Patch Management User Guide for HP-UX 11.x Systems

United States

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Typographic Conventions

We use the following typographical conventions.

`audit(5)`	HP-UX manpage. *audit* is the name and *5* is the section in the *HP-UX Reference*. On the web and on the Instant Information DVD, it may be a hot link to the manpage itself. From the HP-UX command line, you can enter " **man audit** " or " **man 5 audit** " to view the manpage. See `man(1)`.
Book Title	Title of a book. On the web and on the Instant Information DVD, it may be a hot link to the book itself.
Command	Command name or qualified command phrase.
`ComputerOut`	Text displayed by the computer.
Emphasis	Text that is emphasized.
Emphasis	Text that is strongly emphasized.
KeyCap	Name of a keyboard key. Note that **Return** and **Enter** both refer to the same key.
Term	Defined use of an important word or phrase.
`UserInput`	Commands and other text that you type.
Variable	Name of a variable that you may replace in a command or function or information in a display that represents several possible values.
[ ]	Contents are optional in formats and command descriptions. If the contents are a list separated by |, you must choose one of the items.
{ }	Contents are required in formats and command descriptions. If the contents are a list separated by |, you must choose one of the items.
...	Preceding element may be repeated an arbitrary number of times.
|	Separates items in a list of choices.

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Chapter 1.   About This Guide

This guide describes a simplified approach to patching and patch management of HP-UX systems using the following release software:

- HP-UX 11.0 (B.11.00)

- HP-UX 11i v1 (B.11.11)

- HP-UX 11i v1.6 (B.11.22)

- HP-UX 11i v2 (B.11.23)

This guide does not apply to systems running HP-UX 11i v1.5 (B.11.20).

Introductory Level Patching and Patch Management

This guide presents introductory level information concerning patches and patch management for HP-UX. In this context, HP places emphasis on providing solutions that you can *quickly* understand and implement. At a novice level this guide is easy to use, but at an expert patching level you may find it less efficient.

Patching is a complex subject and as such should receive considerable attention from system administrators with patch-related responsibilities. HP understands, however, that this is not always possible, so we have targeted this simplified guide to less experienced system administrators who must acquire and use basic patch management skills in a short period of time.

Key Features

This document does the following:

- Helps less experienced system administrators acquire a minimal set of key patch-related skills and knowledge in a short period of time. It allows you to perform basic HP-UX patch management tasks.

- Aids system administrators in developing a basic patch management strategy.

- Includes Chapter 3: " *Quick Start Guide for Patching HP-UX Systems* " [6] for system administrators with immediate patching needs.

This document does not do the following:

- Function as an all-encompassing source of information for patch management.

- Guide system administrators in determining the *best* or *most efficient* patch management strategy for their environment. Please note that some recommendations in this guide may differ from recommendations we make in other guides that are targeted at more experienced system administrators.

Patching Resources

- For in-depth information on patching, go to *HP-UX Patch Management: A guide to patching HP-UX 11.X systems* on the HP documentation web site: http://docs.hp.com.

- Your main resource to get patches is the IT Resource Center (ITRC): http://itrc.hp.com.

- For more information on the ITRC, go to Chapter 5: " *Using the IT Resource Center* " [21].

- For additional sources of information, go to Appendix A: " *Other Resources* " [42].

Advanced Topic

In this guide, we provide Advanced Topic sections that introduce you to more in-depth levels of discussion and procedures. We recommend that you read them as they may contain information that could be useful and relevant to your patching environment, but they are not necessary to using the main body of procedures.

What's in This Guide

This guide includes the following topics:

- Chapter 2: " *What Are Patches and Patch Management?* " [3]

- Chapter 3: " *Quick Start Guide for Patching HP-UX Systems* " [6]

- Chapter 4: " *What Are Standard HP-UX Patch Bundles?* " [17]

- Chapter 5: " *Using the IT Resource Center* " [21]

- Chapter 6: " *Using FTP as an Alternate Patch Source* " [32]

- Appendix A: " *Other Resources* " [42]

Chapter 2.   What Are Patches and Patch Management?

Overview

Patches are software. HP releases patches to deliver incremental updates to your system. Patches are best known for delivering defect fixes, but also deliver new functionality and features, enable new hardware, and update firmware. You can use HP-UX patches to update HP-UX software without having to completely reinstall your system application.

Key Features

Patch management involves any of the following:

- Selecting patches

- Applying patches

- Updating previously applied patches with more current patches

- Verifying patches

- Testing patches

- Listing patches already applied to existing software

- Copying patches

- Maintaining repositories, or *depots,* of patches for easy selection

- Committing applied patches

- Removing, or *rolling back,* applied patches

Note

Patch management is a task that you can perform in many different ways with no one process being the correct way. You must base decisions regarding patch management on the specifics of your individual situation. Even then, there may be more than one reasonable path.

Patch Strategies

In this guide, we address two basic patch management strategies. Most customers use a combination of both strategies:

- Proactive: Patching regularly to avoid potential problems

- Reactive: Patching after a problem occurs

No matter which strategy or combination of strategies you adopt, you must keep in mind that *any* change to a system, including change incurred during the process of patch management, brings with it the possibility of introducing new problems to your system. This guide discusses some steps that you can take to mitigate the risk associated with patching your system.

Why Is Patch Management Important to Me?

At this point, you may wonder why you should be concerned with patch management. HP recommends that you address patch management, so that you can reduce the risk of problems such as system hangs, panics, memory leaks, data corruption, application failures, and security breaches.

If any of the following items are important to you, then you need to be concerned with patch management.

- Having proper system functionality and performance

- Maintaining system security

- Maintaining system reliability and availability

- Obtaining the latest system enhancements and functionality

- Benefiting from solutions to problems that others have encountered before you encounter them

- Potentially limiting the number of patches to install if you encounter a problem

- Potentially limiting the amount of time to troubleshoot a problem if you encounter one

How Do I Get Patches?

HP provides numerous ways for you to acquire patches, ensuring that people with different goals and different levels of expertise can find a patch source to fit their needs. You can obtain patches individually or in groups of related patches known as patch bundles. In this guide, we discuss the following HP-UX patch sources:

- IT Resource Center (ITRC) web site:

  http://itrc.hp.com

- Software Depot web site:

  http://software.hp.com

- HP FTP Servers

  ftp://ftp.itrc.hp.com

  ftp://singapore-ffs.external.hp.com

- Operating Environment (OE) and Support Plus CDs and DVDs, depending on your release software

Where to Start?

If you have immediate patching needs, we recommend you use Chapter 3: " *Quick Start Guide for Patching HP-UX Systems* " [6].

If you want to learn about your patching options, then we recommend you read all chapters in this guide and then choose the resource that best meets your needs.

Chapter 3. Quick Start Guide for Patching HP-UX Systems

This Quick Start Guide for Patching HP-UX Systems is for system administrators who have immediate patching needs. It is a limited solution to general patching issues. We trade detail for timesavings. If you find the information in this section to be insufficient for your needs, review the rest of this guide and other patch-related resources in Appendix A: " *Other Resources* " [42].

Note

All software and tools detailed in this Quick Start Guide are free of charge. You require root user privileges to complete these procedures.

Overview

This Quick Start Guide will help you to perform basic patch management tasks without complex detail. This chapter contains the following sections to guide you through patching your system:

- " Before You Begin " [7]

  Before you acquire and install the patch bundles or individual patches, you should consider some patch-related questions. See " Should I Use Standard HP-UX Patch Bundles? " [7] and " Should I Use Individual Patches? " [7].

- " Acquiring and Installing Standard HP-UX Patch Bundles " [8]

  When initially patching a system, it is important to establish a stable baseline of patches. This section shows you how to acquire and install the Quality Pack (QPK) patch bundle. This provides an easy and reliable way to update existing patches. The QPK patch bundle is designed for this purpose. The bundle has all stable defect-fix patches for core HP-UX, graphics, and networking drivers.

  The standard HP-UX patch bundles also include the Hardware Enablement (HWE) bundle, which is required for new systems and add-on hardware. For example, if you add hardware to your system or anticipate adding hardware, such as a new IO card, you need to install the latest HWE bundle.

- " Acquiring and Installing Individual Patches " [11]

  In addition to the standard HP-UX patch bundles, you may occasionally need to install individual patches. For example, you may want more recent patches found on HP's IT Resource Center (ITRC) web site than those contained in a standard HP-UX patch bundle on media. You may also want the latest security patches. See the following web site:

  http://itrc.hp.com

Before You Begin

The following sections contain questions that are helpful to review before you begin the quick start procedures.

Should I Use Standard HP-UX Patch Bundles?

When you consider acquiring and installing standard HP-UX patch bundles, you should consider these questions.

- Is this a new system?

- Do you want to establish a baseline of patches?

- Do you want to update the existing baseline of patches?

- Are you adding new hardware to the system?

If you answered yes to any of these questions, then you should continue with " Acquiring and Installing Standard HP-UX Patch Bundles " [8].

Should I Use Individual Patches?

When you consider acquiring and installing individual patches, you should consider this question: Do you need to add individual patches to the system?

If you answer yes to this question, then you should continue with " Acquiring and Installing Individual Patches " [11].

Note

We recommend that you review the release notes for the product that you want to install.

Standard HP-UX Patch Bundles

For the HP-UX 11.0 and HP-UX 11i releases, the following table shows the bundlenames.

Table 3.1. Standard HP-UX Patch Bundlenames

Bundle Name	HP-UX 11.0 (B.11.00)	HP-UX 11i v1 (B.11.11)	HP-UX 11i v1.6 (B.11.22)	HP-UX 11i v2 (B.11.23)
Quality Pack	QPK1100	GOLDAPPS11i GOLDBASE11i	N/A	QPKAPPS QPKBASE
Hardware Enablement	HWE1100	HWEnable11i	N/A	HWEnable11i

Bundle Name	HP-UX 11.0 (B.11.00)	HP-UX 11i v1 (B.11.11)	HP-UX 11i v1.6 (B.11.22)	HP-UX 11i v2 (B.11.23)
Required Patch Bundle	N/A	`BUNDLE11i`	N/A	N/A
Maintenance Pack	N/A	N/A	`MAINTPACK`	N/A

Note

Standard HP-UX patch bundles are cumulative, meaning that you can install the latest version of the bundle. The standard HP-UX patch bundles, for example, the QPK and HWE bundles, may have overlapping content. This does not affect your patching.

Acquiring and Installing Standard HP-UX Patch Bundles

HP's standard patch bundles provide recommended sets of HP-UX operating system patches assembled into patch bundles, which we recommend you use for proactive patching. This section of the Quick Start Guide details how to acquire and install the Quality Pack (QPK) patch bundle and Hardware Enablement (HWE) bundle.

For example, if you have a new system and need to establish a patch baseline, or want to update the existing patch base, then you would install the QPK patch bundle. If you are adding new hardware to your system, then you would install the HWE bundle. If you are unsure of which patch bundles or patches to install on your system, installing both the QPK and HWE bundles represents an excellent starting point for your patch management program.

Acquiring the Bundles

To obtain the bundles from the web, perform the following steps for both the QPK patch bundle and the HWE bundle.

1. Log in to the target system.

2. To determine the operating system release, enter the following command and record the information: **uname -r**

   You will use this information in step 7.

3. Make sure that you are logged in as a user with write permissions to the download directory that you plan to use.

   These instructions assume you are using the `/tmp` directory.

4. Log in to the ITRC at http://itrc.hp.com.

   Please note that you need to log in to the appropriate site (**americas** or **european**). For detailed steps on how to log in to the ITRC, see Chapter 5: " *Using the IT Resource Center* " [21].

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5. Select **maintenance and support** and then select **standard patch bundles - find patch bundles**.

6. Select **HP-UX patch bundles**.

7. Select the most recent **release** for your operating system (by release date) and then the **bundle** link.

   We highly recommend you download the following bundles. They are cumulative so select the latest:

   ● Quality Pack patch bundle

      For defect fixes, install this bundle.

   ● Hardware Enablement bundle

      If you are adding new hardware, then install this bundle.

   The bundle's main page displays:

   ● Each patch contained in the bundle is listed.

      If the bundle contains patches with warnings, which are notifications of known problems, they are listed near the top of the page.

   ● All patch identifications (IDs) are linked to the patch database on the ITRC, and provide detailed patch information.

   ● Access the readme file for the bundle using the **bundle readme** link. Review the readme for critical installation information.

8. Ensure all items are checked. Select **add to selected patch list**.

   If you see additional patches, the ITRC selected them to replace patches with warnings.

9. Review your choices to ensure all items are checked. Select **download selected** .

   The **download patches** page displays.

10. Under the heading **download items in one operation**, select a download server and a format option (we recommend **gzip package**). Only select a zip package if you are certain that your HP-UX system can unpack a `.zip` file.

11. Select **download**. Make the appropriate selections (based on the browser you are using) to save the selected bundle to the `/tmp/tmpdepot` directory on the target system.

12. Record the name of the file being downloaded.

    In the following section, we refer to it as *patches.xxx* .

Installing the Bundles

To install the downloaded bundle, repeat the following steps for each bundle you downloaded.

1. Log in to the target system.

2. To unpack the downloaded file, *patches.xxx* , use one of these commands:

   ● If the downloaded file was *patches*.tgz:

   gunzip -c patches.tgz | tar xvf -

   ● If the downloaded file was *patches*.tar: **tar -xfv patches.tar**

   ● If the downloaded file was *patches*.zip: **unzip patches.zip**

   You must have an installed application that can unpack a .zip file. Not all HP-UX systems have such an application.

3. As root, run the create_depot_hp-ux_11 script.

4. To verify the download, use the command: **swverify -d * @ /tmp/*tmpdepot*/depot**

   You will see:

   "* Verification succeeded."

5. To find the bundlenames, use the command: **swlist -d @ /tmp/*tmpdepot*/depot**

6. Record all bundlenames.

   The bundlename is the first word of each line under the **Bundle(s)** heading.

7. This step is critical. When you install the QPK or HWE bundle, the system reboots automatically. At this point, you need to follow your company's policy regarding a system reboot.

8. This step is also critical. Before you install the bundle, back up your system.

9. To install the bundles, use the following command:

   **swinstall -s /tmp/*tmpdepot*/depot -x autoreboot=true \\
   -x patch_match_target=true**

   During the installation, the system prints progress details to the screen.

10. Monitor the screen for error messages.

    The system reboots automatically as part of the installation process.

11. To verify that the installation was successful, use the following commands:

    ● Repeat the **swlist** command for each bundlename you recorded in step 6:

    swlist -l bundle *bundlename*

    Ensure that the bundle is shown in the output.

    ● Repeat the **swverify** command for each bundlename you recorded in step 6:

swverify *bundlename*

❍ This command may not always complete in a short period of time.

❍ If the verification is successful, the last few lines of output contain the line

   `"* Verification succeeded."`

❍ If the verification was not successful, view the log file `/var/adm/sw/swagent.log` for additional information related to the **swverify** failure. If this is not sufficient to resolve the problem, consult more advanced resources in Appendix A: " *Other Resources* " [42].

● View the `swagent` log file, located at `/var/adm/sw/swagent.log`. This log includes information related to the installation.

❍ Find the section pertaining to the installation just performed (located near the end of the file if you check it immediately after the install). Review this section, and ensure that there were no errors (`"ERROR"`).

❍ If you find errors, consult more advanced resources in Appendix A: " *Other Resources* " [42] to resolve the problem.

Acquiring and Installing Individual Patches

At times, you may find it necessary to acquire and install one or more individual patches based on known patch IDs. For example, you may read an HP-UX security bulletin in which HP recommends you install specific patches. Another possibility is that you are installing software that requires specific patches for the software to function properly. Customers also frequently acquire and install individual patches for reactive patching. Whichever the case, you can use the Patch Database on the ITRC web site to quickly and simply acquire specified patches as well as their dependencies. If you are unfamiliar with patches with dependencies, see the *HP-UX Patch Management: A guide to patching HP-UX 11.X systems* on http://docs.hp.com.

Note

HP-UX patch IDs follow this format: `PH`*XX*`_#####` , where `PH` is patch HP-UX, *XX* is replaced with one of the following values, and `#####` is replaced with a number.

`CO` = command, `KL` = kernel, `NE` = networking, and `SS` = subsystem

Acquiring the Patches

To acquire the patches from the web, perform the following steps:

1. Log in to the target system.

2. To determine the operating system release, enter the following command and record the information: **uname -r**

   You will use this information in step 7.

3. Make sure that you are logged in as a user with write permissions to the download directory that you plan to use.

   These instructions assume you are using the `/tmp/somePatchDir` directory.

4. Log in to the ITRC at http://itrc.hp.com.

   Please note that you need to log in to the appropriate site (**americas** or **european**). For detailed steps on how to log in to the ITRC, see Chapter 5: " *Using the IT Resource Center* " [21].

5. Select **maintenance and support**, then **find individual patches and firmware**.

6. Select **HP-UX** to open the **search for patches** web page.

7. Enter the appropriate hardware and OS information.

   For the appropriate hardware, use **700** for workstations and **800** for servers. For the OS, use the information you recorded in step 2.

8. From the drop-down list, select **Search by Patch IDs**.

9. In the text box next to the drop-down list, enter the patch ID for the patch you want to download. Select **search**.

   If it exists, the selected patch displays in the **search results** web page. Patches (possibly differing from the patch you requested) display in one to three columns.

10. Review the patches in the table.

    ● **specified:** Shows the patch ID you requested.

    ● **recommended:** Shows the patch that HP recommends for download/install based on the patch you requested (it may be different than the patch you specified). If you see a patch in this column, it meets all requirements of the patch you requested. HP recommends that you download and install this patch.

    ● **most recent:** Shows the most recent version of the requested patch.

11. The following icons may display along with the patch ID.

    See Table 5.1: " Navigating the Search Results Table " [23] for a description of all table icons.

    ● The patch has special installation instructions. You should always read them.

    ● The patch has a warning associated with it. You should review the warning text to determine if it applies to your system.

⚠

12. To review details about a patch, select the **patch ID** to open the **patch details** page.

   ● At a minimum, you should review the information provided in the following fields:

   ● **Special Installation Instructions:** Read this section to determine if the chosen patch has additional steps that you must perform during installation.

   ● **Warning:** This section will only exist if the patch has a warning associated with it. Carefully read the information to determine how or if the patch's problems will impact your system. If the warning does impact your system, you must decide if the problem appears severe enough to avoid installing the patch. If this is the case, choose an alternate patch if one is available.

   ● **Patch Dependencies, Hardware Dependencies, Other Dependencies:** Note the patch IDs, as you must later verify that the patches are included on the list of patches that you will download. For more information, see Chapter 5: " *Using the IT Resource Center* " [21].

   ● When you finish viewing this page, select the **search results** link to return to the **search results** web page.

13. On the **search results** page, place a check mark next to the patch ID of the patch to download.

Tip

> If the **recommended** column exists, you should select the patch in that column unless you have a valid reason to do otherwise.

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14. To add the checked patch to the list of patches to download, select **add to selected patch list**.

   ● If the patch you chose has a warning associated with it, the **patch warning** page will appear.

   ● If this happens, verify which patch you are downloading and select **continue**.

   ● The **selected patch list** page displays.

15. The Patch Database may automatically add some patches to the download list to satisfy dependencies. You should download these along with the patches you explicitly selected.

16. To add additional patches to the patch list, select **search results** and repeat steps 7 through 15.

17. After acquiring all the patches you need, select **download selected** to open the **download patches** page.

18. Under the heading **download items in one operation**, select a download server and a format option (we recommend **gzip package**). Only select a zip package if you are certain that your HP-UX system can unpack a `.zip` file.

19. Select **download**. Make the appropriate selections (based on the browser you are using) to save the selected bundle to the `/tmp/`*`somePatchDir`* directory on the target system.

20. Record the name of the file being downloaded.

    In the following section, we refer to it as *`patches.xxx`* .

Installing the Patches

To install the downloaded patches, perform the following steps:

1. Log in to the target system.

2. To unpack the downloaded file, *`patches.xxx`* , use one of these commands:

    ● If the downloaded file was *`patches`*`.tgz`:

    `gunzip -c patches.tgz | tar xvf -`

    ● If the downloaded file was *`patches`*`.tar`: **`tar -xfv patches.tar`**

    ● If the downloaded file was *`patches`*`.zip`: **`unzip patches.zip`**

    You must have an installed application that can unpack a `.zip` file. Not all HP-UX systems have such an application.

3. As root, run the `create_depot_hp-ux_11` script.

    The patches are now in a depot in the *`somePatchDir`* directory.

4. To verify the download, use the command:

    `swverify -d \* @ /tmp/`*`somePatchDir`*`/depot`

    You will see:

    `"* Verification succeeded."`

5. This step is critical. When you install the patches, the system may reboot automatically.

    At this point, you need to follow your company's policy regarding a system reboot.

6. This step is also critical. Before you install the patch(es), back up your system.

7. You can remove the following files to clean up your directory and save space:

    ● patch files, for example, of the form `PH`*`XX`*`_#####`

- `.text` files

- `.depot` files

- `depot.psf` file

- downloaded `.tgz,` `.tar,` or `.zip` file

- `create_depot_hp-ux_11` file

- readme file

8. To install the patches, use the following **swinstall** command:

    **swinstall -s /tmp/*somePatchDir*/depot -x autoreboot=true \
    -x patch_match_target=true**

    During the installation, the system prints progress details to the screen.

9. Monitor the screen for error messages.

    The system will reboot automatically if any of the patches you are installing require it.

    ### Note

    Be patient. The patch installation may not proceed quickly.

    ---

10. To verify that the installation was successful:

    - Enter the command: **swlist –l product**

      Ensure that the installed patches are shown in the output.

    - Execute the **swverify** command on each of the new patches: **swverify *patch_id***

      This command may not always complete in a short period of time.

      If the verification is successful, the last few lines of output contain the line

      `"* Verification succeeded."`

      If the verification was not successful, view the log file `/var/adm/sw/swagent.log` for additional information related to the **swverify** failure. If this is not sufficient to resolve the problem, consult more advanced resources in Appendix A: " *Other Resources* " [42].

    - View the `swagent` log file, located at `/var/adm/sw/swagent.log`.

      This log includes information related to the installation.

❍ Find the section pertaining to the installation just performed (located near the end of the file if you check it immediately after the install). Review this section, and ensure that there were no errors (`"ERROR"`).

❍ If you find errors, consult more advanced resources Appendix A: " *Other Resources* " [42] to resolve the problem.

Chapter 4. What Are Standard HP-UX Patch Bundles?

Overview

Patches can be grouped together into collections known as *patch bundles* or simply *bundles*, and HP provides a number of pre-packaged *standard HP-UX patch bundles* that we intend you to install as a unit. In this chapter, we show you how to obtain standard HP-UX patch bundles. Table 4.1: " Standard HP-UX Patch Bundlenames " [18] shows the QPK and other standard patch bundles. We rigorously test these bundles to assure a high level of reliability and update many of them periodically. Using standard patch bundles can be a less risk-prone and a more efficient way to patch a system as compared to installing patches individually.

We recommend you use standard HP-UX patch bundles for proactive patching. You should use them whether you have a support contract or not.

Note

Please note the following change: For the HP-UX 11.0 (B.11.00) and HP-UX 11i v1 (B.11.11) releases, HP delivers standard HP-UX patch bundles and diagnostic tools on Support Plus media, ITRC, Software Depot, and FTP servers. For the HP-UX 11i v2 (B.11.23) release, HP now delivers standard HP-UX patch bundles on OE media, ITRC, Software Depot, and FTP servers. See Table 4.2: " Standard HP-UX Patch Bundle Use and Release Dates " [19].

Key Features

Standard HP-UX patch bundles can be a very useful part of a proactive patch management strategy:

● Standard HP-UX patch bundles save you time when patching and reduce the risk of errors.

● HP tests all patches in the bundle as a group.

● Standard HP-UX patch bundles provide an easy way to standardize the level of patches on your systems.

● Standard HP-UX patch bundles provide a solution commonly used by many other customers.

● HP performs all dependency analysis to ensure standard HP-UX patch bundles contain all patches necessary to meet dependencies.

● Installation of a bundle never requires more than one system reboot unlike installing multiple patches individually, which may require a reboot for each patch.

● You can use bundles to create standard patch depots for easy deployment to multiple systems.

● Standard HP-UX patch bundles provide a convenient way to track patches on your system.

● ITRC provides support for standard HP-UX patch bundles.

Standard HP-UX Patch Bundles

For the HP-UX 11.0 and HP-UX 11i releases, the following table shows the individual bundlenames.

Table 4.1.   Standard HP-UX Patch Bundlenames

Bundle Name	HP-UX 11.0 (B.11.00)	HP-UX 11i v1 (B.11.11)	HP-UX 11i v1.6 (B.11.22)	HP-UX 11i v2 (B.11.23)
Quality Pack	QPK1100	GOLDAPPS11i GOLDBASE11i	N/A	QPKAPPS QPKBASE
Hardware Enablement	HWE1100	HWEnable11i	N/A	HWEnable11i
Required Patch Bundle	N/A	BUNDLE11i	N/A	N/A
Maintenance Pack	N/A	N/A	MAINTPACK	N/A

Note

Standard HP-UX patch bundles are cumulative, meaning that you can install the latest version of the bundle.

The standard HP-UX patch bundles, the QPK and HWE bundles, may have overlapping content. This does not affect your patching.

For the HP-UX 11.0 and HP-UX 11i releases, the following table shows when to use the bundles and also shows the release information.

Table 4.2. Standard HP-UX Patch Bundle Use and Release Dates

Patch Bundle	Description	When to Use?	Update Schedule
Quality Pack (QPK)	Prior to HP-UX 11i v1, as for HP-UX 11.0 (B.11.00), the QPK was a single bundle which included all stable defect-fix patches for core HP-UX, graphics, and key networking drivers. For HP-UX 11i v1 (B.11.11) and HP-UX 11i v2 (B.11.23), the QPK is delivered as two bundles: ● Base Quality Pack patch bundle has the same purpose as the single-bundle QPK described previously. ● Applications Quality Pack patch bundle has all stable, defect-fix patches for the Operating Environment (OE) applications.	● Configure a new system. ● Use every six to twelve months for proactive patching. ● Use to obtain defect fixes.	HP-UX 11.0: Final release March 2004 HP-UX 11i v1: June, December HP-UX 11i v2: March, September
Hardware Enablement (HWE)	HWE provides the minimal set of patches for supporting new and legacy hardware using HP-UX.	● Get a new system. ● Add new hardware to the system.	HP-UX 11.0: Final release March 2004 HP-UX 11i v1: June, December HP-UX 11i v2: March, September
Required Patch Bundle (BUNDLE11i)	The HP-UX 11i v1 Required Patch Bundle consists of patches for HP-UX 11i v1 which are required to install and update the operating system.	● Installed automatically with the appropriate core software.	HP-UX 11i v1: As needed

Patch Bundle	Description	When to Use?	Update Schedule
Maintenance Pack (`MAINTPACK`)	The HP-UX 11i v1.6 (B.11.22) Maintenance Pack includes all stable defect-fix patches for this release of HP-UX. They have been bundled together and tested extensively. There was only one release of the HP-UX 11i v1.6 (B.11.22) Maintenance Pack in June 2003 and this is the only patch bundle that is available for HP-UX 11i v1.6 (B.11.22).	Use to fix defects.	HP-UX 11i v1.6: Single release June 2003

Obtaining Standard HP-UX Patch Bundles

There are a number of different options for you to obtain patch bundles. We present the following three:

- Option 1: ITRC

  Your first option for obtaining standard HP-UX patch bundles should be the ITRC. Access requires you have an ITRC login, which is free. Follow the online instructions to register with the ITRC, or see Chapter 5: " *Using the IT Resource Center* " [21] for more information.

- Option 2: Software Depot

  Another option for obtaining standard HP-UX patch bundles is to directly access HP's Software Depot web site at http://software.hp.com.

- Option 3: FTP Servers

  You can also obtain standard HP-UX patch bundles from HP's FTP servers. See Chapter 6: " *Using FTP as an Alternate Patch Source* " [32] for more information.

Tip

Acquiring and installing standard HP-UX patch bundles is a two-step process. See Chapter 3: " *Quick Start Guide for Patching HP-UX Systems* " [6].

Chapter 5.   Using the IT Resource Center

The IT Resource Center (ITRC) is a web site that you can personalize to provide a wide range of services and support, including support for HP-UX patch management. The ITRC web site is your fastest connection to HP Support and is located at the following web site: http://itrc.hp.com.

In this chapter, we present many of the ITRC's HP-UX patch-related areas. We recommend that you explore the links on the ITRC main page and familiarize yourself with all the ITRC has to offer as we limit our information to topics related to patch management. From the ITRC home page, select **online help** or **introducing the ITRC** for more detailed information.

Many ITRC services require that you obtain a free user account, and some ITRC services require additional authorization such as a certain level of support agreement or online purchase. All ITRC areas discussed in this chapter, however, are available **free of charge**.

Navigating Free Areas

Although free, most ITRC areas require you have a user account. To obtain a user account:

1. Go to the ITRC at http://itrc.hp.com.

2. Choose the **language**.

3. Choose the appropriate site (**americas** or **european**).

4. Select **register now!**

Viewing the Maintenance and Support Web Page

This web page is the starting point for all the topics that we present in this chapter. The following list of ITRC topic headings and links is a subset of the list shown on the **maintenance and support** page.

- `self-solve tools`

  ❍ See " Searching Technical Knowledge Base " [31].

- `patching`

  ❍ See " Finding Individual Patches and Firmware " [22].

  ❍ See " Finding Standard HP-UX Patch Bundles " [29].

  ❍ See " Creating Custom Patch Bundles " [29].

- `downloads/licensing`

  ❍ See " Finding Individual Patches and Firmware " [22].

❍ See " Finding Standard HP-UX Patch Bundles " [29].

● `collaborate`

❍ See " Using ITRC Forums " [30].

● `assessment and warranty`

❍ See " Creating Custom Patch Bundles " [29].

● `notifications`

❍ See " Subscribing to ITRC Driver and Support Alerts/Notifications " [30].

Note

In the following sections, we discuss this subset of ITRC areas. Please note that we present them in order of importance.

Finding Individual Patches and Firmware

The ITRC's Patch Database should be your primary means of searching for patches, getting information about patches, and acquiring patches. The Patch Database is an excellent tool for system administrators employing a reactive patch management strategy. You will find the Patch Database is also an excellent general purpose tool to refresh specific patches with newer versions.

Note

Please note that we only address finding individual patches in this section; we do not address finding firmware.

Key Features

With the Patch Database, you can search for patches using a variety of criteria. Once the search returns the results, you can obtain detailed information, including

● The patch rating.

● The patch that HP recommends, if one exists.

● The most recent patch.

● Does the patch have an associated warning?

- Has the patch been superseded by another patch?

- Does the patch supersede other patches?

- A **patch details** page containing comprehensive information for each patch returned.

See Table 5.1: " Navigating the Search Results Table " [23] for descriptions of the search results.

Accessing the Patch Database and Finding an Individual Patch

1. Log in to the ITRC at http://itrc.hp.com.

   Please note that you need to log in to the appropriate site (**americas** or **european**). For detailed steps on how to log in to the ITRC, see " Navigating Free Areas " [21].

2. Select **maintenance and support**, then select one of the **find individual patches and firmware** links.

   You are now in the Patch Database.

3. Select the **HP-UX** link.

4. To find detailed instructions, select the **How would you like to search?**, **Search Criteria**, and **read our usage guide** links.

5. Enter your search parameters, then select **search**.

   The following figure shows results from a Patch Database search for the patch `PHKL_23183`.

   ## Figure 5.1. Search Results Table

   Patches returned by a search are shown in a **search results** table. The following table shows you how to interpret the information in the **search results** table.

   ## Table 5.1. Navigating the Search Results Table

Term	Description
Column Headings	Select a column heading to get a description of the heading.
Description Column	Provides a terse patch description for the specified patch.

Term	Description
Specified Column	If you search for a specific patch it displays in the **specified** column, which is only shown when a search is done for a specific patch ID.
Recommended Column	If there is an HP recommended patch, it appears in the **recommended** column and may not be the patch you searched for.
Most Recent Column	Shows the latest patch without a warning in the supersession chain.
Patch Row	The patches shown in a given row are the same or related by supersession.
Patch ID Link	Access the **patch details** page associated with a patch by selecting the patch ID. This page contains extensive information about the patch.
HP Rating	The HP rating indicates the quality rating assigned to a patch, where three stars is the highest rating assigned to any patch. The higher the rating, the lower the risk of side-effects and the more suitable the patch is for mission critical environments.
HP Patch Warning	If a patch has a warning associated with it, no stars display. Instead, a yellow, triangular symbol appears: Select the patch ID link to go to the **patch details** page. Read the **Warning** section.
Notes Link	For additional information about icons and information returned with patches.

Term	Description
Table Icons	Icons display along with the patches to provide additional information. critical fix reboot required possible reboot required not available enhancements only special instructions

6. You can choose to download one patch of your choice from each row of patches returned by the search.

   ● Select the checkbox next to the patch ID link.

   ● Select **add to selected patch list** button.

7. We recommend that you check the special installation instructions and check for dependencies for each patch you selected to download.

   ● See " Advanced Topic: Checking for Special Installation Instructions " [26].

   ● See " Advanced Topic: Checking for All Patch Dependencies " [27].

8. For example, in Figure 5.1: " Search Results Table " [23], if you selected `PHKL_28766` for download, you would then see the list shown in following figure.

Figure 5.2. Selected Patch List Table

Advanced Topic: Checking for Special Installation Instructions

There may be extra installation instructions, called **special installation instructions**, that you should follow to successfully install a patch. The following steps show you how to access these special installation instructions.

1. If there is a patch in the **selected patch list** that has the special instructions icon beside it, select the patch ID link to display the **patch details** page for the patch.

2. Read the **Special Installation Instructions** section. You should follow the instructions given here when installing the patch.

3. Select the **selected patch list** link.

4. Repeat these steps for any remaining patches in the **selected patch list** that also have special instructions icons.

Advanced Topic: Checking for All Patch Dependencies

The Patch Database automatically selects patches to meet certain dependencies for patches that have been selected for download. The Patch Database can detect and select patches that are required to meet enforced dependencies, and in most cases this is sufficient. However, if any of the patches selected for download have unenforced (manual) dependencies on other patches, the Patch Database will not identify these.

You are responsible for verifying that all patches necessary to satisfy dependencies have been selected for download. If you do not perform this verification, there is a risk that certain features related to your chosen patches may not attain full functionality upon installation. For additional information about dependencies, see *HP-UX Patch Management: A guide to patching HP-UX 11.X systems*. In this section, we also describe how you determine if these patches are significant for your environment.

When Should You Check for Patches with Dependencies

You should perform the following steps after selecting patches to download; that is, after step 6 in the " Accessing the Patch Database and Finding an Individual Patch " [23]. Repeat these steps for each patch in your **selected patch list**, including any new patches you add as a result of performing these steps.

1. Select a patch ID link in the **selected patch list** to display the **patch details** page for the patch. For example, in Figure 5.3: " Selected Patch List Example " [27], select PHCO_24198.

   Figure 5.3. Selected Patch List Example

these items are for hpux - 800 11.11		
patch / bundle id	size(kb)	description
☑ PHCO_24198 ★★★ created: 2001/08/21 notes: 📄	250	s700_800 11.11 ioscan(1M) patch remove »

2. Read the **Other Dependencies** and **Special Installation Instructions** sections of the **patch details** page. The **Other Dependencies** section, and occasionally the **Special Installation Instructions** section, may list additional patches or products that may be needed to obtain full functionality of the patch selected in step 1.

   ● If there are any such patches listed, determine if any are needed for your specific situation. If any are, note the patch ID(s) for use in step 3.

   ● For example, Figure 5.4: " Other Dependencies Section of PHCO_24198's Patch Details Page. " [28] shows that PHKL_24163 is only needed if you want a specific performance improvement. If not, you do not need to download the listed patch.

Figure 5.4. Other Dependencies Section of `PHCO_24198's` Patch Details Page.

```
Other Dependencies
Kernel patch PHKL_24163 (or its superseding patch) must be
installed if "ioscan -k" performance improvement is desired.
```

3. Select the **selected patch list** link. If any patches were noted in step 2 for download, verify that they are listed in the **selected patch list**. If not, you should manually add each one. To do this, select the **search results** link and then select and download the patches:

    ● For example, if you choose to manually add patch `PHKL_24163`, the selected patch list will be updated to Figure 5.5 [28].

    ### Figure 5.5. Selected Patch List Example

    ● Enter your search criteria, including the patch ID, and select **search**.

        Patches returned by a search are shown in a **search results** table.

    ● You can choose to download one patch of your choice from each row of patches returned by the search. You should keep in mind that you do not necessarily have to download the exact patch noted in step 2. There may be a better choice, such as a recommended patch that the search returned.

        ❍ Select the checkbox next to the patch ID link.

        ❍ Select **add to selected patch list** button.

Advanced Topic: Searching for Patches for Your System Configuration

You can use HP's Patch Database to perform a patch search based on the configuration of a specific HP-UX system. To access this functionality:

1. Log in to the ITRC at http://itrc.hp.com.

2. Select **maintenance and support**, and then select **patch database**.

3. Select **find patches for my HP-UX system**.

4. Select **upload new system information**.

   You will be required to run a data collection script on your system and upload the results to the ITRC to enable the search to be system specific. The **upload system information** page explains how to do this.

Finding Standard HP-UX Patch Bundles

The **standard patch bundles - find patch bundles** page provides links to help you acquire standard HP-UX patch bundles. See Chapter 4: " *What Are Standard HP-UX Patch Bundles?* " [17] for more information.

Tip

If you are interested in downloading or obtaining information about the Maintenance Pack for HP-UX 11i v1.6 (B.11.22), select **Obtain the HP-UX 11i version 1.6 Maintenance Pack patch bundle** to go to Software Depot's **Maintenance Pack Patch Bundle** page.

If you are interested in obtaining information about Support Plus, select **HP-UX patch bundles**. Then select **support plus on software depot** to go for additional information.

Creating Custom Patch Bundles

The **Patch Assessment Tool** allows you to create custom patch bundles specific to your environment. This web-based tool replaces the **Custom Patch Manager Tool**. The Patch Assessment Tool can be valuable for system administrators employing a proactive patch management strategy.

Key Features

● The patch assessment profile gives you control over which patches are recommended. You can specify options, including the following:

❍ Select or deselect patches that provide critical fixes.

❍ Select or deselect patches that fix security vulnerabilities.

❍ Include sets of patches that pertain to specific applications.

❍ Select or deselect replacement (or superseding) patches for patches already on your system that have non-critical and/or critical warnings.

❍ Require that a specific patch be included in the assessment.

- Conflict analysis is done automatically.

- Dependency analysis is done automatically for all patches; however, it only finds enforced dependencies. It does not find unenforced (manual) dependencies.

- Assessment results include information on why patches are recommended.

- You can download recommended patches in `tar`, `zip`, or `gzip` format or you can download a script that will FTP the patches.

To access the Patch Assessment Tool:

1. Log in to the ITRC at http://itrc.hp.com.

2. Select **maintenance and support**, and then select one of the **custom patch bundles - run a patch assessment** links.

Tip

On the **run a patch assessment** page, **useful links** has good information on the Patch Assessment Tool.

Subscribing to ITRC Driver and Support Alerts/Notifications

The ITRC provides Subscriber's Choice, the home for digest subscriptions.

Key Features

- Stay up to date with the latest support information from HP with e-mail.

- Select your areas of interest and HP sends you the appropriate digests.

To access the **ITRC driver and support alerts/notifications sign-up** page:

1. Log in to the ITRC at http://itrc.hp.com.

2. Select **maintenance and support**.

3. Under **notifications**, select **support information digests**.

Using ITRC Forums

The ITRC forums are gathering places for IT Professionals. You can use them to solve problems, exchange ideas, and learn from peers also using the ITRC. HP engineers may participate in all of these forums to share their advice; however, these forums are intended as a peer-to-peer resource. This site is a valuable patching resource.

To access patch-specific issues:

1. Log in to the ITRC at http://itrc.hp.com.

2. Select **maintenance and support**.

3. Under **collaborate** select **ask your peers in the forums**.

4. Select **HP-UX** and **patches**.

5. From the **patches** page, you can read previously posted questions and replies, or post a question or reply of your own.

Searching Technical Knowledge Base

This functionality allows you to search across HP's technical knowledge base for answers to your support-related questions and for technical support documents to solve problems. This interface makes it easy for you to narrow your searches to documents which pertain to a particular product area or platform by using predefined categories. Additionally, you can limit searches to particular document types. For detailed information about this page, select the **help** link.

Key Features

- Solve problems yourself with timely technical support information.

- Search HP's Technical Knowledge Base for technical documents, including patch information, security bulletins, and service requests related to HP-UX and a variety of other areas.

- Retrieve a specific document using its document identification (ID).

To access the **technical knowledge** page:

1. Log in to the ITRC at http://itrc.hp.com.

2. Select **maintenance and support**.

3. Under **self-solve tools** select **search technical knowledge base**.

Chapter 6.   Using FTP as an Alternate Patch Source

In this chapter, we present File Transfer Protocol (FTP) as an alternate means for you to acquire patch bundles and individual patches. For newer HP-UX system administrators, you will find using the ITRC a very complete and much simpler method. As you will see in this chapter, however, the FTP method does have some unique benefits.

FTP Methods and Key Features

We describe two methods for obtaining patches by FTP:

1. **Using a web browser** to access the FTP servers.

   This is the easiest and most user-friendly method to FTP files.

2. **Using a command line interface** to access the FTP servers.

   - This is a more powerful FTP method, but requires you to know the FTP commands.

   - FTP using a command line interface gives you more advanced features such as automated file download using scripts.

Assumptions

To use the instructions in this chapter, we assume you have access to FTP and a web browser on the HP-UX system that is the final destination of the files to download. We will refer to this as the *target system*. We also assume that you will download the files using this system.

If this is not the case, simply download the files using a system other than the target system and then transfer the files to the target system. This intermediate system does not have to be an HP-UX system or even a UNIX system. For example, you could use a web browser on a PC to download a patch to the PC using FTP and then transfer that patch to the target system using **Secure Shell** (SSH).

Using HP FTP Servers

HP provides two servers for FTP access to standard HP-UX patch bundles and individual patches:

- ftp://ftp.itrc.hp.com

  We recommend this server for most users.

- ftp://singapore-ffs.external.hp.com

  We recommend this server for users in the Asia-Pacific region.

What is the FTP Directory Structure?

The two FTP servers have the following HP-UX patch management related directories.

Note

Some of the directories have a file named `catalog` that contains a listing and description of the patches or bundles in the directory.

---

1. `/patch_bundles/hp-ux/`

   - Contains standard HP-UX patch bundles.

   - The patch bundles are available for at least one year.

   - If you are new to patching, we recommend you use the patch bundles.

   - Navigate to the directory containing the desired bundle type based on directory name:

     ○ The **GOLD** and **QPK** directories contain Quality Pack patch bundles.

     ○ The **HWE** directory contains Hardware Enablement bundles.

     ○ The **SPECIAL** directory contains special bundles such as **BUNDLE11i** and **MAINTPACK**.

     ○ The **RELEASE** directory contains documentation associated with bundles such as read before installing (RBI) booklets and user guides.

     See Figure 6.1: " FTP Listing of Root at ftp.itrc.hp.com " [35] and Figure 6.2: " FTP Listing of ftp.itrc.hp.com " [36] for more information.

2. `/hp-ux_patches/`

   - You usually begin your search here when looking for individual patches.

   - Contains current HP-UX patches. These patches do not have associated patch warnings, have not been superseded, and have not been archived.

   - To find a patch for your system, select the subdirectories that correspond to your hardware type and OS version.

   - If you are looking for a specific patch and cannot find it here, it may be located in one of the directories described in the following list items 3, 4, or 5.

3. `/superseded_patches/hp-ux_patches/`

   - Contains HP-UX patches that have been superseded by a later patch.

- To find a patch for your system, select the subdirectories that correspond to your hardware type and OS version.

4. `/patches_with_warnings/hp-ux_patches/`

    - Contains HP-UX patches that have associated warnings.

    - To find a patch for your system, select the subdirectories that correspond to your hardware type and OS version.

    - The `recalled_patches` directory is linked to the `patches_with_warnings` directory.

5. `/archived_patches/hp-ux_patches/`

    - Contains HP-UX patches that have been archived (HP-UX versions 9.x and earlier).

    - To find a patch for your system, select the subdirectories that correspond to your hardware type and OS version.

    - The `archived_patches` directory is a link to the `/data/archived_patches` directory.

6. `/export/patches/`

    You should explore this directory as it contains much useful information. Examples of directory content include the following:

    - The file `hp-ux_patch_sums` which contains HP-UX Patch Checksum Information.

    - The file `hp-ux_obs_patch_list` which contains the HP-UX Patch Replacement List that you can use to determine if a patch has been replaced by another patch. We do, however, recommend that you use the ITRC to find replacement patches as it provides more complete information than is contained in this file.

    - Files used by the Security Patch Check Tool.

Individual Patch Related Files

For each of the patches in the directories described previously in items 2 through 5, there are two files:

- a patch text file

    The patch text file has the filename format *patch_id*`.txt` and contains detailed patch information similar to that found in the ITRC **patch details** pages as discussed in " Finding Individual Patches and Firmware " [22]. Remember to review the text file for essential information such as special installation instructions and other dependencies. See Chapter 5: " *Using the IT Resource Center* " [21] for an example of a **special installation instructions** section and an **other dependencies** section.

- a shell archive (`shar`) file

    The shar file has the same name as its corresponding patch and *actually* contains the patch.

For the bundle directory described previously in item 1, there are two files for each bundle:

- The bundles are contained in tape depots having the filename format *bundle_name*.depot.

- Each bundle has a corresponding text file that has the filename format *bundle_name*.txt. These are also referred to as bundle readme files.

  The patch bundle readme files provide detailed information about the associated patch bundle. For some of the bundles, the bundlename, operating system version, and bundle release date are embedded in the file name. For example, the tape depot file GOLDQPK11i_B.11.11.0312.4.depot contains the December 2003 release of the Quality Pack bundles for HP-UX 11i v1 (B.11.11).

Using a Web Browser with FTP

You can use a web browser to download standard HP-UX patch bundles and individual patches using the FTP servers.

Note

These steps use the Mozilla web browser, but you may use a different browser. Your screen displays should look similar to the following screens, but will vary given different browsers and versions.

You can download a bundle or individual patch using a web browser. In these steps we show you how to download an individual patch. You can also use these steps for downloading a bundle:

1. Log in to the target system.

2. Open a web browser.

3. To establish a connection with the FTP server, enter one of the HP FTP server addresses:

   - ftp://ftp.itrc.hp.com (recommended for most users)

   - ftp://singapore-ffs.external.hp.com (for Asia-Pacific region)

   A screen similar to the following appears:

Figure 6.1.   FTP Listing of Root at ftp.itrc.hp.com

```
FTP Listing of Root at ftp.itrc.hp.com

Welcome to the IT Resource Center ftp server
------------------------------------------------------
You are user 16, and there is a limit of 400 simultaneous accesses.
Log in as user "anonymous" (using your e-mail address as your password)
to retrieve available patches for HP-UX, MPE/iX, and other platforms.
If you are a user of other HP ITRC services, log in with your
HP ITRC User ID and password to deposit or retrieve your files.
If you have questions, send email to:
```

```
support_feedback@europe-ffs.external.hp.com

.archive         Oct 17 1997 00:00 Directory
archived_patches   Sep 03 2003 14:33
bin          Dec 11 2003 07:41 Directory
data          Sep 03 2003 13:53 Directory
dead_anon_ftp    Oct 30 2003 09:43 Directory
domain_patches    Apr 03 2003 00:00 Directory
export        Sep 03 2003 14:33
firmware_patches   Jan 16 2004 00:59 Directory
hp-ux_patches    Feb 03 2004 01:09 Directory
linux         Apr 10 2001 00:00 Directory
mpe-ix_patches    Feb 03 2004 06:06 Directory
mv_patches      Feb 03 2004 01:43 Directory
openvms_patches   Oct 15 2003 17:36 Directory
patch_bundles    Sep 03 2003 14:34
patches_with_warnings Sep 09 2003 13:19 Directory
product_patches   Feb 03 2004 05:19 Directory
recalled_patches   Oct 16 2001 00:00
superseded_patches  Aug 20 2003 12:30 Directory
tmp          Feb 03 2004 13:36 Directory
tru64_patches     Oct 05 2003 18:00 Directory
users         Dec 11 2003 07:41
```

4. Navigate to the remote directory containing the bundle or patch you want to download. For example, go to /hp-ux_patches/s700_800/11.X.

    The following graphic shows a partial listing of the directory.

Figure 6.2.   FTP Listing of ftp.itrc.hp.com

```
FTP Listing of /hp-ux_patches/s700_800/11.X at ftp.itrc.hp.com

Up to higher level directory

PHCO_13205                 41,914 Dec 10 1997 00:00
PHCO_13205.txt             3,636 May 15 2002 00:00 Plain Text
PHCO_13349                 68,744 Dec 10 1997 00:00
PHCO_13349.txt             3,368 May 15 2002 00:00 Plain Text
PHCO_13719                 17,457 Jan 24 1998 00:00
PHCO_13719.txt             3,936 May 15 2002 00:00 Plain Text
PHCO_13812                 60,191 Feb 06 1998 00:00
PHCO_13812.txt             4,460 May 15 2002 00:00 Plain Text
PHCO_14229                 39,957 May 13 1998 00:00
PHCO_14229.txt             2,622 May 15 2002 00:00 Plain Text
```

5. If you scroll down through the listing, you will see the patch PHSS_29316. The following listing shows the patch shar file (PHSS_29316) and the corresponding text file (PHSS_29316.txt).

Figure 6.3. Partial Listing for PHSS_29316

```
PHSS_29316                          171,527 Sep 09 2003 00:00
PHSS_29316.txt                        7,299 Jul 03 2003 00:00 Plain Text
```

6. Right-click the bundle depot file or patch shar file to download, and make the appropriate selections to save the file to the target directory on your local machine.

7. If you want to download additional bundles and patches, repeat steps 4 through 6.

8. On your local system, open a terminal window.

9. Change to the target directory.

10. Enter the following command: **ls -l | more**

11. Unpack each shar file using the command: **sh *patch_id*** where *patch_id* is the filename.

    Repeat this step for each shar file.

    For any bundles you downloaded, you can skip this step.

    After executing this command, you will have the original shell archive file (*patch_id*), a patch text file (*patch_id.*text), and a tape depot (*patch_id.*depot).

12. This step is critical. When you install the patches, the system may reboot automatically.

    At this point, you need to follow your company's policy regarding a system reboot.

13. This step is also critical. Before you install the patch(es), back up your system.

14. To install the patches, use the following **swinstall** command:

    ```
    swinstall -s /target_directory/depot -x autoreboot=true \
    -x patch_match_target=true
    ```

    where *depot* is the name of the *.depot* file.

    During the installation, the system prints progress details to the screen.

15. Monitor the screen for error messages.

    The system will reboot automatically if any of the patches you are installing require it.

Note

Be patient. The patch installation may not proceed quickly.

---

16. To verify that the installation was successful:

- Enter the command: `swlist -l product`

  Ensure that the installed patches are shown in the output.

- Execute the **swverify** command on each of the new patches: `swverify patch_id`

  This command may not always complete in a short period of time.

  If the verification is successful, the last few lines of output contain the following line:

  `"* Verification succeeded."`

  If the verification was not successful, view the log file `/var/adm/sw/swagent.log` for additional information related to the **swverify** failure. If this is not sufficient to resolve the problem, consult more advanced resources in Appendix A: " *Other Resources* " [42].

- View the `swagent` log file, located at `/var/adm/sw/swagent.log` .

  This log includes information related to the installation.

  ❍ Find the section pertaining to the installation just performed (located near the end of the file if you check it immediately after the install). Review this section, and ensure that there were no errors (`"ERROR"`).

  ❍ If you find errors, consult more advanced resources Appendix A: " *Other Resources* " [42] to resolve the problem.

Using the Command Line Interface with FTP

You can also download standard HP-UX patch bundles and individual patches using FTP from a command line interface. You can use this method of FTP access both for manually downloading patches and bundles as well as for advanced purposes such as downloading patches and bundles automatically using scripts. See Figure 6.4: " Anonymous FTP Using the Command Line Interface " [40].

Important

You may experience difficulty with FTP if you are behind a firewall, and may find it necessary to access FTP through an FTP proxy server.

You should access the servers using *anonymous* FTP, which does not require a user account.

Downloading Files Using the Command Line Interface

To download a bundle or patch using the command line interface, use these steps. Figure 6.4: " Anonymous FTP Using the Command Line Interface " [40] shows an FTP session using the following commands.

1. Log in to the target system.

2. Change directories to the target directory where you want to download the bundle or patch.

3. Enter one of the following ftp commands:

    - **`ftp ftp.itrc.hp.com`** (recommended for most users)

    - **`ftp singapore-ffs.external.hp.com`** (for Asia-Pacific region)

4. When prompted by the FTP server for a username, enter: **`anonymous`**

5. When prompted by the FTP server for a password, enter: **_`your_email_address`_**

    You should now be logged on to the remote FTP server. The command prompt is now `ftp>`.

6. Set the transfer type to binary, enter: **`binary`** or **`bin`**

7. Change directories to the directory of the bundle or patch that you want to download.

8. Download the file to your local system, enter: **`get`** **_`filename`_**

9. If you want to download additional bundles and patches, repeat steps 7 and 8.

10. To quit the FTP session, enter: **`quit`**

    The command prompt reverts back to the HP-UX command prompt for your local system. The downloaded bundle(s) and/or patch(es) will be located in the current directory.

11. Enter the following command: **`ls -l | more`**

12. Unpack each shar file using the command: **`sh`** **_`patch_id`_** where _`patch_id`_ is the filename.

    Repeat this step for each shar file.

    For any bundles you downloaded, you can skip this step.

    After executing this command, you will have the original shell archive file (_`patch_id`_), a patch text file (_`patch_id`_`.text`), and a tape depot (_`patch_id`_`.depot`).

13. This step is critical. When you install the patches, the system may reboot automatically.

    At this point, you need to follow your company's policy regarding a system reboot.

14. This step is also critical. Before you install the patch(es), back up your system.

15. To install the patches, use the following **swinstall** command:

    ```
    swinstall -s /target_directory/depot -x autoreboot=true \
    -x patch_match_target=true
    ```

    where **_`depot`_** is the name of the `.depot` file.

    During the installation, the system prints progress details to the screen.

16. Monitor the screen for error messages.

The system will reboot automatically if any of the patches you are installing require it.

Note

Be patient. The patch installation may not proceed quickly.

---

17. To verify that the installation was successful:

● Enter the command: **`swlist -l product`**

Ensure that the installed patches are shown in the output.

● Execute the **swverify** command on each of the new patches: **`swverify patch_id`**

This command may not always complete in a short period of time.

If the verification is successful, the last few lines of output contain the following line:

```
"* Verification succeeded."
```

If the verification was not successful, view the log file `/var/adm/sw/swagent.log` for additional information related to the **swverify** failure. If this is not sufficient to resolve the problem, consult more advanced resources in Appendix A: " *Other Resources* " [42].

● View the `swagent` log file, located at `/var/adm/sw/swagent.log`.

This log includes information related to the installation.

❍ Find the section pertaining to the installation just performed (located near the end of the file if you check it immediately after the install). Review this section, and ensure that there were no errors (`"ERROR"`).

❍ If you find errors, consult more advanced resources Appendix A: " *Other Resources* " [42] to resolve the problem.

Figure 6.4.   Anonymous FTP Using the Command Line Interface

```
autgr_57> cd target_dir
autgr_57> ftp ftp.itrc.hp.com
Connected to ftp.itrc.hp.com (192.151.52.14).
220-
220-Welcome to the IT Resource Center ftp server
220----------------------------------------------------
220-
220-You are user 13, and there is a limit of 400 simultaneous accesses.
220-
```

```
220-Log in as user "anonymous" (using your e-mail address as your password)
220-to retrieve available patches for HP-UX, MPE/iX, and other platforms.
220-
220-If you are a user of other HP ITRC services, log in with your
220-HP ITRC User ID and password to deposit or retrieve your files.
220-
220-If you have questions, send email to:
220-
220-   support_feedback@europe-ffs.external.hp.com
220-
220 i3107ffs FTP server (HP ASL ftpd, version(322)) ready.
Name (ftp.itrc.hp.com:richardm): anonymous
331 Guest login ok, send your complete e-mail address as password.
Password:
230 Guest login ok, access restrictions apply.
Remote system type is UNIX.
Using binary mode to transfer files.
ftp> bin
200 Type set to I.
ftp> cd hp-ux_patches/s700_800/11.X
250 CWD command successful.
ftp> get PHSS_29316
local: PHSS_29316 remote: PHSS_29316
227 Entering Passive Mode (192,151,52,14,14,70)
150 Opening BINARY mode data connection for PHSS_29316 (171527 bytes).
226 Transfer complete.
171527 bytes received in 0.635 secs (2.6e+02 Kbytes/sec)
ftp> quit
221 Goodbye.
autgr_57> ls -l
total 336
-rw-r--r--   1 rar        users         171527 Sep  9  2003 PHSS_29316
autgr_57> sh PHSS_29316
x - PHSS_29316.text
x - PHSS_29316.depot [non-ascii]
autgr_57> ls
PHSS_29316        PHSS_29316.depot  PHSS_29316.text
```

Appendix A. Other Resources

In this appendix we list patch-related resources. We encourage you to explore the following FTP servers and web sites.

Table A.1. HP FTP Servers

HP FTP Servers	Location
Recommended for most users	ftp://ftp.itrc.hp.com
Recommended for Asia-Pacific users	ftp://singapore-ffs.external.hp.com

Table A.2. HP Web Sites

HP Web Sites	Location
Home Page	http://www.hp.com
Software Depot	http://software.hp.com
Technical Documentation You may find the following documents to be of interest: ● *HP-UX Patch Management: A guide to patching HP-UX 11.X systems* ● *Ignite-UX Administration Guide* ● *Security Patch Check FAQ* ● *Software Distributor Administration Guide* ● *Support Plus User Guide* ● *Read Before Installing Support Plus* ● *Using HP-UX*	http://docs.hp.com
HP-UX 11i features and news	http://unix.hp.com/operating
Ignite-UX	http://software.hp.com/products/IUX
IT Resource Center (ITRC)	http://itrc.hp.com
Software Distributor	http://software.hp.com/SD_AT_HP
Support Plus	http://software.hp.com/SUPPORT_PLUS
System diagnostic and monitoring tools	http://docs.hp.com/hpux/diag

Table A.3. Non-HP Web Sites

Non-HP Web Sites	Location
hpux-admin mailing list: Provides discussion for HP-UX system administration.	http://www.dutchworks.nl/htbin/hpsysadmin
The International Association of Hewlett-Packard Computing Professionals (Interex)	http://www.interex.org/home.html
Interex HP-UX Portal	http://www.interex.org/tech/9000/portal.html
Interex listing of user groups	http://www.interex.org/users/usergrps.html
Interex Patch Special Interest Group Page	http://www.interex.org/advocacy/mcgs/patch/index.html
The HP-UX Porting and Archive Centre: Makes public domain, freeware, and Open Source software more readily available to users of HP-UX systems.	http://hpux.cs.utah.edu http://hpux.its.tudelft.nl http://hpux.connect.org.uk

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