



Quest[®] NetVault[®] Backup
Plug-in *for MongoDB* 12.4
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 MongoDB

- [NetVault Backup Plug-in for MongoDB: at a glance](#)
- [Key benefits](#)
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- [Recommended additional reading](#)

NetVault Backup Plug-in for MongoDB: at a glance

Quest® NetVault® Backup Plug-in for MongoDB (Plug-in for MongoDB) increases confidence in recoverability of critical data and eliminates the need for writing complex backup-and-recovery scripts. Through a web-based user interface (WebUI) and automated workflow process, the plug-in offers a centralized way to set up, configure, and define backup and restore policies for your MongoDB document databases.

Support for MongoDB sharded clusters, MongoDB standalone servers, and MongoDB Atlas cloud backups let you implement a backup policy that is flexible enough to account for many recovery scenarios without learning MongoDB internals. The plug-in offers a detailed level of control that minimizes downtime by allowing you to restore databases. Through integration with a range of backup devices, your data is protected and stored offsite to meet your disaster-recovery and business-continuity goals.

Key benefits

- **MongoDB protection:** Plug-in for MongoDB protects your MongoDB database by taking full and incremental backups. The plug-in lets you back up a variety of database sources, including standalone server, sharded cluster, and MongoDB Atlas cloud server.
- **Restore options:** When you protect a MongoDB database with Plug-in for MongoDB, you have the option to restore backed-up data to any of four destinations: the original database, a renamed database on the same host, an alternate host with a database that has the same name, or an alternate host with a renamed database.
- **Ensures business continuity:** With offsite backups being an important part of the data-protection plan for business-critical applications, the plug-in takes advantage of NetVault's integration with a range of backup devices. NetVault lets you select which backup device to store the backup on. You can store the backup online in a virtual tape library (VTL). You can also duplicate the job to physical tape libraries, ensuring that your MongoDB environment is protected for disaster-recovery purposes.

Feature summary

- **Backup features**
 - Full and incremental backup
 - Support for MongoDB on-premises and cloud implementations
 - Full backup of standalone installations
 - Protection for sharded clusters
 - Backup of MongoDB Atlas data from cloud to on-premises NetVault media
- **Restore features**
 - Full and incremental restore
 - Full restore of standalone installations
 - Restore of MongoDB Atlas cloud data from on-premises NetVault media
 - Alternate host restore
 - Alternate host restore with a renamed database
 - Restore to the same host with a renamed database

Target audience

While advanced DBA skills are not required to create and run routine backup operations, they are required for defining an efficient backup-and-recovery strategy.

Recommended additional reading

Quest recommends that you have the following documentation available for reference while setting up and using this plug-in.

- **MongoDB documentation**, which is available from <https://docs.mongodb.com/>.
- **NetVault documentation:**
 - *Quest NetVault Installation Guide*: This guide provides details on installing the NetVault Server and Client software.
 - *Quest NetVault Administrator's Guide*: This guide explains how to use NetVault and describes the functionality common to all plug-ins.
 - *Quest NetVault CLI Reference Guide*: This guide provides a description of the command-line utilities.

You can download these guides from <https://support.quest.com/technical-documents>.

Installing and removing the plug-in

- [Installation prerequisites](#)
- [Reviewing the recommended configuration](#)
- [Installing the plug-in](#)
- [Removing the plug-in](#)

Installation prerequisites

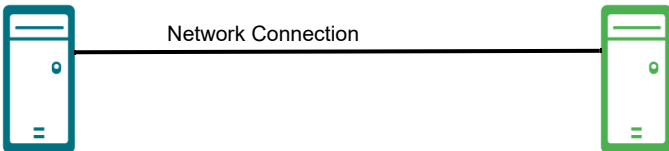
Before installing Plug-in *for MongoDB*, verify that the following software is installed and properly configured on the machine designated as the MongoDB Server:

- **NetVault Server or Client software:** At least the Client version of NetVault should be installed on the machine configured as the MongoDB Server. For more information on supported versions of the NetVault software, see the *Quest NetVault Compatibility Guide*.
- **MongoDB software:** The Client machine must be running a supported version Mongo Shell. For more information, see the *Quest NetVault Compatibility Guide*.

Reviewing the recommended configuration

While you can set up a single machine as both the NetVault Server and the MongoDB Server, that is, all software installation and configuration requirements are performed on a single machine, Quest recommends that these two entities exist on *separate* machines.

Table 1. Recommended configuration



NetVault Client machine	NetVault Server machine
Installed software and configuration	Installed software and configuration
<ul style="list-style-type: none"> • Mongo shell, version 4.0 or later • NetVault Client software • NetVault Backup Plug-in for MongoDB 	<ul style="list-style-type: none"> • NetVault Server software

i | **IMPORTANT:** One MongoDB plug-in can serve multiple MongoDB servers (on-premise and cloud).

Sample procedures throughout this guide assume that you are using this two-machine environment and that configuration requirements have been met.

Installing the plug-in

The following topic describes the process for installing the plug-in on a single client or upgrading an existing one. If you have multiple clients of the same type, you can use the NetVault Configuration Wizard to install the plug-in on multiple clients at the same time. For more information on using push installation to update multiple clients at the same time, see the *Quest NetVault Backup Administrator's Guide*.

- 1 In the Navigation pane, click **Manage Clients**.
- 2 On the **Manage Clients** page, select the machine that contains the Domino Server, and click **Manage**.
- 3 On the **View Client** page, click the **Install Plugin** button (+).
- 4 Click **Choose Plug-in File**, navigate to the location of the “.npg” installation file for the plug-in, for example, on the installation CD or the directory to which the file was downloaded from the website.
Based on the OS in use, the path for this software may vary on the installation CD.
- 5 Select the file entitled “**mongodb-x-x-x-x.npg**,” where **x-x-x-x** represents the version number and platform, and click **Open**.
- 6 To begin installation, click **Install Plugin**.

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

Removing the plug-in

- 1 In the Navigation pane, click **Manage Clients**.
- 2 On the **Manage Clients** page, select the applicable client, and click **Manage**.
- 3 In the **Installed Software** table on the **View Client** page, select **Plug-in for MongoDB**, and click the **Remove Plugin** button (-).
- 4 In the **Confirm** dialog box, click **Remove**.

Configuring the plug-in

Configuring NetVault Backup Plug-in for MongoDB

When you install *NetVault Backup Plug-in for MongoDB*, it includes the mongoc library provided by mongoc. After you register the MongoDB server, all of the databases for that server appear under the MongoDB node on the NetVault Backup Selections page.

To configure NetVault Backup Plug-in for MongoDB:

- 1 In the Navigation pane, click **Create Backup Job**, and then click the **Create New** button next to the Selections list.
- 2 On the **Selections** page, under **Server Details**, enter the information described in the following table:

Table 2.

Option	Description
User	The name used by the MongoDB backup administrator.
Password	The password used by the administrator entered as the User.
Hostname	The hostname or IP address for the MongoDB server.
Port	The port that MongoDB uses.
Mongo Shell Path	The MongoDB shell path on the NetVault Client.
Atlas Server	Select this option if the MongoDB installation is an Atlas cloud server.

- 3 Click **OK** to save the settings.

These settings are stored on the NetVault Backup Plug-in for MongoDB Server in configuration files specific to the host, and applied during backups and restores of shared data performed through the host.

Backing up data

- [Defining a backup strategy](#)
- [Performing a backup](#)

i | **IMPORTANT:** On Windows, use appropriate encoding during database cluster initialization; that is, when you run `initdb`. Backups fail if you use **UTF-8** encoding and the database or table names contain non-ASCII characters.

Defining a backup strategy

Before commencing with database backups, ensure that you have a backup strategy that safeguards data against media failure, data corruption, user error, and loss of the database server. The following topic provides information that helps you devise a backup strategy for use with Plug-in *for MongoDB*.

Example of a backup sequence

Plug-in *for MongoDB* takes full and incremental backups of MongoDB databases. Following are two sequences that might meet your MongoDB database protection requirements.

- **Full database backups only:** If update characteristics are similar across multiple databases, full database backups scheduled every night ensures data protection up to the previous day.

A full database backup consumes large amounts of storage space. However, restores are easier and quicker as only a single job is required to restore the entire cluster. Using the Custom Archive backup format can reduce the backup size.

- **Incremental database backup:** An incremental database backup begins with a full backup of the database. Afterwards, the plug-in takes backups of only the changes that were made since the full backup was taken. You can schedule the frequency of the incremental backups when you create the backup job. This option uses less space on the backup target server than the full database backup option.

A restore of an incremental backup includes the full backup and the most recent incremental backup.

Performing a backup

A backup using Plug-in *for MongoDB* includes the steps outlined in the following topics.

- [Selecting one or more databases for a backup](#)
- [Setting backup options](#)
- [Finalizing and submitting the job](#)

Selecting one or more databases for a backup

You must use sets—Backup Selection Set, Backup Options Set, Schedule Set, Target Set, and Advanced Options Set—to create a backup job. For more information, see the *Quest NetVault Administrator's Guide*.

i | **TIP:** To use an existing set, click **Create Backup Job**, and select the set from the **Selections** list.

- 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**. 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 lets you easily identify the job when monitoring its progress or restoring data. The job name can contain alphanumeric and nonalphanumeric characters, but it cannot contain non-Latin characters. On Linux, the name can have a maximum of 200 characters. On Windows, there is no length restriction. However, a maximum of 40 characters is recommended on all platforms.

- 3 Next to the **Selections** list, click **+**.

- 4 In the list of plug-ins, open **Plug-in for MongoDB**.

- 5 In the Server Details window, enter the following information:

Item	Description
Host Name	Enter the name or IP address of the MongoDB host that you want to protect.
Port	Enter the port number 27017, or the number of the port that MongoDB uses.
User	Enter the name used by the MongoDB backup administrator.
Password	Enter the password used by the MongoDB backup administrator entered as the user.
Mongo Shell Path	Enter the path for the Mongo Shell installation on the NetVault client. For example: <code>/usr/bin/mongo</code> .
Atlas Server	If the host is located on a MongoDB Atlas cloud server, select this option.

- 6 Click **OK**.

The plug-in attempts to connect to the database server with the name and password specified in the **Configure** dialog box. After successful authentication, the added databases are displayed.

i | **NOTE:** When using a cluster environment, add the primary node. If you add the secondary node, **Plug-in for MongoDB** internally identifies the respective primary node and adds it.

- 7 Click the check box next to each database that you want to back up.

- 8 Enter a name in the **Create New Set** dialog box, and then click **Save**.

Alternatively, if you want to clone the set instead of creating a new set, click **Clone Existing Set**.

The name can contain alphanumeric and nonalphanumeric characters, but it cannot contain non-Latin characters. On Linux, the name can have a maximum of 200 characters. On Windows, there is no length restriction. However, a maximum of 40 characters is recommended on all platforms.

Setting backup options

- 1 Next to the **Plugin Options** list, click **+**.

- 2 In the **Backup Method** section on the **MongoDB Backup Options** tab, under **Backup Type**, select one of the following options:
 - Full
 - Incremental

i | **NOTE:** Selecting Incremental results in one full backup, followed by sequential backups taken in the scheduled increments.

- 3 Using the arrows, set the **Maximum Number of Parallel Streams**. The default number is 4.
- 4 In the **Create New Set** dialog box, specify a name for the set, and click **Save**.

Alternatively, if you want to clone the set instead of creating a new set, click **Clone Existing Set**.

The name can contain alphanumeric and nonalphanumeric characters, but it cannot contain non-Latin characters. On Linux, the name can have a maximum of 200 characters. On Windows, there is no length restriction. However, a maximum of 40 characters is recommended on all platforms.

Finalizing and submitting the job

- 1 If you selected Incremental, use the **Schedule** option to configure frequency.
- 2 To configure any additional required options, use the **Target Storage** and **Advanced Options** lists.
- 3 Click one of the following options:
 - **Save** to save the job details but not run the job.
 - **Save & Submit** to save and run the job as configured.

i | **TIP:** To run a job that you have already created and saved, select **Manage Job Definitions** in the Navigation pane, select the applicable job, and click **Run Now**.


You can monitor progress on the **Job Status** page and view the logs on the **View Logs** page. For more information, see the *Quest NetVault Administrator's Guide*.

i | **IMPORTANT:** If you enabled the Dump Data as Copy Data option, Quest recommends that you also set up additional regular backup jobs, such as weekly or every other week, that do not use the Dump Data as Copy option.

Restoring data

- [Selecting data for a restore](#)
- [Selecting a target server](#)
- [Finalizing and submitting the job](#)

Selecting data for a restore

- 1 In the Navigation pane, click **Create Restore Job**.
- 2 On the **Create Restore Job—Choose Saveset** page, select **Plug-in for MongoDB** from the **Plugin Type** list.
- 3 To filter the items displayed in the saveset table, click **Filter**  .
The table displays the saveset name (job title and saveset ID), creation date and time, and size. By default, the list is sorted by creation date.
- 4 In the saveset table, select the applicable saveset to display the database cluster that was the target of the backup.
When you select a saveset, the following details are displayed in the **Saveset Information** area: Job ID, job title, server name, client name, plug-in name, saveset date and time, retirement setting, Incremental Backup or not, Archive or not, saveset size, and snapshot-based backup or not.
- 5 Click **Restore**.
- 6 On the **Create Selection Set** page, select the data that you want to restore.
- 7 To view the databases included in the backup, open **All Databases**.
- 8 For next-level selections, drill down further.
- 9 Select the database as required.

i | **IMPORTANT:** BLOBs included in the backup are displayed as a separate node, and not beneath the associated table. Selecting this node restores all BLOBs contained in the saveset and not just objects associated with the selected table. Also note that, to restore BLOBs, this node must be selected explicitly, that is, either this node or the parent database node must be selected. Selecting only the table does *not* restore the associated BLOBs.

Selecting a target server

With NetVault Backup Plug-in for MongoDB, you have the option to restore a database to its original location or to a different server. You can also change the name of the restored database regardless of the selected destination.

- 1 On the **Create Select Set** page, complete one of the following options:
 - To restore the database to the original location with the original name, go to [Finalizing and submitting the job](#).

- To restore the database to a different location or rename the database, right-click on the database and then click **Rename**.
- 2 In the **Rename / Relocate** window, enter the following information:
 - **Rename:** If you want to change the name of the restored database, enter the new name.
 - **Relocate:** If you want to restore the database to a different location, enter the name or IP address of the new location.

If you are relocating the database, complete the following actions:

- Enter the IP address for the primary node.
- Verify that the Plug-in *for MongoDB* is configured and the MongoDB software installed on the alternate host.

If you are relocating or renaming the database, complete the following action:

- Name the database a different name from any databases that exist on the destination host, otherwise the restore fails. In the case when you restore or rename multiple databases and one database has the same name as a database that exists on the destination host, the operation succeeds with a warning.

i | **IMPORTANT:** If you use the Rename or Relocation options to restore a database that has sharding enabled, the database restores without sharding enabled. To enable sharding for the restored database, refer to your MongoDB instructions.

- 3 Click **OK**.

Finalizing and submitting the job

The final steps include setting additional options on the Schedule, Source Options, and Advanced Options pages, submitting the job, and monitoring the progress through the Job Status and View Logs pages. These pages and options are common to all NetVault Plug-ins. For more information, see the *Quest NetVault Administrator's Guide*.

- 1 On the **Create Select Set** page, click **Next**.
- 2 On the **Create Restore Job** page, in **Job Name**, specify a name for the job if you do not want to use the default setting.

Assign a descriptive name that lets you easily identify the job when monitoring its progress. The job name can contain alphanumeric and nonalphanumeric characters, but it cannot contain non-Latin characters. On Linux, the name can have a maximum of 200 characters. On Windows, there is no length restriction. However, a maximum of 40 characters is recommended on all platforms.
- 3 In the **Target Client** list, select the machine on which you want to restore the data.
 - i** | **TIP:** You can also click **Choose**, and then locate and select the applicable client in the **Choose the Target Client** dialog box.
- 4 Use the **Schedule**, **Source Options**, and **Advanced Options** lists to configure any additional required options.
- 5 Click **Save** or **Save & Submit**, whichever is applicable.

You can monitor progress on the **Job Status** page and view the logs on the **View Logs** page. For more information, see the *Quest NetVault Administrator's Guide*.

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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:

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- 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.