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## Document Revision Level

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Installing the HNAS VAAI plugin

Install the Hitachi NAS vSphere APIs for Array Integration (HNAS VAAI) plugin when you have virtual machines (VMs) stored on Hitachi NAS Platforms, which are accessible using NFS from the VMware® ESXi™ host.

Installing the HNAS VAAI includes:
- Download the latest HNAS VAAI plugin package, available from the HDS Portal, on the Software Downloads > VMware Adapters page.
- Install the plugin on one or more VMware ESXi hosts using the VMware vSphere® Update Manager™ (VUM) or use the CLI installation.
- Verify the installation was successful.

- HNAS VAAI installation prerequisites
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- Uninstalling HNAS VAAI
- Reference documentation
HNAS VAAI installation prerequisites

- Hitachi NAS File Operating System (NAS File OS) 11.2, or later, with a valid Hitachi NAS File Clone license installed.
- VMware vSphere® v5.x with Update Manager installed (or else use the CLI-based installation).

**Note:** Only install the HNAS VAAI plugin if you have:
- virtual machines (VMs) stored on Hitachi NAS Platforms, which are accessible using NFS from the VMware ESXi host.
- a valid Hitachi NAS File Clone license installed.

Using VMware vSphere Update Manager (VUM)

You must first import the HNAS VAAI plugin package to VUM before installing.

**Procedure**

1. Log in to the vCenter server through a vSphere client.

2. From the **Home** page, click **Update Manager** in **Solutions and Applications**, and then select the **Patch Repository** tab.
3. On the upper-right corner of the tab, click **Import Patches**.
4. Select the HNAS-VAI zip package that was previously downloaded, and then click **Next**.

**Tip:** The VAAI-HNAS zip package that was downloaded from the HDS portal may have a name such as zip-00sa029-01--usah1-xxxxx.zip, depending on the release version. You can rename the package to HDSNASVaiPlugin.zip to make it easier to find.

**Note:** If a security warning displays, click **Ignore** to continue.
5. Click **Finish** to confirm the import.

6. Select the **Baselines and Groups** tab, and click **Create** in the **Baselines** pane.
7. Enter a name for your baseline in **Baseline Name and Description**; for example: **HNAS-VAAI**.

8. In **Baseline type**, select **Host Extension**, and then click **Next**.

9. Select **HDS-NAS-VaaiPlugin** from the extensions list, click the arrow to add the extension, and then click **Next**.
10. Click **Finish**; the **HNAS-VAAI** baseline should appear in the **Baselines** section.
Installing HNAS VAAI using VUM

Note: The targeted ESXi host enters a maintenance mode and will reboot during this installation process.

Procedure

1. From the Home page, click Hosts and Clusters, select the vCenter icon, and then select the Update Manager tab.

2. On the upper-right corner of the tab, click Attach.

3. In the Extension Baseline section, select HNAS-VAAI, and then click Attach.
4. On the upper-right corner, click **Scan**.
5. On **Confirm Scan**, fill the check box for **Patches and Extensions**, and then click **Scan**.
6. Click **Remediate**, select a host that you want to remediate, and then click **Next**.

7. Click **Next** to skip the **Patches and Extensions** section.
8. Enter a task name and description, select a remediation time, and then click **Next**.
9. Select the related information, and then click **Next**.
10. Click **Finish** to complete the installation.

### Installing HNAS VAAI using CLI

**Tip:** The VAAI-HNAS zip package that is downloaded from the HDS portal may have a name such as zip-00sa029-01--usah1-xxxxx.zip, depending on the release version. You can rename this package to HDSNAS-VaaiPlugin.zip to make it easier to find.

**Tip:** To put the zip package on the ESXi host, you can use PUTTY Secure Copy (PSCP). For example, you can use the following command:

```
./pscp HDSNAS-VaaiPlugin.zip root@ESXinode1.world.local:/tmp
```

**Procedure**

1. From the VMware ESXi CLI, enter `esxcli software vib install -d local_path` to install the plugin on the host.

   `local_path` is the path to the offline bundle (.zip), which must be available on the ESXi host.

   `local_path` example:

   ```
   ~ # esxcli software vib install -d /tmp/HDSNAS-VaaiPlugin.zip
   ```

   **Installation Result**

   - Message: The update completed successfully, but the system needs to be rebooted for the changes to be effective.
   - Reboot Required: true
   - VIBs Installed: Hitachi_Data_Systems_bootbank_vmware-esx-HDSNAS-VaaiPlugin
   - VIBs Removed:
   - VIBs Skipped:

2. Reboot the ESXi host to complete the installation.

### Verifying HNAS VAAI plugin installation

**Procedure**

1. To verify the HNAS VAAI plugin installation:

   - If you installed the plugin using the Update Manager, go to **Home > Update Manager**, and locate the **Extensions** column. If **Compliant** lists, then the HNAS VAAI plugin installed correctly.
• If you installed using the CLI, go to Home > Inventory > Hosts and Clusters > Configuration > Storage, and locate the Hardware Acceleration column. If Supported lists for a datastore that you know to be an HNAS file system, then the HNAS VAAI plugin installed correctly.

From the VMware ESXi CLI, enter `esxcli software vib list | grep -i Hitachi` and `esxcli software vib get --vibname=vmware-esx-HDS-NAS-VaaiPlugin` to verify that the plugin successfully installed on the host. For example:

~ # esxcli software vib list | grep -i Hitachi
vmware-esx-HDS-NAS-VaaiPlugin  1.3
Hitachi_Data_Systems  VMwareAccepted  2013-04-16
Uninstalling HNAS VAAI

Procedure

1. Using the VMware ESXi CLI on the host, enter `esxcli software vib remove --vibname=vmware-esx-HDS-NAS-VaaiPlugin` to uninstall HNAS VAAI.
   
   Example output:
   ```
   ~ # esxcli software vib remove --vibname=vmware-esx-HDS-NAS-VaaiPlugin
   Removal Result
   Message: The update completed successfully, but the system needs to be rebooted for the changes to be effective.
   Reboot Required: true
   VIBs Installed:
   VIBs Removed: Hitachi_Data_Systems_bootbank_vmware-esx-HDS-NAS-VaaiPlugin_1.3
   VIBs Skipped: ~
   ~ #
   ```

2. Reboot the ESXi host to complete the uninstallation.

Reference documentation

For more information about VMware vSphere Storage, see:

- *vSphere Storage ESXi 5.1 vCenter Server 5.1*
Installing the HNAS VAAI plugin

Hitachi NAS vSphere APIs for Array Integration Installation Guide