin)
setenv WF_SMPATH /usr/wf
setenv SMTERM X
setenv SM_CONFIGS <config file directory>
setenv BUILDER_DIR $HOME/.builder_dir
```

**9. Log off and log on again as the user.**

**10. Verify the Site Manager installation by entering:**

**wfchkinst**

**11. Verify the Site Manager environment for each user account by entering:**

**wfchkenv**

**12. Start Site Manager by entering:**

**wfsm -a <router\_IP\_address> &**

<router\_IP\_address> is the IP address of the router's initial interface.

## Installing BayRS

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If you need to upgrade, modify, or reinstall router software, read the tasks in the following sections:

- [Loading Router Software onto a PC](#)
- [Loading Router Software onto a UNIX Workstation](#)
- [Continuing the Router Software Installation](#)

Before you begin the installation, complete the preinstallation tasks for your system. For upgrades, see the upgrade section of the *BayRS Version 12.20 Document Change Notice*. For general information about the Image Builder and transferring router images to the router, see *Configuring and Managing Routers with Site Manager*.

## Loading Router Software onto a PC

---

To load router software onto a PC running Windows 95 or Windows NT:

- 1. Insert the CD into the CD-ROM drive.**
- 2. Choose Start > Programs > Windows Explorer.**  
The Windows Explorer window opens.
- 3. In the Windows Explorer window, click on the CD-ROM drive icon (for example, drive D).**

- 4. Click on the *rtr\_xxx* directory, where *xxx* is the router software version.**

For example, for BayRS Version 12.20, click on the *rtr\_1220* directory.

You see a list of directories specific to the version of router software you are using, such as *an*, *asn*, *bn*, and so forth.

- 5. Click on the directory for your router platform.**
- 6. Copy the router files in the platform directory to a destination folder on your workstation.**

For example, one method you can use to copy the router files to a destination folder is as follows:

- a. Hold down the Shift key and click on each file you want to copy. The files are highlighted.**
- b. Choose Edit > Copy.**
- c. Click on the folder to which you want to copy the router files.**
- d. Choose Edit > Paste.**

The system copies the router files you selected to the destination folder on your PC.

## Loading Router Software onto a UNIX Workstation

---

To load router software onto a UNIX workstation:

1. **Insert the CD into the CD-ROM drive.**
2. **Mount the CD-ROM drive. See “Mounting a CD-ROM Drive (UNIX Only)” on [page 5](#) for instructions.**
3. **Change directories by entering:**  
`cd /cdrom`
4. **Run the script to load the router software using one of the following commands:**
  - On a SPARCstation, enter:  
`./copy.sh`
  - On an IBM workstation, enter:  
`./copy.sh`
  - On an HP 9000 workstation, enter:  
`./COPY.SH;1`

During the load procedure, you must specify the following:

- The directory where you want to load the router software, for example, */usr/wf/rtr\_1220*
- The router platform

The system then loads the software for the platform you selected.

## Continuing the Router Software Installation

---

If you are installing BayRS as part of an upgrade, see *Upgrading Routers from Version 7-11.xx to Version 12.00* to complete the following upgrade tasks:

- 1. Load the router software into the Image Builder.**
  - a. Go to the directory where the router software image files reside.**
  - b. Double-click on the directory that contains the router software image you want to load.**
  - c. Choose the file name of the router software image that you want to load, for example, *bn.exe*.**
  - d. Click on OK.**

After you choose the directory and file name of the image, the Image Builder window lists the current components of the router software image.

## **2. Modify the router software image.**

You modify the software image to:

- Remove any nonessential files (protocols) that you will not use to save space on the flash card.
- Add new components (protocols) as you need them.

See *Configuring and Managing Routers with Site Manager* for detailed instructions on removing and adding software components to a router software image.

## **3. Save the router software image by choosing File > Save.**

Bay Networks<sup>®</sup> recommends that you save modified software images in a different directory, and that you use different image names for each router on your network.

## **4. Prepare the router to receive the new software image.**

Before you can transfer a customized image to the router you want to upgrade, you must first prepare the router's flash card or flash SIMM to receive a customized image and a configuration file.

## **5. Transfer the customized image and router files to the router.**

You can use the Router Files Manager to transfer a customized software image and associated router files to the router you want to upgrade using the Trivial File Transfer Protocol (TFTP) command.

## **6. Upgrade and verify PROMs on the router.**

The router's programmable read-only memory (PROM) contains software images for its bootstrap and diagnostic code. Bootstrap and diagnostic PROM code is included on the BayRS Version 12.20 release media.

Bay Networks strongly recommends that you upgrade PROMs in a router to implement the latest software or hardware features before booting with a new version of router software.

## **7. Boot the router with the customized image.**

After you successfully transfer the customized image to the router and upgrade the PROMs, you can boot the router with the customized image. The first time you successfully boot an ASN™ router from a Version 12.20 image, the boot time may be longer. After that, you can shorten the boot interval by changing the default Netboot settings.

## **8. Upgrade the existing configuration file.**

You need to upgrade your existing configuration files to support the new Version 12.20 features. Optionally, you can create a new Version 12.20 configuration file to replace your existing configuration file for the router.

You upgrade your existing configuration file using the Configuration Manager by booting the router with the current configuration file (*config*) and saving it in dynamic mode. This updates the configuration file's version stamp to match Version 12.20 router software.

See the *BayRS Version 12.20 Document Change Notice* and *Upgrading Routers from Version 7-11.xx to Version 12.00* for the remaining upgrade tasks.

## Unmounting the CD-ROM Drive (UNIX Only)

---

To unmount a CD-ROM drive, enter:

```
cd /
```

```
umount /cdrom
```

For CDs automatically mounted on a CD-ROM drive, enter:

```
cd /
```

```
eject cdrom
```