



# Effective Patch Management Using HP's IT Resource Center

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## agenda

- IT Resource Center overview
- Patch tool features
- HP-UX patch rating
- Finding patches to fix a problem
- Obtaining specific patches
- Preventive maintenance

# IT Resource Center

- <http://www.itrc.hp.com> or <http://my.itrc.hp.com>
- One-stop, personalized web site for IT professionals.
- Access self-solve tools, reliable assistance, training, and planning resources, and a broad multivendor knowledge base.
- Interact and share best practices with your peers.

## features in ITRC patch tools

- Granular OS Searching and Browsing
- Automatic Identification of Dependent Patches
- Merged *Candidate Patch List* and *Installed Patches* pages
- Superseded Patches available
- HP Rating and *Bestpatch*

## timeliness v. risk: the tradeoff




- You want fixes to your problem immediately
- You want assurance that a patch won't crash your mission critical system
- It takes time to build that assurance!



## making the tradeoff – hp patch ratings

- In interest of timeliness, hp releases patches when they meet established hp quality standards
- In interest of assurance, patches undergo additional post release testing in hp in complex environments and application stacks
- Patches are assigned a progressive star rating (level) – 1, 2, or 3
- ITRC patch tools enable you to **make informed benefit/risk tradeoff** based on patch's rating

# hp-ux patch ratings

<i>Rating</i>	<i>Meaning</i>
 (level1)	<ul style="list-style-type: none"><li>• Patch meets established HP quality standards</li><li>• Patch fixes problem it purports to fix</li><li>• No side-effects</li><li>• Installs and de-installs in target environment</li></ul>
 (level2)	<ul style="list-style-type: none"><li>• Patch sent to threshold number of customers</li><li>• Patch is threshold number of days old</li><li>• No problems reported</li></ul>
 (level3)	<ul style="list-style-type: none"><li>• Tested under complex configurations</li><li>• Tested with complex application stacks</li><li>• Stress &amp; Performance tested</li></ul>

## scenario 1 : fix a problem

- Huge directory reads take too long and client system performance degrades as NFS IO activity increases.
- Problem experienced on a K460 server running HP-UX 11.0





patch database

Anyone who has access to the web can browse and download patches from the IT Resource Center (ITRC) at <http://www.itrc.hp.com> or <http://my.itrc.hp.com>.

## patch database

### **Benefits**

- Anyone can download a patch that is in a general release or superseded state (GR, GS).
- Patches can be downloaded as needed.
- There is an option to download groups of patches and create patch depots for installation as a depot.


### **Drawbacks**

- Requires a more advanced/knowledgeable system administrator to manage patching.
- Not all environments have access to the web from their UNIX machines.
- Some patches may be very large and cumbersome to download.

# getting patches from the ITRC

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- online help
- contact hp

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- maintenance and support
- technical knowledge base
- hot docs
- support info by product
- knowledge trees
- individual patches
- more...
- training and education
- planning, design, and implementation
- forums

### self-solve tools

- search technical knowledge base **i**
- review hot docs **i** **o** **π**
- browse support information by product **i** **o** **π**
- navigate knowledge trees and response center FAQ's **i** **o** **π**

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### patching

- individual patches **i**
- standard patch bundles (support plus) **i**
- customized patch bundles (custom patch manager) **i** **o** **π** **\$**
- custom patch notification **i** **o** **π**

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### downloads / licensing

- individual patches **i**
- standard patch bundles (support plus) **i**
- updates (software update manager) **i** **o** **π**
- software licensing (codewords, passwords, FAQs) **i**

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### collaborate

- software calls (contract based only) **i** **o** **π**

### legend

- o** **π** requires additional authorization like a certain level of support agreement or online purchase.
- \$** can be purchased online if you are not already entitled to it.

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# choosing selection criteria

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## patch database

**1. select hardware and OS:**

- Series 800
- Series 700
- Series 300/400

**2. search or browse the patch list**  
(examples)

Search By Keyword

search criteria

- all words  any word
- exact phrase  boolean

[Take a tour](#) of the HP patch interface.

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- online help
- contact hp

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- Java performance tuning
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# selecting matching patches

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## patch database

Here are the best patches available for an s800 system running HP-UX version 11.00. Select the desired patches and add them to your Shopping Cart using the button at the bottom of the list.

patch description
<input type="checkbox"/> <a href="#">s700_800_11.00_libc_cumulative_patch(PHCO_22314)</a>
<input type="checkbox"/> <a href="#">s700_800_11.00_PM/VM/UFS/async/scsi/io/DMAPI/JFS/perf_patch(PHKL_18543)</a>
<input type="checkbox"/> <a href="#">s700_800_11.00_Cumulative_STREAMS_Patch(PHNE_20316)</a>
<input checked="" type="checkbox"/> <a href="#">s700_800_11.0_NFS_Kernel_General_Release/Performance_Patch(PHNE_20627)</a>
<input type="checkbox"/> <a href="#">s700_800_11.00_cumulative_ARPA_Transport_patch(PHNE_21767)</a>

[→ SELECT ALL](#)   [→ DESELECT ALL](#)

[→ ADD TO SELECTED PATCH LIST](#)

# viewing patch details

## PHNE\_20627 patch description

**Note:** Obtaining software or data from HP's Patch Database is governed by the [IT Resource Center Terms of Use](#). Use of software or data obtained from HP's Patch Database is governed by [HP Software License Terms](#). Please read them before you proceed.

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**NOTE** This patch has been superseded.

Patch PHNE\_20627 has been replaced by:

- [PHNE\\_22125](#) Latest Superseding Patch

[patch files](#) [dependencies](#) [supersedes](#) [size](#) [critical](#) [symptoms](#) [defect description](#) [installation instructions](#)

**Patch Name:** PHNE\_20627

**Patch Description:** s700\_800 11.0 NFS Kernel General Release/Performance Patch

Creation Date: 00/05/08

Post Date: 00/05/22

Hardware Platforms - OS Releases:

s700: 11.00

s800: 11.00

Products: N/A

Filesets:

OS-Core.CORE2-KRN, fr=B.11.00, fa=HP-UX\_B.11.00\_32, v=HP

OS-Core.CORE2-KRN, fr=B.11.00, fa=HP-UX\_B.11.00\_64, v=HP

NFS.NFS-KRN, fr=B.11.00, fa=HP-UX\_B.11.00\_32, v=HP

NFS.NFS-KRN, fr=B.11.00, fa=HP-UX\_B.11.00\_64, v=HP

# downloading patches from the ITRC

## patch database

Your currently selected configuration is an s800 system running HP-UX version 11.00.

**NOTE :** [Read about the HP-UX 10.20 and 11.00 Kernel Patch Process Change](#)

patch name	size (kb)	date posted	description
PHNE_20627	1058	00/05/22	<a href="#">s700 800 11.0 NFS Kernel General Release/Performance Patch</a>
<a href="#">Notes:</a> HP Recommended.Reboot required after installation.			<a href="#">→ REMOVE</a> <a href="#">→ DOWNLOAD</a>

**The patches in your cart above require the following additional patches:**

patch name	size (kb)	date posted	description
PHCO_19945	30	99/09/27	<a href="#">s700 800 11.00 bdf(1M) patch to skip autofs file systems</a>
<a href="#">Notes:</a> HP Recommended.This patch is required by: PHNE_20371.			<a href="#">→ DOWNLOAD</a>
PHCO_20882	516	00/02/09	<a href="#">s700 800 11.00 fsck_vxfs(1M) cumulative patch</a>
<a href="#">Notes:</a> HP Recommended.Fixes critical problem.This patch is required by: PHKL_18543.			<a href="#">→ DOWNLOAD</a>
PHCO_21187	21982	00/06/15	<a href="#">s700 800 11.00 cumulative SAM/ObAM patch</a>
<a href="#">Notes:</a> HP Recommended.This patch is required by: PHKL_18543.			<a href="#">→ DOWNLOAD</a>
PHCO_22314	10300	00/10/27	<a href="#">s700 800 11.00 libc cumulative patch</a>
<a href="#">Notes:</a> HP Recommended.This patch is required by: PHNE_20371.			<a href="#">→ DOWNLOAD</a>

## what if it's not "HP Recommended"?

- Sometimes the **Best** patch to fix the problem might be a Level 1 patch – hot off the press!!
- Decide whether the benefit is worth the risk
  - Problem critical to you or you can tolerate some risk?
    - Go with the Level 1 patch
  - Otherwise:
    - Defer fixing problem until reliability of patch is more fully established
- Level 2 and 3 patches are annotated "HP Recommended"



# the patch download list



- Two sections: Top & Bottom
  - Top contains the patches you selected
  - Bottom lists patches needed to satisfy dependencies
- You can delete patches from top section but not bottom. Why?
- Think of the download list as the "*Complete Solution*" i.e., all the patches you need to resolve the problem.

## find patches to fix a problem : summary



- Enter keywords describing problem into textbox; select *Search by Keyword*
- Examine search results for applicability. Select relevant patches. *Add to Selected Patch List*
- System always presents you with the **Best** available patch to solve your problem
- Determine whether **Best** is good enough for you

## scenario 2: obtain specific patches

- Suppose that you want to install HP-UX SDK for the Java 2 platform on your C180 workstation running HP-UX 11.0.
- From the installation website, you learn that you should have the following patches installed:

PHCO\_19666

PHCO\_20555

PHKL\_23002

PHKL\_18543

## scenario 2: steps


- SelectSeries 700 ,HP-UX 11.0
- Select *Search by PatchID*
- Enterpatches into textbox
- Hit *SEARCH!*



# search by patch id

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## patch database

**1. select hardware and OS:**

- Series 800 11.11
- Series 700 11.00
- Series 300/400 9.10

**2. search or browse the patch list**  
[\(examples\)](#)

Search By Patch IDs

phco\_19666 phco\_2055!

→ SEARCH

**useful information**

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- CIFS/9000

[search criteria](#)

- all words  any word
- exact phrase  boolean

[Take a tour](#) of the HP patch interface.

Done Internet

# recalled patch warning

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## patch database

One of the patches you entered on the Selecting a Patch List page, [PHCO\\_20555](#), has been recalled. Hewlett-Packard suggests [PHCO\\_22314](#) as the best alternative.

You may:

the recalled patch in your Shopping Cart, or

the recalled patch with the suggested patch.

# download list

## patch database

Your currently selected configuration is an s700 system running HP-UX version 11.00.

**NOTE :** [Read about the HP-UX 10.20 and 11.00 Kernel Patch Process Change](#)

patch name	size (kb)	date posted	description
PHCO_19666	973	99/10/13	<a href="#">s700 800 11.00 libpthreads cumulative patch</a>
<a href="#">Notes:</a> HP Recommended.			<a href="#">→ REMOVE</a> <a href="#">→ DOWNLOAD</a>
PHCO_22314	10300	00/10/27	<a href="#">s700 800 11.00 libc cumulative patch</a>
<a href="#">Notes:</a> HP Recommended.			<a href="#">→ REMOVE</a> <a href="#">→ DOWNLOAD</a>
PHKL_18543	12439	99/06/28	<a href="#">s700 800 11.00 PM/VM/UFS/async/scsi/io/DMAPI/JFS/perf patch</a>
<a href="#">Notes:</a> HP Recommended.Fixes critical problem.Reboot required after installation.			<a href="#">→ REMOVE</a> <a href="#">→ DOWNLOAD</a>
PHKL_23002	97	01/01/09	<a href="#">s700 800 11.00 pthread, thread hang, nfs/tcp panic, chang</a>
<a href="#">Notes:</a> HP Recommended.Fixes critical problem.Reboot required after installation.			<a href="#">→ REMOVE</a> <a href="#">→ DOWNLOAD</a>

**The patches in your cart above require the following additional patches:**

patch name	size (kb)	date posted	description
PHCO_13411	418	97/12/09	<a href="#">s700 800 11.00 fsck_vxfs(1M) cumulative patch</a>

## obtain specific patches: summary



- Enter the *patch\_ids* into the text box, select "Search by PatchID"
- System will supply any missing dependencies
- System will identify any recalled patch and suggest replacement
- Allows you to get any patch, even the recalled ones.



## scenario 3 : preventive maintenance

- Eliminate known problems *before* your users encounter them
- Find all patches applicable to the target system
- Analyze for patch conflicts, missing dependencies
- Download
- Apply to target system

## custom patch manager

Custom Patch Manager is available via the IT Resource Center to customers with a support contract. This method allows you to create your own patch bundles specifically for your system.

You can access CPM from the web at <http://www.itrc.hp.com>. You must register with the ITRC and associate your contract system handle before using the Custom Patch Manager.

# custom patch manager

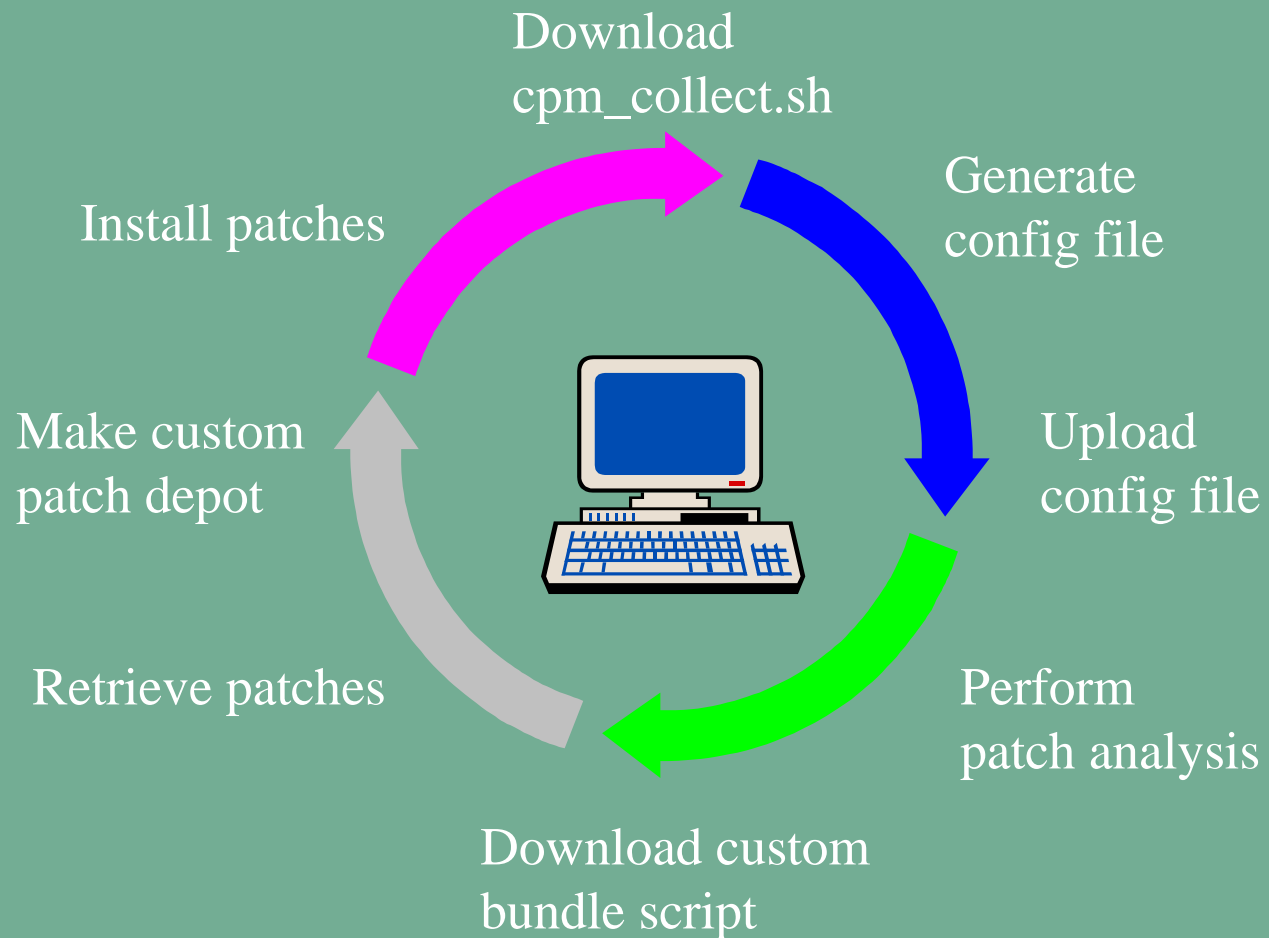
## Benefits

- Allows you to configure and download custom patch bundles based on your specific configuration.
- Provides automated analysis which reports dependent patches and patch conflicts to you.
- You are in control of which patches go on the system. This allows you to be as aggressive or conservative as you want to be.
- Your use of a patch is registered.

## Drawbacks

- Requires a highly experienced individual with knowledge of patching and the patching process.
- These patches are not tested as a unit.


# The Custom Patch Manager Cycle



# getting customized bundles from the ITRC

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### self-solve tools

- search technical knowledge base **i**
- review hot docs **i**
- browse support information by product **i**
- navigate knowledge trees and response center FAQ's **i**

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### patching

- individual patches **i**
- standard patch bundles (support plus) **i**
- customized patch bundles (custom patch manager) **i**
- custom patch notification **i**

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### downloads / licensing

- individual patches **i**
- standard patch bundles (support plus) **i**
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- software licensing (codewords, passwords, FAQs) **i**

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### collaborate

- software calls (contract based only) **i**
- hardware calls (contract / warranty based only) **i**
- individual software incidents (purchased online) **i** **key**

### legend

- key** requires additional authorization like a certain level of support agreement or online purchase.
- \$** can be purchased online if you are not already entitled to it.

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# download cpm\_collect.sh

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Welcome, HP ESC Demo User!  
(ESCDEMO)

## system information collection

To research candidate patches for your system or depot you must first take the following steps to collect current configuration data from the specified location and copy it to the IT Resource Center machine. The analysis will generate the configuration file which serves as the basis for your candidate patch list.

You may upload several Configuration Files.

**Note:** There is a 1.5 MB capacity limit for your incoming directory.

Follow these steps to collect system configuration.

## collect system configuration

### 1. download

Download this [cpm\\_collect.sh](#) to your system. This Posix shell script will collect the names and revisions of all the products installed on your system. Make sure the permissions on `cpm_collect.sh` allow execution.

### 2. execute

`cd(1)` to the directory that contains the script and execute it. You do not need to be root. The results of the script are written into an ascii file called `hostname.fs`, where `hostname` is the result of '`uname(1) -n`', the name of your system.

## upload results to IT resource center

### 3. connect to the IT resource center

Using your local `ftp(1)` client, connect to `us-support2.external.hp.com`, and login with your IT Resource Center User ID and Password.

### 4. upload results

`cd` to `/incoming` directory, and put your `hostname.fs` file onto `us-support2.external.hp.com`

**Note:** You **MUST** use binary transfer mode when uploading your `hostname.fs` file.

**Note:** If you are uploading your `hostname.fs` file from a PC, check the file name after uploading to ensure that it is in lowercase letters, or Custom Patch Manager will not recognize it as a valid configuration file.

# perform patch analysis

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**home**  
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Welcome, HP ESC Demo User!  
(ESCDEMO)

<input type="radio"/>	amhqnd1.fs Config File Created: 04 Dec 00	amhqnd1	9000/800	HP-UX B.11.00 Last Analyzed On: None
<input type="radio"/>	amhqnd2.fs Config File Created: 04 Dec 00	amhqnd2	9000/800	HP-UX B.11.00 Last Analyzed On: None
<input checked="" type="radio"/>	system.fs Config File Created: 27 Feb 01	bilge	9000/780	HP-UX B.11.00 Last Analyzed On: None

→ DISPLAY CANDIDATE PATCHES

## candidate patch filters and category options

All candidate patches applicable to your configuration will be displayed unless you restrict the displayed patch list according to the parameters below. [Tips for setting filters and searching](#) are available.

### patches containing these keywords

Search Mode:

Descriptive Search  Boolean Search

(Please use US ASCII encoding with your Search String)

**Critical patches only**

**Fileset filtering**

Include the following Patch Categories:

**Command patches** ( PHCO\_nnnn : vi(1) , ls(1) , etc.)

**Kernel patches** ( PHKL\_nnnn : OS internals)

**Network patches** ( PHNE\_nnnn : NFS, NIS, etc.)

**Subsystem patches** ( PHSS\_nnnn : VUE, Softbench, etc.)

→ DISPLAY CANDIDATE PATCHES

# candidate patch list

description	date installed	installed	recommended	latest
s700_800 11.X HP AutoRAID Manager cumulative patch	000707	<a href="#">PHCO 21435</a> (3)	<input type="checkbox"/> <a href="#">PHCO 22103</a> (3)	<input type="checkbox"/> <a href="#">PHCO 22103</a> (3)
s700_800 11.00 ex(1), vi(1) patch	000707	<a href="#">PHCO 13828</a> (3)		<input type="checkbox"/> <a href="#">PHCO 22229</a> (1)
s700_800 11.00 XCursor cumulative patch	000707	<a href="#">PHCO 20075</a> (3)	<input type="checkbox"/> <a href="#">PHCO 22263</a> (3)	<input type="checkbox"/> <a href="#">PHCO 22263</a> (3)
s700_800 11.00 libpam.1 patch	000707	<a href="#">PHCO 15448</a> (3)	<input type="checkbox"/> <a href="#">PHCO 21833</a> (3)	<input type="checkbox"/> <a href="#">PHCO 22265</a> (2)
s700_800 11.00 cumulative libpam patch	000707	<a href="#">PHCO 20104</a> (3)	<input type="checkbox"/> <a href="#">PHCO 21833</a> (3)	<input type="checkbox"/> <a href="#">PHCO 22265</a> (2)
s700_800 11.00 cumulative SAM/ObAM patch	000707	<a href="#">PHCO 19047</a> (R)	<input type="checkbox"/> <a href="#">PHCO 21187</a> (3)	<input type="checkbox"/> <a href="#">PHCO 22269</a> (1)
s700_800 11.00 lpspool subsystem cumulative patch	000707	<a href="#">PHCO 19484</a> (3)		<input type="checkbox"/> <a href="#">PHCO 22365</a> (2)
s700_800 11.00 fsck_vxfs(1M) cumulative patch	000707	<a href="#">PHCO 20882</a> (3)		<input type="checkbox"/> <a href="#">PHCO 22453</a> (2)
s700_800 11.00 m4(1) patch				<input type="checkbox"/> <a href="#">PHCO 22500</a> (1)
s700_800 11.00 sh-posix(1) cumulative patch	000707	<a href="#">PHCO 20816</a> (3)		<input type="checkbox"/> <a href="#">PHCO 22537</a> (1)
s700_800 11.00 pipes(1) and pipcrm(1) patch				<input type="checkbox"/> <a href="#">PHCO 22592</a> (1)
s700_800 11.00 Patch for /sbin/init	000707	<a href="#">PHCO 14105</a> (3)		<input type="checkbox"/> <a href="#">PHCO 22664</a> (2)
s700_800 11.00 kermit(1) patch			<input type="checkbox"/> <a href="#">PHCO 22665</a> (2)	<input type="checkbox"/> <a href="#">PHCO 22665</a> (2)
s700_800 11.00 syslogd(1M) patch	000707	<a href="#">PHCO 21023</a> (3)		<input type="checkbox"/> <a href="#">PHCO 22673</a> (2)



# selected patch list

## selected patch list bilge 9000/780 HP-UX B.11.00

patch name	reboot required	dependencies	size (kbytes)	date posted
<input checked="" type="checkbox"/> <a href="#">PHCO_21187(3)</a>	No	No	20439	000615
<input checked="" type="checkbox"/> <a href="#">PHCO_21494(3)</a>	No	No	184	000504
<input checked="" type="checkbox"/> <a href="#">PHCO_21833(3)</a>	No	Yes	256	000724
<input checked="" type="checkbox"/> <a href="#">PHCO_21892(3)</a>	No	No	61	000721
<input checked="" type="checkbox"/> <a href="#">PHCO_22103(3)</a>	No	Yes	11776	000825
<input checked="" type="checkbox"/> <a href="#">PHCO_22263(3)</a>	No	No	666	000829
<input checked="" type="checkbox"/> <a href="#">PHCO_22665(2)</a>	No	No	952	001215
<input checked="" type="checkbox"/> <a href="#">PHCO_22760(2)</a>	No	No	72	001204
<input checked="" type="checkbox"/> <a href="#">PHKL_21680(3)</a>	Yes	Yes	92	000522
<input checked="" type="checkbox"/> <a href="#">PHKL_21681(2)</a>	Yes	No	61	001018

→ DESELECT ALL

→ REMOVE

Enter the name of a patch (or multiple patches separated by spaces) and press the *Add* button to have it added to the **Selected Patch List**.

Patch Name:

→ ADD

You currently have 10 patches with a total size of 34559 kbytes.

→ ANALYZE

the **Selected Patch List** for possible conflicts.

## analyze for conflicts

- Checks for 3 classes of problems

- ***Unsatisfied Dependencies***: indicating that the set of patches is incomplete

- ***Structural Conflict***: two or more patches affect the same module – last one in wins!

- ***Recalled Patches***: Patches on your system or in your set are known to be bad

# analyze

Recalled Patch	HP Recommended Replacement	Latest Replacement
<a href="#">PHKL_20965(R)</a>	<input type="checkbox"/> <a href="#">PHKL_22926(2)</a>	<input type="checkbox"/> <a href="#">PHKL_22926(2)</a>

[PHKL\\_21165\(Installed\)](#) Replacements for [PHKL\\_21165](#)  
(Select one patch from each line of table)

Recalled Patch	HP Recommended Replacement	Latest Replacement
<a href="#">PHKL_21165(R)</a>	<input type="checkbox"/> <a href="#">PHKL_22903(1)</a>	<input type="checkbox"/> <a href="#">PHKL_22903(1)</a>

[PHNE\\_17027\(Installed\)](#) Replacements for [PHNE\\_17027](#)  
(Select one patch from each line of table)

Recalled Patch	HP Recommended Replacement	Latest Replacement
<a href="#">PHNE_17027(R)</a>	<input type="checkbox"/> <a href="#">PHNE_21835(2)</a>	<input type="checkbox"/> <a href="#">PHNE_21835(2)</a>

**Dependency Conflicts:** [PHKL\\_18543\(Installed\)](#)

[PHKL\\_18543](#) Dependencies

(Select one patch from each line of table)

Immediate Dependency	HP Recommended Dependency	Latest Dependency
<input type="checkbox"/> <a href="#">PHKL_22589(2)</a>	<input type="checkbox"/> <a href="#">PHKL_22589(2)</a>	<input type="checkbox"/> <a href="#">PHKL_22589(2)</a>

## tips on conflict resolution

<i>Type of Conflict</i>	<i>General Guidelines for Resolving</i>
Structural Conflict	Take higher numbered patch ( <i>be careful, though!</i> )
Unsatisfied Dependencies	Supply HP Recommended dependency
Recalled Patch Installed	Determine if patch needs to be replaced  Obtain replacement patch  Remove recalled patch  Install replacement

***Be sure to re-analyze!***

# conflict resolution

You currently have 17 patches with a total size of 58510 kbytes.

→ ANALYZE

the **Selected Patch List** for possible conflicts.

[Tips on conflict resolution](#) are available.

**Recalled Patches:** [PHCO\\_14044](#)(Installed)This patch is replaced by [PHCO\\_22096](#) which has been added to the **Selected Patch List**. [PHCO\\_19047](#)(Installed)This patch is replaced by [PHCO\\_22269](#) which has been added to the **Selected Patch List**. [PHCO\\_20443](#)(Installed)

**Note:** There is currently no replacement for this patch. A replacement will be available soon. Please check patch details for further information. [PHCO\\_20869](#)(Installed)**Note:** There is currently no replacement for this patch. A replacement will be available soon. Please check patch details for further information. [PHKL\\_20965](#)(Installed)This patch is replaced by [PHKL\\_22926](#) which has been added to the **Selected Patch List**. [PHKL\\_21165](#)(Installed)This patch is replaced by [PHKL\\_22903](#) which has been added to the **Selected Patch List**. [PHNE\\_17027](#)(Installed)This patch is replaced by [PHNE\\_21835](#) which has been added to the **Selected Patch List**.

**Behavioral Conflicts:** [PHNE\\_21835](#)(Selected) should not be installed with [PHNE\\_21767](#) (Installed), check the patch details.

**Predecessor Conflicts:** [PHCO\\_22269](#)(1) **supersedes** [PHCO\\_21187](#)(3). Be aware that if both patches are installed on the same system [PHCO\\_22269](#)(1) will override [PHCO\\_21187](#) (3).

Download the patch cleanup utility if it is not currently on your system. For 10.X systems, the patch is called [PHCO\\_20824](#) and is 60396 bytes in length. For 11.X systems, the patch is called [PHCO\\_22044](#) and is 118380 bytes in length.

[More information on the patch cleanup utility](#) is available.

→ PACKAGE

my **Selected Patch List** for download.

To submit questions and comments regarding Custom Patch Manager, [contact HP for assistance](#).

Return to the [Custom Patch Manager Main Page](#)  
Select a new system for [Patch Analysis](#)

# download patch bundle

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## custom patch manager

### download patch bundle

#### Notes! For this Patch Package

1. You have until **Tue Mar 13 10:24:21 PST 2001** to download the Patch Package before Custom Patch Manager will remove it.
2. You will need about 55013 kbytes of disk space when the retrieval script downloads these patches. This reflects the amount of space needed for the compressed patches. When they are uncompressed, the size will closely match what is listed in the **Selected Patch List**.

#### download

Your patch retrieval information has been placed into `/outgoing/bilge.sh` on `patchit.fc.hp.com`. This is a `shar(1)` file. [More information on package format](#) is available. You may **download** the Patch Package now through your browser. Or you may follow the instructions below to download the Patch Package using any `ftp(1)` client.

1. With your local `ftp(1)` client, connect to **patchit.fc.hp.com**
2. login using your IT Resource Center User ID and Password
3. `cd` to `/outgoing/`.
4. `get bilge.sh` (be sure to use binary transfer).

#### install

Follow the directions contained within the file to install your patches.

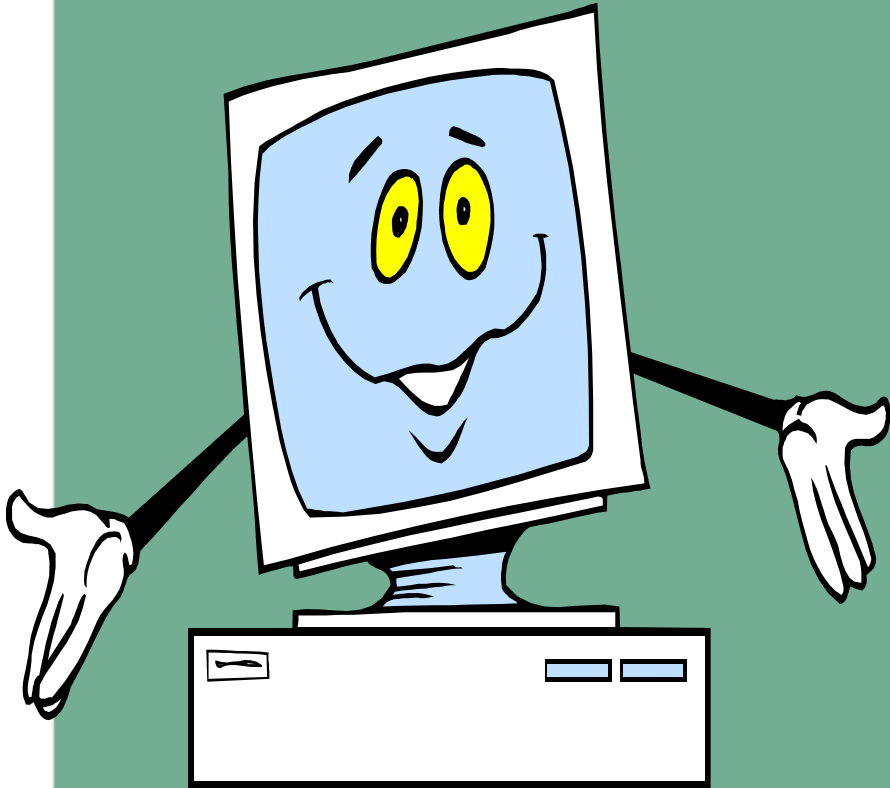
Download the patch cleanup utility if it is not currently on your system. For 10.X systems, the patch is called [PHCO\\_20824](#) and is 60396 bytes in length. For 11.X systems, the patch is called [PHCO\\_22044](#) and is 118380 bytes in length.

## package and download

- **Package** button creates file in your *./outgoing* directory.
- You have 2 weeks to retrieve that file via *ftp*.
- Execute the file on HP-UX box. It will retrieve patches and scripts.
- Follow instructions to install on target system.



## preventive maintenance summary



- Downbad *cpm\_collect.sh*; run on target; upbad result via *ftp*
- Select system ; *Display Candidate Patch List*; select patches of interest; hit *Add*.
- Hit *Analyze*; resolve any conflicts; hit *Package*; retrieve the package file
- Execute package file; execute *make\_depot*; install patches on target system