

HP-UX® Host Utilities 6.0

Release Notes

NetApp, Inc.
495 East Java Drive
Sunnyvale, CA 94089 U.S.
Telephone: +1 (408) 822-6000
Fax: +1 (408) 822-4501
Support telephone: +1 (888) 4-NETAPP
Documentation comments: doccomments@netapp.com
Information Web: <http://www.netapp.com>

Part number: 215-06810_A0 ur001
June 2012

Contents

Host Utilities 6.0 Release Notes	4
The 6.0 release of the HP-UX Host Utilities	4
Information about finding system requirements	5
New features in the 6.0 release of HP-UX Host Utilities	5
Updates to the Release Notes	5
Important Cautions and Warnings	6
Known problems and limitations	8
Error message while trying to connect to the Windows Guest operating system using Remote Desktop connection	8
Limited NDUs supported in HP-UX 11iv3 with VSF 5.0.1 RP2 environments	8
HP-UX iSCSI software initiator attempts to log in on wrong interface	9
HP-UX iSCSI software initiator is unable to create sessions after reaching an HP-UX OS limit on "bus instances"	9
Ways to view current and fixed product bugs	12
NetApp product documentation	13
How to search for documentation on the NetApp Support Site	13
Links to NetApp product documentation	13
Contact technical support	15
Things to check before you call technical support	15
Information you must provide to technical support	15
How to contact NetApp technical support	15
Copyright information	17
Trademark information	18
How to send your comments	19

Host Utilities 6.0 Release Notes

These Release Notes contain the latest information for the HP-UX® Host Utilities 6.0, including updates about known problems and limitations, information about tunable parameters, and any important cautions. The Release Notes also include any issues that might have been discovered since the Host Utilities were released.

These Release Notes are updated when new information about using the HP-UX Host Utilities becomes available. It is a good practice to periodically check the Release Notes to see if new information has been added. See the section *Updates to the Release Notes* to determine whether information has been added since you last checked.

The 6.0 release of the HP-UX Host Utilities

The HP-UX Host Utilities provide support for environments running HP-UX 11iv2 and HP-UX 11iv3. The Host Utilities enable you to connect a HP-UX host to NetApp storage systems.

HP-UX Host Utilities 6.0 adds Cluster-Mode support to HP-UX 11iv3 for the following environments:

- Logical Volume Manager (LVM)
 - Native multipath I/O (MPIO)
- Veritas Volume Manager (VxVM)
 - Dynamic Multipathing (DMP)

Note: For specific information about the operating system versions and updates that the Host Utilities support, see the support.netapp.com/NOW/products/interoperability.

The Host Utilities software is provided as a standard HP-UX depot file. You can download the file and the documentation from the NetApp Support Site at support.netapp.com. The *HP-UX Host Utilities 6.0 Installation and Setup Guide* provides instructions for installing and setting up the Host Utilities to work with your environment and protocol.

Related information

HP-UX Host Utilities 6.0 documentation: support.netapp.com/documentation/productsatoz/index.html

Information about finding system requirements

NetApp qualifies additional components between releases of the Host Utilities software.

For the most up-to-date information about the system requirements, see the Interoperability Matrix, which is available online at support.netapp.com/NOW/products/interoperability.

New features in the 6.0 release of HP-UX Host Utilities

The HP-UX Host Utilities 6.0 adds several features.

The Host Utilities adds the following supports:

- Data ONTAP operating in Cluster-Mode for certain versions of HP-UX Host Utilities.
To determine whether your version of HP-UX supports Data ONTAP operating in Cluster-Mode, see the Interoperability Matrix, which is online at support.netapp.com/NOW/products/interoperability.
- An updated sanlun utility that displays new output for the Data ONTAP modes.
Note: The format used by the sanlun utility shipped with the HP-UX Host Utilities 6.0 does not maintain backward compatibility with the output displayed in previous versions of the Host Utilities.
- The installation package contains software for all architectures supported by the HP-UX Host Utilities.
To reflect this support, the name of the installation package is
`netapp_hpux_host_utilities_6.0_ia_pa.depot.gz`.

For more information, see the *HP-UX Host Utilities 6.0 Installation and Setup Guide*.

Note: For the most up-to-date information on which features are supported and which new features have been added, see the Interoperability Matrix.

Updates to the Release Notes

The Release Notes are updated between product releases as new information is uncovered. The following changes have occurred since the HP-UX Host Utilities 6.0 were released.

June 2012 --The Release Notes were updated in June 2012 to support the Host Utilities 6.0 release.

Important Cautions and Warnings

There are several important issues you should review before installing and using the HP-UX Host Utilities.

Critical Issue: I/O might hang when a takeover or giveback occurs on an HP-UX 11iv3 host with Veritas Storage Foundation 5.0.1 RP2.

An I/O hang might occur when a takeover or giveback is performed on an HP-UX 11iv3 host that has Veritas Storage Foundation 5.0.1 RP2 installed and I/O running on the Veritas volumes.

Symantec has fixed this issue. To resolve this issue, you must install the hot fix that is available.

To get this hot fix and guidelines for installing it, contact Symantec Support about incident number 1957982.

Do not deploy the Veritas Storage Foundation 5.0.1 RP2 solution in production HP-UX environments until you have installed the patches recommended by Symantec.

Critical Issue: HP-UX hosts might panic when a takeover or giveback is performed with Veritas Storage Foundation 5.0 MP1 RP2

An HP-UX host might panic when a takeover or giveback is performed with the Veritas Storage Foundation 5.0 MP1 RP2 patch installed and I/O running on the Veritas volumes.

Symantec has fixed this issue. To resolve this issue, you must install the PHKL_38188 and PHCO_38187 patches.

To get these patches and the guidelines for installing them, contact HP.

Do not deploy the Veritas Storage Foundation 5.0 MP1 RP2 solution in production HP-UX environments until you have installed the patches recommended by Symantec.

Critical Issue: HP-UX 11iv3 March 2008 release host might panic during path failovers

An HP-UX host might panic during path failovers.

HP has released the fix for this issue. To resolve this issue, you must install the PHCO_38064, PHKL_38053, and PHKL_38054 patches.

These patches are part of the HP-UX 11iv3 September 2008 release and can be downloaded from the HP www.itrc.hp.com Web site.

Critical Issue: HP-UX 11iv3 March 2008 release host might hang during path failovers

An HP-UX host might hang during path failovers.

HP has released the fix for this issue. To resolve this issue, you must install the PHKL_38038 patch.

This patch is part of the HP-UX 11iv3 September 2008 release and can be downloaded from the HP www.itrc.hp.com Web site.

Critical Issue: I/O resumption might take more than 120 seconds during path failover with A6826A Card in HP-UX 11iv3 March 2008 release active/active ALUA environment

The resumption time for I/O might take more than 120 seconds during path failover with A6826A card.

Currently, ALUA is not supported in environments using an A6826A card with the HP-UX 11iv3 March 2008 release.

Critical Issue: I/O resumption might take more than 120 seconds during path failover with AB379 in HP-UX 11iv3 March 2008 release active/active ALUA environment with Data ONTAP 7.2.5.1

The resumption time for I/O might take more than 120 seconds during path failover with AB379 card.

Currently, ALUA is not supported in environments using an AB379 card with the HP-UX 11iv3 March 2008 release.

Known problems and limitations

Some unexpected and potentially undesired behaviors, as well as, in some cases, workarounds to avoid these behaviors, have been identified.

To request more information about an individual bug and to explore other bug-related tools, see Bugs Online on the NetApp Support Site.

Error message while trying to connect to the Windows Guest operating system using Remote Desktop connection

When configuring Windows as a guest operating system on HP-UX Virtual Machines A.03.00, you might get an error message when you try to connect to the Windows guest using a Remote Desktop connection.

The following error message is displayed:

```
unable to connect
```

By default, the remote machine login is disabled in the Windows 2003 server operating system. The Windows Registry reports the parameter as:

```
Set fDenyTSConnections to 0
```

To set this parameter on the Windows guest operating system, run the following command:

```
reg add "HKLM\SYSTEM\CurrentControlSet\Control\Terminal server" /v  
fDenyTSConnections /t REG_DWORD /d 0
```

The Windows Registry now reports the parameter as:

```
Set TSEnabled to 1
```

Limited NDUs supported in HP-UX 11iv3 with VSF 5.0.1 RP2 environments

Non-disruptive upgrades (NDU) from Data ONTAP 7.2.x to 7.3.x fail in environments running HP-UX 11iv3 with Veritas Storage Foundation 5.0 RP2. In this environment, only NDUs from Data ONTAP 7.3.x to 8.0.x are supported.

When you perform an NDU from Data ONTAP 7.2.x to 7.3.x in this environment, the Veritas Volume Manager disables the mount point due to an I/O error and the upgrade fails.

If you are using HP-UX 11iv3 hosts with Veritas Storage Foundation 5.0.1 RP2, make sure that all NDUs are from Data ONTAP 7.3.x to 8.0.x. Do not attempt to perform an NDU from Data ONTAP 7.2.x to 7.3.x.

For the latest status on this issue, see bug 462937 at Bugs Online.

HP-UX iSCSI software initiator attempts to log in on wrong interface

The HP-UX iSCSI software initiator attempts to log in to all the target portals discovered during a discovery session.

By default, the storage system lists all its network interfaces, including interface e0, in a discovery session. No mechanism exists on the initiator side to control which target interfaces the initiator can use for iSCSI.

Disable iSCSI on the interfaces that you do not want the initiator to use.

1. Determine which interfaces are enabled for iSCSI by running the following command on the storage system: `iscsi interface show`
2. Disable the interfaces that you do not want the initiator to use by running the following command: `/iscsi interface disable interface_name`

Note: After performing this workaround, you might see the following messages on the storage system console: `ISCSI: network interface interface_name disabled for use; incoming connection discarded.`

You can ignore these messages, which display after you enter the command. The initiator stops after four unsuccessful attempts to log in to this interface.

For example, if your interface name is e0, then a message similar to the following is displayed.

```
iscsi interface disable e0
ISCSI: network interface e0 disabled for use; incoming
connection discarded.
```

HP-UX iSCSI software initiator is unable to create sessions after reaching an HP-UX OS limit on "bus instances"

The HP-UX iSCSI software initiator is unable to create sessions after reaching an HP-UX operating system limit of 255 bus instances.

The initiator assigns a bus instance to each session it creates. These instances are not reused. When you reach this limit, you might go through a very disruptive procedure to add targets or even change an existing TargetPortalGroup configuration, which also creates new bus instances.

The HP-UX operating system (not iSCSI) has a hard limit of 256 ext_bus (bus instances). Unused bus instance numbers cannot be reclaimed. So as you create new buses and discontinue the use of old instances, the number keeps going up. At 256, the number cannot get any larger, so discovery stops.

The following workaround can be done only when no valid data is on the FC, pSCSI, or iSCSI test disks other than root.

To reinitialize the bus instance number and reclaim unused bus instance numbers, complete the following steps:

Note: This workaround is disruptive.

1. Save the old ioconfig file by running the following command:

```
root->
```

```
mv /stand/ioconfig/tmp/ioconfig.pre_init
```

Note: If you booted from somewhere other than /stand/vmunix, you must change the first command to the following:

```
root->
```

```
echo "iscsi_krs_delete/W 1 | adb -w /stand/vmunix dev/kmem
```

2. Remove the ioconfig file with current bus instance numbers and its backup by running the following commands:

```
root->
```

```
rm /etc/ioconfig
```

```
root->
```

```
rm /stand/ioconfig
```

3. Save the old configuration by running the following commands:

```
root->
```

```
ioscan -kfn >/tmp/ioscan.pre_init
```

```
root->
```

```
iscsiutil -p >/tmp/iscsiutil.pre_init
```

4. Initialize the registry used by iSCSI. You must reenter all iSCSI information after reboot.

```
root->
```

```
iscsiutil -x
```

```
root->
```

reboot/shutdown the system

You must respond to a few prompts during startup. The prompts point out that the ioconfig file could not be found and ask if you want to construct a new one. You must create a new one.

The boot/root/swap/dump disks are discovered with the same instance numbers as before. The device files for the FC, pSCSI, and iSCSI data disks change, which makes it difficult to recover valid data from any of them.

Note: When you upgrade to the HP-UX Host Utilities 5.1, you must first uninstall the previous version of the Host Utilities and then install the 5.1 software.

Ways to view current and fixed product bugs

NetApp provides an online tool that enables you to search for the most current information about a known bug. You can also use this tool, which is available on the NetApp Support Site, to get a list of current or fixed bugs for a particular product.

Bugs Online, which is online at support.netapp.com/NOW/cgi-bin/bol, enables you to search for information in the following ways:

- By entering the bug number
- By entering keywords related to the bug
- By selecting a software product from the list in the **Bug Type(s)** field or the **Product Type(s)** field.

Some products are listed in one field and some in the other field. You should check both to find the product you want.

Some keyword combinations and Bug Type(s) that you might want to use include the following:

- FCP - HP-UX
- ISCSI - HP-UX

NetApp product documentation

You can access documentation for all NetApp products on the NetApp Support Site at support.netapp.com.

In addition to product documentation, NetApp provides other product information, such as technical reports and white papers.

How to search for documentation on the NetApp Support Site

NetApp provides a variety of documentation on the support.netapp.com site that can be helpful in working with the Host Utilities.

You can use the Search tool on the support.netapp.com site to search through the following information sources:

- Product documentation
- Knowledgebase articles
- Bugs Online
- The support community
- Tools and other documentation
- Partner knowledgebases

Links to NetApp product documentation

The Product Documentation page contains pointers to the most current NetApp documentation for Host Utilities and storage systems.

Links to specific Host Utilities documentation are in the Product Library A-Z page available at support.netapp.com/documentation/productsatoz/index.html site for each Host Utilities product.

The following table describes some of the documents on the support.netapp.com site that contain current information about host and storage system requirements, supported configurations, and best practices, as well as procedures for installing and managing your storage environment.

If you need more information about...	Go to...
The latest supported configurations	• The NetApp Interoperability Matrix • The System Configuration Guide

If you need more information about...	Go to...
Configuring and managing the storage system	• The following documents for your Data ONTAP release on the Documentation Library: • The <i>Data ONTAP Software Setup Guide</i> • The <i>SAN Administration Guide (called Data ONTAP Block Access Management Guide for iSCSI and FC in Data ONTAP 8.1 and earlier)</i> • The <i>Data ONTAP Release Notes</i> • The <i>Data ONTAP Commands: Manual Page Reference, Volume 1</i> • The <i>Data ONTAP Commands: Manual Page Reference, Volume 2</i> • The <i>Data ONTAP Upgrade and Revert/Downgrade Guide for 7-Mode</i>
Supported Fibre Channel SAN topologies	The <i>Data ONTAP SAN Configuration Guide for 7-Mode</i>
Configuring your host for the Host Utilities	The Host Utilities documents on the Host Utilities Documentation Library

Contact technical support

If you have a question that has not been resolved by these Release Notes, contact NetApp technical support.

Things to check before you call technical support

Before you call technical support, there are several things you can try first, to solve the problem yourself.

Potential solutions are as follows:

- Go through these *Release Notes* to see if they contain information about your problem.
- Check all cables to make sure that they are connected properly.
- If you are using switches, check the power switches to make sure that the system is turned on. You should also make sure that the system components were turned on in the correct order.
- Review the troubleshooting information in the documentation for this product.

Information you must provide to technical support

Before you contact technical support, you must gather information about your system and your problem.

You should have the following information available when you contact technical support:

- Your contact information
- A list of all the NetApp products you are using
- All the error messages from the system
- Information about your system setup
- Your licensing information

How to contact NetApp technical support

You can contact NetApp technical support by telephone or from the NetApp Support Site.

To contact technical support by telephone, use the following numbers:

- 888 4-NETAPP (United States and Canada)
- 00.800.44.NETAPP (EMEA/Europe)
- +800.800.80.800 (Asia/Pacific)

To contact technical support from the web, use the following address:

- [*support.netapp.com*](http://support.netapp.com)

For a detailed listing of technical support phone numbers, go to the NetApp Support page.

Copyright information

Copyright © 1994–2012 NetApp, Inc. All rights reserved. Printed in the U.S.

No part of this document covered by copyright may be reproduced in any form or by any means—graphic, electronic, or mechanical, including photocopying, recording, taping, or storage in an electronic retrieval system—without prior written permission of the copyright owner.

Software derived from copyrighted NetApp material is subject to the following license and disclaimer:

THIS SOFTWARE IS PROVIDED BY NETAPP "AS IS" AND WITHOUT ANY EXPRESS OR IMPLIED WARRANTIES, INCLUDING, BUT NOT LIMITED TO, THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE, WHICH ARE HEREBY DISCLAIMED. IN NO EVENT SHALL NETAPP BE LIABLE FOR ANY DIRECT, INDIRECT, INCIDENTAL, SPECIAL, EXEMPLARY, OR CONSEQUENTIAL DAMAGES (INCLUDING, BUT NOT LIMITED TO, PROCUREMENT OF SUBSTITUTE GOODS OR SERVICES; LOSS OF USE, DATA, OR PROFITS; OR BUSINESS INTERRUPTION) HOWEVER CAUSED AND ON ANY THEORY OF LIABILITY, WHETHER IN CONTRACT, STRICT LIABILITY, OR TORT (INCLUDING NEGLIGENCE OR OTHERWISE) ARISING IN ANY WAY OUT OF THE USE OF THIS SOFTWARE, EVEN IF ADVISED OF THE POSSIBILITY OF SUCH DAMAGE.

NetApp reserves the right to change any products described herein at any time, and without notice. NetApp assumes no responsibility or liability arising from the use of products described herein, except as expressly agreed to in writing by NetApp. The use or purchase of this product does not convey a license under any patent rights, trademark rights, or any other intellectual property rights of NetApp.

The product described in this manual may be protected by one or more U.S. patents, foreign patents, or pending applications.

RESTRICTED RIGHTS LEGEND: Use, duplication, or disclosure by the government is subject to restrictions as set forth in subparagraph (c)(1)(ii) of the Rights in Technical Data and Computer Software clause at DFARS 252.277-7103 (October 1988) and FAR 52-227-19 (June 1987).

Trademark information

NetApp, the NetApp logo, Network Appliance, the Network Appliance logo, Akorri, ApplianceWatch, ASUP, AutoSupport, BalancePoint, BalancePoint Predictor, Bycast, Campaign Express, ComplianceClock, Cryptainer, CryptoShred, Data ONTAP, DataFabric, DataFort, Decru, Decru DataFort, DenseStak, Engenio, Engenio logo, E-Stack, FAServer, FastStak, FilerView, FlexCache, FlexClone, FlexPod, FlexScale, FlexShare, FlexSuite, FlexVol, FPolicy, GetSuccessful, gFiler, Go further, faster, Imagine Virtually Anything, Lifetime Key Management, LockVault, Manage ONTAP, MetroCluster, MultiStore, NearStore, NetCache, NOW (NetApp on the Web), Onaro, OnCommand, ONTAPI, OpenKey, PerformanceStak, RAID-DP, ReplicatorX, SANscreen, SANshare, SANtricity, SecureAdmin, SecureShare, Select, Service Builder, Shadow Tape, Simplicity, Simulate ONTAP, SnapCopy, SnapDirector, SnapDrive, SnapFilter, SnapLock, SnapManager, SnapMigrator, SnapMirror, SnapMover, SnapProtect, SnapRestore, Snapshot, SnapSuite, SnapValidator, SnapVault, StorageGRID, StoreVault, the StoreVault logo, SyncMirror, Tech OnTap, The evolution of storage, Topio, vFiler, VFM, Virtual File Manager, VPolicy, WAFL, Web Filer, and XBB are trademarks or registered trademarks of NetApp, Inc. in the United States, other countries, or both.

IBM, the IBM logo, and ibm.com are trademarks or registered trademarks of International Business Machines Corporation in the United States, other countries, or both. A complete and current list of other IBM trademarks is available on the web at www.ibm.com/legal/copytrade.shtml.

Apple is a registered trademark and QuickTime is a trademark of Apple, Inc. in the United States and/or other countries. Microsoft is a registered trademark and Windows Media is a trademark of Microsoft Corporation in the United States and/or other countries. RealAudio, RealNetworks, RealPlayer, RealSystem, RealText, and RealVideo are registered trademarks and RealMedia, RealProxy, and SureStream are trademarks of RealNetworks, Inc. in the United States and/or other countries.

All other brands or products are trademarks or registered trademarks of their respective holders and should be treated as such.

NetApp, Inc. is a licensee of the CompactFlash and CF Logo trademarks.

NetApp, Inc. NetCache is certified RealSystem compatible.

How to send your comments

You can help us to improve the quality of our documentation by sending us your feedback.

Your feedback is important in helping us to provide the most accurate and high-quality information. If you have suggestions for improving this document, send us your comments by email to doccomments@netapp.com. To help us direct your comments to the correct division, include in the subject line the product name, version, and operating system.

You can also contact us in the following ways:

- NetApp, Inc., 495 East Java Drive, Sunnyvale, CA 94089 U.S.
- Telephone: +1 (408) 822-6000
- Fax: +1 (408) 822-4501
- Support telephone: +1 (888) 463-8277