

Quest® NetVault® Backup
Plug-in for SnapShot Manager 3.0

User's Guide



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Legend

-  **WARNING:** A WARNING icon indicates a potential for property damage, personal injury, or death.

-  **CAUTION:** A CAUTION icon indicates potential damage to hardware or loss of data if instructions are not followed.

-  **IMPORTANT NOTE, NOTE, TIP, MOBILE, or VIDEO:** An information icon indicates supporting information.

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Introducing NetVault Backup Plug-in for SnapShot Manager

- [About NetVault Backup Plug-in for SnapShot Manager](#)
- [Target audience](#)
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About NetVault Backup Plug-in for SnapShot Manager

NetVault Backup Plug-in for SnapShot Manager (Plug-in for SnapShot Manager) allows you to generate, automatically schedule and recover snapshots through the NetVault Backup Console—a key factor in simplifying NetApp filer snapshot management as part of your overall data protection strategy.

Throughout this guide, various references to devices are made which all refer to an NDMP-enabled Network Appliance Filer. The devices noted include NDMP-enabled NAS Filer, NetApp Filer (or simply, Filer), and NDMP Server (the generic NetVault Backup term, describing this type of device).

Target audience

An understanding of the NDMP protocol, NetApp filers, and Snapshot Management are required to successfully use this plug-in.

Recommended additional reading

- *Quest NetVault Backup Installation Guide*: This guide provides details on installing the NetVault Backup Server and Client software.
- *Quest NetVault Backup Administrator's Guide*: This guide explains how to use NetVault Backup and describes the functionality common to all plug-ins.
- *Quest NetVault Backup CLI Reference Guide*: This guide provides a description of the command-line utilities.
- *Quest NetVault Backup Plug-in for NDMP Application Notes*: These notes provide filer-specific information. You can download these guides from <https://support.quest.com/technical-documents>.

- i** **IMPORTANT:** Starting with 10.0, NetVault Backup provides a web-based user interface to configure, manage, and monitor your NetVault Backup system and installed plug-ins. The procedures described in this guide are intended for the new NetVault Backup WebUI. For procedures based on the NetVault Backup Console (user interface available with NetVault Backup 9.x and 8.x), see the documentation for an earlier version of the plug-in.

Installing the plug-in

- [Prerequisites](#)
- [Installing the plug-in](#)
- [Removing the plug-in](#)

Prerequisites

Before installing the plug-in, you must complete the following tasks:

- **Install NetVault Backup Server:** The Plug-in *for SnapShot Manager* can only be installed on the NetVault Backup Server.
- **Install and Configure NetApp Snapshot Software:** The Snapshot software must be installed and properly configured on each NDMP Server (Filer) that is used with the plug-in.

Installing the plug-in

The Plug-in *for SnapShot Manager* only functions on a Server installation of NetVault Backup. For details on installing the NetVault Backup Server software, see the *Quest NetVault Backup Installation Guide*.

- 1 In the Navigation pane, click **Guided Configuration**, and then on the **NetVault Configuration Wizard** page, click **Install Plugins**. In the **NetVault Backup Clients** list, select the clients on which you want to install the plug-in. This method allows you to install the plug-in on multiple clients at the same time (if the selected clients are all the same type).

i | **NOTE:** When you select multiple clients, make sure that the plug-in binary file is compatible with the OS and platforms of the target clients.

– or –


In the Navigation pane, click **Manage Clients**. In the **NetVault Backup Clients** list, select the client on which you want to install the plug-in, and click **Manage**. At the lower-right corner of the Installed Software table, click the **Install Plugin** button (📦).

- 2 Click **Choose Plug-in File**, and in the browse window, navigate to the location of the “.npg” installation file for the plug-in (on the installation CD or the directory to which the file was downloaded from the website).
- 3 Select the file named **nss-x-x-x-x.npg** (x-x-x-x represents the version, build, and platform numbers), and click **Next** to begin installation.

After the plug-in is installed successfully, a message is displayed.

- 4 Close NetVault Backup (and the other open applications), and restart the system.

Removing the plug-in

- 1 In the Navigation pane, click **Manage Clients**.
- 2 In the **NetVault Backup Clients** list, select the client on which the plug-in is installed, and click **Manage**.
- 3 In the **Installed Plug-ins** table, select **NDMP Snapshot Manager**, and click the **Remove Plugin** button .
- 4 In the confirmation dialog box, click **Remove**.

Configuring the plug-in

- [Prerequisites](#)
- [Adding an NDMP Server](#)

Prerequisites

Before configuring the plug-in, you must complete the following tasks:

- **Install License for Plug-in for SnapShot Manager:** The license key for the plug-in can be requested at <https://support.quest.com/>.
- **Install License for Snapshot Software:** A separate license must be installed on each filer that is used to restore snapshots generated with the Network Appliance Snapshot utility and Plug-in for SnapShot Manager.

To obtain Network Appliance-specific license information, start a telnet session into the applicable filer and issue the following command:

```
license
```

Due to the scope of NetApp Snapshot backup and recovery, a physical storage device (for example, a tape drive) is not required as the snapshots are stored on the filer's hard drive. However, for redundancy, you may choose to back up the actual snapshots onto physical media. To do so requires the use of the NetVault Backup Plug-in for NDMP. For more information about this plug-in, see the *Quest NetVault Backup Plug-in for NDMP User's Guide*.

Adding an NDMP Server

The initial configuration procedure involves adding a filer as an NDMP Server. This procedure must be completed for each target filer.

- 1 In the Navigation pane, click **Create Backup Job**.
– or –
In the Navigation pane, click **Guided Configuration**, and then on the **NetVault Configuration Wizard** page, click **Create Backup Jobs**.
- 2 To open the **NetVault Backup Selections** page, click **Create New** next to the **Selections** list.
- 3 Open the NetVault Backup Server node, and select **NDMP Snapshot Manager**.
- 4 In the **Actions** list, click **Add Server**.
- 5 In the **NDMP Server** dialog box, configure the following settings.

Table 1. Add NDMP Server

Option	Description
Name	Type a name for the filer. The filer name must be unique. You can assign the actual name of the filer to easily identify it in the NetVault Backup environment. NOTE: You cannot change the server name after it is configured.
Address(es)	Type the IP address of the filer. To configure multiple addresses, separate them using a comma.
Port	By default, the filer is configured to listen on port number 10000. Unless otherwise required, do not change the listener port for the filer.
Account	Specify a user account that can be used to log in to the filer. The user account must have necessary privileges to perform NDMP backups and restores.
Password	Type the password for the user account.

- 6 To add the filer, click **OK**.

Editing server details

- 1 Start the Backup Job Wizard, and click **Create New** next to the **Selections** list.
- 2 Open the NetVault Backup Server node, and then open **NDMP Snapshot Manager**.
- 3 Select the filer, and in the **Actions** list, click **Edit Server**.
- 4 Reconfigure the applicable settings.

For more information about these settings, see [Add NDMP Server](#).

Note the following:

- You cannot change the server name.
- To change the password, select the **New Password** check box, and type the password.

- 5 To save the new settings, click **OK**.

Removing a server

- 1 Start the Backup Job Wizard, and click **Create New** next to the **Selections** list.
- 2 Open the NetVault Backup Server node, and then open **NDMP Snapshot Manager**.
- 3 Select the filer, and in the **Actions** list, click **Remove Server**.
- 4 In the confirmation dialog box, click **OK**.

Managing snapshots

- [Scheduling snapshot generation](#)
- [Reserving disk space for snapshots](#)
- [Deleting a snapshot](#)

Scheduling snapshot generation

- 1 Start the Backup Job Wizard, and click **Create New** next to the **Selections** list.
- 2 Open the NetVault Backup Server node, and then open **NDMP Snapshot Manager**.
- 3 In the list of added servers, open the applicable filer to display **Volumes** node.
- 4 To display the available volumes, open the **Volumes** node.
- 5 Select the volumes that you want to back up.
- 6 Select the **Volumes** node, and in the **Actions** list, click **Auto-Schedule**.
- 7 In the **Schedule Snapshot** dialog box, configure the following settings.

Option	Description
Number of weekly snapshots	Weekly Snapshots are taken each Sunday at 12:00 midnight. This setting indicates how many snapshots are to be taken each week at this time before replacing (overwriting) the first one.
Number of daily snapshots	Daily Snapshots are taken each night at 12:00 midnight. This setting indicates how many snapshots are to be taken each night at this time before replacing (overwriting) the first one.
Number of hourly snapshots	This setting indicates, based on the values specified in the Hours to Perform Snapshots box, how many snapshots are to be taken before overwriting the first one.
Hours to perform snapshot	This setting specifies the hours at which the snapshot is generated. For example, to generate the snapshot at 7:00 A.M., enter 7. To specify multiple values, separate the values by a comma (,). Ensure that the values are specified in ascending order (for example, 8, 10, 18, 20).

- i** **NOTE:** Since these values can be set locally on the NetApp filer by an administrator, initially they are read from the Filer and displayed accordingly.
A zero (0) value set in any of these boxes results in no Snapshot of that type being performed.

- 8 To save the settings and close the dialog box, click **OK**.

Example of Auto-Schedule settings

For this example, the following values were specified in the **Schedule Snapshot** window:

- **Number of Weekly Snapshots** = 0
- **Number of Daily Snapshots** = 2
- **Number of Hourly Snapshots** = 6
- **Hours to Perform Snapshots** = 8, 12, 16, 20

As a result the following would occur:

- **Hourly Snapshots:** The first snapshot is taken at 8:00 A.M., followed by one at 12:00 noon, a third at 4:00 P.M., and the fourth at 8:00 P.M. Subsequently, the fifth snapshot is taken at 8:00 A.M. the following day followed by the sixth and final snapshot at 12:00 pm. The cycle restarts with Snapshot #1, but the time sequence specified in the **Hours to Perform Snapshot** box is maintained. Therefore, NetVault Backup prompts the filer to generate six snapshots starting with first at 4:00 P.M. Being the first of the series of six, this one overwrites the original snapshot taken the first day at 8:00 A.M. The second snapshot is taken at 8:00 P.M., and replaces the initial second snapshot taken at 12:00 noon, and so on.
- **Daily Snapshots:** This Snapshot is taken at 12:00 midnight. This snapshot is separate from the ones taken hourly, unless "0" (Midnight) is set in the **Hours to Perform Snapshots** box. In this case, this Snapshot would take its place. A second Daily Snapshot is taken the following night at the same time. On the third night, the next Snapshot will be taken at midnight, but this one will overwrite the one taken the first night. This process continues to occur each night, with the new Snapshot overwriting the oldest.
- **Weekly Snapshot:** Snapshots set in this field would be taken weekly at 12:00 midnight. These snapshots are separate from other Snapshots except a Daily Snapshot on a Sunday night—this Snapshot would take its place. Since this parameter is set to zero (0) in this example, no Snapshots are taken weekly.

Reserving disk space for snapshots

- 1 Complete [Step 1](#) through [Step 5](#) in [Scheduling snapshot generation](#).
- 2 Select the **Volumes** node, and in the **Actions** list, click **Reserve**.
- 3 In the **Reserve** dialog box, configure the following settings.

Option	Description
Current percentage reserved for snapshots	This setting displays the percentage of disk space reserved for snapshots currently. The default value is 20%.
Current space reserved for snapshots:	This setting displays the physical amount of space reserved for snapshots in relation to the percentage setting. For example, if 20% of a 10 GB drive is set, this value would read 2.0 Gbytes
New Percentage to reserve for snapshots	This setting allows you to modify the percentage of disk space reserved for snapshots.

i | **NOTE:** Since these values can be set locally on the NetApp filer by an administrator, initially they are read from the Filer and displayed accordingly.

- 4 To save the settings and close the dialog box, click **OK**.

Deleting a snapshot

- 1 In the Navigation pane, click **Create Restore Job**, and then click **Restore Snapshots**.
- 2 Open the NetVault Backup Server node, and in the list of plug-ins, open **NDMP Snapshot Manager** to list the added NDMP Servers.
- 3 Open the NDMP Server, and then open the applicable volume to list the available snapshots.
- 4 Select the snapshot that you want to delete, and in the **Actions** list, click **Delete**.

This option invokes the NetApp **Snap Delete** command on the filer containing the Snapshot. Issuing this command deletes the snapshot from the NetVault Backup Database and the filer.

Restoring data

- Restoring data from a snapshot

Restoring data from a snapshot

The restore process for a Snapshot is relatively seamless and only takes a matter of minutes because it is being read locally from the filer's hard disk.

- 1 In the Navigation pane, click **Create Restore Job**, and then click **Restore Snapshots**.
- 2 Open the NetVault Backup Server node, and in the list of plug-ins, open **NDMP Snapshot Manager** to list the added NDMP Servers.
- 3 Open the NDMP Server, and then open the applicable volume to list the available snapshots.

Important Notes

- Each time the filer is accessed by NetVault Backup, the Plug-in *for SnapShot Manager* first syncs with it to ensure that all Snapshots performed and removed outside of NetVault Backup are recognized. Therefore, all Snapshots present on that filer are displayed in the selection tree, including those Snapshots performed outside of NetVault Backup.
 - Snapshots generated with NetVault Backup are labeled "NV-xxxx", where "xxxx" represents increments in each snapshot generated.
 - Only one snapshot can be restored at a time. Restoring the snapshot overwrites all data on the selected volume of the filer.
- 4 Select the snapshot that you want to restore.
If you omit individual items after selecting a snapshot, the job will fail.
 - 5 In **Job Title**, enter a suitable title for the job.
Specify a detailed title that lets you easily identify the job for monitoring its progress.
 - 6 On the toolbar, click **Submit**.

Alternatively, on the **Accept** menu, click **Submit Restore**.

You can monitor the job progress from the **NetVault Backup Jobs** window, and view the logs from the **NetVault Backup Logs** window. For more information about these functions, see the *Quest NetVault Backup Administrator's Guide*.

The Plug-in *for SnapShot Manager* does not provide any **Restore Options**. The settings on the other tabs of the **NetVault Backup Backup** window are not applicable to the Plug-in *for SnapShot Manager*. Of the other available tabs, the following function with this plug-in:

- **Schedule** tab: All options
- **Target** tab: No functionality in this tab is supported
- **Advanced Options** tab: Only the **Pre-** and **Post Script** option.

If you set any other options on the tabs, the job fails or the settings are ignored.

- 7 Click **Next**.

- 8 Select or create the Schedule Set and Advanced Options Set.
- 9 For more information about these sets, see the *Quest NetVault Backup Administrator's Guide*.
- 10 To submit the job for scheduling, click **Submit**.
You can monitor the job progress from the **Job Status** page and view the logs from the **View Logs** page.
For more information about these functions, see the *Quest NetVault Backup Administrator's Guide*.

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