IBM XIV Host Attachment Kit for HP-UX
Version 2.0.0

Release Notes

IBM

Contents

Overview

The IBM® XIV® Host Attachment Kit (HAK) for HP-UX is a software pack that simplifies the task of connecting an HP UNIX host to the IBM XIV Storage System.

The HAK provides a set of command-line interface (CLI) tools that help host administrators perform different host-side tasks, such as: detect any physically connected XIV storage system (single system or multiple systems), detect XIV volumes, define the host on the XIV storage system, run diagnostics, and apply best practice native multipath connectivity configuration on the host.

You can download the IBM XIV Host Attachment Kit software package at any time from the IBM Fix Central website (www.ibm.com/support/fixcentral).

Compatibility and requirements

The IBM XIV Host Attachment Kit for HP-UX is compatible with different versions of the HP-UX operating system and the XIV storage system, as well as with different HBAs and multipath solutions.

Note: This section applies to version 2.0.0. For information about the compatibility and requirements of a previous host attachment kit version, refer to its relevant release notes.

Supported HP-UX versions

The IBM XIV Host Attachment Kit for HP-UX supports different HP-UX versions or editions, as listed in the following table.

Operating system	Architecture
HP-UX 11i v3	Intel Itanium (IA-64)

Supported XIV storage systems

The IBM XIV Host Attachment Kit for HP-UX supports different microcode versions of the IBM XIV Storage System, as listed in the following table.

Storage system	Microcode version
IBM XIV Storage System	10.2.x
	11.0.x, 11.1.x, 11.2.0

Note: Newer microcode versions may also be compatible. Refer to the latest XIV storage system release notes when a new XIV microcode version becomes available. You can obtain the latest XIV storage system release notes on the IBM XIV Storage System Information Center (publib.boulder.ibm.com/infocenter/ibmxiv/r2).

Supported HBAs

The IBM XIV Host Attachment Kit for HP-UX supports different host bus adapter (HBA) brands and types.

For the latest support information and compatibility matrix, see the IBM System Storage® Interoperation Center website (www.ibm.com/systems/support/storage/config/ssic).

Note: For best performance, install the latest firmware and drivers for the HBAs that are in use. The HBA vendor should provide the latest firmware and drivers.

Attention: The IBM XIV Host Attachment Kit for HP-UX does not support iSCSI connectivity. Only Fibre Channel (FC) is supported.

Supported multipath I/O solutions

The IBM XIV Host Attachment Kit for HP-UX supports the following multipath solutions:

- Native multipath I/O (MPIO)
- Veritas Dynamic Multipathing (DMP) 5.0 or 5.1 (including native support for XIV in Veritas Storage Foundation 5.1)

Important: Active-Active multipathing is available only by using a commercial and licensed version of the Veritas Volume Manager. For more information, refer to the Symantec Storage Foundation website (www.symantec.com/business/storage-foundation).

Change log

This section summarizes the changes made in different version releases of the IBM XIV Host Attachment Kit for HP-UX.

Version 2.0.0 (March 2013)

Version 2.0.0 includes the following enhancements.

Ticket ID	Description
HA-26055*	**Enhancement**: A new host diagnostics utility, Host Profiler (`xiv_host_profiler`), is now available. The utility collects comprehensive host configuration information, creates a profile based on this information, and allows detailed analysis of the collected information. For more information, refer to the Diagnostics chapter in the IBM XIV Host Attachment Guide.
HA-251470	**Enhancement**: Reduced HAK package size, requiring less disk space.

* Applies to all supported operating systems.

Version 1.10.0 (September 2012)

Version 1.10.0 included the following fixes.

Ticket ID	Description
HA-234368	**Fixed**: When no volumes are mapped to the host, some `module:port` FC targets are missing from the `xiv_syslist` report.
HA-236858*	**Fixed**: `xiv_devlist` does not display the correct size of volumes that are larger than 2.2 TB.
HA-238118	**Fixed**: `xiv_devlist` may report a wrong number of active paths.

* Applies to all supported operating systems.

Version 1.9.0 (June 2012)

Version 1.9.0 included the following enhancements and fixes.

Ticket ID	Description
HA-10663	**Enhancement**: Detailed on-screen help prompt is now available for the different HAK utilities using the `man` command option in the following format: ``` man xiv_attach man xiv_fc_admin man xiv_syslist man xiv_devlist man xiv_diag ```
HA-73943*	**Enhancement**: The `--path` optional argument is now available for the `xiv_diag` command, allowing one-step definition of the directory into which the report file should be generated. For more information, refer to the user guide.
HA-228028	**Fixed**: `xiv_devlist` halts and prompts an index error when used after a WWPN port is deleted from the host definition on the XIV storage system.
HA-233433*	**Fixed:** In some cases, `xiv_syslist` may fail with a general error prompt (ValueError exception).

* Applies to all supported operating systems.

Version 1.8.0 (March 2012)

Version 1.8.0 included the following enhancements and fixes.

Ticket ID	Description
HA-179589*	**Enhancement**: A new utility, `xiv_syslist`, has been added to the IBM XIV Host Attachment Kit in order to provide broader and more customized information than the output of the `xiv_fc_admin -L` and `xiv_iscsi_admin -L` commands. Using the `xiv_syslist` command and its optional arguments, users can view different details of all XIV storage systems that are connected to the host. For more information, refer to the IBM XIV Host Attachment Guide.
HA-164283	**Fixed**: `xiv_devlist` does not list the logical unit number (LUN) of XIV volumes.

* Applies to all supported operating systems.

Version 1.7.1 (December 2011)

Version 1.7.1 included the following fix.

Ticket ID	Description
HA-163382*	**Fixed**: An exception occurs when trying to define the host on the XIV storage system with incorrect XIV credentials.

* Applies to all supported operating systems.

Version 1.7.0 (September 2011)

Version 1.7.0 added support for the XIV Gen3 hardware configuration and for version 11.0 of the IBM XIV microcode.

In addition, version 1.7.0 included the following enhancements and changes:

Ticket ID	Description
HA-159503*	**Enhancement**: Portable HAK. Instead of installing the HAK locally on each host, it can be used from a mounted network drive or a portable USB flash drive. For more information, refer to the user guide.
HA-23373*	**Enhancement**: `xiv_fc_admin -L` now displays all four levels of the XIV microcode version number, in the `x.y.z.n` format. For example: 10.2.4.1 is displayed for microcode 10.2.4a, 10.2.4.2 is displayed for microcode 10.2.4b.
HA-121647*	**Change**: The IBM Storage Solutions External Runtime Components (previously named "XPyV") are now integrated within the HAK code, rather than installed separately.

* Applies to all supported operating systems.

Version 1.6.0 (May 2011)

Version 1.6.0 included the following enhancements and fixes.

Ticket ID	Description
HA-18616*	**Enhancement**: `xiv_diag` now provides the HAK version number when used with the `--version` argument.
HA-22130*	**Enhancement**: More information is collected with the `xiv_diag` command.
HA-24970*	**Enhancement**: `xiv_devlist` can display LUN sizes in different capacity units, by using the `-u` or `--size-unit` argument.
HA-26338*	**Enhancement**: The `xiv_devlist` output can be saved to a file in CSV or XML format, by adding the `-f` or `--file` argument.
HA-21244	**Fixed**: The `xiv_diag` command may cause a crash.
HA-21456*	**Fixed**: Redirecting the `xiv_devlist` output results in a broken pipe error.
HA-21805	**Fixed**: `xiv_attach` fails when STMS already installed.
HA-22470*	**Fixed**: In some cases, the `xiv_devlist` output shows "N/A" instead of the actual volume size.
HA-23250*	**Fixed**: `xiv_attach` crashes when a user who is not defined as a storage admin (user type) tries to define a host.
HA-25522	**Fixed**: The `xiv_attach` command defines the host without the HP-UX type.
HA-26601*	**Fixed**: `xiv_devlist` may cause a few non-IBM RAID controllers to lose a disk due to incorrect SCSI Test-Unit-Ready parsing.
HA-57433	**Fixed**: `xiv_diag` creates a TAR file that cannot be opened on HP-UX.
HA-62263*	**Fixed**: Entering an invalid username or password results in a wrong error message.
HA-67801	**Fixed**: `xiv_attach` fails to detect XIV storage arrays when removing HP legacy devices and using Agile on HP-UX 11i v3.
HA-62263*	**Fixed**: Entering an invalid username or password results in a wrong error message.

* Applies to all supported operating systems.

Version 1.5.0 (November 2009)

Version 1.5.0 included the following enhancements, changes, and fixes.

Ticket ID	Description
HA-3965*	**Enhancement**: Automatic host definition on undefined XIV systems. The `xiv_attach` and admin commands automatically detect undefined XIV storage systems and define the host on those systems.
HA-6151*	**Enhancement**: Added the `--version` command argument. The `--version` command argument was added to the `xiv_fc_admin` and `xiv_iscsi_admin` commands. In addition, `xiv_attach` displays the HAK version in the Welcome banner.
HA-6708*	**Enhancement**: Colored output for host attachment binaries. Colored output added to the following commands: • `xiv_attach` • `xiv_iscsi_admin` • `xiv_fc_admin` • `xiv_devlist` • `xiv_diag`
HA-9877*	**Enhancement**: Listing attached XIV systems. The `xiv_attach`, `xiv_iscsi_admin` and `xiv_fc_admin` commands display the attached XIV systems along with basic connectivity information.

HA-9887*	**Enhancement**: Additions and changes to the `xiv_devlist` command.
	• Added command-line arguments:
	  – `-t xml` provides a new XML output format
	  – `--hex` changes the machine ID from decimal to hexadecimal base
	  – `-o` adds all available fields to the table
	  – `--xiv-only` lists only the XIV devices
	  – `-d` writes debugging information to a file
	• Wide-terminal-aware table output:
	  – If the terminal width is long enough, each row in the table is printed on a single line.
	  – If the terminal width is shorter than needed, the columns are wrapped where necessary.
	• Changed the machine ID format to decimal base.
	• Added verification that the user is running with root/administrator permissions.

HA-10288	**Enhancement**: Added support for PV-Links on HP-UX 11i v2.

Ticket ID	Description
HA-6492	**Enhancement**: Added support for the Intel IA64 architecture.
HA-6956*	**Change**: Restructured host attachment tree. The host attachment tree was restructured so that it will be consistent across all operating systems.
HA-9980*	**Fixed**: An error message stating "XPyV: command not found" appears in a first-time installation.
HA-19860	**Fixed**: HAK commands fail when external disk devices are connected.

* Applies to all supported operating systems.

Known issues

This section details the known issues in version 2.0.0, along with possible workarounds (if workarounds are available).

Ticket ID	Description
HA-100800	Mapping the LUN0 volume causes errors. Due to the distinctive properties of the XIV LUN0 volume (on any storage pool), mapping it to the host causes numerous errors or performance problems. Accordingly, mapping the LUN0 volume is not recommended.
HA-19873	When using **xiv_devlist**, a volume that is reserved by another host appears as an unreachable device. Currently there is no workaround for this limitation (HA-19873).
HA-21126	**xiv_devlist** does not identify a volume assigned to LUN0. Related issue: HA-100800. Currently there is no workaround for this limitation (HA-21126).
HA-58086	**xiv_devlist** does not report accurate data after deleting the host port definition on the XIV system. Currently there is no workaround for this limitation (HA-58086).
HA-97194	A conflict occurs when using the same LUN (logical unit number) on a host to map different volumes on different XIV storage systems. To avoid this issue, always assign different logical unit numbers when connecting to more than one XIV storage system.

Ticket ID	Description
HA-209680	When using the Veritas multipathing framework, `xiv_devlist` displays the native device names of newly mapped volumes. To resolve this issue, run the Veritas device rescan command: `vxdctl enable`

Related information and publications

You can find additional information and publications related to the IBM XIV Host Attachment Kit for HP-UX on the following websites.

- IBM Storage Host Software Solutions Information Center (publib.boulder.ibm.com/infocenter/strhosts/ic)
- IBM XIV Storage System Information Center (publib.boulder.ibm.com/infocenter/ibmxiv/r2)
- HP-UX 11i website (h71028.www7.hp.com/enterprise/w1/en/os/hpux11i-overview.html)

Getting information, help, and service

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- IBM Support Portal website (www.ibm.com/storage/support)
- IBM Directory of Worldwide Contacts website (www.ibm.com/planetwide)

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