



Quest[®] NetVault[®] Backup Plug-in *for Domino*
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.

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

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Introducing NetVault Backup Plug-in *for Domino*

- [NetVault Backup Plug-in for Domino: at a Glance](#)
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NetVault Backup Plug-in *for Domino*: at a Glance

Quest® NetVault® Backup Plug-in *for Domino* (Plug-in *for Domino*) increases confidence in the recoverability of your IBM or HCL Domino Server, while eliminating the need for complex scripting. 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 Domino Server. Support for Full and Incremental Backups lets you choose a preferred backup method. The plug-in offers a detailed level of control that minimizes downtime by allowing you to restore the Domino Databases or individual User Mailboxes. 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

- **Increases confidence and reduces risks for critical data:** Plug-in *for Domino* lets you create backup policies that are flexible enough to account for many recovery scenarios. You can choose the best backup method without having to learn Domino internals. By relying on the plug-in to implement backup policies, you can focus on more critical tasks without risking your ability to recover what is needed if a failure occurs.
- **Speeds up restores and reduces downtime:** With Plug-in *for Domino*, you select what must be restored and the backup set to restore from, and the plug-in automatically performs the restore. To maximize availability, the plug-in is designed for detailed recovery, which lets you recover Domino Databases or individual User Mailboxes. Through automated options, the plug-in reduces reliance on human interaction, which eliminates errors often caused by manual intervention.
- **Ensure business continuity:** The plug-in takes advantage of NetVault Backup's integration with a range of backup devices. Offsite storage to tapes and disks gives you the confidence that your data is protected for disaster-recovery purposes. With Plug-in *for Domino*, you need not be present 24x7. Less-experienced personnel can initiate restores, thus reducing downtime and improving business continuity.

Feature summary

- Full and Incremental Backups while data is online and accessible
- Protection down to individual Domino Database
- Protection down to the individual Domino User Mailbox
- Support for multiple instances—partitioned server—of the Domino Server
- Restore of the Domino Databases or individual User Mailboxes
- Roll-Forward and Point-In-Time Recovery
- Rename database and mailboxes during restore
- Relocate database and mailboxes during restore
- Restore to an alternate Domino Server
- Point-and-click WebUI

Target audience

This guide is intended for users who are responsible for the backup and recovery of the Domino Server. Familiarity with Domino administration and the operating system (OS) under which the Domino Server is running is assumed. Advanced knowledge of Domino is useful for defining an efficient backup-and-recovery strategy.

Recommended additional reading

The following documentation is also available:

- **NetVault Backup documentation:**
 - *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.

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

- **Domino documentation**, which is available from <http://www.ibm.com/developerworks/lotus/documentation/domino> or https://help.hcltechsw.com/domino/domino_welcome.html.

Installing and removing the plug-in

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

Prerequisites

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

- **NetVault Backup Server and Client software:** At a minimum, the NetVault Backup Client must be installed on the machine configured as the Domino Server.
- **Set up Transactional Logging:** Ensure that Transactional Logging is enabled on the Domino Server. For details, see [Setting up Transactional logging on the Domino Server](#).

! **IMPORTANT:** Without Transactional Logging, you cannot perform Incremental Backups and Restores.

- **Double-check symbolic links on Linux and UNIX:** If you use Domino on Linux or UNIX, the plug-in might not let you browse the Domino Server because some symbolic links are not created during installation. Other Domino client applications, such as **compact**, might also fail to run correctly. For example, if you run the **compact** command for a database, `compact -c /path/notesdata/filename.nsf`, you might encounter an error such as: "Error while loading shared libraries: *<nameOfLibrary>*: cannot open shared object file: No such file or directory."

To determine whether any of the symbolic links are missing, run the following commands. The *.so extension applies to Linux and Solaris SPARC. Replace this extension with the applicable one for your OS; for example, use the *.a extension for IBM AIX.

```
ls -al /usr/lib/libnotes.so
ls -al /usr/lib/libndgts.so
ls -al /usr/lib/libxmlproc.so
```

If you are using a 64-bit version of Domino Server 9 or later, run the following additional command:

```
ls -al /usr/lib/libgsk8iccs_64.so
```

If any of the links are missing, run the following commands to create them:

```
ln -s <directoryWhereDominoServerIsInstalled>/libnotes.so /usr/lib/libnotes.so
ln -s <directoryWhereDominoServerIsInstalled>/libndgts.so /usr/lib/libndgts.so
ln -s <directoryWhereDominoServerIsInstalled>/libxmlproc.so
    /usr/lib/libxmlproc.so

ln -s <directoryWhereDominoServerIsInstalled>/libgsk8iccs_64.so
    /usr/lib/libgsk8iccs_64.so
```

On a Sun Solaris SPARC system that uses the default installation location of the Domino Server, these commands might look similar to the following examples. Depending on the version of Domino Server that you are using, the path might use **HCL** instead of **IBM** or **Domino** instead of **Lotus/Notes**.

```
ln -s /opt/ibm/lotus/notes/latest/sunspa/libnotes.so /usr/lib/libnotes.so
```

```
ln -s /opt/ibm/lotus/notes/latest/sunspa/libndgts.so /usr/lib/libndgts.so
ln -s /opt/ibm/lotus/notes/latest/sunspa/libxmlproc.so /usr/lib/libxmlproc.so
```

Setting up Transactional logging on the Domino Server

i | **NOTE:** Depending on the version of your Domino Administrator, the following steps might differ. For more information, see your Domino Administrator documentation.

- 1 Ensure that all target databases reside in the Domino Data Directory or directories within this directory.
- 2 Start Domino Administrator.
- 3 Select the **Configuration** tab.
- 4 In the **User Directory On** list, select the relevant server's Domino directory.
- 5 Select the **Server Configuration** check box.
- 6 Select the **Current Server Document** option.
- 7 Select the **Transactional Logging** tab, and configure the following parameters:
 - **Transactional Logging:** Select the **Enabled** option.
 - **Logging Style:** Select the **Archive** option.
- 8 Save these settings, and exit Domino Administrator.
- 9 To apply the settings, restart the Domino Server.

Installing or upgrading 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 “**not-x-x-x-x.npg**,” where **xxxxx** 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 Domino**, and click the **Remove Plugin** button ([-]).
- 4 In the **Confirm** dialog box, click **Remove**.

Configuring the plug-in

- [Configuring default settings](#)
- [Configuring additional settings for a partitioned server](#)

Configuring default settings

The plug-in lets you set default options for backup and restore jobs. You can override these options on a per-job basis. If you intend to use a partitioned server, the settings entered at the plug-in level are automatically set for the primary partition, partition 1. You can also access this option from the partition level.

- 1 In the Navigation Pane, click **Create Backup Job**, and click **+** next to the **Selections** list.
- 2 In the selection tree, open the applicable client node.
- 3 Click **Plug-in for Domino**, and select **Configure** from the context menu.
- 4 Configure the following parameters:

i **NOTE:** If you are running a Windows OS, the appropriate information is displayed in the **Configure** dialog box by default—except the **Lotus Domino User Domain** name, which you must enter, if necessary. Quest strongly recommends that you review the default values for these parameters to ensure their accuracy.

- **Lotus Domino Installation Directory:** Enter the full path to the Domino installation directory. On AIX, Linux, and Windows, this path is displayed by default.
- **Lotus Domino Data Directory:** Enter the full path to the directory where the Domino Databases are stored. On AIX, Linux, and Windows, this path is displayed by default.
- **Lotus Domino Username:** The Plug-in *for Domino* requires a host login account—OS user account—to access the data on the Domino Server for backups. Depending on the OS in use, the following preconfigured user account is displayed in this field:
 - **Windows:** On Windows, “**Administrator**” is displayed by default.
 - **Linux and UNIX:** On Linux and UNIX, “**notes**” is displayed by default if the default user name was not changed during Domino installation and Domino Server is running from this account. Otherwise, the Plug-in *for Domino* does not preconfigure a default user. If the box is blank, configure a valid user account for the plug-in’s use.

When configuring a user account, ensure that the specified user has sufficient privileges to access the Domino Server program and the database.

- **Lotus Domino User Domain (Windows)/User Group (Linux/UNIX):** Depending on the OS, provide the User Domain or User Group:
 - **Windows:** If the NetVault Backup Server and the Domino Server belong to different Windows Domains, enter the Windows Domain for the Domino Server. This parameter is optional.
 - **Linux or UNIX:** Enter the user group to which the configured user belongs. If the Domino Server is running from this account, the preconfigured user group is **notes**.

- **Tmp Directory for Recovery:** Enter the path to a temporary directory on the Plug-in *for Domino* host. The plug-in uses this directory to store data temporarily when relocating a database as part of the restore operation. When the entire database is restored, the data is moved to the data directory on the target server and the temporary directory is emptied.
- **Location of file notes.ini:** Enter the full path to the Domino Server configuration file, “**notes.ini.**”
- **Name of *.ini file:** Enter the filename of the initialization file. The default name of the initialization file on Windows, Linux, and UNIX is “**notes.ini.**”
- **Location of file server.id:** Enter the path to the Domino Server’s ID file, “**server.id.**”
- **Location of file cert.id:** Enter the path to the Domino Domain Certifier ID file, “**cert.id.**”
- **Location of file mail.box:** Enter the path to the Domino Outbox Mail Router file, “**mail.box.**”
- **Location of User’s Mail:** Enter the path to the directory where the user email data is stored.
- **Location of file log.nsf:** Enter the path to the Domino Log Database, “**log.nsf.**”
- **Location of file names.nsf:** Enter the path to the Domino Domain directory, “**names.nsf.**”
- **Logs Directory:** Enter the path to the directory where the log files are stored.
- **Logs ControlFile:** Enter the name of the file acting as the logs control file.
- **Lotus DAOS Directory:** Available starting with Domino 8.5, the Domino Attachment and Object Service (DAOS) consolidates storage of attachments in a separate DAOS repository. DAOS also reduces disk space usage by allowing single-instance storage for attachments present in multiple mails.

For Domino Servers on which DAOS is enabled, enter the path to the DAOS repository on the server.

i | IMPORTANT: In a standard database, you only have to back up the “**.nsf**” file because the attachments are stored inside this file. With DAOS enabled, the “**.nsf**” file only contains a reference to the attachment. In this environment, also back up the files in the DAOS repository.

- **Ignore Circular Log Warnings in Full Backups:** As described in [Setting up Transactional logging on the Domino Server](#), Quest strongly recommends that you enable **Archive** logging. If you must use Circular logging and you do not want NetVault Backup to generate Circular logging warnings during Full Backups, select this option.
- **Ignore No Logged Database Log Warnings in Backups:** To skip **Completed with warnings** messages for backup jobs that do not include logged databases, select this option.

If you select this option and no logged databases are encountered during the backup process, the warning associated with the event of the database not being logged is not taken into account for the exit status of the backup job. If other errors or warnings are encountered, the job exit status is set to errors or warnings accordingly.

- **Incomplete backup of ALL items selected:** The plug-in lets you specify what action a backup job should take if it is unable to back up all the selected items. Consider the following example:

A backup job includes multiple Domino Databases and User Mailboxes. When you run a job instance, the backup of user mailboxes is unsuccessful, while the server databases are backed up successfully. In this situation, you can specify what action the backup job should take.

To configure a default action for the Plug-in *for Domino*, select one of the following from the list:

- **Complete with Warnings — Saveset Retained:** The job returns a status of “**Backup Completed with warnings**” and a backup saveset is created that includes the items that were successfully backed up.
- **Complete without Warnings — Saveset Retained:** The job completes and returns a status of “**Backup Completed.**” The errors are logged in the NetVault Backup binary logs and ignored on the **Job Status** page. A backup saveset is created that includes the items that were backed up.

- **Fail — Saveset Retained:** The job returns a status of “**Backup Failed.**” However, a backup saveset is generated that includes the items that were successfully backed up.
- **Fail — No Saveset Retained:** The job returns a status of “**Backup Failed**” and no saveset of backed-up objects is kept. That is, even if some of the objects were successfully backed up, the saveset is discarded.

i | **NOTE:** To override the default action on a per-job basis, see [Setting backup options](#).

- **Job Manager Channel Exercise Message Interval (in seconds):** To change the frequency at which a running instance of the plug-in sends a probe message to the NetVault Job Manager to maintain an active communication channel between the plug-in and the Job Manager, enter the new number here. The default is 180 seconds.
- **Number of Logical Domino Servers (Partitions):** If you are using a partition-server setup, use this option to change the value from 1, the default, to the number that reflects the number of partitions you have created. This ensures that the subsequent nodes appear in the selection tree and that you can configure them and back them up is applicable.

On a partitioned server, the partitions share one set of program files located in the Domino home directory, while each partition has a separate Domino Data Directory.

i | **IMPORTANT:** If you are using a standalone Domino Server, leave the default value set to 1.

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

Configuring additional settings for a partitioned server

As explained previously, when you access the **Configure** option from the plug-in level, the settings are automatically set for the primary partition, partition 1. If you access the option for partition 1, the settings reflect the defaults that you entered at the plug-in level. For the additional partitions, the plug-in only displays the fields that you can update for the selected partition.

i | **NOTE:** On Windows, when you browse one of the non-primary partition nodes after configuring the primary node, the plug-in prompts you to log in. To do so, enter the name and password, and domain if applicable, that you used to configure the primary node.

To configure additional partitions:

- 1 In the selection tree, expand the **Plug-in for Domino** node to see the list of partitions.
- 2 Click the first applicable partition, such as partition 2, and select **Configure** from the context menu.
- 3 On the **Configure Domino Server Partition** dialog box, enter the following parameters for the selected partition:
 - **Data Directory:** Enter the full path to the directory where the Domino Databases are stored.
 - **Domino Username:** (Required only for Linux/UNIX.) The plug-in requires either a Domino, host, or OS login account to access the data on the partition. Enter a valid user account for the plug-in’s use. When configuring a user account, ensure that the specified user has sufficient privileges to access the Domino Server program and the database.
 - **Domino User Group:** (Required only for Linux/UNIX.) Enter the user group to which the configured user belongs.
 - **Location of file notes.ini:** Enter the full path to the Domino Server configuration file, “**notes.ini.**”
 - **Name of *.ini file:** Enter the filename of the initialization file.
 - **Location of file server.id:** Enter the path to the Domino Server’s ID file, “**server.id.**”

- **Location of file cert.id:** Enter the path to the Domino Domain Certifier ID file, “**cert.id**.”
- **Location of file mail.box:** Enter the path to the Domino Outbox Mail Router file, “**mail.box**.”
- **Location of User’s Mail:** Enter the path to the directory where the user email data is stored.
- **Location of file log.nsf:** Enter the path to the Domino Log Database, “**log.nsf**.”
- **Location of file names.nsf:** Enter the path to the Domino Domain directory, “**names.nsf**.”
- **Logs Directory:** Enter the path to the directory where the log files are stored.
- **Logs ControlFile:** Enter the name of the file acting as the logs control file.
- **DAOS Directory:** For Domino Servers on which DAOS is enabled, enter the path to the DAOS repository on the server.

i | **IMPORTANT:** In a standard database, you only have to back up the “.nsf” file because the attachments are stored inside this file. With DAOS enabled, the “.nsf” file only contains a reference to the attachment. In this environment, also back up the files in the DAOS repository.

- 4 To save the settings, click **Save**.
- 5 Repeat these steps for each applicable partition.

Backing up data

- [Available backup types](#)
- [Performing Full Backups](#)
- [Performing Incremental Backups](#)

Available backup types

The Plug-in for *Domino* offers the following backup types:

- **Full Backup:** This type backs up the full contents of the selected items. Full Backups usually take longer to complete and consume more backup media. A Full Backup serves as the base for future Incremental Backups. A Full Backup of the DAOS repository includes all the existing attachments in the repository.
- **Incremental Backup:** This type backs up the new and changed data written to the Transaction Logs. To use this method, Transactional Logging must be enabled on the Domino Server. For more information, see [Setting up Transactional logging on the Domino Server](#). For a nonlogged database, the Incremental Backup backs up the full contents of the database. When a backup job includes both logged and nonlogged databases, the saveset contains the Transaction Logs for the logged databases and the full contents of the nonlogged database.

Incremental backups usually consume less storage space and are quicker to perform. The Incremental Backup method can only be selected for the server database, user-mailbox items, and the DAOS repository. An Incremental Backup of the DAOS repository only backs up DAOS files that have been newly added since the last Full or Incremental Backup.

- **IMPORTANT:** Any additional items that you select for backup are ignored; if none of the three valid types—server database, user-mailbox items, and the DAOS repository—are selected, the plug-in logs a warning and does not complete the backup process.

Performing Full Backups

The Full Backup procedure includes the steps outlined in the following topics:

- [Selecting data for a backup](#)
- [Setting backup options](#)
- [Finalizing and submitting the job](#)

- **NOTE:** Quest recommends that you run a cold (offline) backup after the initial installation of the plug-in. A cold backup consists of a backup of all the server databases and user-mailbox databases when the Domino Server is offline and inaccessible for new transactions and updates. A cold backup is a safe way to back up the Domino Server and provide a backup image of the data at the time of backup. However, a cold backup involves production downtime because the backup is performed while the Domino Server is offline and the users cannot access the IBM or HCL Notes Documents. If the maintenance window is sufficient, you can perform a cold backup during planned system maintenance downtime. You can use the procedure described in this topic for both online and offline backups.

Selecting data 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.

Backup Selection Sets are essential for Incremental Backups. Create the Backup Selection Set during a Full Backup, and use it for Incremental Backups. The backup job reports an error if you do not use a Selection Set for the Incremental Backup. For more information, see the *Quest NetVault Backup Administrator's Guide*.

i | **IMPORTANT:** Consider the following while selecting data for a backup.

- Domino Server lets you create the following types of links:
 - **Directory Link:** A Directory Link is used to access a specific directory that contains Domino Database files.
 - **Database Link:** A Database Link is used to access a specific database.

The Directory Links can be backed up and restored normally. However, when you restore a backed-up Database Link, the actual database is restored, not just the link. In addition, the database is restored to the location of the Database Link file, not its original location. Consider the following example: A Domino Database resides on partition A, while the Database Link is created on partition B. When you restore the backed-up Database Link, the database is restored to partition B where the link file resides. This process results in two instances of the same database residing on different partitions. Therefore, Quest recommends against including Database Links in a backup.

- Multiple server databases and template files can share a display name, for example, two template files could be named **Template_1**. When navigating the selection tree to include items for a backup, ensure that the applicable item is selected. This process can be completed by checking the server database and template-file structure on the Domino Server.
- Domino Server allows you to access a server-database file based on its file type and ignores its physical directory location. However, to access a server-database file on the **NetVault Backup Selections** page, navigate the selection tree to locate the file at its actual destination directory.

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 Domino** to display the Domino Server components.

- 5 If you are using a Windows system, enter the following login credentials when the dialog box is displayed, and then click **OK**:

- **Account Name:** Enter a Windows user account that the plug-in can use to access the Domino Server. You can configure a default user account for the plug-in's use as described in [Configuring default settings](#). The user account must have sufficient privileges to access the Domino Server and databases.
- **Password:** Enter the password associated with the specified user.
- **Domain:** If the NetVault Backup Server and the Domino Server belong to different Windows Domains, enter the Windows Domain for the Domino Server. This parameter is optional.

Upon authentication, the selection tree is displayed.

i | **IMPORTANT:** On Linux and UNIX, the plug-in uses the default user account and user group provided in the Configure dialog box to log in automatically to the Domino Server. No login prompt is displayed on this platform when you open the Domino Server node. Instead, the Domino Server components are listed for selection. However, if you have not specified a user name or user group in the Configure dialog box, or either of the configured parameters is invalid, the plug-in fails with an error message.

6 If you are using a partitioned server, expand the node for the partition that you want to back up.

i | **IMPORTANT:** Each partition is backed up separately, however, a backup job can include Domino objects from only one partition. If you have multiple partitions and your backup job includes one or more Domino objects from one of the partitions, the remaining partitions are dimmed.

7 Select the applicable data:

- **<server>**: To select all files and databases, select this node.
- **Initialization File**: To include the “notes.ini” file, select this node.
- **Identification Files**: To include the “*.id” files, including the “server.id” and “cert.id” files, select this node.
- **Mail Configuration File**: To include the “*.box” files, including the “mail.box” file, select this node.
- **Mail Databases**: To include the “log.nsf” and “names.nsf” database files, select this node.
- **Template Files**: To back up all the Template Files, select this node. To include individual files, open this node, and select the target files.
- **Server Databases**: To back up all the server databases, select this node. To include individual databases, open this node, and select the target databases.
- **Users MailBox**: To back up all the mailboxes, select this node. To include individual mailboxes, open this node, and select the target mailboxes. Any database that contains an **Inbox** is automatically displayed beneath the **Users MailBox** node on the **Selections** tab.
- **Domino Attachment and Object Service (DAOS)**: To back up all the items in the DAOS repository, select this node. To include individual directories, open this node, and select the target directories.

i | **NOTE:** For a DAOS Backup, Quest recommends that you create a separate job for the DAOS repository. To do so, create a separate Target Set, also referred to as a Selection Set, for the Full and Incremental Backups. For details on creating Selection Sets, see the *Quest NetVault Backup Administrator's Guide*.

8 Enter a name in **Set Name**, and click **Save**.

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

The next step involves creating the Backup Options Set or selecting an existing one.

i | **TIP:** To use an existing set, in the **Plugin Options** list, select the set that you want to use.

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

2 Configure the following options:

- **Backup Type**: Select the **Full Backup** option. For details, see [Available backup types](#).

- **Mark transaction log files as archived:** If you use Transactional Logging on your Domino Server, select this option if you want the plug-in to notify the Domino Server when the Transaction Logs have been archived and are available for reuse by the Domino Server.
- **Number of Retries:** Enter or select the number of times that the plug-in should try to back up a database or file that is in use by a different process.

Plug-in *for Domino* cannot back up a database if it is locked by a different process. This issue also applies to the database-compact process. The **Number of Retries** parameter determines the number of times the Plug-in *for Domino* tries to back up a database or Domino file when the initial attempt fails. By default, the Plug-in *for Domino* only makes one attempt. This feature applies to a specific file or database; it does not apply to the overall backup job.

- **Server Data:** If you want to include and exclude specific directories, enter the applicable information—use full path names—in these fields. When completing these fields, use the following guidelines:
 - Use a comma to separate multiple entries.
 - In the **Backup Inclusion List — Directories** field, verify that the specified directories are subdirectories of entries listed in the **Backup Exclusion List — Directories** field; otherwise, the directory is ignored. For example, you can exclude **c:\domino_data\site1** and include **c:\domino_data\site1\marketing**.
 - A file or database selected for backup is ignored if it is contained in a directory that is specified in the **Backup Exclusion List — Directories** field. The file or database must reside in a subdirectory, and that subdirectory must be listed in the **Backup Inclusion List — Directories** field.
- **Incomplete backup of ALL items selected:** To override what action the plug-in should take if an individual job fails to back up all applicable items, select one of the following:
 - **Complete with Warnings — Saveset Retained:** The job returns a status of “**Backup Completed with warnings**” and a backup saveset is created that includes the items that were successfully backed up.
 - **Complete without Warnings — Saveset Retained:** The job completes and returns a status of “**Backup Completed.**” The errors are logged in the NetVault Backup binary logs and ignored on the **Job Status** page. A backup saveset is created that includes the items that were backed up.
 - **Fail — Saveset Retained:** The job returns a status of “**Backup Failed.**” However, a backup saveset is generated that includes the items that were successfully backed up.
 - **Fail — No Saveset Retained:** The job returns a status of “**Backup Failed**” and no saveset of backed-up objects is kept. That is, even if some of the objects were successfully backed up, the saveset is discarded.

A default action for all backup jobs can be set in the **Configure** dialog box. For details, see [Configuring default settings](#).

- 3 In **Set Name**, specify a name for the set, and click **Save**.

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 Use the **Schedule**, **Target Storage**, and **Advanced Options** lists to configure any additional required options.
- 2 Click **Save** or **Save & Submit**, whichever is applicable.

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 Backup Administrator's Guide*.

i **IMPORTANT:** A database that is in the process of being compacted when a job begins might not be included in the backup. Quest recommends that you perform a Full Backup of a compacted database after the compact process ends.

Performing Incremental Backups

i **IMPORTANT:** If the **Database Instance Identification (DB-IID)** of any selected database changes after the initial Full Backup, perform a Full Backup before running any Incremental Backups. Otherwise, the data might not be recoverable.

If you create a mailbox after performing a Full Backup, it is not backed up as part of an Incremental Backup until a different Full Backup is performed that includes the new mailbox.

- 1 Start the Backup Job Wizard.
- 2 In **Job Name**, specify a name for the job.
- 3 In the **Selections** list, select the Backup Selections Set that was used to perform the Full Backup.
- 4 In the **Plugin Options** list, do one of the following:
 - Select the applicable Backup Options Set for an Incremental Backup.
– or –
 - Click **+**, and complete the following steps.
 - a In **Set Name**, enter a name for the set.⁹

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.
 - b Under **Backup Types**, select the **Incremental Backup** option.⁹
 - c Configure the remaining backup options.
For details, see [Setting backup options](#).
- 5 Complete and submit the job.
For details, see [Finalizing and submitting the job](#).

Restoring data

- [Available restore and recovery types](#)
- [Performing a standard restore](#)
- [Examples of restore sequences](#)
- [Advanced restore procedures](#)

Available restore and recovery types

The Plug-in *for Domino* supports the following types of restore and recovery:

- **Full and Incremental Restore:** Full Restore involves restoring one or more databases from a Full Backup. Incremental Restore involves restoring the Full Backup and the individual Incremental Backups.
- **Roll-Forward and Point-In-Time Recovery:** Roll-Forward Recovery involves applying the Transaction Logs for a complete recovery of the database to the most recent state. This type of recovery is useful if a Domino Server is lost. Point-In-Time Recovery (PITR) involves applying the Transaction Logs to recover a database up to a specific point between the Full Backup and now. This type of recovery can be used to “roll back” invalid database updates or database corruption.
- **Soft and Hard Recovery:** Soft Recovery involves applying the Current Logs on the Domino Server for a complete recovery of the database to the most recent state. It can be performed regardless of whether the Domino Server is offline or online. Hard Recovery involves only applying the Transaction Logs in the Incremental Backups. It can only be performed when the Domino Server is offline.

Performing a standard restore

A standard restore procedure includes the steps outlined in the following topics:

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

Selecting data for a restore

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

2 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, size, and catalog status. By default, the list is sorted by creation date.

3 In the saveset table, select the applicable saveset.

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.

4 Click **Restore**.

5 On the **Create Selection Set** page, select the data that you want to restore.

i | **TIP:** If you configured the plug-in to use a partitioned server, the selection tree includes a node for the applicable partition.

- **Initialization File:** To restore “**notes.ini**,” select this node.
- **Identification Files:** To restore all the “***.id**” files included in the backup, such as “**server.id**” and “**cert.id**,” select this node. For a selective restore, open this node and select the individual files.
- **Mail Configuration File:** To restore the “**mail.box**” file, select this node.
- **Mail Databases:** To restore the “**log.nsf**” and “**names.nsf**” database files, select this node.

i | **IMPORTANT:** To restore the “**log.nsf**” database file, restore it to a different directory unless you are performing a disaster recovery and the Domino Server has not created the file yet.

- **Template Files:** To restore all the Template Files, select this node. For a selective restore, open the parent node, and select the target files.
- **Server Databases:** To restore all the server databases, select this node. For a selective restore, open the parent node, and select the target databases.

i | **IMPORTANT:** Depending on the version and Fix Pack (FP) level of your Domino Server, recovery of server-database files might fail during a cold restore. You can work around this issue by restoring the files to a different directory. For more information, see [Renaming and relocating data during restore](#) and [Troubleshooting](#).

- **Users MailBox:** To restore all the mailboxes, select this node. For a selective restore, open the parent node, and select the target mailboxes.
- **Domino Attachment and Object Service (DAOS):** To restore all the items in the DAOS repository, select this node.

i | **IMPORTANT:** If you modified the “**notes.ini**” file to change the `DAOS_LOAD` and `DAOS_Enable` settings from 1 to 0 (`DAOS_LOAD=0` and `DAOS_Enable=0`) to facilitate cold restores and you must restore the “**notes.ini**” file, restore it separately, *after* you have restored all other items. This sequence prevents loss of the edits that facilitate cold restores when DAOS is configured on the Domino Server.

Setting restore options

This step involves the steps outlined in the following topics:

- [Configuring Roll-Forward Recovery options](#)
- [Configuring PITR options](#)
- [Configuring Destination options](#)
- [Configuring DAOS restore options](#)

Configuring Roll-Forward Recovery options

On the **Create Selection Set** page, click **Edit Plugin Options**, and configure the following parameters on the **Rollforward** tab:

- Under **Recovery and Rollforward**, configure the following parameters:
 - **Last Backup Set:** To recover the database in the following scenarios, select this check box:
 - When you are restoring only a Full Backup.
 - When you are restoring the last Incremental Backup in the backup sequence.
- The maximum number of logged databases that the plug-in can recover ranges from 800 to 5,000 depending on the installation path. If the maximum is exceeded, NetVault Backup displays a message that indicates which databases were excluded and thus require a separate roll-forward recovery.
- **Do Not Perform Recovery:** Select this check box if you want to omit replay of the archive logs.
 - **Soft Recovery:** To replay the Current Logs on the Domino Server to recover a database to the most recent state, leave this option selected. You can use this option whether the Domino Server is offline or online.
 - **Hard Recovery:** To recover only the Transaction Logs in the last saveset without recovering the Current Logs, select this option. This option is useful if the Current Logs and the Control File “**nlogctrl.lfh**” are damaged or missing. You can select this option only when the Domino Server is offline.
- Under **Assign New DB-IID**, configure the following parameters:
 - **Do not give new DB-IID:** Select this option if you do not want to assign a new DB-IID to the recovered databases.
 - **Give new DB-IID to databases:** Select this option if you want to assign a new DB-IID to the recovered databases. Using a new DB-IID lets you access the original database if it exists. Because the recovered version is a new instance, Quest recommends that you perform a backup of the new instance after the recovery.

When you select this option, the **Assign New Replica ID** check box becomes available; it only works with the **Give new DB-IID to databases** option. If you want to assign a new Replica ID to the recovered databases, select this check box; otherwise, verify that the check box is cleared.

i | **IMPORTANT:** After completion of a recovery in which the DB-IID is changed, the Transaction Logs that apply changes to the database with the previous DB-IID cannot identify the database as the one with transactions that must be applied.

- **New DB-IID only if Necessary:** To assign a new DB-IID to a database only if a different instance of the same database is online, select this option. This issue might occur if you restore to a different directory, or if the database was backed up through a Domino Database Link.

Configuring PITR options

To perform a PITR, click the **Point In Time Recovery** tab, select the **Apply Point In Time Recovery up to** check box, and configure the specific point in the **Day** and **Hour** boxes:

- **Day:** Enter or select the day up to which the backed-up data should be recovered. The format for specifying the day is **dd:mm:yyyy**.
- **Hour:** Enter or select the hour up to which the backed-up data should be recovered. The format for specifying the hour is **hh:mm:ss**.

i | **IMPORTANT:** If you use the PITR option, a new DB-IID is automatically assigned, and IBM or HCL Notes ignores the settings made in the Assign New DB-IID section.

Configuring Destination options

On the **Restore Destination** tab, the **Backup Taken from Logical Domino Server (Partition)** field identifies the Domino Server or partition from which the backup was taken. If you are restoring a partition, by default, the restore must be directed to the original partition from which the backup was taken. Otherwise, the restore process might fail.

- i** | **TIP:** If you are performing a disaster recovery to an alternate server and you have changed the partition on which the “notes.ini” file is located, you can use the **Restore to Logical Domino Server (Partition)** field to specify a different partition number. For more information, see [Restoring data to an alternate server](#).

For the **Restore to Logical Domino Server (Partition)** field, verify the following:

- If you are restoring a standalone Domino Server, verify that the field contains a **1**.
- If you are restoring a partition to its original location, verify that the field contains the correct partition number.

Configuring DAOS restore options

To configure the DAOS restore options, click the **Lotus DAOS** tab, and configure the following parameters:

- **If existing, overwrite DAOS files:** Leave this check box selected to overwrite the existing DAOS items in the target directory with the backed-up version in the selected saveset. To skip the existing files and restore only the missing items, clear the check box.
- **Restore DAOS files listed in the following text file:** For a selective restore of the missing DAOS items, select this check box, and then enter the complete path to the text file that contains the list of DAOS items to be restored. The text file must contain one item per line. The preconfigured value for this parameter is: **<DominoDataDirectory>/listnlo.txt**
 - i** | **NOTE:** **listnlo.txt** is the default filename for the missing “.nlo” files, unless a custom name is specified while generating the list from Domino Server Console.
- **Relocate all restored DAOS files to the directory:** If you do not want to overwrite the existing DAOS repository, select this check box to restore the DAOS items to an alternate directory, and then specify the full path for the alternate directory. The Plug-in *for Domino* maintains the existing directory hierarchy while restoring the DAOS items, creating the necessary subdirectories in the process. For example, a file backed up from subdirectory 0001 is restored to the same sub-subdirectory in the new location. By default, the relocation directory is set to the configured DAOS directory.

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 Backup Plug-ins. For more information, see the *Quest NetVault Backup Administrator's Guide*.

- 1 To save the settings, click **OK**, and then click **Next**.
- 2 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 Backup Administrator's Guide*.
- 6 If you selected the DAOS node for the restore, review the documentation for your Domino Server to determine whether a resync operation, `tell daosmgr resync`, is required after the restore is complete.

Examples of restore sequences

The following examples describe the specific steps required to restore and recover data in different restore scenarios.

- [Restoring a Full Backup only](#)
- [Applying Transaction Logs with a Full Backup](#)
- [Restoring an Incremental Backup sequence](#)

Restoring a Full Backup only

To restore a Full Backup without applying Transaction Logs, perform the following steps.

- 1 Select the data to restore.
For details, see [Selecting data for a restore](#).
- 2 Configure the DAOS options, if necessary.
For details, see [Configuring DAOS restore options](#).
- 3 Complete and submit the job.
For details, see [Finalizing and submitting the job](#).

Applying Transaction Logs with a Full Backup

To apply Transaction Logs while restoring only a Full Backup, perform the following steps.

- 1 Select the data to restore.
For details, see [Selecting data for a restore](#).
- 2 Click the **Rollforward** tab, and configure the Roll-Forward and PITR options.
 - If the Domino Server is online, select the **Last Backup Set** check box and the **Soft Recovery** option to apply the Transaction Logs on the server.
 - If the Domino Server is offline, select the **Hard Recovery** option.For details, see [Configuring Roll-Forward Recovery options](#) and [Configuring PITR options](#).
- 3 Configure the DAOS options, if necessary.
For details, see [Configuring DAOS restore options](#).
- 4 Complete and submit the job.
For details, see [Finalizing and submitting the job](#).

Restoring an Incremental Backup sequence

This example assumes that Full Backups are performed every Sunday, and Incremental Backups are performed Monday through Saturday. To recover from a failure that occurred on Wednesday morning, restore the Full Backup created on Sunday, followed by the Incremental Backups created on Monday and Tuesday.

Restoring an Incremental Backup includes the steps outlined in the following topics:

- [Restoring the original Full Backup](#)
- [Restoring the intermediary Incremental Backups](#)
- [Restoring the final Incremental Backup](#)

Restoring the original Full Backup

- 1 Select the data to restore.
For details, see [Selecting data for a restore](#).
- 2 Configure the DAOS options, if necessary.
For details, see [Configuring DAOS restore options](#).
- 3 Complete and submit the job.
For details, see [Finalizing and submitting the job](#).

Restoring the intermediary Incremental Backups

- 1 Select the data to restore.
For details, see [Selecting data for a restore](#).
- 2 Configure the DAOS options, if necessary.
For details, see [Configuring DAOS restore options](#).
- 3 Complete and submit the job.
For details, see [Finalizing and submitting the job](#).

Restoring the final Incremental Backup

When restoring the final Incremental Backup, you can apply the Transaction Logs and perform a Roll-Forward Recovery or PITR. To apply Transaction Logs while restoring the final Incremental Backup, perform the following steps.

- 1 Select the data to restore.
For details, see [Selecting data for a restore](#).
- 2 Click the **Rollforward** tab, and configure the Roll-Forward and PITR options.
 - If the Domino Server is online, select the **Last Backup Set** check box and the **Soft Recovery** option to apply the Transaction Logs on the server.
 - If the Domino Server is offline, select the **Hard Recovery** option.For details, see [Configuring Roll-Forward Recovery options](#) and [Configuring PITR options](#).
- 3 Configure the DAOS options, if necessary.
For details, see [Configuring DAOS restore options](#).
- 4 Complete and submit the job.
For details, see [Finalizing and submitting the job](#).

Advanced restore procedures

This topic describes the advanced restore operations that can be performed using Plug-in *for Domino*.

- [Renaming and relocating data during restore](#)
- [Restoring data to an alternate server](#)
- [Performing a disaster recovery to the same Domino Server](#)

i | **IMPORTANT:** Do not use the rename and relocate options at the same time that you perform a restore of a Full Backup to an alternate server. If you must use both procedures for any reason, perform them separately.

Renaming and relocating data during restore

The plug-in lets you rename or relocate a server database, template, or individual mailboxes during a restore. You can use this feature to create a copy of an item, or move it to an alternate location with the same name or a new name.

i | **IMPORTANT:** This feature does not allow you to overwrite an existing database. The restore fails if a file with the same name exists in the specified location.

- 1 In the Navigation pane, click **Create Restore Job**.
- 2 To filter the items displayed in the saveset table, click **Filter** .
For more information, see [Selecting data for a restore](#).
- 3 In the saveset table, select the applicable saveset.
- 4 Click **Restore**.
- 5 On the **Create Selection Set** page, click the item that you want to rename or relocate, and select **Rename** from the context menu.
- 6 In the **Rename/Relocate** dialog box, configure either or both of the following parameters, and click **OK**.
 - **Rename:** Enter a new name or leave this field empty to use the default.⁹
 - **Relocate:** Enter a new path or leave this field empty to use the default.⁹
- 7 Configure the required restore options.
For details, see [Setting restore options](#).

i | **IMPORTANT:** If you do not select the **Last Backup Set** and **Do not Perform Recovery** options on the **Rollforward** tab, the database and the mailboxes are restored to the path specified in the **Tmp Directory for Recovery** field.⁹

- 8 Complete and submit the job.
For details, see [Finalizing and submitting the job](#).

Restoring data to an alternate server

The plug-in lets you restore Full Backups to an alternate Domino Server. This procedure can be used to copy a database from one production server to a different production server.

i | NOTE: Incremental Backups cannot be restored to an alternate server.

Before proceeding, ensure that the following requirements are met:

- **Same version of Domino installed:** The Domino version must be same as the version running on the existing Domino Server. In addition, the server platform must be the same and the operating systems on both servers must be compatible. For example, if the source server was running Windows, the target server must also run Windows.
- **Properly configured Domino Instance:** Verify that you have a properly configured Domino instance.
- **NetVault Backup software and the Plug-in for Domino installed:** The same version of NetVault Backup software and the Plug-in for Domino must be installed and configured on the new restore target.
- **Heterogeneous Client added to the NetVault Backup Server:** The target server must be added as a Heterogeneous Client to the NetVault Backup Server. You can perform this task from the **Manage Clients** page of the NetVault Backup WebUI.
- **Recent Full Backup available:** Ensure that a recent Full Backup is available. Restore to an alternate Domino Server is completed using a Full Backup of the databases being restored. Nonlogged databases can be restored from an Incremental Backup because for such databases, an Incremental Backup actually includes the full contents of the database. For logged databases, Incremental Backups are not supported when restoring to an alternate server.

To restore the data to an alternate client, perform the following steps.

- 1 Select the data to restore.
For details, see [Selecting data for a restore](#).
- 2 Click the **Rollforward** tab, and do one of the following in the **Recovery and Rollforward** section:
 - If a Domino Database with the same name as the database being restored exists on the alternate Domino Server, clear the **Last Backup Set** check box.
 - If a Domino Database with the same name does not exist on the alternate Domino Server, select the **Last Backup Set** check box.

Because this option rolls forward the restored database on the alternate Domino Server and the roll-forward process applies the Transaction Logs that reside on the alternate server, you do not want this server to contain any Transaction Logs for the database being restored. A roll-forward recovery fails if a Domino Database with the same name as the database being restored exists on the alternate Domino Server and you select this option. This failure happens because the Transaction Logs do not belong to the database being restored.

- 3 If you are restoring a partition to an alternate server, click the **Restore Destination** tab, and enter the partition number for the new partition in the **Restore to Logical Domino Server (Partition)** field:
As explained previously, the **Backup Taken from Logical Domino Server (Partition)** field identifies the partition from which the backup was taken and the plug-in enters the same information in the **Restore to Logical Domino Server (Partition)** field by default. If you have changed the partition on which the “notes.ini” file is located, you can use this field to specify the new partition number.
- 4 Configure the DAOS options, if necessary.
For details, see [Configuring DAOS restore options](#).
- 5 In the **Target Client** list, select the machine on which you want to restore the data.
- 6 Complete and submit the job.
For details, see [Finalizing and submitting the job](#).

Performing a disaster recovery to the same Domino Server

You can use the plug-in to perform a disaster recovery to the same server where the source Domino Server resided.

i | **IMPORTANT:** You might use this procedure if a complete media failure occurred and either the damaged host was rebuilt using the same configuration or a new server was configured that imitates the original host's configuration.

Before proceeding, ensure that the following requirements are met:

- **Domino software installed:** Install the same OS and version of Domino on the system that existed on the damaged server.
 - i** | **NOTE:** Only run the software installation steps. Do not set up the Domino Server.
- **NetVault Backup software and the Plug-in for Domino installed:** The same version of NetVault Backup software and the Plug-in *for Domino* must be installed and configured on the new restore target.
- **Heterogeneous Client added to the NetVault Backup Server:** The target server must be added as a Heterogeneous Client to the NetVault Backup Server. You can perform this task from the **Manage Clients** page of the NetVault Backup WebUI.
- **Full and Incremental Backups available:** Ensure that the recent Full Backup and the required Incremental Backups are available.

To restore the data to the repaired server, perform the following steps.

- 1 In the Navigation pane of the NetVault Backup WebUI on the NetVault Backup Server, click **Create Restore Job**.
- 2 To filter the items displayed in the saveset table, click **Filter** ▼.
- 3 In the saveset table, select the applicable saveset.
- 4 Select the required data from a recent Full Backup created for the original Domino Server.

For details, see [Selecting data for a restore](#).

Quest recommends that you restore the items in the following order:

- Initialization file, identification files, mail databases, and mail-configuration file
- Template files
- Server databases
- User-mailbox items and the DAOS repository

- 5 Click **Restore**.

- 6 Complete and submit each job.

For details, see [Finalizing and submitting the job](#).

- 7 Restore the Incremental Backups as required.

When restoring the last saveset, select the **Last Backup Set** check box and the **Hard Recovery** option. If Incremental Backups are not restored, the Domino Server re-creates any necessary Transaction Logs.

- 8 Restart the Domino Server.

i | **IMPORTANT:** After a disaster recovery, Quest recommends that you perform a Full Backup of the Domino Server.

Troubleshooting

Common errors

This topic describes some common errors and their solutions. In cases where an error occurs and is not described in this table, obtain the Domino error number from the NetVault Backup Logs, and then see the relevant Domino documentation for the resolution.

Table 1. Troubleshooting

Description	Symptom	Solution
Backup failed.	Server is not currently logged in. Resulting backup might not be recoverable.	Set up Transactional Logging on the Domino Server. For details, see Setting up Transactional logging on the Domino Server
Backup completed with errors on Linux or UNIX.	Series of job messages that indicate the backup job completed successfully but that errors were noted.	If you use Domino Server on Linux or UNIX and you use symbolic links instead of absolute links for the installation or data directory, or both, the Domino Server generates error messages during the backup process. Use of symbolic links for these directories changes the owner of items, which leads to the error messages. Update the symbolic links to use absolute links and run the backup job again.
Cold backup fails on Linux or UNIX when DAOS is configured.	A message from the client states: "Plug-in terminated unexpectedly" or "Plug-in is down."	To change the <code>DAOS_LOAD</code> and <code>DAOS_Enable</code> settings from 1 to 0, edit the Domino Server's "notes.ini" file, and try the backup again. After the backup has completed successfully, edit the "notes.ini" file again to change the <code>DAOS_LOAD</code> and <code>DAOS_Enable</code> settings back to 1 <i>before</i> you restart the Domino Server.
Hard Recovery Restore (Offline Restore) of Domino Databases, including Users Mailbox Databases, fails.	The databases being restored exist, while the Transaction Logs are missing and must be re-created. The job waits while the logs are being re-created. If the OS response is slow during this process, the thread times out and the restore job fails.	Resubmit the restore job.

Table 1. Troubleshooting

Description	Symptom	Solution
Cold restore fails on Linux or UNIX when DAOS is configured.	A message from the client states: "Plug-in terminated unexpectedly" or "Plug-in is down."	<p>Try the following:</p> <ul style="list-style-type: none"> • Restore the files to a different directory where they did not previously exist; for more information about relocating files during a restore, see Renaming and relocating data during restore. • To change the <code>DAOS_LOAD</code> and <code>DAOS_Enable</code> settings from 1 to 0 (<code>DAOS_LOAD=0</code> and <code>DAOS_Enable=0</code>), edit the Domino Server's "notes.ini" file, and try the restore again. If you try this method and if the "notes.ini" file must be restored, restore it <i>after</i> the other items are successfully restored. This process ensures that the modified settings are retained in the active file. <p>If you try the latter method and the "notes.ini" file does <i>not</i> have to be restored, edit the "notes.ini" file again to change the <code>DAOS_LOAD</code> and <code>DAOS_Enable</code> settings back to 1 <i>before</i> you restart the Domino Server.</p>
Cold restore of server-database files fails.	<p>A message similar to one of the following occurs:</p> <ul style="list-style-type: none"> • Error 2014/04/10 13:23:52 43 Data Plugin <serverName> Failed to take database /local/notesdata/<fileName>.nsf offline. • Job Message 2014/04/10 13:23:52 43 Data Plugin <serverName> Bring database '/local/notesdata/<fileName>.nsf' online. • Error 2014/04/10 13:23:52 43 Data Plugin <serverName> Failed to Restore database '/local/notesdata/<fileName>.nsf' 	<p>The version and Fix Pack (FP) level of your Domino Server affects the recovery process. You can work around this issue by restoring the files to a different directory. For more information, see Renaming and relocating data during restore.</p>

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