

The HP-UX Host Utilities Quick Start Guide

This guide is for experienced HP-UX users. It provides the basic information required to get the HP-UX Host Utilities installed and set up on an HP-UX host.

If you are not an experienced HP-UX user, see the *HP-UX Host Utilities Installation and Setup Guide*, which provides detailed steps and examples. It also includes instructions for optional tasks, such as setting up a SAN boot LUN and troubleshooting information.

For information about installing and setting up third-party hardware and applications such as HBAs or Veritas Storage Foundation, see the documentation that accompanies that product.

Note: There are known problems that can affect your system setup. Read the *HP-UX Host Utilities Release Notes* before you install the Host Utilities. The *Release Notes* are updated whenever an issue is found and contain the information that was discovered after this guide was produced.

Task 1: Ensure that the prerequisites for installing and setting up the Host Utilities have been met

To install the Host Utilities and set up your system, you must perform tasks on both the host and the storage system. In some cases, the tasks you perform might vary depending on your system's environment.

Note: The IBM N series interoperability matrix website at www.ibm.com/systems/storage/network/interophome.html contains the most current information about supported environments for the Host Utilities.

1. Verify that your host system is correct, including:

- Host operating system version and appropriate updates
- HBAs and drivers, model and version, or software initiator
- Volume management and multipathing, if you are using multipathing
- Veritas Storage Foundation

Set up the Veritas Volume Manager (VxVM) and install the Array Support Library (ASL) and Array Policy Module (APM), if these modules were not installed with your version of Veritas Storage Foundation. If you are using Veritas Storage Foundation with HP-UX 11iv3, you must disable Native MPIO ALUA on Veritas LUNs to ensure that DMP functions properly.

You must also set the Veritas DMP restore daemon interval to 60.

Note: If you need to manually install the ASL and APM, make sure you first have the Veritas VxVM installed. You can get the ASL and APM from the Symantec website.

2. Verify that your storage system is set up correctly, which includes:

- The correct version of Data ONTAP is installed.
- The protocol on which your environment runs must be licensed.
- The appropriate HBAs are set up to work with the host as needed by your protocol.

3. **(FC environments)** If you are using a fabric connection, verify that the switch is set up correctly, which includes having the switch:

- Cabled according to the instructions in the *SAN Configuration Guide (called Fibre Channel and iSCSI Configuration Guide in Data ONTAP 8.1 and earlier)* for your version of Data ONTAP.

- Zoned appropriately.
- Powered on in the correct order: switch, disk shelves, storage systems, and then the host.

Note: For information about supported topologies, see the *SAN Configuration Guide (called Fibre Channel and iSCSI Configuration Guide in Data ONTAP 8.1 and earlier)* for your version of Data ONTAP.

4. Confirm that the host and the storage system can communicate by verifying the following:
 - Host ports have "logged in" on controller.
 - LUNs are visible if mapped to the host.

Task 2: Install and set up the Host Utilities

To install and set up the Host Utilities, you must download the Host Utilities software package.

You must be logged in as root to install or uninstall the Host Utilities.

Complete the following steps to get, install, and set up the Host Utilities:

1. Download the compressed file containing the Host Utilities from the IBM N series Support website at www.ibm.com/storage/support/nseries/
2. If you are upgrading the Host Utilities, remove any currently installed version of the Host Utilities by using the following command:


```
# swremove Ontap_santoolkit
```
3. Use the **gunzip** command to uncompress the file.


```
# gunzip ontap_hpux_host_utilities_6.0_ia_pa.depot.gz
```

Note: If you are using iSCSI, make sure you install the iSCSI Software Initiator before you install the Host Utilities.

4. Install the Host Utilities software by using the **swinstall** command.

```
# swinstall -s /depot_path depot_path
```

 provides the path and name of the depot file.
5. Log out and log back in to enable the updates that the installation script makes.

(iSCSI) Task 3: Configure the iSCSI protocol

If you are using iSCSI, you must make sure your system is correctly set up for this protocol.

Complete the following steps to set up the iSCSI protocol:

1. Download the iSCSI software initiator from the HP website.
2. Use the **swlist** command to verify that the file is downloaded correctly and then install the initiator by using the **swinstall** command.


```
# swlist @/depot_path # swinstall -x autoreboot=true -s/depot_path depot_path
```

 provides the path and name of the depot file.
3. Configure the iSCSI Software Initiator by using **iscsiutil** command.

```
# iscsiutil -i -N iSCSI-initiator-name
```

 For more information, see the instructions provided with the iSCSI Software Initiator.
4. Record the host's iSCSI node name by entering the following command:

```
# iscsiutil -l
```
5. Set up target discovery by entering the following command:

```
# iscsiutil -a -I target-ip-address
```
6. **Optional:** Set up Challenge Handshake Authentication Protocol (CHAP) on the host and the storage system by following the instructions provided in the HP-UX documentation.

Task 4: Set up access between the host and the LUNs on the storage system

To complete the Host Utilities setup, you must ensure the host discovers and can work with the LUNs on the storage system. The steps you perform differ depending on your environment.

You must be logged in as root administrator to execute the Host Utilities commands.

1. Create and map igroups and LUNs.

For details about creating an igroup and LUNs, see the *SAN Administration Guide (called Data ONTAP Block Access Management Guide for iSCSI and FC in Data ONTAP 8.1 and earlier)* for your version of Data ONTAP.

2. **(FC)** If your environment is running the FC protocol and supports ALUA, make sure ALUA is enabled.

3. Discover the new LUNs by entering the appropriate command for your environment.

You can use the **ioscan** command to discover the LUNs and the **insf** command to create device special files for the newly discovered LUNs. `# ioscan -fnC disk # insf -e`

4. Configure LUNs to work with the volume manager.

5. Display information about the LUNs and the HBAs by using the **sanlun** command.

For example, to verify that the host has discovered the LUNs, enter the following command: `# sanlun lun show`

For displaying the multipathing information, enter the following command: `# sanlun lun show -p`

Note: For displaying HBA information, enter the following command: `# sanlun fcp show adapter`

