Quest® NetVault® Backup Built-in Plug-ins 11.4.5

User's Guide

Contents

Introduction

- About Quest® NetVault® Backup Built-in Plug-ins
- About this document
- Target audience
- Recommended additional reading

About Quest® NetVault® Backup Built-in Plug-ins

The built-in plug-ins are packaged with the Quest® NetVault® Backup Built-in Plug-ins (NetVault Backup Built-in Plug-ins) software, and automatically installed on the respective machines when you install the NetVault Backup Server or Client software. A standard installation of NetVault Backup includes the following built-in plug-ins.

- **Quest NetVault Backup Plug-in *for FileSystem* (Plug-in *for FileSystem*):** The Plug-in *for FileSystem* increases confidence in the recoverability of critical file system data and eliminates the need for writing complex backup and recovery scripts. Through an intuitive user interface and automated workflow process, the plug-in offers a centralized console to set up, configure, and create flexible backup policies that account for multiple recovery scenarios. Support for Full, Incremental, and Differential Backups allows you to choose a preferred backup strategy. The plug-in minimizes downtime by allowing you to restore full volumes, individual partitions, or individual directories and files quickly and reliably with minimal interaction. Through automatic integration with a wide range of backup devices, you can be confident that your data is protected and safely stored off-site to meet your disaster recovery and business continuity goals.

- **Quest NetVault Backup Plug-in *for Consolidation* (Plug-in *for Consolidation*):** The Plug-in *for Consolidation* lets you create a composite saveset by combining a Full Backup and its associated Incremental Backups. You can use this consolidated saveset as the base for subsequent Incremental Backups. For example, after an initial Full Backup, you can schedule Incremental Backups from Monday to Friday, and schedule a backup consolidation job on Saturday. You can use the consolidated backup created on Saturday as the base for next week's Incremental Backups. The Plug-in *for Consolidation* does not back up data from a client; it just creates a composite set from existing savesets.

- **Quest NetVault Backup Plug-in *for Data Copy* (Plug-in *for Data Copy*):** The Plug-in *for Data Copy* lets you create one or more copies of backups for off-site storage and disaster recovery purposes. You can schedule jobs to copy or migrate data at convenient off-peak hours, and thus shrink your backup windows. The Plug-in *for Data Copy* does not back up data from a client; it just creates a copy of an existing backup.

- **Quest NetVault Backup Plug-in *for Databases* (Plug-in *for Databases*):** The Plug-in *for Databases* protects system data (such as configuration files, system settings, backup indexes, backup media information, job schedule, license keys, and other data) stored in the NetVault Database. You can use this backup to recover a functional NetVault Backup Server after a failure.

- **Quest NetVault Backup Plug-in *for Raw Devices* (Plug-in *for Raw Devices*):** The Plug-in *for Raw Devices* protects data stored on physical disks. The plug-in lets you recover the Master Boot Record (MBR), system partitions, and individual user partitions from a point-and-click user interface without writing any complex scripts.

About this document

This guide provides information about configuring and using the following plug-ins:

- Plug-in *for Consolidation*
- Plug-in *for Data Copy*
- Plug-in *for Databases*
- Plug-in *for Raw Devices*

For information about using the Plug-in *for FileSystem*, see the *Quest NetVault Backup Plug-in for FileSystem User's Guide*.

Target audience

This guide is intended for backup administrators and other technical personnel who are responsible for designing and implementing a backup strategy for the organization. A good understanding of the operating systems under which the NetVault Backup Server and Clients are running is assumed.

Recommended additional reading

- *Quest NetVault Backup Installation Guide:* This guide provides information about installing the NetVault Backup Server and Client software.

- *Quest NetVault Backup Administrator's Guide:* This guide provides information about configuring and using NetVault Backup to protect your data. It provides comprehensive information about all NetVault Backup features and functionality.

- *Quest NetVault Backup CLI Reference Guide:* This guide provides information about using the NetVault Backup command-line utilities.

You can download these guides from https://support.quest.com/.

> **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 user's 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), see the documentation for an earlier version of the built-in plug-ins.

Using Plug-in *for Consolidation*

- About backup consolidation methods
- Configuring default settings
- Creating a consolidated saveset
- Restoring a consolidated saveset

About backup consolidation methods

The plug-in offers the following methods for consolidating the Full and Incremental Backups:

> **i** | **NOTE:** The Plug-in *for Consolidation* can only be used to consolidate the Full and Incremental Backups created using the Plug-in *for FileSystem*.

- **Backup Jobs:** This method creates a composite set by combining all backups up to the selected Incremental Backup. For example, if Full Backups are performed on Sundays and Incremental Backups Monday through Saturday, you can select Wednesday's Incremental Backup to consolidate all savesets up to the selected backup.

  You can use this method for creating consolidated savesets before changing your backup schedule, re-using media that store the Incremental Backups, or creating an archive.

- **Backup Sets:** This method creates a composite set by combining all backups up to most recent Incremental Backup created using the selected Backup Selection Set. For example, if Full Backups are performed on Sundays and Incremental Backups Monday through Saturday, you can select the applicable Backup Selection Set to consolidate all savesets up to last Incremental Backup created using that set.

  The Backup Set method is recommended when you want to perform regular backup consolidation jobs. A policy to create consolidated backups can only be defined using the Backup Sets method.

> **i** | **IMPORTANT:**
> - You can define and submit backup consolidation jobs only from the NetVault Backup Server.
> - We recommend that you do not select the advanced backup option **Enable Deduplication** for Incremental Backups that are consolidated and saved to Quest NetVault SmartDisk (NetVault SmartDisk). By not selecting this option, you eliminate the unnecessary overhead of rehydrating the deduplicated Incremental Backups during the consolidation process. You can enable deduplication while backing up the Consolidated Full Backup.
> - When backups stored on the Quest DR Series systems are selected for backup consolidation jobs, the overhead of rehydrating the deduplicated data can have a negative impact on performance.

Configuring default settings

To configure the default settings for Plug-in for Consolidation:

1   In the Navigation pane, click **Change Settings**. On the **Configuration** page, click the applicable icon, and on the Settings page, click **Plugin Options**.

2   Under **Consolidate**, configure the following setting:

   ▪   **Sort Backups Newest First:** By default, the saveset list on the **NetVault Backup Selections** page is sorted by date and time in descending order (that is, from the latest to the earliest date). To sort the list in ascending order (from the earliest to the latest date), clear the check box.

   The setting only applies to the **Backup Jobs** method.

3   Click **OK** or **Apply** to save the settings.

Creating a consolidated saveset

To perform a backup consolidation job:

1   In the Navigation pane, click **Create Backup Job**.

   You can also start the wizard from the **Guided Configuration** link. In the Navigation pane, click **Guided Configuration**, and then on the **NetVault Configuration Wizard** page, click **Create Backup Jobs**.

2   In **Job Name**, specify a name for the job. Assign a descriptive name that allows you to easily identify the job for monitoring its progress or restoring data.

   A job name can contain alphanumeric and non-alphanumeric characters, but it cannot include non-Latin characters. There is no length restriction. However, a maximum of 40 characters is recommended on all platforms.

3   In the **Selections** list, select an existing Backup Selection Set, or complete the following steps to create a set.

   a   Click **Create New** to open the **NetVault Backup Selections** page.

   b   Open the NetVault Backup Server node, and in the list of plug-ins, open **Consolidate Incremental Backups**.

   c   To consolidate all backups up to the selected backup:

      ▫   Open the **Backup Jobs** node, and in the list of NetVault Backup machines, open the client from which the data was backed up.

      ▫   Select the last backup up to which you want to create a consolidated saveset.

   d   To consolidate all backups up to the most recent backup created using a Backup Selection Set:

      ▫   Open the **Backup Sets** node, and in the list of NetVault Backup machines, open the client for which the set was created.

      ▫   Select the Backup Selection Set that was used to create the Full and Incremental Backups.

   e   Click **Save**, and in the **Create New Set** dialog box, type a name for the set. Click **Save** to close the dialog box.

      i | **NOTE:** A set name can contain alphanumeric and non-alphanumeric characters, but it cannot include non-Latin characters. On Linux OS, the names can have a maximum of 200 characters. On Windows OS, there is no length restriction. However, a maximum of 40 characters is recommended on all platforms

4   In the **Plugin Options** list, select an existing Backup Options Set, or complete the following steps to create a set.

a   Click **Create New** to open the **Consolidate Options** page.

b   Configure the following option:

▫   **Run consolidation on client:** By default, the consolidation job runs on the NetVault Backup Server. To run the job on a different NetVault Backup machine, select the client in the list.

c   Click **Save**, and in the **Create New Set** dialog box, type a name for the set. Click **Save** to close the dialog box.

5   Select or create the Schedule Set, Source Set, Target Set, and Advanced Options Set. For more information about these sets, see the *Quest NetVault Backup Administrator's Guide*.

6   To submit the job for scheduling, click **Save & Submit**. You can monitor the job progress from the **Job Status** page and view the logs from the **View Logs** page.

To save the job definition without scheduling it, click **Save**. You can view, edit, or run this job from the **Manage Job Definitions** page. This job is not displayed on the **Job Status** page until you submit it.

For more information about **Job Status**, **View Logs**, and **Manage Job Definitions**, see the *Quest NetVault Backup Administrator's Guide*.

Restoring a consolidated saveset

For a restore job, you can use either the original savesets (Full, Incremental, and Differential savesets) or the Consolidated saveset created using these backups. The procedure for restoring data is the same for the original and the consolidated savesets. For information about restoring the data, see the relevant section in the *Quest NetVault Backup Plug-in for FileSystem User's Guide*.

Using Plug-in *for Data Copy*

- About Data Copy methods
- Configuring default settings
- Performing a Data Copy job
- Restoring a Data Copy

About Data Copy methods

The Plug-in *for Data Copy* offers the following methods:

- **Backups:** This method can be used to create a copy of selected backup. It can be used to perform non-repeating data copy jobs.

- **Backup Sets:** This method can be used to create copy of the most recent backup created using the selected Backup Selection Set. The Backup Sets method is recommended when you want to perform regular Data Copy jobs.

> **i** | **IMPORTANT:**
> - You can define and submit Data Copy jobs only from the NetVault Backup Server.
> - You cannot use the Plug-in *for Data Copy* to create copies of backups that were created using the **Archive** option.
> - You cannot use the Plug-in *for Data Copy* to create copies of Data Copy backups that were created using the Secondary Copy method or the Plug-in *for Data Copy*. In other words, you cannot use a Data Copy backup to create another Data Copy.

Configuring default settings

To configure the default settings for Plug-in for Data Copy:

1   In the Navigation pane, click **Change Settings**. On the **Configuration** page, click the applicable icon, and on the Settings page, click **Plugin Options**.

2   Under **Datacopy**, configure the following setting:

- **Sort Backups Newest First:** By default, the saveset list on the **NetVault Backup Selections** page is sorted by date and time in descending order (that is, from the latest to the earliest date). To sort the list in ascending order (from the earliest to the latest date), clear the check box.

    The setting only applies to the **Backups** method.

3   Click **OK** or **Apply** to save the settings.

Performing a Data Copy job

To perform a Data Copy job:

1 In the Navigation pane, click **Create Backup Job**.

   You can also start the wizard from the Guided Configuration link. In the Navigation pane, click **Guided Configuration**, and then on the **NetVault Configuration Wizard** page, click **Create Backup Jobs**.

2 In **Job Name**, specify a name for the job. Assign a descriptive name that allows you to easily identify the job for monitoring its progress or restoring data.

   A job name can contain alphanumeric and non-alphanumeric characters, but it cannot include non-Latin characters. There is no length restriction. However, a maximum of 40 characters is recommended on all platforms.

3 In the **Selections** list, select an existing Backup Selection Set, or complete the following steps to create a set.

   a Click **Create New** to open the **NetVault Backup Selections** page

   b Open the NetVault Backup Server node, and in the list of plug-ins, open **Data Copy**.

   c To copy the selected backup:

      ▫ Open the **Backups** node, and in the list of NetVault Backup machines, open the client from which the data was backed up.

      ▫ Open the plug-in that was used to create the saveset, and select the saveset that you want to copy.

   d To copy the most recent backup created using a Backup Selection Set:

      ▫ Open the **Backup Sets** node, and in the list of NetVault Backup machines, open the client for which the set was created.

      ▫ Open the plug-in that was used to create the set, and then select the Backup Selection Sets that was used to create the Full and Incremental Backups.

   e Click **Save**, and in the **Create New Set** dialog box, type a name for the set. Click **Save** to close the dialog box.

      ⓘ | **NOTE:** A set name can contain alphanumeric and non-alphanumeric characters, but it cannot include non-Latin characters. On Linux OS, the names can have a maximum of 200 characters. On Windows OS, there is no length restriction. However, a maximum of 40 characters is recommended on all platforms

4 In the **Plugin Options** list, select an existing Backup Options Set, or complete the following steps to create a set.

   a Click **Create New** to open the **Data Copy Options** page.

   b Under **Copy Type**, configure the following options.

Option	Description
Copy a full backup to produce a new independent copy of the data	This option is recommended when you want to create a copy for off-site storage.
	The Data Copy method breaks down the backup into segments and copies the segments to the backup device. During restore, either the primary backup or the secondary copy is used to recover data. The segments from the primary backup and secondary copy are not interchangeable. Therefore, it is possible to enable encryption for the Data Copy when the primary copy is unencrypted. This option is useful when you want to use the deduplication option for the primary backups.

Option	Description
	The Data Copy option can be used to create a copy of the Full as well as Incremental Backups. This method removes all links between the Full and Incremental Backups, and allows you to set a new retention period for the copy.
	NOTE: Before creating a Data Copy of regular Incremental Backup, you must have created a copy of the initial Full Backup and the previous Incremental Backups in the backup sequence. Otherwise, the plug-in reports an error. For more information, see Important notes.
Duplicate a backup	This option is recommended when you want to migrate the saveset to different media.
	The Duplicate method creates an exact copy which is linked to the original backup. This method breaks down the backup into segments and copies the segments to the storage device. During restore, the segments from the primary backup and secondary copy are interchangeable. As it is not possible to mix unencrypted segments with encrypted segments during restore, you cannot enable or disable encryption for the Duplicate. If the original saveset is encrypted, the Duplicate method creates an encrypted copy. If the original saveset is not encrypted, this method creates an unencrypted copy.
	This option can be used to create a copy of the Full as well as Incremental Backups. The savesets created using the Duplicate method automatically share the original saveset's name and reference.
	NOTE: When restoring copies of Incremental Backups, NetVault Backup requires the original Full Backup. On the Create Restore Job page, only one saveset is listed for the original and duplicate backup.
Use saveset name from original backup	By default, the plug-in assigns a new saveset name to a copy created using the **Copy a full backup to produce a new independent copy of the data** option. This name is derived from the Job Name.
	If you want to use the original saveset name for such copies, select this check box.
Allow streams to share media	This check box is not selected by default. You can use this option with the **Duplicate a backup** method.
	When creating a Duplicate of a multi-stream backup, you can use this option to convert multiple data streams into a sequential data stream. If you do not select this check box, each stream is written separately.
	If you are using a disk-based device to store the Duplicate backup, multiple streams are recommended. For such jobs, there is no need to select this check box.
	If you do not select the **Allow Streams to Share Media** check box for tape devices, each data stream targets a separate media item. Any tape that is used to write a stream is excluded from the allowable media items. If enough tapes are not available for the job, the job fails. When using tape devices to store the Duplicate backups, you can select this check box to use minimal media items.
Automatically get a set's last full backup	You can use this option with the **Backup Sets** method to create a copy of the last Full Backup that was performed using a particular Backup Selection Set.
	The Incremental Backups are not copied when you select this option.
Use a set's most recent job regardless of type	You can use this option with the **Backup Sets** method to create a copy of the last backup, regardless of its type (Full or Incremental Backup).
	This option allows you to create copies of Incremental Backups.
	NOTE: When you use this option, you must run the data copy job before the next primary backup (Full or Incremental) for that backup sequence is run; otherwise, the plug-in creates a copy of that primary backup.

Option	Description
Tagname	When you create multiple copies of an Incremental Backup Sequence, you must provide a tag can be used to identify each copy. A tag can contain any string value. Without a tag, the plug-in cannot distinguish between the multiple copies of a backup sequence.

On the data selection page for restore, the savesets created with the Plug-in for Data Copy are labeled as follows:

- **Data copies created without a tag:**

  `<Saveset Name> — DataCopy of <Selection Set Name> (Saveset <#>) <Timestamp>`

- **Data copies created with a tag:**

  `<Saveset Name> — DataCopy of <Saveset #>, Tag '<User Tag>' (Saveset <#>) <Timestamp>`

Example:

The following example explains how to use this option.

1. Create a Backup Selection Set, and perform a Full Backup using the set.
2. Create a copy of the set using device 1. While creating the copy, specify a unique **Tagname** on the **Data Copy Options** page.
3. Create a second copy of the set using device 2. While creating the copy, specify a unique **Tagname** on the **Data Copy Options** page.
4. Perform an Incremental Backup for the set.
5. Repeat steps 2 and 3 for the Incremental Backup.
6. On the data selection page for restore job, both the original backup and two copies of the backup sequence are displayed.
7. To restore data from a specific copy, select the applicable saveset. You can identify a copy using its **Tagname**.

c   Configure the required additional options.

Option	Description
Migrate (Discard original backup)	To migrate the backup instead of creating a copy, select this check box. After copying the data, NetVault Backup deletes the index for the original backup. **NOTE:** When creating copies of the Plug-in *for FileSystem* backups, the **Migrate** option can only be selected for Full Backups that do not have any associated Incremental or Differential Backups. If you select this option for a Full Backup that has an associated Incremental or Differential Backup, NetVault Backup creates the secondary copy successfully, but it does not delete the index for the primary or original backup. For such backups, after creating the copy, you must manually retire the primary or original backup.

Option	Description
Use optimised replication between devices that support this feature	Optimized replication enables transfer of deduplicated data directly from one device to another device of the same type during a Data Copy or Duplicate operation. It provides an efficient method to create secondary copies and offers the following advantages: • Copies data in its deduplicated form, which greatly reduces the amount for data transferred over the network. • Copies data directly from the source to the destination without using any resources on the NetVault Backup Server. The following storage devices support optimized replication: • **Quest DR Series Systems:** To perform optimized replication, both the source and target Quest DR Series systems must be running the same release version of the DR OS. Replication is not supported between systems that run different releases of the OS. For example, to replicate data from a source system that is running DR OS 3.x, the target system must be running the same OS release version. Replication is unsuccessful if the target system is running DR OS release 2.0.x or 3.0.x. **NOTE:** When optimized replication and backups are performed simultaneously on a Quest DR Series system, the backup throughput is affected. • **NetVault SmartDisk devices:** To perform optimized replication, you require NetVault SmartDisk 2.0 or later. If the login credentials configured for the source and destination NetVault SmartDisk Servers do not match, replication fails. To ensure a successful replication, do one of the following: - Disable WebDAV authentication on both NetVault SmartDisk Servers. - Enable WebDAV authentication only on the source server. - Configure the same login credentials on both servers. **NOTE:** When copying a backup from a NetVault SmartDisk to a different device type (for example, VTL, Quest DR Series System, or Data Domain System), you must clear this check box. If you do not clear this check box, the Data Copy or Duplicate job fails or stops responding. • **DD Boost-enabled Data Domain Systems:** The secondary copy backups between two DD Boost-Enabled Data Domain Systems use the managed file-level replication feature provided by DD Boost. File-level replication requires the DD Boost Replicator license, which must be installed on both the source and destination Data Domain systems. **NOTE:** If the source and target Data Domain systems are running different versions of the Data Domain OS, then for replication to be successful, the target system must be running the higher version of the OS.
Acquire Source Media before Target Media	When you select this check box, the Plug-in *for Data Copy* tries to acquire the source media before it attempts to acquire the target media for the Data Copy and Duplicate backups.
Maximum Streams for Data Copy	Type or select the maximum number of parallel streams that can be generated for the Data Copy job. By default, a single data stream is generated to copy the data items in a sequential manner.

Option	Description
Media Request Timeout	Type or select the amount of time NetVault Backup waits for the backup media. This timeout value is specified in number of minutes. If the required piece of media is not available within the specified interval, the job is aborted.

The default value is 10 minutes. If you set the value to zero (0), the Data Copy job waits indefinitely until the media is provided or the job is manually aborted.

The maximum timeout period that can be set is 1440 minutes (24 hours), which ensures that current instance is aborted before NetVault Backup runs the next instance of a Daily job.

NOTE: The media request timeout for Phase 1 Data Copy jobs (created using the Plug-in *for Data Copy*) is controlled by the **Media Request Timeout** setting in the Backup Options Set; it is not controlled by the **Media Request Timeout** setting in the Target Set. The media request timeout for Phase 2 (Secondary Copy) Data Copy and Duplicate jobs is controlled by the **Media Request Timeout** specified in the Backup Advanced Options Set |
| **Run data copy on client** | By default, the Data Copy job runs on the NetVault Backup Server. To run the job on a different NetVault Backup machine, select the client in the list. |

d Under **Backup Life**, configure the following options.

Option	Description
Use originals life	To use the original saveset's retention period, select this option.
Use 'Backup Life' on 'Advanced Options' tab	To set a different retention period for the data copy, select this option, and then specify the retention period in the Backup Advanced Options set. For more information about these options, see the *Quest NetVault Backup Administrator's Guide*.

e Click **Save**, and in the **Create New Set** dialog box, type a name for the set. Click **Save** to close the dialog box.

5 Select or create the Schedule Set, Source Set, Target Set, and Advanced Options Set. For more information about these sets, see the *Quest NetVault Backup Administrator's Guide*.

> **NOTE:** When performing Duplicate and Data Copy backups, you cannot use media items that contain the original saveset or a copy of the same backup. NetVault Backup excludes these media items to ensure that copies and original backup do not exist on the same media item.
>
> The concept of media does not apply to disk-based devices. If the original saveset is stored on a disk-based device, NetVault Backup does not exclude that device when you run a Duplicate or Data Copy job for that backup.

> **NOTE:** When performing multi-stream backups, do not select the **Ensure backup is the first on the target media** check box. If you select this check box for multi-stream backups, each data stream targets a separate piece of media to exist as the first backup on the media item. Thus, if a backup generates five streams, the job tries to obtain five blank or new media items.
>
> This option does not apply to disk-based storage devices.

6 To submit the job for scheduling, click **Save & Submit**. You can monitor the job progress from the **Job Status** page and view the logs from the **View Logs** page.

To save the job definition without scheduling it, click **Save**. You can view, edit, or run this job from the **Manage Job Definitions** page. This job is not displayed on the **Job Status** page until you submit it.

For more information about **Job Status**, **View Logs**, and **Manage Job Definitions**, see the *Quest NetVault Backup Administrator's Guide*.

Important notes

- When you create a Data Copy of any backup sequence, you must create a copy of each backup in the sequence to maintain data integrity of the copy. If you try to create a copy of an Incremental Backup without creating a copy of the original Full Backup or previous Incremental Backup, the job reports the following error and fails:

  "Cannot DataCopy this incremental as the previous DataCopied backup it depends on is missing. Please ensure the entire series has been DataCopied."

- The Plug-in *for FileSystem* supports two types of Incremental Backups: Regular Incremental Backups and Dump Type Incremental Backups.

  - Regular Incremental Backups are linked to the initial Full Backup and the previous Incremental Backups. Before creating a Data Copy of a regular Incremental Backup, you must have created a copy of the initial Full Backup and the previous Incremental Backups in the backup sequence. Otherwise, the plug-in reports an error.

  - Dump Type Incremental Backups are standalone Incremental Backups. You can copy these backups without creating a copy of any other backup in the backup sequence.

- The Advanced Backup Option **Enable Encryption** can be used only with the **Copy a full backup to produce a new independent copy of the data** option.

  If the primary copy is encrypted, the Data Copy method automatically creates an encrypted saveset whether you select the **Enable Encryption** check box or not. Therefore, this option is only useful when you want to create an encrypted secondary copy from an unencrypted primary copy.

  Encrypted primary backups are not encrypted again if you select the **Enable Encryption** check box.

  To restore data from an encrypted Data Copy, you must use the primary copy's Encryption Key

- The option **Automatically get a set's last full backup** is incompatible with the backups performed using NetVault Backup Plug-in *for NetWare*. The Plug-in *for Data Copy* creates a copy of the last backup regardless of its type (Full or Incremental).

- The Plug-in *for Data Copy* cannot distinguish between the NDMP Level 0 Full Backup and Levels 1–9 Incremental Backups. An NDMP backup of any level appears as Full Backup to the Plug-in *for Data Copy*. So, if you are trying to make a copy of the latest saveset, and you have selected the options **Copy a full backup to produce a new independent copy of the data** and **Automatically get a set's last full backup**, the Plug-in *for Data Copy* still creates a copy of the last backup (of any level). It does not create a copy of the Level 0 backup for that Backup Selection Set.

- On NetVault Backup Server 10.0.5 and later, the Plug-in *for Data Copy* creates index version 4, which is incompatible with earlier versions of NetVault Backup. A client running NetVault Backup 10.0.1 or an earlier version cannot read these index files. To restore Data Copy savesets generated from NetVault Backup Server 10.0.5 or later, the client must also be running NetVault Backup 10.0.5 or later.

Restoring a Data Copy

For a restore job, you can use either the original saveset or a Data Copy. The procedure for restoring data is the same for the original saveset and the data copy saveset, and depends on the plug-in used to create the original saveset. For information about restoring the data, see the relevant plug-in user's guide.

Using Plug-in *for Databases*

- Configuring default settings
- Backing up the NetVault Database
- Restoring NetVault Database

Configuring default settings

To configure the default settings for Plug-in for Databases:

1   Start the Backup Job Wizard, and click **Create New** next to the **Selections** list. Open the NetVault Backup Server or Client node. Select **NetVault Databases**, and in the **Actions** list, click **Configure**.

You can also configure the default settings from the **Change Settings** page. In the Navigation pane, click **Change Settings**. On the **Configuration** page, click **Server Settings**, and then on the **NetVault Server Settings** page, click **Plugin Options**.

2   Under **NetVault Database Backup**, configure the following settings.

Option	Description
Minimum free space on database device before warning is output	This setting specifies the minimum amount of free disk space required on the drive or partition on which the **db** directory resides. By default, it is set to 20 percent of the total size of the NetVault Database.
	To change this limit, type or select a new value.
	If the available free space falls below the specified level, the plug-in logs a warning message.
Minimum free space on logs device before warning is output	This setting specifies the minimum amount of free disk space required on the drive or partition on which the **logs** directory resides. By default, it is set to 10 percent of the total size of the log files.
	To change this setting, type or select a new value.
	If the available free space falls below the specified level, the plug-in logs a warning message.

Option	Description
Minimum free space on reports device before warning is output	This setting specifies the minimum amount of free disk space required on the drive or partition on which the **reports** directory resides. By default, it is set to 10 percent of the total size of the Reports Database.
	To change this setting, type or select a new value.
	If the available free space falls below the specified level, the plug-in logs a warning message.
Format to be used while backing up NetVault Database	The NetVault Database backups can be generated in **tar** and **custom** formats. By default, the plug-in uses the **custom** format.
	The **tar** format has the following limitations:
	• It requires a large amount of disk space to store temporary files during backup. The backup could fail if the **tmp** directory in the NetVault Backup installation directory does not have sufficient space to store the files.
	• It has a table size limit of 8GB. Database tables that are larger than 8GB in size cannot be backed up using this format.

3   Click **OK** or **Apply** to save the settings.

Backing up the NetVault Database

To safeguard your NetVault Backup Server, you must perform regular backups of the NetVault Database. The NetVault Database backup allows you to recover the NetVault Backup Server in the event of a disaster. You can schedule a daily backup of the NetVault Database after all other jobs have completed. Make sure that you use specific media or media group for these backups.

> **i** | **NOTE:** To avoid database inconsistency or job failure, you must not perform the following activities together:
> • NetVault Database backup
> • Execution of a job
> • Media scan

To back up the NetVault Database:

1   In the Navigation pane, click **Create Backup Job**.

You can also start the wizard from the Guided Configuration link. In the Navigation pane, click **Guided Configuration**, and then on the **NetVault Configuration Wizard** page, click **Create Backup Jobs**.

2   In **Job Name**, specify a name for the job. Assign a descriptive name that allows you to easily identify the job for monitoring its progress or restoring data.

A job name can contain alphanumeric and non-alphanumeric characters, but it cannot include non-Latin characters. There is no length restriction. However, a maximum of 40 characters is recommended on all platforms.

3   In the **Selections** list, select an existing Backup Selection Set, or complete the following steps to create a set.

a   Click **Create New** to open the **NetVault Backup Selections** page.

b   Open the NetVault Backup Server node, and in the list of plug-ins, open **NetVault Databases**.

c   Select the **NetVault Database** node.

d   Click **Save**, and in the **Create New Set** dialog box, type a name for the set. Click **Save** to close the dialog box.

> **i** | **NOTE:** A set name can contain alphanumeric and non-alphanumeric characters, but it cannot include non-Latin characters. On Linux OS, the names can have a maximum of 200 characters. On Windows OS, there is no length restriction. However, a maximum of 40 characters is recommended on all platforms

4   In the **Plugin Options** list, select an existing Backup Options Set, or complete the following steps to create a set.

   a   Click **Create New** to open the **NetVault Database Backup Options** page.

   b   Configure the following setting:

      ▫ **Check Database Tables before Backup:** This option can be used to verify the structural, entity, and referential integrity for the Scheduler and Media databases before the backup. It generates a warning or error log if any inconsistency is detected during the process.

        This option is selected by default.

      ▫ **Exclude the Online Indexes during backup**: This option can be used to exclude the online backup indexes (backup indexes stored on the local filesystem) from the NetVault database backup to complete the NVDB backup in the required backup window.

        This option is disabled by default.

   c   Click **Save**, and in the **Create New Set** dialog box, type a name for the set. Click **Save** to close the dialog box.

5   Select or create the Schedule Set, Target Set, and Advanced Options Set. For more information about these sets, see the *Quest NetVault Backup Administrator's Guide*.

6   To submit the job for scheduling, click **Save & Submit**. You can monitor the job progress from the **Job Status** page and view the logs from the **View Logs** page.

   To save the job definition without scheduling it, click **Save**. You can view, edit, or run this job from the **Manage Job Definitions** page. This job is not displayed on the **Job Status** page until you submit it.

   For more information about **Job Status**, **View Logs**, and **Manage Job Definitions**, see the *Quest NetVault Backup Administrator's Guide*.

Restoring NetVault Database

You can restore a NetVault Database backup to:

•   Recover a NetVault Backup Server.

•   Migrate the NetVault Backup system to a new machine.

•   Migrate the system settings during NetVault Backup upgrade.

This procedure for restoring a NetVault Database backup includes the following steps:

•   Prerequisites

•   Restore Procedure

Prerequisites

Before you start the restore procedure, verify that the following requirements are met:

•   Install the NetVault Backup Server on the target system. The software version must be the same as the original server.

•   Add a backup device to the NetVault Backup Server. For more information about this procedure, see the *Quest NetVault Backup Administrator's Guide*.

- Load the backup media. In the new NetVault Backup Domain, the media are marked as "foreign." You must scan the media to load the contents. For more information about this procedure, see the *Quest NetVault Backup Administrator's Guide*.

Restore Procedure

To restore a NetVault Database backup:

1   In the Navigation pane, click **Create Restore Job**.

On the **Create Restore Job — Choose Saveset** page, the saveset table provides a list of available savesets. The table shows the saveset name (Job Title and Saveset ID), creation date and time, saveset size, and saveset status.

The saveset status is indicated using the following icons.

Icon	Description
🟢	Saveset is online (all segments are online).
🟠	Saveset is partially online (some segments are online).
🔴	Saveset is offline (all segments are offline).

The saveset list is sorted alphabetically by saveset name. You can sort the list by a different column or reverse the sort order by clicking the column heading. The arrowhead next to the column name indicates the sort order.

You can click **Load more** to load the next set of records, if available. Each load action fetches a maximum of 5000 records. This button is disabled if there are no more records to load.

By default, the table is sorted by creation date and time. You can sort the table by one or more columns, as required.

NetVault Backup Built-in Plug-ins web application supports multiple-column sorting for the tables. However, the first sorted column takes the highest precedence over the sorting of other columns. For example, if the table is sorted by the 'Start Time' as the primary sort, selecting sort options on the 'ID/ Instance/ Phase' column does not affect the list order.

To sort by a column, click the column header; to change the sort direction, click the column header again. Repeat this step for other columns by which you want to sort the table.

The arrowhead next to the column name indicates the sorting order (up for ascending order and down for descending order). A blue arrowhead is used to indicate the sort order for the primary column.

To remove a sort, click the column header for the corresponding column until the arrowhead is no longer displayed.

To choose the following actions in a column, click the column menu:

Option	Description
Sort Ascending	Sorts the column in ascending order.
Sort Descending	Sorts the column in descending order.
Columns	Select/ clear to show/ hide the required column (s).

To view the page size setting, sorting order in the table, export the records, or edit table settings, click the icons at the lower- right corner of the table. The following table provides a brief description of the icons at the lower- right corner of the table.

Icon	Description
❶	Move the pointer over this icon to view the page size setting and column sorting order applied in the table. The primary and secondary column sort order is displayed.
⬇	To export the table data to a CSV format file, click this icon.
⚙	Click this icon for **Table Settings:** • **Set Pagesize**: Click this to set the number of records per page to display in the table. **Table Options** dialog box is displayed. Specify the required number in the field "Specific number per page". Click **OK**. By default, table options are set to **Automatically, based on what will fit**. • **Restore Defaults**: Click this to remove the user-defined settings for the table. A confirmation dialog appears. Click **OK**.

2   To filter the saveset list, you can use the following filter options.

Filter	Description
Client	Displays savesets created for particular clients. *To use this filter:* • Click the **Client** box. • In the **Choose Client** dialog box, select the client. -OR- To quickly locate the client (s), you can use the Search box at the upper right corner of the table. The data in the table is filtered as you type the search text into the box. • Click **OK** to close the dialog box. The default selection is **All**.
Plugin Type	Displays savesets created using a particular plug-in. *To use this filter:* • Click the **Plugin Type** box, and in the list, select the plug-in. The default selection is **All**.
Date	Displays savesets created during a specified period. *To use this filter:* • Click the **Date** box, and in the list, select the option that you want to use. The available options are Last 24 hours, Last Week, Last Month, Last 6 Months, Last Year, and Any. The default selection is **All**.
Job	Displays savesets created for particular jobs. *To use this filter:* • Click the **Job** box, and in the **Choose Job** dialog box, select the jobs. Click **OK** to close the dialog box. The default selection is **All**.

3   Select the saveset that you want to use, and click **Next**.

When you select a saveset, the following details are displayed in the **Saveset Information** area: Job ID, job title, tag, server name, client name, plug-in name, saveset date and time, retirement setting, Incremental Backup or not, archive or not, and saveset size.

4 On the **Create Selection Set** page, select the database components to recover the full database or parts of it.

Component	Description
Auditor Database	Restores the Auditor Database. This database contains the audit logs for the NetVault Backup system.
Backup Indexes	Restores backup indexes. Backup indexes contain the list of backed up items and their references. Each index is assigned a saveset number. Backup indexes are stored on the backup media and the disk as part of the Media Database. The indexes provide the position of the individual backed up items so that they can be recovered from the backup media. Backing up the indexes on the media ensures that the content of each saveset is available to view when required, in case the index files are deleted or retired from the Media Database. You can scan the backup indexes from the archived media, after they have retired or deleted from the NetVault Database. NOTE: If "Exclude the Online Indexes during backup" option is enabled during NVDB backup, then the "Backup Indexes" option is not shown in the list of components for restore on the **Create Selection Set** page for restore.
Cluster	Restores cluster-specific configuration and associated client information
Configuration	Restores configuration files and settings for the.server and client systems, including network access and configuration information for the plug-ins
General Reports Files	Restores the files included in the Reporting system.
Keys	Restores license keys to permit the continued operation of NetVault Backup and the licensed plug-ins.
Logs	Restores NetVault Backup Logs, which include all messages from the Server and Client machines. It allows you to check the activity of NetVault Backup at a particular point in time.
Media Manager	Restores the Media Database, which contains records of all active media, the contents of all backups, how backups are organized, and where they are located.
Reports Database	Restores tables in the Report Database that store persistent information used during report generation. Primarily, these tables store data related to drives, data transfer, event history, media requests, and other data provided by the Statistics Manager process.
Schedule Manager	Restores the Schedule Database. This database contains records of all defined jobs, backup policies, scheduled jobs, and job history, including when jobs last ran and what backups were produced.
Scripts	Restores system-defined and user-defined scripts for NetVault Backup.

i | NOTE: Selecting individual components to restore parts of a NetVault Database backup can introduce inconsistencies in the database.

5 On the **Create Selection Set** page, click **Edit Plugin Options**.

6 Configure the following option:

- **Blank reports database tables before restore:** By default, the existing data in the reports database is deleted when you restore the NetVault Database. If you want to retain the existing data in the reports data, clear this check box.

Click **OK** to save the settings, and then click **Next**.

7 On the **Create Restore Job** page, specify a name for the job. Assign a descriptive name that allows you to easily identify the job for monitoring its progress.

A job name can contain alphanumeric and non-alphanumeric characters, but it cannot contain non-Latin characters. There is no length restriction. However, a maximum of 40 characters is recommended on all platforms.

8   In the **Target Client** list, the client from which data was backed up is selected by default. Do not change this setting.

9   Select or create the Schedule Set, Restore Source Set, and Advanced Options Set. For more information about these sets, see the *Quest NetVault Backup Administrator's Guide*.

10 Click **Submit** to submit the job for scheduling.

i   **IMPORTANT:** After submitting the restore job, close the WebUI. Do not try to monitor the job status while the job is running.

After the restore job completes, the NetVault Backup Service is stopped. You must manually restart the service from the Txtconfig or the command-line interface.

Using Plug-in *for Raw Devices*

- Backing up raw devices
- Restoring a raw device backup
- Relocating data to an alternate disk or partition
- Restoring data to an alternate NetVault Backup Client

Backing up raw devices

The procedure for backing up raw devices includes the following steps:

- Prerequisites
- Backup procedure

Prerequisites

Before you start the backup procedure, verify that the following requirements are met:

- **Linux and UNIX systems:**

  - Unmount the file system on the disk that you want to back up.

- **Windows systems:**

  - Ensure the disk that you want to back up is not in use.

  - Close all explorer windows.

  - Stop the Disk Management Utility if it is running.

> **i** | **NOTE:** On Windows, the Plug-in *for Raw Devices* cannot be used to back up GPT (GUID Partition Table)
> style partitions. The plug-in can only be used to back up MBR (Master Boot Record) style partitions.
>
> On Linux, the Plug-in *for Raw Devices* can be used to back up GPT style partitions.

Backup procedure

To back up raw devices:

1 In the Navigation pane, click **Create Backup Job**.

   You can also start the wizard from the **Guided Configuration** link. In the Navigation pane, click **Guided
   Configuration**, and then on the **NetVault Configuration Wizard** page, click **Create Backup Jobs**.

2 In **Job Name**, specify a name for the job. Assign a descriptive name that allows you to easily identify the
   job for monitoring its progress or restoring data.

A job name can contain alphanumeric and non-alphanumeric characters, but it cannot include non-Latin characters. There is no length restriction. However, a maximum of 40 characters is recommended on all platforms.

3   In the **Selections** list, select an existing Backup Selection Set, or complete the following steps to create a set.

      d   Click **Create New** to open the **NetVault Backup Selections** page.

      a   Open the NetVault Backup Server node, and in the list of plug-ins, open **Raw Device**.

      b   Select the data that you want to back up.

          Linux and UNIX (including Mac OS X)

            a   Open the root directory node to display the directory tree.

            b   Open the **/dev** node, and select the applicable disk.

            c   Select the partition device file that you want to back up.

          Windows

            ▫   **Back Up the Entire Physical Disk:** Select the **Physical Disk <n>** node.

            ▫   **Back Up Master Boot Record (MBR) and System Partition:** Open the **Physical Disk <n>** node, and select the **Master Boot Record & System Partition** node.

            ▫   **Back Up Individual Partitions**: Open the **Physical Disk <n>** node, and select the **Partition <n>** nodes that you want to back up.

      c   Click **Save**, and in the **Create New Set** dialog box, type a name for the set. Click **Save** to close the dialog box.

         ⅰ   NOTE: A set name can contain alphanumeric and non-alphanumeric characters, but it cannot include non-Latin characters. On Linux OS, the names can have a maximum of 200 characters. On Windows OS, there is no length restriction. However, a maximum of 40 characters is recommended on all platforms

4   In the **Plugin Options** list, select an existing Backup Options Set, or complete the following steps to create a set.

      a   Click **Create New** to open the **Raw Partitions Backup Options** page.

      a   Configure the following settings on Windows-based clients:

          ▫   **Backup Reported Disk Size:** By default, the plug-in obtains the disk size from the operating system and backs up that amount of data. This option allows you to restore data to any physical disk of the same reported size, even if the actual sizes differ.

          ▫   **Backup Entire Contents:** Select this option if the actual and reported disk sizes vary, and you want to back up the entire contents regardless of the reported disk size.

      b   Click **Save**, and in the **Create New Set** dialog box, type a name for the set. Click **Save** to close the dialog box.

5   Select or create the Schedule Set, Target Set, and Advanced Options Set. For more information about these sets, see the *Quest NetVault Backup Administrator's Guide*.

6   To submit the job for scheduling, click **Save & Submit**. You can monitor the job progress from the **Job Status** page and view the logs from the **View Logs** page.

To save the job definition without scheduling it, click **Save**. You can view, edit, or run this job from the **Manage Job Definitions** page. This job is not displayed on the **Job Status** page until you submit it.

For more information about **Job Status**, **View Logs**, and **Manage Job Definitions**, see the *Quest NetVault Backup Administrator's Guide*.

Restoring a raw device backup

The procedure for restoring a Raw Device Backup includes the following steps:

- Prerequisites
- Restore Procedure

Prerequisites

Before you start the restore procedure, verify that the following requirements are met:

- **Restore an entire disk:** Unmount the target disk. Verify that the size of the target disk is equal to or larger than the size of the source disk.

- **Restore an individual partition:** On Windows, verify that the size of the target partition is equal to the size of the source partition. When you restore the data to a partition of a different size, the job completes with the message **"Partition to Restore to a Different Size than the Backed Up Partition."** This type of restore might require reinstallation or reformatting.

  This requirement does not apply to Linux and UNIX systems.

> **i** | **NOTE:** The Plug-in *for Raw Devices* cannot be used to perform cross-platform restores. You cannot restore raw device backups of a Windows Client to a Linux Client or raw device backups of a Linux Client to a Windows Client.

Restore Procedure

To restore a raw device backup:

1. In the Navigation pane, click **Create Restore Job**. Complete Step 1 through Step 3 in the section Restore Procedure.

2. On the **Create Selection Set** page, select the disks that you want to restore. Alternatively, open the parent node and select the partitions that you want to restore.

   Click **Save** to save the settings, and then click **Next**.

3. On the **Create Restore Job** page, specify a name for the job. Assign a descriptive name that allows you to easily identify the job for monitoring its progress.

   A job name can contain alphanumeric and non-alphanumeric characters, but it cannot contain non-Latin characters. There is no length restriction. However, a maximum of 40 characters is recommended on all platforms.

4. In the **Target Client** list, the client from which data was backed up is selected by default. Do not change this setting.

5. Select or create the Schedule Set, Restore Source Set, and Advanced Options Set. For more information about these sets, see the *Quest NetVault Backup Administrator's Guide*.

6. Click **Submit** to submit the job for scheduling.

> **i** | **IMPORTANT:**
> - While restore is in progress, do not access the target drive. If you do so, the job fails and the partition data is corrupted.
> - To view the job status, use the NetVault Backup WebUI.
> - After a restore completes on a Windows Client, reboot that machine. Do not try to view or browse the restored data until the machine is rebooted.

Additional notes

If you select MBR and one or more partitions for a restore job, the plug-in restores the MBR successfully, but it fails to restore the selected partitions and the jobs completes with warnings ("Failed to get the information of Partition <n> for Disk <n>"). The plug-in is unable to obtain the partition information because the information about the restored MBR has not been updated on Windows.

To restore MBR and one or more partitions, use the following steps:

1   Restore the MBR.

2   Start the Windows Disk Management utility. Use the **Refresh** command to update the MBR information on Windows.

3   Restore the individual partitions.

Relocating data to an alternate disk or partition

To restore a Raw Device Backup without overwriting the existing data, you can relocate the data to an alternate disk or partition on the client. You can also use this procedure if the original disk is unavailable or corrupted.

> **i** | **IMPORTANT:**
> - On Windows, you can restore the MBR to an alternate disk without recreating the individual partitions.
> - You can relocate the MBR to any disk, but it must be copied to partition zero on that disk.
> - You can relocate a backup to a designated disk or partition using the disk and partition numbers.

To relocate data to an alternate disk or partition:

1   Start the restore wizard, and select the data that you want to restore. For more information, see steps 1 through 3 in the section Restoring a raw device backup.

2   Select the disk or partition that you want to rename or relocate, and in the **Actions** list, click **Rename**.

3   In the **Rename/Relocate** dialog box, provide the following information.

   - **Linux and UNIX:** Type the full path to the new disk.

   - **Windows:** To relocate the data to an alternate disk, type the target disk number. For example, `Disk 1` or `1`.

      To relocate the data to an alternate partition, type the disk number and the partition number. For example, `Disk 1 Partition 4` or `1 4`.

   Click **OK** to close the dialog box.

   After you close the dialog box, the plug-in updates the corresponding node in the selections tree to display the new location for the disk or partition.

4   Complete steps 3 through 7 in the section Restoring a raw device backup.

Restoring data to an alternate NetVault Backup Client

When restoring a Raw Device Backup, you can relocate the data to an alternate client. This procedure can be useful during a server migration or disaster recovery operation.

The procedure for restoring a Raw Device Backup to an alternate client includes the following steps:

- Prerequisites
- Restore procedure

Prerequisites

Before you start the restore procedure, verify that the following requirements are met:

- Install the NetVault Backup Server or Client software on the target system.
- Add the target client to the NetVault Backup Server.

Restore procedure

To relocate data to an alternate client:

1 Complete steps 1 through 4 in the section Restoring a raw device backup.

2 In the **Target Client** list, select the restore target.

Alternatively, click **Choose**, and in the **Choose the Target Client** dialog box, select the restore target. Click **OK** to close the dialog box.

3 Complete steps 6 and 7 in the section Restoring a raw device backup.

ℹ️ | **NOTE:** You can also use the **Relocate** option while restoring data to an alternate client. For more information about these options, see Relocating data to an alternate disk or partition.

About us

We are more than just a name

We are on a quest to make your information technology work harder for you. That is why we build community-driven software solutions that help you spend less time on IT administration and more time on business innovation. We help you modernize your data center, get you to the cloud quicker and provide the expertise, security and accessibility you need to grow your data-driven business. Combined with Quest's invitation to the global community to be a part of its innovation, and our firm commitment to ensuring customer satisfaction, we continue to deliver solutions that have a real impact on our customers today and leave a legacy we are proud of. We are challenging the status quo by transforming into a new software company. And as your partner, we work tirelessly to make sure your information technology is designed for you and by you. This is our mission, and we are in this together. Welcome to a new Quest. You are invited to Join the Innovation™.

Our brand, our vision. Together.

Our logo reflects our story: innovation, community and support. An important part of this story begins with the letter Q. It is a perfect circle, representing our commitment to technological precision and strength. The space in the Q itself symbolizes our need to add the missing piece—you—to the community, to the new Quest.

Contacting Quest

For sales or other inquiries, visit www.quest.com/contact.

Technical support resources

Technical support is available to Quest customers with a valid maintenance contract and customers who have trial versions. You can access the Quest Support Portal at https://support.quest.com.

The Support Portal provides self-help tools you can use to solve problems quickly and independently, 24 hours a day, 365 days a year. The Support Portal enables you to:

- Submit and manage a Service Request.
- View Knowledge Base articles.
- Sign up for product notifications.
- Download software and technical documentation.
- View how-to-videos.
- Engage in community discussions.
- Chat with support engineers online.
- View services to assist you with your product.