

HP-UX iSCSI Software Initiator Release Notes

**Revision B.11.11.03e for HP-UX 11i v1
Revision B.11.23.03e for HP-UX 11i v2 September 2004 (or
later)**



**Manufacturing Part Number : T1452-90010
E0705**

Printed in US

© Copyright 2005 Hewlett-Packard Development Company L.P.

Legal Notices

The information in this document is subject to change without notice.

Hewlett-Packard makes no warranty of any kind with regard to this manual, including, but not limited to, the implied warranties of merchantability and fitness for a particular purpose. Hewlett-Packard shall not be held liable for errors contained herein or direct, indirect, special, incidental or consequential damages in connection with the furnishing, performance, or use of this material.

Warranty

A copy of the specific warranty terms applicable to your Hewlett-Packard product and replacement parts can be obtained from your local Sales and Service Office.

U.S. Government License

Proprietary computer software. Valid license from HP required for possession, use or copying. Consistent with FAR 12.211 and 12.212, Commercial Computer Software, Computer Software Documentation, and Technical Data for Commercial Items are licensed to the U.S. Government under vendor's standard commercial license.

Trademark Notices

UNIX® is a registered trademark in the United States and other countries, licensed exclusively through The Open Group

HP-UX iSCSI Software Initiator Release Notes

Announcement

The HP-UX iSCSI Software Initiator is a software implementation of the iSCSI protocol (RFC 3720) based on the HP-UX host TCP/IP stack. The iSCSI protocol defines a mass storage transport wedge between TCP and the SCSI Services layer. The HP-UX iSCSI Software Initiator is compliant with RFC 3720. To access the IETF iSCSI Specification RFC 3720, go to:

<http://www.ietf.org/rfc/rfc3720.txt>

The HP-UX iSCSI Software Initiator consists of two modules, the iSCSI Transport Driver and the iSCSI Software Interface Driver.

- The iSCSI Transport Driver is the Session management module.
- The iSCSI Software Interface Driver module interfaces with the host based TCP/IP module.

The following information is for revisions B.11.11.03e and B.11.23.03e of the HP-UX iSCSI Software Initiator.

NOTE The HP-UX iSCSI Software Initiator revision B.11.23.03e is supported on HP servers running HP-UX 11i v2 September 2004 or later.

 The HP-UX iSCSI Software Initiator revision B.11.23.03e is not supported on HP-UX 11i v2 versions preceding HP-UX 11i v2 September 2004.

- The HP-UX iSCSI Software Initiator requires no changes to applications that access mass storage devices.
- The HP-UX iSCSI Software Initiator revision B.11.11.03e is supported on any of the 64 bit HP 9000 series servers running HP-UX 11i v1.
Network interface cards (NICs) and network infrastructure components currently supported with HP-UX 11i v1 are required. NICs with 1 Gigabit or greater transfer rates are strongly recommended.
- The HP-UX iSCSI Software Initiator revision B.11.23.03e is supported on any of the HP Integrity servers running HP-UX 11i v2 September 2004 or later and on any HP 9000 series servers running HP-UX 11i v2 September 2004 or later.
Network interface cards (NICs) and network infrastructure components currently supported with 11i v2 September 2004 or later are required. NICs with 1 Gigabit or greater transfer rates are strongly recommended.
- For instructions on locating, downloading and installing the HP-UX iSCSI Software Initiator, see the *HP-UX iSCSI Software Initiator Support Guide*.

Table 1 HP-UX iSCSI Software Initiator Documentation Availability

Document Title	Part Number	url
HP-UX iSCSI Software Initiator Support Guide	T1452-90011	http://www.docs.hp.com See: "iSCSI (SCSI Over TCP/IP)" in the "Networking & Communications" section.
HP-UX iSCSI Software Initiator Release Notes Revision B.11.11.03e and 11.23.03e, E0705	T1452-90010	http://www.docs.hp.com See: "iSCSI (SCSI Over TCP/IP)" in the "Networking & Communications" section.
HP-UX iSCSI Software Initiator Support Matrix	N/A	http://www.docs.hp.com See: "iSCSI (SCSI Over TCP/IP)" in the "Networking & Communications" section.

What's New

What's New In Revision B.11.11.03e of the HP-UX iSCSI Software Initiator

- Correct ExpStatSN is sent during login phase

In previous releases, out-of-order ExpStatSN was sent by the HP-UX iSCSI Software Initiator during login phase. This problem has been resolved.

- `islpd` daemon configuration

`islpd` daemon is by default not auto-started on boot. The following new `islpd` options are provided:

- a Configure `islpd` to auto-start on boot
- r Configure `islpd` not to auto-start on boot
- g Get the current `islpd` boot configuration

- `iswd` is kept alive for tasks during reboot to complete

The following message will be displayed during execution of `shutdown(1m)` or `reboot(1m)`.

```
reboot: CAUTION: some process(es) wouldn't die
```

This message is the result of the `iswd` daemon being kept alive to complete various tasks during reboot. When iSCSI is configured in a system, this message may be ignored.

- The Veritas Volume Manager (VxVM) is supported with the VxVM patch PHCO_30850.

What's New In Revision B.11.23.03e of the HP-UX iSCSI Software Initiator

- Correct ExpStatSN is sent during login phase

In previous releases, out-of-order ExpStatSN was sent by the HP-UX iSCSI Software Initiator during login phase. This problem has been resolved.

- `islpd` daemon configuration

`islpd` daemon is by default not auto-started. The following new `islpd` options are provided:

- a Configure `islpd` to auto-start on boot
- r Configure `islpd` not to auto-start on boot
- g Get the current `islpd` boot configuration

- `reboot(1m)` does not cause a system hang

In previous releases, a `reboot(1m)` issued typically by Software Distributor utilities (`swinstall/swremove`) terminated the `iswd` daemon thereby causing the system hang due to the inability of processes executing during reboot to access iSCSI devices. This problem has been resolved.

The following message will be displayed during execution of `shutdown(1m)` or `reboot(1m)`.

```
reboot: CAUTION: some process(es) wouldn't die
```

This message is the result of the `iswd` daemon being kept alive to complete various tasks during reboot. When iSCSI is configured in a system, this message may be ignored.

Limitations

The following information is for revisions B.11.11.03e and B.11.23.03e of the HP-UX iSCSI Software Initiator.

- iSCSI usage of IPsec is supported on HP-UX, however, the HP-UX iSCSI Software Initiator has not been tested with IPsec due to the lack of iSCSI targets that support IPsec.

Support of IPsec with the HP-UX iSCSI Software Initiator is dependent on the availability of iSCSI targets that support IPsec and target vendor testing of the HP-UX iSCSI Software Initiator with those targets.

- The HP-UX iSCSI Software Initiator does not support IPv6 addresses.
- The HP-UX iSCSI Software Initiator does not support the definition of the boot, root, primary swap, dump, or var volumes on iSCSI physical volumes.

Known Problems and Workarounds

Known Problems and Workarounds for the HP-UX iSCSI Software Initiator Revision B.11.11.03e

- **Problem:** Kernel Registry Service states that information will be available prior to I/O initialization. However, kernel modules that use the Kernel Registry Service to store driver information are not available until after I/O initialization.
Workaround: Patches PHKL_27321 and PHKL_27096 must be installed to provide early access to the Kernel Registry Services.
- **Problem:** `ioscan` displays the device state as “NO_HW” when nodes that have hardware paths beginning with 255 are scanned.
Workaround: Install patch PHKL_28209.
- **Problem:** The shutdown command is blocked when the iSCSI Software Initiator is installed. During shutdown, `/sbin/umountall` is unable to determine the status of the file system, because the `killall` script has killed the iSCSI Software Initiator daemons needed to access devices.
Workaround: Install patch PHCO_28319. This patch will modify the `killall` script to prevent it from killing the iSCSI Software Initiator daemons; “`iswd`”, “`iradd`”, and “`iscsi_resolvd`”.
- **Problem:** Data page fault seen with transfer of data using iSCSI Software Initiator.
Workaround: Install patch PHNE_26939 to resolve data page fault issue.
- **Problem:** SAM does not support iSCSI.
Workaround: Install patch PHCO_27374 to provide access to iSCSI volumes from SAM.
- **Problem:** If SLP is being used by iSCSI, and the SLP daemon (`slpd`) is terminated, the iSCSI `islpd` daemon will be killed.
Workaround: No patch available. If a user starts or restarts the SLP daemon (`slpd`), the `islpd` daemon must be restarted using the command line.
- **Problem:** Operations (such as `ioscan`, `vgcreate`, `diskinfo`, `insf`, etc.), that require a device open of an SPC-2 compliant target are delayed, due to extra retries that delay the device open of the SPC-2 compliant target.
Workaround: Install patch PHKL_30510.
- **Problem:** If Event Monitoring Services (EMS) and Support Tool Manager (STM) are used for diagnostic logging and monitoring, some new events generated by the HP-UX iSCSI Software Initiator will not be processed by the iSCSI EMS Monitor. Also, incorrect event messages will be produced, because the HP-UX iSCSI Software Initiator and the iSCSI EMS Monitor are out of sync.
Workaround: Install patch PHSS_30888 after installing the HP-UX 11i v1 Hardware Enablement bundle: HWE0406.
- **Problem:** LVM Volume Group (VG) activation failure error messages are displayed during system startup.

iSCSI Physical Volumes (PVs) are network dependent devices, which are not accessible until the network subsystem is initialized. Attempts during system startup (prior to network initialization) to activate VGs that include an iSCSI PV, will generate VG activation failure error messages. The iSCSI Software

Initiator will return the errno “ENETUNREACH” (Network is unreachable), when iSCSI devices are accessed prior to the completion of network initialization. Once the network subsystem is initialized, the iSCSI Software Initiator will no longer return the errno “ENETUNREACH”. Any errno that is returned after network initialization will be the same as if the iSCSI Software Initiator were not installed on the system.

Workaround: Install patches PHKL_32854 and PHCO_29379.

- **Problem:** For HFS file systems residing on LVM Logical Volumes that are defined on iSCSI Physical Volumes, `fsck` retries the open for the PV to become available, on 10 second intervals, for a total of 360 seconds. This will prolong the system startup time, depending on the number of HFS file systems configured.

Workaround: Install patches PHKL_32854 and PHCO_29379.

- **Problem:** File system commands executed against iSCSI devices display error messages.

During system startup, file system commands (such as `fsck`, `fsck`, `mountall`) executed against iSCSI raw devices, or LVM Logical Volumes that are defined on iSCSI Physical Volumes, will generate error messages, because iSCSI devices will be inaccessible prior to network initialization.

Workaround: Install the following patches:

PHCO_33203 makes `fsck(1m)` iSCSI aware.

PHCO_33205 makes `mountall(1m)` iSCSI aware, and perform required actions while trying to mount/fsck iSCSI devices.

PHCO_33221 makes HFS `bcheckrc` aware of `fsck(1m)`'s error code for iSCSI devices.

PHCO_33226 makes VxFS `bcheckrc` aware of `fsck(1m)`'s error code for iSCSI devices.

PHCO_33236 makes VxFS `mount(1m)` iSCSI aware

PHCO_33237 makes VxFS `fsck(1m)` iSCSI aware.

PHCO_33242 makes HFS `fsck(1m)` iSCSI aware.

PHCO_33327 makes `mount(1m)` iSCSI aware.

- **Problem:** The Veritas Volume Manager™ (VxVM) support with the iSCSI Software Initiator requires the VxVM patch.

Workaround: Install VxVM patch PHCO_30850.

Known Problems and Workarounds for the HP-UX iSCSI Software Initiator Revision B.11.23.03e

- **Problem:** For HFS file systems residing on LVM Logical Volumes that are defined on iSCSI Physical Volumes, `fsck` retries the open for the PV to become available, on 10 second intervals, for a total of 360 seconds. This will prolong the system startup time, depending on the number of HFS file systems configured.

Workaround: Install patch PHKL_32855.

- **Problem:** During system start-up, the VxFS file systems residing on iSCSI devices cannot be fsck'ed causing the `bcheckrc` to drop the control into a shell. This needs manual intervention to continue with the boot. This defect exists on HP-UX 11i v2 with JFS 3.5 only.

Workaround: Install patch PHCO_32912

Installation Requirements

Installation Requirements for the HP-UX iSCSI Software Initiator Revision B.11.11.03e

The following patches, or any superseding patches, should be installed along with revision B.11.11.03e of the HP-UX iSCSI Software Initiator. The absence of any of these patches will not prevent the HP-UX iSCSI Software Initiator from executing correctly, but there will be problems, as detailed in “Known Problems and Workarounds for the HP-UX iSCSI Software Initiator Revision B.11.11.03e” on page 6

- PHCO_27374
- PHCO_28319
- PHCO_29379
- PHCO_30850
- PHCO_33203
- PHCO_33205
- PHCO_33221
- PHCO_33226
- PHCO_33236
- PHCO_33237
- PHCO_33242
- PHCO_33327
- PHKL_27096
- PHKL_27321
- PHKL_28209
- PHKL_30510
- PHKL_30622
- PHNE_26939
- PHSS_30888
(Requires installation of the HP-UX 11i v1 Hardware Enablement bundle: HWE0406.)

Installation Requirements for the HP-UX iSCSI Software Initiator Revision B.11.23.03e

The following patches, or any superseding patches, should be installed along with revision B.11.23.03e of the HP-UX iSCSI Software Initiator. The absence of any of these patches will not prevent the HP-UX iSCSI Software Initiator from executing correctly, but there will be problems, as detailed in “Known Problems and Workarounds for the HP-UX iSCSI Software Initiator Revision B.11.23.03e” on page 7

- PHCO_32912
- PHKL_32855

HP-UX iSCSI Software Initiator Support Matrix

NOTE The following support matrix reflects the support status of Revisions B.11.11.03e and B.11.23.03e of the HP-UX iSCSI Software Initiator, at the time these Release Notes were published. The HP-UX iSCSI Software Initiator Support Matrix located at <http://www.docs.hp.com>, is regularly updated with the latest support status on all supported revisions of this product.

Table 2 HP-UX iSCSI Software Initiator Support Matrix

HP-UX iSCSI Software Initiator Revision	Supported Operating System Versions	Supported Systems	Patches	Supported Targets
Revision B.11.11.03e	HP-UX 11i v1 (64 bit only)	All 64 bit HP 9000 Servers	PHCO_27374 PHCO_28319 PHCO_29379 PHCO_30850 PHCO_33203 PHCO_33205 PHCO_33221 PHCO_33226 PHCO_33236 PHCO_33237 PHCO_33242 PHCO_33327 PHKL_27096 PHKL_27321 PHKL_28209 PHKL_30510 PHKL_32854 PHNE_26939 PHSS_30888	HP StorageWorks™ IP Storage Router 2122-2 Cisco MDS 9000 IP Services Module

Table 2 HP-UX iSCSI Software Initiator Support Matrix (Continued)

HP-UX iSCSI Software Initiator Revision	Supported Operating System Versions	Supported Systems	Patches	Supported Targets
Revision B.11.23.03e	HP-UX 11i v2 September 2004, or later	All HP 9000 Series Servers All HP Integrity Servers	PHCO_32912 PHKL_32855	HP StorageWorks™ IP Storage Router 2122-2 Cisco MDS 9000 IP Services Module
Detailed support information for the HP StorageWorks™ IP Storage Router 2122-2 is available at: http://www.hp.com/support/iprouter				
Detailed support information for the Cisco MDS 9000 IP Services Module is available at: http://h18006.www1.hp.com/products/storageworks/cmds9000ipsm/index.html				
Information on additional iSCSI targets is available at: http://www.hp.com/products1/unixserverconnectivity/mass_storage_devices.html http://h21007.www2.hp.com/dspp/tech/tech_TechSoftwareDetailPage_IDX/1,1703,992,00.html				

Software Availability in Native Languages

HP-UX iSCSI Software Initiator information is only available in the English language.