Quest® NetVault® 14.1.2

Installation Guide

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

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Introduction

- About Quest® NetVault®
- About this document
- Target audience
- Recommended additional reading

About Quest® NetVault®

Quest NetVault (NetVault) offers the most advanced, cross-platform data protection capabilities on the market as well as unsurpassed ease of use, out-of-the-box deployment, and pain-free scalability.

NetVault allows you to safeguard your data and applications in both physical and virtual environments from one intuitive user interface and to protect a massive number of servers that contain many petabytes of data. NetVault also features heterogeneous support, so you can safeguard data on a wide range of operating systems, applications, databases, processor architectures, and networked storage devices. Such cross-platform versatility makes it easy for you to tailor NetVault to match the ever-changing and growing landscape of your IT infrastructure.

Key benefits

- Simple, out-of-the-box deployment for fast time to value
- Fully automated installation manager that simplifies deployment of Windows clients
- Protection for both physical and virtual environments for cost savings
- Heterogeneous server support for unparalleled coverage in diverse IT environments
- Broad application support
- Disk-based backup and deduplication to significantly improve storage efficiency
- Seamless integration with the Quest DR Series system for source-side deduplication and WAN-optimized replication
- Comprehensive Network Attached Storage (NAS) protection to safeguard critical data
- Feature rich protection of virtual environments
- Bare metal recovery to drastically reduce the time it takes to recover a failed server
- Extensive storage attachment options to allow for distributed backup targets and workload
- Dynamic device sharing to optimize backup data transfers and reduce points of failure
- Fast file-system backups with high performance multi-streaming
- File immutability, when used with QoreStor storage.

Feature summary

- **Application protection:** Ensure the availability of business-critical applications such as Oracle, SQL Server, Exchange, SharePoint, MySQL, PostgreSQL, Domino, DB2, Informix, SAP, and Sybase with application plug-ins. These plug-ins complement native solutions to save you time on integration. No scripting is required to run backup and recovery jobs.
- **NAS protection:** Get advanced data protection for information stored on NAS appliances, including the devices made by Quest, EMC, Hitachi, IBM, NetApp, and Sun. You can reduce traffic over the LAN and maximize performance by backing up data using Network Data Management Protocol (NDMP). NetVault supports many different storage topologies and configurations, allowing you to perform backups directly to a locally attached SCSI device, a SAN-attached device, or a storage device elsewhere on the network.
- **Enterprise-wide control:** Use the web-based interface to configure, manage, and monitor your backup and recovery operations. Convenient wizards guide you through the common tasks, such as creating backup jobs, assigning policies, configuring storage devices, and generating reports.
- **Back up to disk and tape:** Leverage disk- and tape-based backups to a wide range of storage targets, including NAS devices and third-party deduplication appliances. NetVault also allows you to move data from one storage target to another for off-site storage and disaster recovery purposes.
- **Data deduplication:** Reduce your data storage footprint with powerful deduplication technologies.

  NetVault integrates seamlessly with the Quest DR Series of deduplication systems and the Rapid Data Access (RDA) client-side deduplication technology, enabling you to take full advantage of the system's powerful deduplication, compression, and replication capabilities. Additionally, NetVault supports software-defined Quest QoreStor™ storage devices (Linux only), which provide the advantage of RDA client-side deduplication. NetVault also supports EMC Data Domain backup and recovery platform, as well as its DD Boost technology for deduplication.
- **Virtualization support:** Extend advanced data protection to VMware and Hyper-V environments. NetVault gives you consistent, reliable, point-and-click backup and restore for virtual environments without requiring you to be an expert.
- **High-performance multi-streaming:** Save time and ease management by backing up multiple workloads simultaneously.
- **Strong security:** Meet regulatory requirements without sacrificing backup windows or deduplication performance with encryption plug-ins for CAST-128, CAST-256, non FIPS compliant AES-256, and FIPS compliant AES-256 algorithm support. Flexible job-level encryption lets you easily select which data to encrypt.
- **Simple, straight-forward licensing:** License NetVault by capacity or by component. This option gives you incredible flexibility to choose the model that best meets the organization's needs. With component-based licensing, you can choose which modules you need. You can also license NetVault by capacity and deploy an unlimited number of clients or application plug-ins. Quest offers two capacity-based licensing editions for NetVault. One offers great value for growing businesses; the other offers comprehensive protection for large enterprises.

About this document

This guide provides information about installing the NetVault Server and Client software. It does not provide information about the NetVault features and functionality. For more information about using NetVault to protect your data, see the *Quest NetVault Administrator's Guide*.

IMPORTANT:

- NetVault stores the system data in a PostgreSQL database, which resides on the NetVault Server. You should not attempt to modify the NetVault Database directly using any PostgreSQL tools unless directed by Quest Technical Support personnel. Improper changes to the database can cause irrecoverable data corruption. Before modifying the NetVault Database, make sure that you create a backup copy of the database. For more information about backing up the NetVault Database, see the *Quest NetVault Built-in Plug-ins User's Guide*.
- NetVault stores the system configuration settings in **".cfg"** files, which reside in the **config** directory under the NetVault installation directory. The settings in these files should only be modified under the guidance of Quest Technical Support personnel. Improper changes to these files can cause errors and other unexpected behavior. Before modifying a configuration file, make sure that you create a backup copy of the file.

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 on which the NetVault Server and Clients are running is assumed.

Recommended additional reading

- *Quest NetVault Administrator's Guide:* This guide describes how to configure and use NetVault to protect your data. It provides comprehensive information about all NetVault features and functionality.
- *Quest NetVault CLI Reference Guide:* This guide provides information about using the NetVault command-line utilities.
- *Quest NetVault Plug-in for FileSystem User's Guide:* This guide provides information about installing, configuring, and using NetVault Plug-in *for FileSystem*.
- *Quest NetVault Built-in Plug-ins User's Guide:* This guide provides information about configuring and using the following plug-ins:
  - NetVault Plug-in *for Consolidation*
  - NetVault Plug-in *for Data Copy*
  - NetVault Plug-in *for Databases*
  - NetVault Plug-in *for Raw Devices*
  - NetVault Plug-in *for Encryption*
- *Quest NetVault Compatibility Guide:* This guide provides information about the platforms, operating system versions, and application versions that are supported by NetVault.

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

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Deploying NetVault

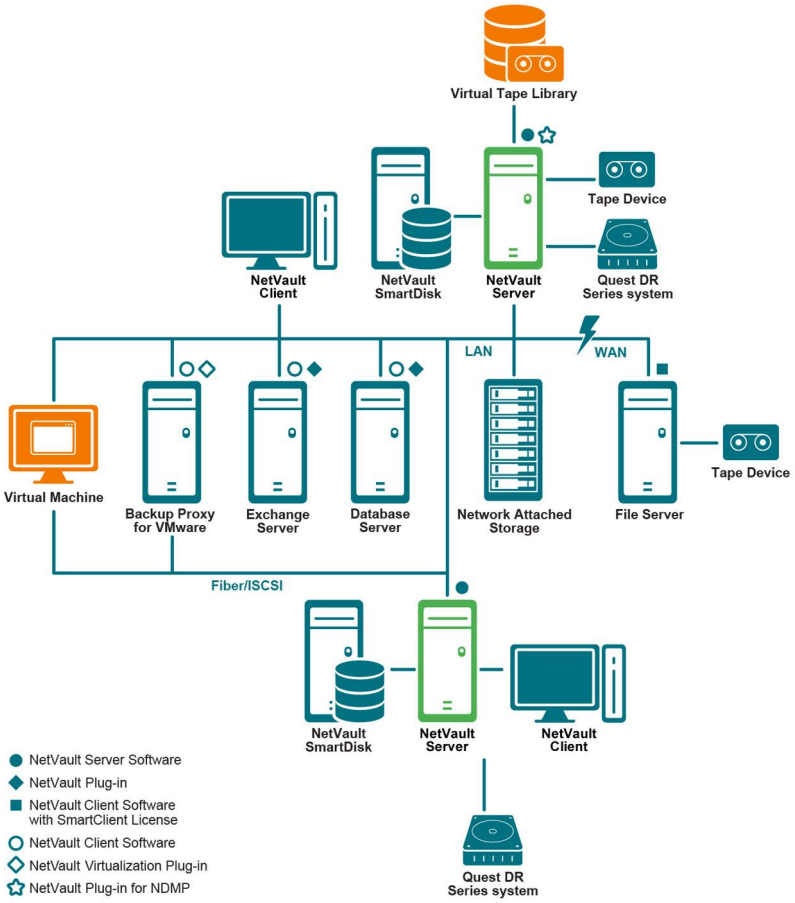
- About deploying NetVault
- NetVault components
- Deployment planning

About deploying NetVault

In a NetVault setup, one machine is configured as the NetVault Server and various other machines that you want to protect function as NetVault Clients. A single server and its associated clients form a **NetVault Domain**.

The following diagram depicts a NetVault deployment.

Figure 1. NetVault deployment overview



NetVault Components

A NetVault deployment consists of the following components:

- NetVault Server
- NetVault Clients
- NetVault plug-ins
- NetVault WebUI
- NetVault Command Line Interface

NetVault Server

The NetVault Server provides the core services for protecting your data.

The server provides services such as schedule management, job management, device management, media management, user management, notification management, and log management. The server administers backup and restore jobs for all assigned clients. Various types of physical and virtual storage devices can be locally attached to the server.

The NetVault Server can run on Windows and Linux operating systems.

NetVault Clients

The NetVault Client is installed on machines that you want to protect using the NetVault solution. These machines can be file servers, database servers, email servers, application servers, and workstations.

The NetVault Clients are assigned to a NetVault Server, which manages all data protection operations for the clients. A single server and its associated clients form a NetVault Domain. A NetVault SmartClient license is required to attach physical or virtual storage devices to a NetVault Client and Server.

The NetVault Client can run on Linux and Windows operating systems.

NetVault plug-ins

The NetVault Plug-ins are used to protect various applications and data stored on the server and client machines. There are two categories of NetVault plug-ins: built-in plug-ins and licensed plug-ins.

Built-in plug-ins

The built-in plug-ins are packaged with the NetVault software, and automatically installed on the respective machines when you install the NetVault Server and Client software.

NetVault offers the following types of built-in plug-ins:

- **NetVault Plug-in *for FileSystem* (Plug-in *for FileSystem*):** The Plug-in *for FileSystem* protects critical file system data, and minimizes downtime by allowing you to restore full volumes, individual partitions, or individual directories and files quickly and reliably with minimal interaction.
- **NetVault 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. The Plug-in *for Consolidation* does not back up data from a client; it just creates a composite set from existing savesets.

- **NetVault 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. The Plug-in *for Data Copy* does not back up data from a client; it just creates a copy of an existing backup.
- **NetVault 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, licenses, and other data) stored in the NetVault Database. You can use this backup to recover a functional NetVault Server after a failure.
- **NetVault 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.
- **Quest NetVault Plug-in *for Rapid Data Access* (Plug-in *for RDA*):** The Plug-in *for RDA* lets you use the client-side and inline deduplication capabilities that are available in other products, such as the Quest DR Series system of deduplication appliances and the software-defined Quest QoreStor storage devices (Linux only).
- **NetVault Plug-in *for Encryption* (Plug-in *for Encryption*):** The Plug-in for Encryption lets you choose from three encryption algorithms — CAST-128, CAST-256, non FIPS compliant AES-256, and FIPS compliant AES-256 — to encrypt and transfer data across the network to the backup device, where the data remains encrypted until restored to the client.

For more information about built-in plug-ins, see the *Quest NetVault Plug-in for FileSystem User's Guide* and *Quest NetVault Built-in Plug-ins User's Guide*.

Licensed plug-ins

The licensed plug-ins are available as separate products, and installed on the NetVault Server and Client machines to protect specific applications and appliances.

NetVault offers the following types of licensed plug-ins:

- **Plug-ins for applications:** These plug-ins provide data protection to business-critical applications, such as Oracle, SQL Server, Exchange, SharePoint, MySQL, PostgreSQL, Domino, DB2, Informix, SAP, and Sybase.
- **Plug-ins for NDMP-based NAS appliances:** These plug-ins enable NDMP-based backups and restores for appliances that support this protocol. NetVault also offers specialized plug-ins that integrate the NetApp SnapMirror, SnapVault, and Snapshot technologies to provide advanced data protection to NetApp appliances.
- **Plug-ins for virtual environments:** These plug-ins provide data protection to virtual machines in VMware and Hyper-V environments.
- **Plug-ins for device integration:** These plug-ins enable configuration of specialized tape libraries for use in a NetVault environment.
- **Plug-ins for bare metal recovery:** These plug-ins let you recover an entire system, including the operating system, applications, system settings, partition information, and data on supported Windows and Linux operating systems.

NetVault also offers cluster-aware versions of various plug-ins that enable data protection for distributed data.

For more information about the licensed plug-ins, see the respective plug-in user's guide.

NetVault WebUI

NetVault offers a web-based user interface, called the NetVault WebUI, to configure, manage, and monitor your NetVault system.

You can use the NetVault WebUI to perform various tasks such as the following:

- Configure performance, security, and other options
- Manage clients, storage devices, and storage media
- Perform backups and restores
- Monitor jobs, device activities, and logs
- Set up notifications
- Generate and view reports

You can access the NetVault WebUI from any standard browser. You can use the WebUI to remotely administer a NetVault Server from any system on which you can run a supported web browser and connect to the server over HTTP or HTTPS.

NetVault Command Line Interface

NetVault also provides a Command Line Interface that allows you to configure and manage a NetVault system from a command prompt window or terminal window.

You can use the NetVault CLI utilities to perform various tasks such as the following:

- Start and stop the NetVault Service
- Configure performance, security, and other options
- Manage clients, storage devices, and storage media
- Perform backups and restores
- Generate and view reports

The NetVault command-line utilities can be accessed from the NetVault Server and Client machines. For more information about the command-line interface, see the *Quest NetVault Command Line Interface Reference Guide*.

Deployment planning

Before you deploy a NetVault system, review the following topics:

- Determine the server and client machines
- Determine the installation directory
- Determine the database location
- Determine NetVault name and password
- Determine NetVault PostgreSQL Linux user account

Determine the server and client machines

The first step in deploying NetVault is to identify the server and client machines:

- **NetVault Server:** This machine hosts the server version of NetVault.

  The server manages all NetVault operations and administers backup and recovery operations for the clients. A NetVault Server can also act as a client to itself for backups and restores of its local data.

- **NetVault Clients:** These machines host the client version of NetVault and serve as the backup and restore targets.

Determine the installation directory

NetVault must reside on a local disk. If you select a network share or mount point, and that is lost, it would cause NetVault to stop or malfunction.

On Linux and UNIX platforms, you cannot install NetVault on mount points. The installer tries to delete the existing contents on the mount point, which is not allowed on Linux and UNIX.

A NetVault server installation requires about 200MB of disk space on Windows-based systems and 160MB of disk space on Linux-based systems.

Determine the database location

The NetVault Database stores system information, configuration files, job details, and backup indexes. It is created on the NetVault Server. The database continues to grow in size as various data protection operations are performed in the NetVault system. NetVault operations can stop if the database cannot be updated due to lack of disk space.

The NetVault Database cannot reside on a remote file system (for example, network share, network mapped drive, or NFS volume). For installing the NetVault Database, you must select a directory on a local drive or volume.

NOTE: In large environments, we recommend that you select 500GB or 1TB disks with RAID 10 or RAID 5 configurations. The disks must support high Input/Output Operations Per Second (IOPS). Therefore, Solid State Drives (SSD) or 10k and 15k Serial Attached SCSI (SAS) drives are recommended.

Database subdirectories

The database directory contains the following subdirectories:

- **install:** This directory contains the **modules** file, which includes a list of NetVault modules installed on the server and client machines. The **install** directory is small in size.
- **lv:** This directory contains one license file called productlicenses.xml, which is where the install license is added. The directory is small in size.
- **MediaDatabase:** This directory stores the media records and backup indexes. The MediaDatabase directory grows to be rather large as you use the NetVault system. To estimate space requirements for the MediaDatabase directory, see Database size calculation.
- **pgsql:** This directory stores the backup and restore job records. The space requirement for this directory depends on the content of the jobs. When calculating space requirement for the NetVault Database, consider adding 10 percent of the MediaDatabase size for this directory.

Database size calculation

For estimating space requirements for the MediaDatabase, consider the following:

- **Approximate number of files and directories backed up per machine:** Each file or directory that is included in a backup requires an average number of bytes for an index entry in the NetVault Database. This average is based on a formula of 71 bytes plus the average number of characters contained in the filenames of the files that make up a target file system.
- **Number of generations of each backup retained:** Each generation is a separate instance of a file or directory backup. For example, if the same file is backed up seven times using the default backup settings, there are seven generations of the file stored on the media and indexed in the NetVault Database.

Based on this information, you can use the following formula to calculate space requirement for the MediaDatabase directory:

Approximate number of files and directories backed up per machine	Multiplied by	Approximate number of generations retained	Multiplied by	Number of machines backed up	Multiplied by	(71 bytes + average filename length)

Example

With an average file or directory name of eight characters for a target file system, if you back up 200,000 files and 15,000 directories once, indexing uses 17.5MB. If you back up the same files and directories three times, indexing uses 52.5MB. If you back up the same files and directories five times, indexing uses 87.5MB, and so on.

Determine NetVault name and password

During installation, the NetVault Server and Client machines are assigned a name and password:

- **NetVault machine name:** The NetVault machine name is used to identify the server and client machines in a NetVault Domain.

  By default, NetVault uses the OS-assigned name of the machine. If the name includes any illegal characters, NetVault replaces those characters with underscores (“_”).

  The NetVault Database is tied to the NetVault Server through its name. While relocating a server, a backup of the NetVault Database is used to recover the system after installing the NetVault software on the new machine. Therefore, we recommend that you do not use the OS-assigned name for the NetVault Server.

  The NetVault machine name can contain a maximum of 63 characters. If the machine name is longer than 63 characters, the NetVault Service may fail to start. The NetVault machine names can include uppercase letters (A–Z), lowercase letters (a–z), numbers (0–9), hyphens (“-”), underscores (“_”), and periods (“.”).
- **NetVault machine passwords:** The NetVault machine password is used while adding a client to the server. The machine password can contain a maximum of 100 characters. It cannot contain the characters: `\` and `spaces`.

NOTE: While installing NetVault in GUI mode or Text mode, in the Machine Password or PostgreSQL Database Superuser Password, do not escape any special character. However, while using the CLI options like `nvpassword` or `nvpgdbpasswd`, escape the special characters such that the desired password is properly received by the CLI. For example, if the password is `<>&#|/"':*.-`()[]{}$@?` then, enter it as the following:

On Linux shell: `\<\>\&#\|/\"\':\*.-\`\(\)[]{}\$@?`

On Windows command prompt: `"<>&#|/""':*.-`()[]{}$@?"`.

Determine NetVault PostgreSQL Linux user account

In NetVault, run PostgreSQL under a separate user account. This user account must only own the data that is managed by the server, and must not be shared with other daemons.

Sometimes, due to policy restrictions on your system, the NetVault server installer on Linux operating system is unable to create new PostgreSQL Linux user account automatically.

While installing NetVault Server, you can select any of the following options for PostgreSQL Linux user account:

- **Allow NetVault to create PostgreSQL Linux user:** The default option to allow NetVault to create PostgreSQL Linux user account automatically (default value: `netvault-pgsql` on Linux).
- **Linux user name**: Create a new Linux user account by referring to the corresponding operating system guide. Ensure that the specified PostgreSQL Linux user belongs to the group <user name>. Create the group with the same name as of the Linux user name and add the user into the same group.

NOTE: While creating a PostgreSQL Linux user account, do not use 'root' user in the field 'Linux user name'. In NetVault, PostgreSQL cannot run by a 'root' user due to restrictions from PostgreSQL.

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Reviewing pre-installation requirements

- General requirements
- Platform-specific requirements

General requirements

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

- **Review the release notes and compatibility guide:** Before you start the installation procedure, review the Release Notes thoroughly. The Release Notes may contain important information regarding the installation and use of NetVault.

  You must also review the *Quest NetVault Compatibility Guide*, which contains information about the supported platforms, operating system versions, devices, and application versions. You can download this guide from https://support.quest.com/technical-documents.

- **Review the OS requirements for NetVault Server and Client:** The NetVault Server can be installed on Linux and Windows. The NetVault Client can be installed on Linux and Windows operating systems.

  For information about supported operating system versions, see the *Quest NetVault Compatibility Guide* available at https://support.quest.com/technical-documents.

- **Review the NetVault Server Sizing Guide:** This guide provides information about system requirements for the NetVault Server. You can download this guide from https://support.quest.com/technical-documents.
- **Set OS permissions:** Set appropriate OS permissions on the target machines to allow users to install software components.
- **Set the executable permission to the Linux and UNIX installers**: On Linux and UNIX platforms, set the executable permission to the installers.
- **Select multiuser runlevel on Linux and UNIX:** On Linux and UNIX platforms, boot into multiuser mode.
- **Set user permission (umask) on Linux and UNIX**: On Linux and UNIX platforms, do not change the default **umask** value for the root user. The default value is 022. Setting **umask** to a value other than 022 (for example, 077) can cause job failures if the plug-in users are unable to access the NetVault files.
- **Verify the SELinux (Security-Enhanced Linux) policy:** If SELinux is enabled using the default “targeted” policy, NetVault processes do not cause any Access Vector Cache (AVC) denial problems. If a strict or custom policy is implemented, ensure that NetVault processes can run in unconfined mode.
- **Disable the anti-virus software:** We recommend that you disable the anti-virus software before installing or upgrading NetVault. If you do not disable the anti-virus software, the installation process may conflict with the anti-virus software and various NetVault operations may fail to function properly after installation.
- **Verify TCP/IP connectivity:** NetVault requires good TCP/IP connectivity between the server and client machines. To use name resolution, a host name must resolve to a unique IP address.
- **Check storage device connections**: Verify that the storage devices are properly connected and functional. You can check the device connections using any native OS tool for minimal backup operations on the device.

- **Configure “ulimit” variables on Linux and UNIX:** On Linux and UNIX, the default size limitation for various variables may conflict with the NetVault installation. For example, the default setting for the **file size (blocks)** and **virtual memory (kbytes)** variables may be too low for NetVault.

  If you do not increase these values, installation may fail and a “core dump” error may be reported. To avoid this problem, we recommend that you use the “unlimited” setting for variables.

  Table 1. Variable settings on Linux and UNIX

  ```
  core file size (blocks)        32768
  data seg size (kbytes)         unlimited
  file size (blocks)             unlimited
  open files                     64
  pipe size (512 bytes)          10
  stack size (kbytes)            unlimited
  cpu time (seconds)             unlimited
  max user processes             400
  virtual memory (kbytes)        unlimited
  ```

  To change the variable settings:

  a Start a terminal session. To view the current settings, type:

  ```
  ulimit -a
  ```

  b If the file size (blocks) variable is not set to “unlimited,” type:

  ```
  ulimit unlimited
  ```

  c If the virtual memory (kbytes) variable is not set to “unlimited”, type:

  ```
  ulimit -v unlimited
  ```

  d To re-list the statistics and verify the new settings, type:

  ```
  ulimit -a
  ```

- **Load the SCSI Generic (sg) driver on Linux-based machines:** On Linux-based systems, NetVault uses the **sg** driver to connect to the tape devices. On machines with locally attached tape devices, either manually load the **sg** driver or edit the kernel configuration file to automatically load this driver at boot time.

  To manually load the driver, type:

  ```
  modprobe sg
  ```

  You must run this command every time the system is restarted.

  To ensure that the driver is automatically loaded at boot time, you can include an entry for the driver in the kernel configuration file. For more information about loading a kernel module at boot time, consult the relevant OS documentation.

  If this driver is not loaded, NetVault fails to recognize any locally attached tape devices.

- **Confirm required libraries on Linux platforms:** When installing NetVault on a Linux platform, verify that glibmm and libicu libraries are present on the system.

Platform-specific requirements

The following sections cover the requirements that apply to all Linux machines:

- All Linux environments

The following sections cover the requirements for specific Linux platforms:

- Debian 12.x (64-bit)
- RHEL 7
- RHEL 8
- RHEL 9 and RHEL 10
- SLES 15
- Ubuntu 18.04 and 20.4
- Windows

All Linux environments

Before installing the NetVault Server or Client software on any Linux-based machine, install the `sysstat` package.

Before installing the NetVault Server software on Linux-based machines, install the following packages:

```
fontconfig
libfontconfig
ghostscript-fonts
```

> **NOTE:** Starting with Red Hat Enterprise Linux (RHEL) 8 and Oracle Linux 8, the package `ghostscript-fonts` is no longer available for install. Ensure that the package `ghostscript` is installed.

To prevent the garbled or blank reports in Japanese version of NetVault Server on Linux-based machines, install the following package:

```
vlgothic-fonts
```

Debian 12.x (64-bit)

Note: Stop and restart NetVault service after installing NetVault 13.3.x Server or Client on Debian 12.

RHEL 7

Before installing the pure 64-bit package of NetVault on RHEL 7 x86-64, install the following package:

```
tcl
```

RHEL 8

Before installing the pure 64-bit package of NetVault on RHEL 8 x86-64, install the following package:

```
tcl
```

If the installation fails, install the following package:

```
libxcrypt-compat
```

Run the following command:

```
yum install libxcrypt-compat
```

NOTE: For RHEL 7 and 8 version, if you do not have `libglibmm` library installed, you have to explicitly install it by executing following commands

`yum install glibmm24-devel.`

`yum install libicu`

RHEL 9 and RHEL 10

Before installing NetVault server on Red Hat Enterprise (RHEL) 10 or later, AlmaLinux or later, Oracle Linux 10 or later, or any other RHEL based system, install the following package:

```
libxcrypt-compat
```

The *libxcrypt-compat* is a package in the latest Linux distributions that ensures backward compatibility with applications and systems that rely on the *libcrypt* library from the GNU C Library (glibc).

Install libxcrypt-compat package if not installed (as root user or sudo):

```
# yum install libxcrypt-compat
```

SLES 15

Before installing the pure 64-bit package of NetVault Server on SLES 15 64-bit, complete the following steps:

- Install the following package:

  `system-group-obsolete (if group sys is not present)`
- Create the following link:

  `ln -s /usr/lib64/libtcl8.6.so /usr/lib64/libtcl8.5.so`

Before installing the pure 64-bit package of the NetVault Client on SLES 15 64-bit, complete the following steps:

- Download and install `libopenssl0_9_8-0.9.8j-62.1.x86_64.rpm` from the SUSE Downloads website.
- Install the following package:

  `system-group-obsolete (if group sys is not present)`

Ubuntu 18.04 and 20.4

Before installing the pure 64-bit package of NetVault on 64-bit Ubuntu 18.04, create the following link:

```
ln -s /usr/lib /usr/lib64
```

Before installing the pure 64-bit package of NetVault on 64-bit Ubuntu 20.4, complete the following steps:

- Create the following link:

  ```
  ln -s /usr/lib /usr/lib64
  ```
- Install the following packages:

  ```
  apt-get install libaio1
  apt-get install libstdc++5
  ```

Windows

Increase non-interactive desktop heap on NetVault Server: On Windows-based NetVault Servers, the default setting for the non-interactive desktop heap memory setting has the potential to be exhausted when you do the following:

- Run several simultaneous jobs on the NetVault Server.

  For example, when you run 25 simultaneous jobs, NetVault uses about 200KB additional non-interactive desktop heap. In this scenario, some jobs continue to run, while others fail with the message “Job Died Unexpectedly.” This issue is a known Windows problem (ID: 184802).

- Add several drives to a Virtual Tape Library (VTL).
- Browse a Backup Selection Set containing a deeply nested directory structure. In this scenario, the message “failed to get connection to plugin” is displayed.

To correct these issues, increase the size of the non-interactive desktop heap in the following registry value:

```
HKEY_LOCAL_MACHINE\SYSTEM\CurrentControlSet\Control\SessionManager\SubSystems\
Windows
```

NOTE: This key is not available in Windows Server 2019 and Windows Server 2022.

The **SharedSection** setting in this registry value controls how the desktop heap is allocated. The heap size is specified in KB. The format for specifying the heap size is as follows:

```
SharedSection=xxxx,yyyy,zzzz
```

`xxx` defines the maximum size of the system-wide heap

`yyyy` defines the size of each desktop heap

`zzzz` defines the size of the desktop heap that is associated with a non-interactive Windows station

To increase the size of the non-interactive desktop heap:

1. Start the Registry Editor. (In the **Run** box on the **Start Menu**, type **regedit**, and press **Enter**.)
2. Expand the `HKEY_LOCAL_MACHINE\SYSTEM\CurrentControlSet\Control\Session Manager\SubSystems` key.
3. On the right pane, right-click **Windows**, and select **Modify**.
4. In the **Edit String** dialog box, change the value for the **SharedSection** parameter from 512 to 1024:

   ```
   Windows SharedSection=1024,3072,1024
   ```

5. Click **OK**, and close the Registry Editor.

4

Installing NetVault

- Installation overview
- Installing NetVault in GUI mode
- Installing NetVault in text mode
- Installing NetVault in unattended mode
- Installing NetVault Client on Windows using Group Policy

Installation overview

You can install NetVault by using the interactive or non-interactive installation method. You can also use the push installation method to simultaneously install the NetVault Client software on multiple Windows and Linux-based machines. This section provides an overview of the NetVault installer and available installation methods.

It includes the following topics:

- NetVault installer
- Installation modes
- Installation mode selection
- Installation logs
- Push installation method

NetVault installer

The NetVault installer is offered as a single file—typically an application. The installation file is named as follows:

```
netvault-<RYYYYMMMDD>-vx.x.x.x-{Server|Client}-<platform>
```

NetVault offers separate client-only and server-only installation packages for Linux and Windows-based systems. Both the server and the client packages are available in pure 64-bit versions.

NetVault supports installations in the following languages: English, Simplified Chinese, French, German, Japanese, and Korean. The installer automatically detects the system language and uses it as the default language. On systems that use an unsupported language, the installer defaults to English.

Installation modes

You can run the NetVault installer in graphical, text, or unattended mode. These modes are available for both new and upgrade installations. This section provides an overview of the available installation modes.

Graphical mode

Use the graphical mode to install the software interactively from a graphical user interface. This mode is available on all supported operating systems that provide a graphical environment. The graphical mode requires GTK packages or X Window System libraries on Linux- and UNIX-based systems. The installer automatically runs in graphical mode if no installation mode is specified.

Text mode

Use the text mode to install the software interactively from a text-based user interface. This mode is available on all supported operating systems, except Windows. On systems that do not provide a graphical environment, the installer automatically runs in text mode if no installation mode is specified.

Unattended mode

Use the unattended mode to perform automated installations with minimal or no user interaction. This mode is supported on all operating systems. When performing unattended installations, you can specify the installation options at the command line or in an option file.

Installation mode selection

When running the NetVault installer, you can use the `--mode` option to specify the installation mode. Generally, you do not need to use this option because the installer automatically uses the default mode. If, for any reason, the default mode cannot be initialized, then the installer tries to use the alternative GUI or text modes, if available. For example, on Linux, if the GTK libraries are unavailable, the default **gtk** mode cannot be initialized. In such cases, the installer tries to use the **xwindow** mode, and if no X Server is detected, the installer defaults to **text** mode.

The following table lists the supported installation modes.

Table 1. Supported installation modes

Operating system	Supported modes
Linux	• gtk (default) • xwindow • text • unattended
Windows	• win32 (default) • unattended
UNIX	• xwindow (default) • text • unattended
OS without any graphical environment	• text (default) • unattended

To run the installer in unattended mode, it is necessary to use the `--mode` option; the installer does not automatically switch to this mode. The `--mode` option is also required to run the installer in text mode on machines that support GUI (for example, to perform remote installations on Linux- or UNIX-based systems).

Installation logs

The installer generates a log file in the system temporary directory. The file is named as follows: `netvault_{GUID}_install.log`, where `{GUID}` is unique for each installation occurrence (for example, `netvault_274bffb2-a3c1-457e-7f5e-221bf60a7689_install.log`).

If the installation fails for any reason, you can examine the log file for details about the problem.

If an installation or upgrade is unsuccessful, the installer may not generate the regular log file. Instead, the installer may leave an intermediate log file is named `bitrock_installer.log` or `bitrock_installer_nnn.log` in the system temporary directory.

Push installation method

The push installation method lets you install one or more software packages on remote machines. You can use this method to install or upgrade the NetVault client and plug-ins on multiple machines. You can perform push installations from the NetVault WebUI. Push installation is available for Windows-to-Windows, Windows-to-Linux, Linux-to-Linux, and Linux-to-Windows scenarios. For more information about this method, see the *Quest NetVault Administrator's Guide*.

Installing NetVault in GUI mode

The graphical mode is available on all supported operating systems that provide a graphical environment. This mode requires GTK packages or X Window System libraries on Linux- and UNIX-based systems.

To install NetVault Server or Client in graphical mode:

> **NOTE:**
> In Linux Operating Systems, in certain locales, ex ja_JP.utf8, the view port does not display the entire installation dialog, including scroll bars failing to render, which makes it difficult to navigate through the installation procedure. As an alternative, you can use the available Linux tools to reduce the scaling factor or proceed with the installation in text mode. Follow the below steps:
>
> - Install gnome-tweaks
> - Run gnome-tweaks
> - On the gnome-tweaks menu, select Fonts, Scaling Factor, and reduce the factor for example from 1.00 to 0.90 or less

1. Log on to the system with administrator or root-level access, and navigate to the directory in which the installation file resides.
2. Double-click the installation file.

   > **NOTE:**
   > After the installation completes, you can unmount the disk image from the Finder window by clicking the Eject icon next to the virtual drive icon. Alternatively, you can click the virtual drive icon on the desk top, and press CMD+E.

3. In the **Language Selection** dialog box, select the language for your NetVault installation.

   The available options are:

   - English
   - Simplified Chinese

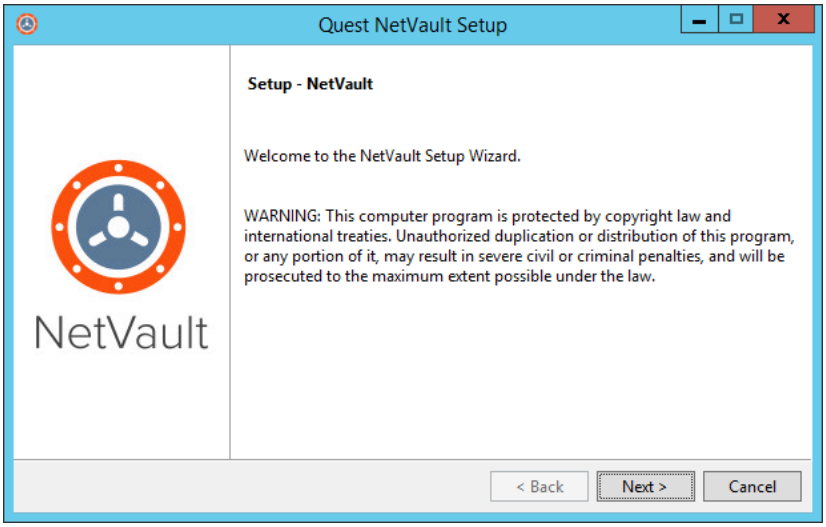
- French
- German
- Japanese
- Korean

The default selection is English.

Click **OK**.

4 In the Welcome dialog box, review the notes, and click **Next** to continue.

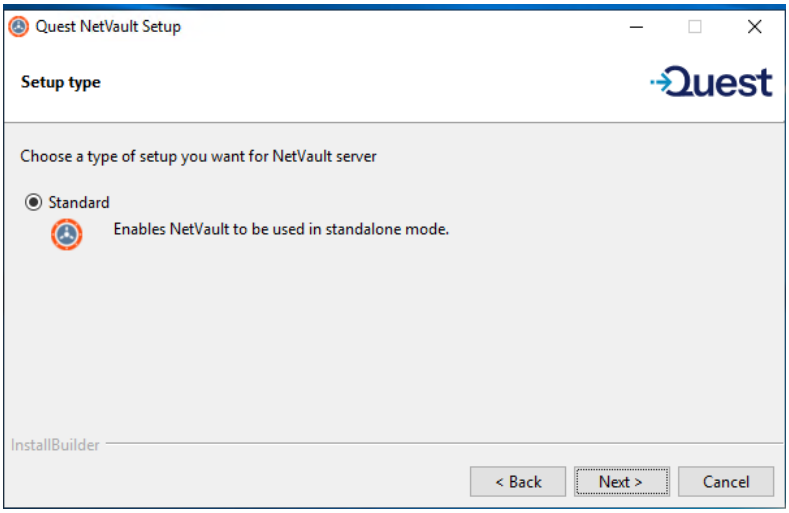
Figure 1. Welcome dialog box



5 Choose the type of setup for NetVault Server as:

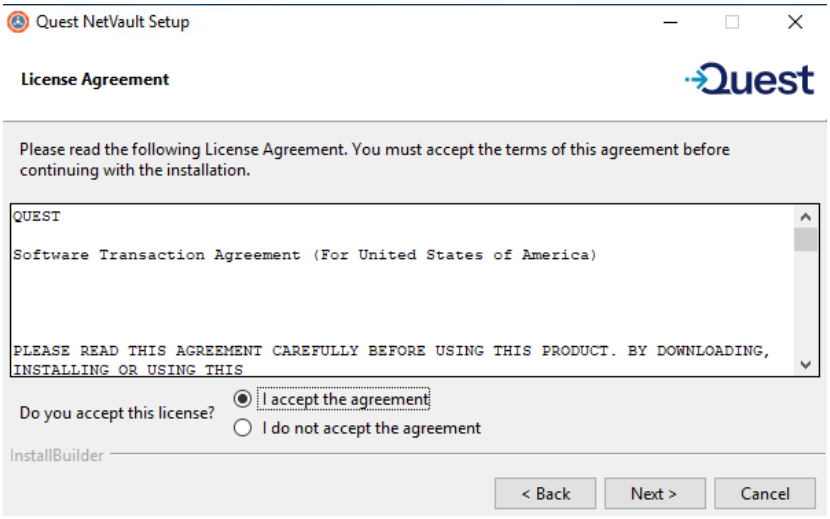
- **Standard**: This option allows you to use the NetVault Server in standalone mode.

Figure 2. NetVault Server Setup type



6 In the **License Agreement** dialog box, select the **I accept the agreement** option if you accept all the terms.

Figure 3. License Agreement dialog box

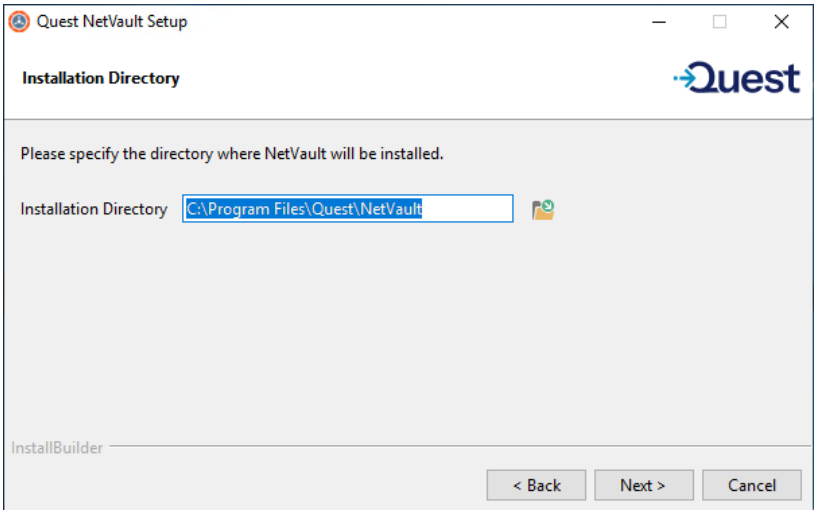


NOTE: Before proceeding with the installation, make sure that you have thoroughly reviewed the license agreement.

7 Click **Next** to continue.

8 In the **Installation Directory** dialog box, specify the installation path.

Figure 4. Installation Directory dialog box



The default installation path for NetVault is as follows:

- **On Linux:** `/usr/netvault`
- **On Windows:** `C:\Program Files\Quest\NetVault` or

To use the default path, click **Next**.

To change the location, type the new path, and click **Next**. If the specified path does not exist, it is automatically created during installation. You can also click **Browse**, and select the target directory from the Explorer window.

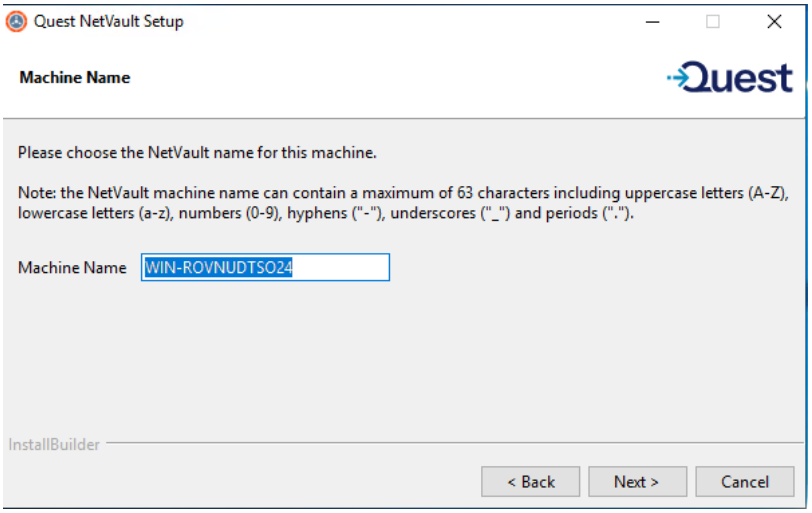
If the installation directory contains any files or directories, a warning is displayed:

```
The directory you have selected is not empty. If you continue the installation,
everything in the directory will be deleted. Is it OK to install into this
directory and delete the existing contents?
```

Select the **Yes** option, and then click **Next** to continue.

9 In the **Machine Name** dialog box, specify a unique name for the NetVault Server. Click **Next**.

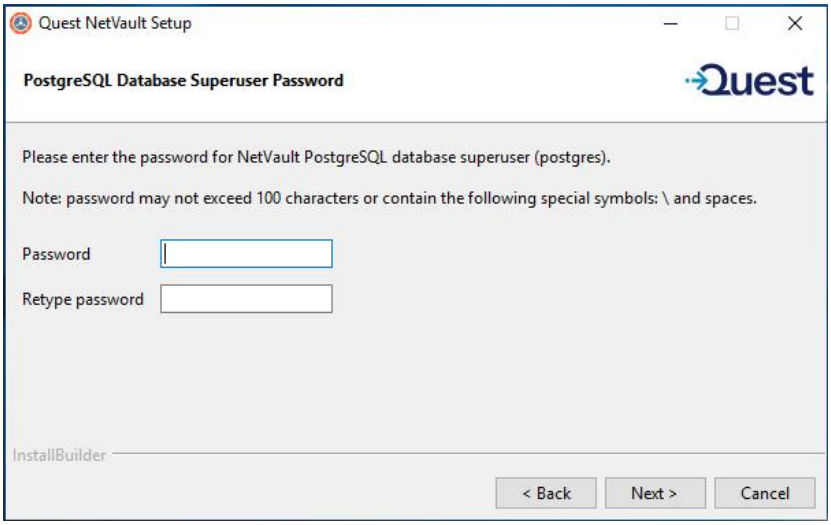
Figure 5. Machine Name dialog box



By default, NetVault uses the OS-assigned machine name. For more information about machine names, see Determine NetVault name and password.

10 In the **Machine Password** dialog box, specify a password for the NetVault machine.

Figure 6. Machine Password dialog box

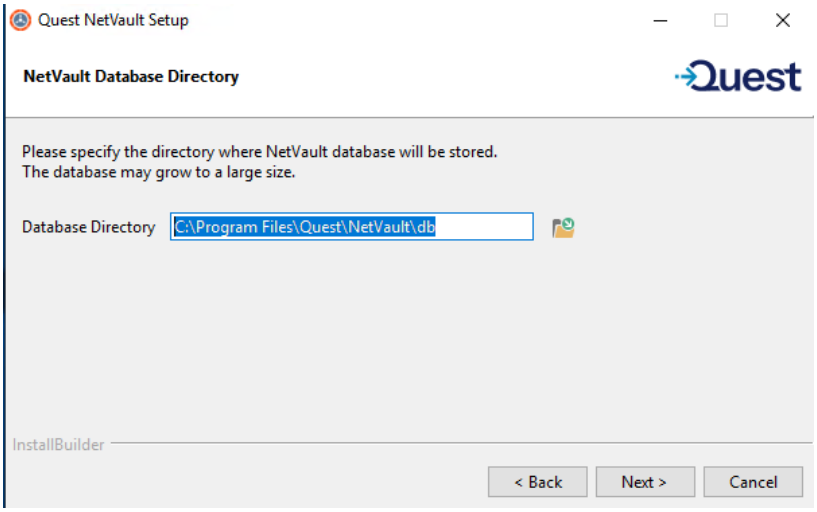


The machine password is used while adding a NetVault Client to the server. If no password is set during installation, NetVault uses the system's root or administrator password. For more information about passwords, see Determine NetVault name and password.

In the **Retype password** box, type the password again for confirmation. Click **Next**.

11 When installing the NetVault Server, the **NetVault Database Directory** dialog box is displayed next. This dialog box is not displayed during client installations.

Figure 7. NetVault Database Directory dialog box



In the **Database Directory** box, specify the installation path for the NetVault Database.

The default path for NetVault Database is as follows:

- **On Linux:** `/usr/netvault/db`
- **On Windows:** `C:\Program Files\Quest\NetVault\db`

To use the default installation path, click **Next**.

To change the location, type the new path, and click **Next**. If the specified path does not exist, it is automatically created during installation. You can also click **Browse**, and select the target directory from the Explorer window.

If the database directory contains any files or directories, a warning is displayed:

```
The directory you have selected is not empty. If you continue the installation,
everything in the directory will be deleted. Is it OK to install into this
directory and delete the existing contents?
```

12 When installing the NetVault Server on Linux, the dialog box for PostgreSQL Linux user account is displayed next.This dialog box is not displayed during client installations. For more information about NetVault PostgreSQL Linux user account, see Determine NetVault PostgreSQL Linux user account.

Select the option for PostgreSQL Linux user account:

- **Allow NetVault to create PostgreSQL Linux user**: By default, this option is selected.
- **Linux user name**: Select this option if you want to use the already existing Linux user account.

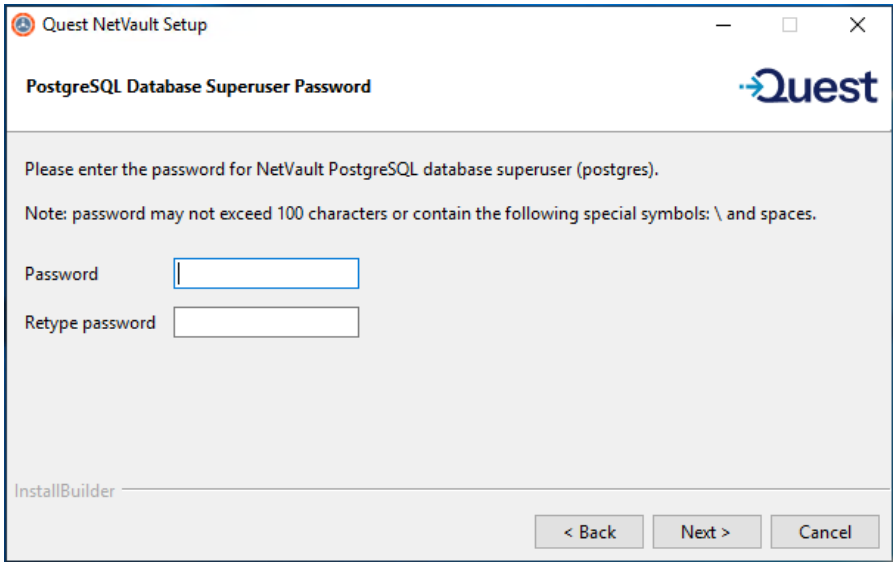
  — or —

  To create new Linux user account, refer to the corresponding operating system guide.

Click **Next** to continue.

13 When installing the NetVault Server, the dialog box for Database Superuser password is displayed next. This dialog box is not displayed during client installations.

Figure 8. PostgreSQL Database Superuser Password dialog box



In the **Password** box, specify a password for the PostgreSQL database super user.

In the **Retype password** box, type the password again for confirmation.

For more information about specifying a password for the PostgreSQL database super user, see Determine NetVault name and password.

14 In the **Ready to Install** dialog box, review the installation parameters, and click **Next** to begin installation.

If you want to change any installation parameter, click **Back**.

15 The installer begins to install the software. As the installation proceeds, the progress bar is updated in the Installation dialog box.

16 After the software is successfully installed on the machine, the Setup Completion dialog box displays. Click **Finish** to close the dialog box, and exit the installer.

Installing NetVault in text mode

The text mode is available on all supported operating systems, except Windows.

NOTE: You can exit the setup in text mode at any time before the installation starts by pressing Ctrl+C.

To install NetVault Server or Client in text mode:

1. Log on to the system with root-level access. Start a terminal session, and navigate to the directory in which the installation file resides.
2. To start the installer, type the following command:

   ```
   ./<installation file name> --mode text
   ```

   Follow the instructions to complete the installation steps.

3. ```
   Language Selection
   ```

   ```
   Please select the installation language
   ```

   ```
   [1] English
   ```

   ```
   [2] Simplified Chinese
   ```

   ```
   [3] French
   ```

   ```
   [4] German
   ```

   ```
   [5] Japanese
   ```

   ```
   [6] Korean
   ```

   ```
   Please choose an option [1]:
   ```

   Select the language for your NetVault installation. To select English, press **1** or **Enter.** To select a different language, press the corresponding key.

4. The License Agreement screen is displayed next. Press **Enter** to read through the agreement.

   Press **y** to accept the license agreement and continue.

   NOTE: Before proceeding with the installation, ensure that you have thoroughly reviewed the license agreement.

5. ```
   Please specify the directory where NetVault will be installed.
   ```

   ```
   Installation Directory [/usr/netvault]:
   ```

   The default installation path for NetVault is as follows:

   - **On Linux:** `/usr/netvault`

   To use the default path, press **Enter**.

   To change the location, type the new path, and press **Enter**. If the specified path does not exist, it is automatically created during installation.

   If the installation directory contains any files or directories, a warning is displayed:

   ```
   The directory '/usr/software/netvault' already exists. All contents of this
   directory will be destroyed. Are you sure you want to continue? (y n) [n]
   ```

   Press **y** to continue.

6. ```
   Please choose the NetVault name for this machine.
   ```

   ```
   Note: the NetVault machine name can contain a maximum of 63 characters
   including uppercase letters (A-Z), lowercase letters (a-z), numbers (0-9),
   hyphens ("-"), underscores ("_"), and periods (".").
   ```

   ```
   Machine Name [<OS-assigned machine name>]:
   ```
   ```

By default, NetVault uses the OS-assigned machine name. To select the default name, press **Enter**.

To assign a different name, type the name, and press **Enter**. For more information about machine names, see Determine NetVault name and password.

7 `Please enter the NetVault password for this machine.`

`Note: password may not exceed 100 characters or contain the following special symbols: \ and spaces.`

`Password:`

Specify a password for the NetVault machine, and press **Enter**.

The machine password is used while adding a NetVault Client to the server. If no password is set during installation, NetVault uses the system's root or administrator password. For more information about passwords, see Determine NetVault name and password.

`Retype password:`

Type the password again for confirmation, and press **Enter**.

8 When installing the NetVault Server, you are prompted for the database directory. This step does not apply to client installations.

`NetVault Database Directory`

`Please specify the directory where NetVault database will be stored.`

`The database may grow to a large size.`

`Database Directory [/usr/netvault/db]:`

The default installation path for the NetVault Database is **/usr/netvault/db**.

To use the default path, press **Enter**.

To change the location, type the new path, and press **Enter**. If the specified path does not exist, it is automatically created during installation.

If the database directory contains any files or directories, a warning is displayed:

`The directory '/usr/software/netvaultdb' already exists. All contents of this directory will be destroyed. Are you sure you want to continue? (y n) [n]`

Press **y** to continue.

9 When installing the NetVault Server on Linux, specify the option for PostgreSQL Linux user account. For more information about NetVault PostgreSQL Linux user account, see Determine NetVault PostgreSQL Linux user account.

`Specify option for PostgreSQL Linux user account`

`[1] Allow NetVault to create PostgreSQL Linux user`

`[2] Linux user name`

`Please choose an option [1]:`

Press **Enter** if you want to select the default option.

Enter 2 if you want to use the already existing Linux user account. To create new Linux user account, refer to the corresponding operating system guide.

`Linux user name [netvault-pgsql]:`

Specify the Linux user name, and press **Enter**.

10 When installing the NetVault Server, you are prompted for the database superuser password. This step does not apply to client installations. For more information about specifying a password for the PostgreSQL database super user, see Determine NetVault name and password.

`Please enter the NetVault PostgreSQL database superuser password.`

```
Note: password may not exceed 100 characters or contain the following special
symbols: \ and spaces.

Password:
```

Specify a password for the PostgreSQL database super user, and press **Enter**.

```
Retype password:
```

Type the password again for confirmation, and press **Enter**.

11 In the **Ready to Install** screen, review the installation parameters, and press **Enter** to begin installation.

12 The installer begins to install the software. As the installation proceeds, the progress information is displayed in the terminal window.

13 After the software is successfully installed on the machine, a setup completion message is displayed.

Installing NetVault in unattended mode

The unattended mode is supported on all operating systems. When performing unattended installations, you can specify the installation options at the command line or in an option file.

An option file is a text file that provides answers to the questions that would be asked during the installation process. Each answer is stored as a value for a variable identified in the option file. You can save the option file in any directory and assign it any valid filename.

The installer uses the default values for options that are omitted (except for the password for PostgreSQL Database Superuser, which does not have a default value).

To install NetVault Server or Client in unattended or silent mode:

1. Log on to the system with administrator or root-level access.
2. Start a command prompt window or terminal session, and navigate to the directory in which the installation file resides.
3. Type the following command:

   Linux- and UNIX-based systems:

   ```
   ./<Name of the installation file> --mode unattended <options>
   ```

   — or —

   ```
   ./<Name of the installation file> --mode unattended --optionfile <filename>
   ```

   Windows-based systems:

   ```
   <Name of the installation file> --mode unattended <parameter list>
   ```

   — or —

   ```
   <Name of the installation file> --mode unattended --optionfile <filename>
   ```

You can specify the following parameters at the command line or in the option file.

NOTE: To access help on the installation options, you can run the installer with the `--help` option:
On Linux and UNIX: `./<Name of the installation file> --help`
On Windows: `<Name of the installation file> --help`

Table 2. Installation options

Option	Description
`--unattendedmodeui <interaction level>`	Specifies the interaction level for the unattended installation. The allowed values are: • **none:** This is the default mode for unattended installations. In this mode, the installer does not display any prompts or progress information. • **minimal:** In this mode, the installer does not display any prompts, but it provides the progress information through pop-up windows. • **minimalWithDialogs:** In this mode, the installer displays some prompts, and it provides the progress information through pop-up windows.
`--optionfile <filename>`	Specifies the name of the option file. Provide the full path if the file does not reside in the current directory.

Table 2. Installation options

Option	Description
`--installer-language <NetVault language>`	Specifies the language for your NetVault installation. The supported languages are: • **en:** English • **zh_CN:** Simplified Chinese • **fr:** French • **de:** German • **ja:** Japanese • **ko:** Korean The default is English (en).
`--setup-type <setup-type>`	Specifies the setup type for NetVault Server. The setup type can be: • **Standard**: This is a default option and enables you to use the NetVault Server in standalone mode. • **MSP**: NetVault offers a Standard installation mode for all Server deployments. Previous versions offering a specific 'Managed Service Provider' (MSP) mode have been deprecated. All new installations default to the Standard configuration.
`--prefix <installation directory>`	Specifies the installation path for NetVault. If the path contains spaces, enclose it in quotation marks (“ ”). The default path is as follows: • **On Linux:** `/usr/netvault` • **On Windows:** `“C:\Program Files\Quest\NetVault”`
`--logical-name <NetVault machine name>`	Specifies the NetVault machine name. By default, NetVault uses the OS-assigned machine name. For more information about machine names, see Determine NetVault name and password.
`--password <password>`	Specifies the NetVault machine password. The machine password is used while adding a NetVault Client to the server. The password can contain a maximum of 100 characters. It cannot contain the following characters: `\` and `spaces` For more information about passwords, see Determine NetVault name and password. If no password is set during installation, NetVault uses the system’s root or administrator password.
`--db-dir <NetVault Database installation>`	Specifies the installation path for NetVault Database. This parameter can only be specified for NetVault Server installations. If the path contains spaces, enclose it in quotation marks (“ ”). The default path for NetVault Database is as follows: • **On Linux:** `/usr/netvault/db` • **On Windows:** `“C:\Program Files\Quest\NetVault\db”`
`--pg-linuxuser-option <pg-linuxuser-option>`	Specifies the option for PostgreSQL Linux user account. For more information about NetVault PostgreSQL Linux user account, see Determine NetVault PostgreSQL Linux user account. The default option will be selected if you do not provide the input here. Default: `auto` Allowed: `auto custom`

Table 2. Installation options

Option	Description
--pg-linuxuser-name <pg-linuxuser-name>	Required only when `--pg-linuxuser-option` is set to custom. Default: `netvault-pgsql`
`--pg-su-passwd <password>`	Specifies the password for PostgreSQL Database Superuser. This parameter can only be specified for NetVault Server installations. The password can contain a maximum of 100 characters. It cannot contain the following characters: `\` and `spaces` For more information about specifying a password for the PostgreSQL database super user, see Determine NetVault name and password.

NOTE: When performing unattended installations, you can check the installer return code to verify whether the installation completed successfully. If the return code is zero (0), it implies that the installation is successful. A non-zero value indicates that the installation has failed. In such cases, you can examine the installation logs for details about the problem.

Examples

This section provides some examples of using the NetVault installer in unattended mode.

Server installation

- To perform an uninterrupted installation of NetVault Server using default values for all options, use the following command:

  Linux-based systems:

  ```
  ./<Name of the installation file> --mode unattended --pg-su-passwd MyDbPassword
  ```

  Windows-based systems:

  ```
  <Name of the installation file> --mode unattended --pg-su-passwd MyDbPassword
  ```

- To specify a custom name and installation directory for a Windows-based NetVault Server, use the following command:

  ```
  <Name of the installation file> --mode unattended --prefix "D:\NetVault" --logical-name TestServer --pg-su-passwd MyDbPassword
  ```

- To install the Japanese version of NetVault Server on a Linux-based system, use the following command:

  ```
  ./<Name of the installation file> --mode unattended --installer-language ja --pg-su-passwd MyDbPassword
  ```

- To perform an uninterrupted installation of NetVault Client using default values for all options, use the following command:

  Linux-based systems:

  ```
  ./<Name of the installation file> --mode unattended
  ```

  Windows-based systems:

  ```
  <Name of the installation file> --mode unattended
  ```

- To specify a custom name and installation directory for a Windows-based NetVault Client, use the following command:

  ```
  <Name of the installation file> --mode unattended --prefix "D:\NetVault" --logical-name Client-A
  ```

- To install the Japanese version of NetVault Client on a Linux-based system, use the following command:

```
./<Name of the installation file> --mode unattended --installer-language ja
```

Sample option files

This section provides some sample option files.

Server installation

- The following file specifies all options for installing the English version of NetVault on a Linux-based system:

  ```
  prefix=/usr/NetVault

  logical-name=TestServer

  password=MyPassword

  db-dir=/usr/TstDir/Db

  pg-su-passwd=MyDbPassword
  ```

- The following file specifies a custom name and installation directory for a Windows-based NetVault Server:

  ```
  prefix=D:\NetVault

  logical-name=TestServer

  db-dir=D:\TstDir\Db

  pg-su-passwd=MyDbPassword
  ```

- The following file specifies the options for installing the Japanese version of NetVault Server on a Linux-based system:

  ```
  installer-language=ja

  pg-su-passwd=MyDbPassword
  ```

Client installation

- The following file specifies all options for installing the English version of NetVault Client on a Linux-based system:

  ```
  prefix=/usr/NetVault

  logical-name=Client-A

  password=MyPassword
  ```

- The following file specifies a custom name and installation directory for a Windows-based NetVault Client:

  ```
  prefix=D:\NetVault

  logical-name=Client-A
  ```

- The following file specifies the options for installing the Japanese version of NetVault Client on a Linux-based system:

  ```
  installer-language=ja
  ```

Installing NetVault Client on Windows using Group Policy

This section includes the following topics:

- Installing the software package using Group Policy
- Upgrading the software package
- Removing the software package

Installing the software package using Group Policy

In an Active Directory (AD) Domain, you can create a Group Policy Object (GPO) to install the NetVault Client software on multiple machines in the domain.

To install NetVault Clients using Group Policy Objects:

1 **Step 1: Set up a Windows Domain:**

   a Set up a machine as the Windows Domain Controller.

   b Add all the clients to the Domain.

   For more information about setting up a Windows Domain, see the relevant Windows documentation.

2 **Step 2: Copy the NetVault installation file to a shared folder:**

   a Log on to the Domain Controller as Administrator, and create a shared folder that is accessible to all machines in the domain.

   a Copy the installation file to the shared directory.

3 **Step 3: Create a Group Policy Object:**

   a Click **Start**, point to **Administrative Tools**, and then click **Group Policy Management**.

   b Right-click the domain, and click **Create a GPO in this domain, and Link it here**.

   c Type a name for the new policy (for example, NetVault), and click **OK**.

   d In the left pane of the **Group Policy Management Console**, open the applicable nodes, and select the GPO. In the right-pane, go to the **Security Filtering** section.

   e By default, the policy is not applied to any client machines. To add a machine, click **Add**. In the dialog box that appears, click **Object Types**, and select **Computers** (if not already selected).

   f Select the machines on which you want to install NetVault. Click **OK**.

4 **Step 4: Assign the package:**

   a In the **Group Policy Management Console**, select the policy, and click **Edit**. Under **Computer Configuration**, expand **Software Settings**.

   b Right-click **Software installation**, point to **New**, and then click **Package**. In the **Open** dialog box, type the full UNC path of the shared installer package (for example, `\\<file server>\<share>\<installation file name>`), and click **Open**.

   NOTE: Verify that you use the UNC path; do not use the **Browse** button to access the shared location.

   c In the **Deploy Software** dialog box, leave the **Assigned** option selected, and click **OK**.

   The NetVault installation package is now listed in the right-pane of the **Group Policy Management Editor**.

   d Close the **Group Policy Management Editor** and the **Group Policy Management Console**.

   e When you restart the machine, NetVault is automatically installed on the selected clients.

Upgrading the software package

To upgrade the NetVault software package:

1. Click **Start**, point to **Administrative Tools**, and then click **Group Policy Management**.
2. Select the **Group Policy Object** that you used to deploy the package, and then click **Edit**.
3. In the **Group Policy Management Editor**, expand **Software Settings**.
4. Open the **Software installation** node.
5. In the right-pane of the **Group Policy Management Editor**, right-click the entry for NetVault, point to **All Tasks**, and then click **Redeploy application**.
6. In the confirmation dialog box, click **Yes**.
7. Close the **Group Policy Management Editor** and the **Group Policy Management Console**.

Removing the software package

To remove the assigned software package:

1. Click **Start**, point to **Administrative Tools**, and then click **Group Policy Management**.
2. Select the Group Policy Object that you used to deploy the package, and then click **Edit**.
3. In the **Group Policy Management Editor**, expand **Software Settings**.
4. Open the **Software installation** node.
5. In the right-pane of the **Group Policy Management Editor**, right-click the entry for NetVault, point to **All Tasks**, and then click **Remove**.
6. Do one of the following:
   - Click **Immediately uninstall the software from users and computers**, and then click **OK**.
   - Click **Allow users to continue to use the software but prevent new installations**, and then click **OK**.
7. Close the **Group Policy Management Editor** and the **Group Policy Management Console**.

5

Reviewing post-installation requirements

- Platform-specific post-installation requirements

Platform-specific post-installation requirements

This section covers the requirements for the following platforms:

- Linux
- Windows

Linux

On Linux OS, verify that the following shared C libraries are available on the server and client systems:

- `libc.so.6`
- `libdl.so.2`

These libraries provide the standard library functions, including the “system calls” functions.

On systems that do not have these packages, NetVault does not start after installation. In this scenario, run the following command from the NetVault installation directory (**/usr/netvault/**, by default) to obtain a list of NetVault dependencies and to determine any missing ones.

```
find ./|grep -v -E "pgAdmin3|stackbuilder|postgresql|lib/libssl|replaced/"|xargs
file|egrep 'shared object|executable'|cut -d: -f1|xargs ldd 2>/dev/null|egrep -v
'^\.'|perl -pe 's/ *\(.*$//'|sort -u|grep "not found"|grep -v -E "PIC"
```

The missing dependencies are reported as “Not Found.”

The required files are available as RPM packages. You can install them using the RPM utility. For more information, see the man page for the **rpm** command. You can also use the configuration tool YaST (Yet another Setup Tool) to locate and install the packages. Once the tool finds the package containing the required file, select the **Install** command from the **Package** menu to install the file. For more information about YaST, see the user’s guide for this tool.

Windows

On Windows, the locally attached backup devices must not be under the control of the Windows Removable Storage service.

To disable the Windows Remote Storage Manager on systems with locally attached backup devices:

1. Log on as an Administrator-level user.
2. Right-click **My Computer**, and select **Manage** to open the **Computer Management** window.
3. Expand the **Storage** node to display the local device. Right-click the device, and select **Properties**.
4. On the **General** tab, clear the **Enable library** check box. Click **Apply**, and then **OK** to close the dialog box.

NOTE: This option is not available in Windows Server 2019 and Windows Server 2022.

6

Upgrading NetVault

- Upgrade requirements and considerations
- Preparing for an upgrade
- Upgrading NetVault in GUI mode
- Upgrading NetVault in text mode
- Upgrading NetVault in unattended mode
- Migrating NetVault Server from Hybrid to Pure environment
- Upgrading licensed plug-ins

Upgrade requirements and considerations

IMPORTANT: Upgrading an existing NetVault Server running in legacy MSP mode is no longer supported via the standard upgrade workflow. Customers with legacy MSP mode is no longer supported via the standard upgrade workflow. Customers with legacy MSP deployments must contact Quest Support for assistance with migration or upgrade paths.

IMPORTANT: NetVault Backup is now NetVault. With this name change comes a new license format. Instead of a license key, NetVault uses license files in the .dlv format that install on the NetVault Server machine. If you use a NetVault Client or licensed plug-in that is older than version 13.0, then you must obtain a license file to install on the NetVault Server, in addition to the old license located on Client or plug-in machine. For more information, see the related KB on the Support Portal.

Before you upgrade your NetVault system, review the following notes:

- Go to My Account at www.quest.com, download the .dlv license files for NetVault Client and all licensed plug-ins used in your configuration, and then save the files to your current NetVault Server's \tmp folder.

  CAUTION: It is very important to copy all necessary license files to the \tmp folder of your NetVault Server before you upgrade. If the installer does not find any .dlv license files in NetVault Server's \tmp folder during upgrade, it installs the default 30-days trial license for NetVault. If you are using features and plug-ins not included or allowed or allowed under a trial license, the installation could cause unexpected changes in your NetVault configuration and failed backup jobs. To install the license files after an upgrade, go to the License Management page in the WebUI. ***Release Notes.***

- When you perform an upgrade, select the server or client version based on the current installation type.
- Upgrade the NetVault Server before upgrading any client system.
- A NetVault Server can only support clients of the same version as itself or older. The NetVault Client software version cannot be higher than the NetVault Server software version.

- The NetVault Server installation is only supported on Windows and Linux operating systems.

  For information about supported operating system versions, see the *Quest NetVault Compatibility Guide* available at https://support.quest.com/technical-documents.
- When you upgrade NetVault on Linux-based systems, it removes all start and stop links to the netvault init script before resetting them to the runlevels of the new version. If you want to retain any user-defined links to the init script after an upgrade, do not use the word “netvault” in the link name.
- To simultaneously upgrade the NetVault Client software on multiple machines, you can use the push installation method of NetVault WebUI. You can use this method for both new and upgrade installations. For more information about this method, see the *Quest NetVault Administrator's Guide*.
- During upgrade, the language must be the same as the original language when NetVault was first installed. If the language during upgrade differs from the original language, the default administrator account will not migrate successfully and the NetVault instance may get locked.
- If an external installation of RDA version 3.2 is present, either remove it or upgrade it to the RDA version 4.0.3041.0 or later.
- All the DR devices that were attached to the previous version NetVault, must be reachable and online during the upgrade process.
- DR devices that are either not reachable or running on DR OS version less than 4.0.3 are grouped under Orphan Devices. Remove these devices first and then re-add to NetVault after the upgrade.
- To ensure the smooth operation of NetVault, after upgrading NetVault to version 14.1.2, you must clear the browser cache.
- When you upgrade NetVault Server, NetVault requires that you log in with the same user account that you used for installing the previous version of the NetVault, and run the setup. The upgrade fails if you upgrade NetVault using a different user account.
- There is an expected latency of a few minutes to load NetVault WebUI pages such as Dashboard, View Reports, and Create Backup Job, immediately after NetVault installation or upgrade.

If you experience authentication issues in other areas of NetVault, reconfigure the password and perform the action again. If the issue continues, contact NetVault Support.

When upgrading NetVault hybrid to NetVault pure 64 on Linux, the NetVault machine ID changes. Follow the below steps to upgrade:

- Install NetVault 12.4 Hybrid on Linux.
- Annotate NetVault machine ID.
- Upgrade to NetVault 13.0.3 pure64.
- Annotate NetVault machine ID and compare with the initial machine ID.

Preparing for an upgrade

- **Back up the NetVault Database:** The first step in preparing for an upgrade of NetVault Server is to perform a backup of the existing NetVault Database. If an upgrade is unsuccessful, you can reinstall the previous version of NetVault and recover the NetVault Database to enable troubleshooting of the failed upgrade without interfering with an existing backup schedule.

  For more information about backing up the NetVault Database with the Plug-in *for Databases*, see *Quest NetVault Built-in Plug-ins User’s Guide*.

  When you restore data from the NetVault Database, the logs are restored to the directory **logs_restored_<YYYYMMDD>**.

> **CAUTION: It is very important to copy all necessary license files to the \tmp folder of your NetVault Server before you upgrade. If the installer does not find any .dlv license files in NetVault Server's \tmp folder during upgrade, it installs the default 30-days trial license for NetVault. If you are using features and plug-ins not included or allowed or allowed under a trial license, the installation could cause unexpected changes in your NetVault configuration and failed backup jobs. To install the license files after an upgrade, go to the License Management page in the WebUI.** ***Release Notes.***

- **Close all other NetVault applications:** Before starting the upgrade procedure, close all other NetVault applications, such as NetVault Configurator, Workstation Client, and PostgreSQL pgAdmin. If you have opened any configuration file, make sure that the file is closed before you start the upgrade procedure. On Windows, it may also be necessary to close Event Viewer before performing an upgrade. On Windows, close all the command prompts where any of the NetVault directories are browsed.
- **Disable anti-virus software**: We recommend that you disable the anti-virus software before installing or upgrading NetVault. The installation process may conflict with the anti-virus software and various NetVault operations may fail to function properly after the installation if you do not disable the anti-virus software.

Upgrading NetVault in GUI mode

The graphical mode is available on all supported operating systems that provide a graphical environment. This mode requires GTK packages or X Window System libraries on Linux- and UNIX-based systems.

To upgrade NetVault Server or Client in graphical mode:

1. Log on to the system with administrator or root-level access, and navigate to the directory in which the installation file resides.
2. Double-click the installation file.
3. In the Language Selection dialog box, select the language to be used in the upgraded installation. Click **OK**.

   > **NOTE:** By default, in the Language Selection dialog box, the language of an existing NetVault installation is displayed and the same language is displayed for upgraded installation as well.The language must be the same as the original language when NetVault was first installed. If the language during upgrade differs from the original language, the default administrator account will not migrate successfully and the NetVault instance may get locked.

4. In the Welcome dialog box, review the notes, and click **Next** to continue.
5. In the **License Agreement** dialog box, select the **I accept the agreement** option if you accept all the terms.

   > **NOTE:** Before proceeding with the installation, make sure that you have thoroughly reviewed the license agreement.

   Click **Next** to continue.
6. In the Upgrade Confirmation dialog box, click **Yes**.

   Before upgrading the NetVault Server, make sure that a backup of NetVault Database has been performed.
7. In the **Ready to Upgrade** dialog box, click **Yes** to begin installation.
8. The installer begins to install the software. As the installation proceeds, the progress bar is updated in the Installation dialog box.
9. After the software is successfully installed on the machine, the Setup Completion dialog box is displayed. Click **Finish** to close the dialog box, and exit the installer.

Upgrading NetVault in text mode

The text mode is available on all supported operating systems, except Windows.

NOTE: You can exit the setup in text mode at any time before the installation starts by pressing Ctrl+C.

To upgrade NetVault Server or Client in text mode:

1. Log on to the system with root-level access. Start a terminal session, and navigate to the directory in which the installation file resides.
2. To start the installer, type the following command:

   ```
   ./<installation file name> --mode text
   ```

   Follow the instructions to complete the installation steps.
3. The License Agreement screen is displayed. Press **Enter** to read through the agreement.

   Press **y** to accept the license agreement and continue.

   NOTE: Before proceeding with the installation, make sure that you have thoroughly reviewed the license agreement.
4. In the Upgrade Confirmation screen, press **y** to continue.
5. In the **Ready to Upgrade** screen, press **Enter** to begin installation.
6. The installer begins to install the software. As the installation proceeds, the progress information is displayed in the terminal window.
7. After the software is successfully installed on the machine, a setup completion message is displayed.

Upgrading NetVault in unattended mode

To upgrade NetVault Server or Client in unattended or silent mode:

1. Log on to the system with administrator or root-level access.
2. Start a command prompt window or terminal session, and navigate to the directory in which the installation file resides.
3. Type the following command:

   Linux- and UNIX-based systems:

   ```
   ./<Name of the installation file> -mode unattended
   ```

   Windows-based systems:

   ```
   <Name of the installation file> -mode unattended
   ```

NOTE: When performing unattended installations, you can check the installer return code to verify whether the installation completed successfully. If the return code is zero (0), it implies that the installation is successful. A non-zero value indicates that the installation has failed. In such cases, you can examine the installation logs for details about the problem.

Migrating NetVault Server from Hybrid to Pure environment

This feature helps you migrate from Windows or Linux NetVault Server Hybrid (32-bit) to a Pure environment (64-bit). This migration lets you use all of the available system resources of a 64-bit OS, which increases the capability to use NetVault.

- NetVault supports migration on the servers where NetVault hybrid is installed on Windows or Linux 64-bit Operating System (OS). For more information, see Migrating NetVault Server in GUI mode or Migrating NetVault Server in unattended mode.
- If NetVault Server Hybrid is installed on 32-bit OS, you must migrate this hybrid environment to a 64-bit OS. For more information, see https://support.quest.com/netvault/kb/261119/migrating-netvault-server.

NOTE: When running on Linux, NetVault Machine ID changes when you upgrade from NetVault hybrid version to NetVault pure64 version.

Steps to Reproduce:

1. Install NetVault 12.4 Hybrid on Linux.
2. Annotate NetVault Machine ID.
3. Upgrade to NetVault 13.0.3 Pure 64.
4. Annotate NetVault Machine ID and compare with the initial ID.

Migration Prerequisites

- Operating System (OS) must be 64 bit.
- Migration is supported from NetVault 13.0.3 or later version. For migrating an earlier version of NetVault Server Hybrid environment to Pure environment, you must first upgrade the NetVault Server to 113.0.3 or later hybrid version.

Migrating NetVault Server in GUI mode

To install NetVault Server in graphical mode:

1. Log on to the system with administrator or root-level access, and navigate to the directory in which the installation file resides.
2. Double-click the Pure (64 bit) installation file.
3. In the **Language Selection** dialog box, select the language for your NetVault installation.

   The available options are:

   - English
   - Simplified Chinese
   - French
   - German
   - Japanese
   - Korean

   The default selection is English.

   Click **OK**.

4 The installer identifies previous installation of NetVault Server in hybrid environment, and confirms to proceed upgrade of Pure (64 bit) installation. In the **Migration mode** confirmation dialog box, Click **Yes**.

5 In the Welcome dialog box, review the notes, and click **Next** to continue.

6 In the **License Agreement** dialog box, select the **I accept the agreement** option if you accept all the terms.

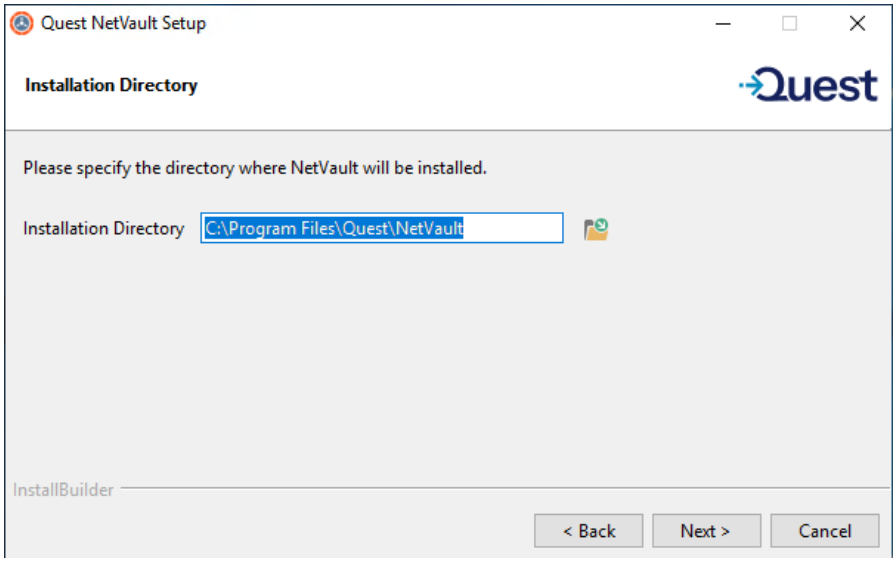
> **NOTE:** Before proceeding with the installation, make sure that you have thoroughly reviewed the license agreement.

Click **Next** to continue.

7 In the **Installation Directory** dialog box, specify the installation path.

> **NOTE:** During migration, the Installation Directory option is applicable only on Windows Servers.

Figure 1. Installation Directory dialog box



The default installation path for NetVault is same as your existing installation path.

For example: On a Windows machine, if the existing NetVault Hybrid installation path is `C:\Program Files (x86)\Quest\NetVault` then during migration to Pure64 environment the default installation path is `C:\Program Files\Quest\NetVault`.

To use the default path, click **Next**.

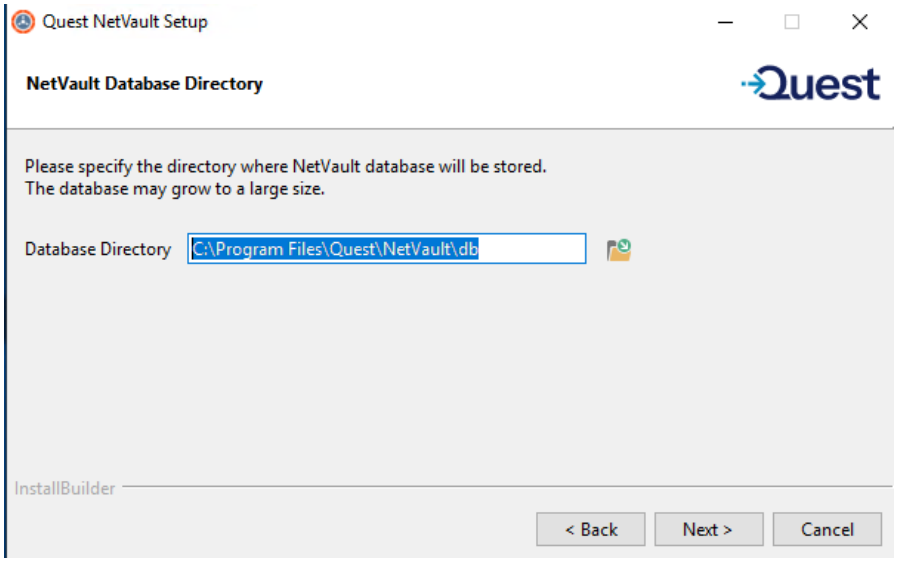
To change the location, type the new path, and click **Next**. If the specified path does not exist, it is automatically created during installation. You can also click **Browse**, and select the target directory from the Explorer window.

If you specify a new installation directory other than the existing installation directory, where the new installation directory contains any files or directories, a warning is displayed:

```
The directory you have selected is not empty. If you continue the
installation, everything in the directory will be deleted. Is it OK to
install into this directory and delete the existing contents?
```

8 In the **NetVault Database Directory** dialog box, specify the database directory path.

Figure 2. NetVault Database Directory dialog box



The default database directory path for NetVault is same as your existing database path.

For example: On Windows machine, if the existing database path of NetVault in Hybrid environment is `C:\Program Files (x86)\Quest\NetVault\db` then during migration to Pure64 environment the default database path is `C:\Program Files\Quest\NetVault\db`. On a Linux machine, the default path for both Hybrid and Pure 64 environments is `/usr/netvault/db`.

To use the default path, click **Next**.

To change the location, type the new path, and click **Next**. If the specified path does not exist, it is automatically created during installation. You can also click **Browse**, and select the target directory from the Explorer window.

If you specify a new database directory other than the existing database directory, where the new database directory contains any files or directories, a warning is displayed:

```
The directory you have selected is not empty. If you continue the
installation, everything in the directory will be deleted. Is it OK to
install into this directory and delete the existing contents?
```

9 In the **Database Stage Directory** dialog box, specify the **Stage Directory** path. In this directory NetVault PostgreSQL database dump is created, this directory is created temporary for the PostgreSQL migration process. Once the migration is successful this temporary directory gets deleted, however, if migration is not successful this directory is not deleted and can be used for troubleshooting purpose.

The default stage directory path for NetVault is same as your existing database path.

For example: On Windows machine, if the existing database path of NetVault in Hybrid environment is `C:\Program Files (x86)\Quest\NetVault\db` then during migration to Pure 64 environment the default database path is `C:\Program Files\Quest\NetVault\db`. On a Linux machine, the default path for both Hybrid and Pure 64 environments is `/usr/netvault/db`.

To use the default path, click **Next**.

To change the location, type the new path, and click **Next**. If the specified path does not exist, it is automatically created during installation. You can also click **Browse**, and select the target directory from the Explorer window.

10 In the **NetVault Upgrade** dialog box, review the migration parameters and click **Next**. If you want to change any migration parameter, click **Back**.

NOTE: If you have installed additional plug-ins, all the additional plug-ins are un-installed during the migration process. Once NetVault Pure 64 is successfully installed, you need to again install additional Pure Plug-ins.

Jobs created using end of life plug-ins will not work.

11 In the **Ready to Upgrade** dialog box, click **Yes** to begin installation.

Migrating NetVault Server in unattended mode

To upgrade NetVault Server in unattended or silent mode:

1 Log on to the system with administrator or root-level access.

2 Start a command prompt window or terminal session, and navigate to the directory in which the installation file resides.

3 Type the following command:

Linux-based systems:

```
./<Name of the installation file> --mode unattended <options>
```

— or —

```
./<Name of the installation file> --mode unattended --optionfile <filename>
```

Windows-based systems: To continue with the default parameters during upgrade

```
<Name of the installation file> --mode unattended
```

Windows-based systems: To change the default parameter value during upgrade

```
<Name of the installation file> --mode unattended <parameter list>
```

— or —

```
<Name of the installation file> --mode unattended --optionfile <filename>
```

You can specify the following parameters at the command line or in the option file.

NOTE: To access help on the installation options, you can run the installer with the `--help` option:
On Windows: `<Name of the installation file> --help`
On Linux: `./<Name of the installation file> --help`

Table 1. Installation options

Option	Description
`--unattendedmodeui <interaction level>`	Specifies the interaction level for the unattended installation. The allowed values are: • **none:** This is the default mode for unattended installations. In this mode, the installer does not display any prompts or progress information. • **minimal:** In this mode, the installer does not display any prompts, but it provides the progress information through pop-up windows. • **minimalWithDialogs:** In this mode, the installer displays some prompts, and it provides the progress information through pop-up windows.
`--optionfile <filename>`	Specifies the name of the option file. Provide the full path if the file does not reside in the current directory.

Table 1. Installation options

Option	Description
`--new-install-dir <new-install-dir>`	Windows only. Specifies the installation path for NetVault. If the path contains spaces, enclose it in quotation marks (“ ”). The default installation path for NetVault is same as your existing installation path. **For example:** On Windows machine, if the existing installation path of NetVault in Hybrid environment is “`C:\Program Files (x86)\Quest\NetVault`” then during migration to Pure 64 environment the default installation path is “`C:\Program Files\Quest\NetVault`”
`--new-db-dir <new-db-dir>`	Specifies the installation path for NetVault Database. This parameter can only be specified for NetVault Server installations. If the path contains spaces, enclose it in quotation marks (“ ”). The default database directory path for NetVault is same as your existing database path. **For example:** On Windows machine, if the existing database path of NetVault in Hybrid environment is “`C:\Program Files (x86)\Quest\NetVault\db`” then during migration to Pure64 environment the default database path is “`C:\Program Files\Quest\NetVault\db`”. On a Linux machine, the default path for both Hybrid and Pure 64 environments is `/usr/netvault/db`.
`--db-backup-dir <db-backup-dir>`	Specifies the installation path for NetVault Database. This parameter can only be specified for NetVault Server installations. If the path contains spaces, enclose it in quotation marks (“ ”). The default stage directory path for NetVault is same as your existing database path. • **For example:** On Windows machine, if the existing database path of NetVault in Hybrid environment is “`C:\Program Files (x86)\Quest\NetVault\db`” then during migration to Pure64 environment the default database path is “`C:\Program Files\Quest\NetVault\db`”. • On a Linux machine, the default path for both Hybrid and Pure 64 environments is `/usr/netvault/db`.

NOTE: When performing unattended installations, you can check the installer return code to verify whether the installation is completed successfully. If the return code is zero (0), it implies that the installation is successful. A non-zero value indicates that the installation has failed. In such cases, you can examine the installation logs for details about the problem.

If you have installed additional plug-ins, all the additional plug-ins are un-installed during the migration process. Once NetVault Pure 64 is successfully installed, you need to again install additional Pure Plug-ins.

Jobs created using end of life plug-ins will not work.

Migrating NetVault Server from 32-bit OS to 64-bit OS

To migrate NetVault Server from 32-bit OS to 64-bit OS

1. Move exiting Hybrid NetVault Server from 32-bit OS to new 64-bit OS. For more information https://support.quest.com/netvault-backup/kb/261119/migrating-netvault-server
2. After moving NetVault Server to 64-bit OS, if NetVault Server (Hybrid) version is earlier than NetVault Server (Hybrid) version 13.0.3, you need to first upgrade it to NetVault Server Hybrid environment version13.0.3 or later.

3 Ensure NetVault Server (Hybrid) is up and running before you migrate to Pure 64 environment.

4 Migrate NetVault Server from Hybrid to Pure 64 environment using the latest version of Pure 64 NetVault Server setup. For more information see, Migrating NetVault Server from Hybrid to Pure environment

Upgrading licensed plug-ins

The procedures for installing and removing the licensed plug-ins are covered in the respective plug-in user's guides. The standard method for upgrading any optional plug-in is to install the latest version over the previous version of the plug-in. Any changes or additional steps required for an upgrade are described in the Release Notes for that version of the plug-in.

7

Licensing NetVault

- About licensing NetVault
- Obtaining the machine ID
- Obtaining a permanent license file
- Installing the product license file

About licensing NetVault

When you first install a NetVault application, it includes a trial license. The trial license for NetVault is valid for 30 days, and can be used only once. To continue using the software after the expiry of the evaluation period, you must obtain and install the permanent license file for the server and installed plug-ins.

The server is licensed based on the NetVault Server Edition and the additional options that you have purchased. The clients do not require a permanent license file, unless they are running a NetVault Client or plug-in older than version 13.0 . NetVault 14.1.2 does not require license files to installed on clients. All license files must be installed on the NetVault Server. For more information about licenses for plug-ins released prior to NetVault 13.0, see the *Quest NetVault 14.1.2 Release Notes*.

The permanent license file for NetVault is tied to the particular server where it is installed using the Machine ID. To obtain the permanent license file, locate the relevant Machine ID, and submit the request using the online licensing form.

Obtaining the machine ID

To obtain the machine ID for a NetVault machine:

1. Start the NetVault WebUI, and in the Navigation pane, click **License Management**.
2. In the **Client Details** list, note the machine ID for the applicable server or client entry.

Obtaining a permanent license file

To obtain a permanent license file for NetVault:

Submit the request using the on-line product licensing form at: https://support.quest.com/

Installing the product license file

You can install the license file from the License Management page. You need only to install the file on the NetVault Server.

NOTE: The permanent license file for NetVault is tied to the Machine ID of the NetVault Server machine. While installing the license file, verify that you select the correct server for which the license was obtained.

Installing the license file

To install the license file:

1. In the Navigation pane, click **License Management**.
2. On the **License Management** page, click **Install License**.

   Because the NetVault WebUI is tied to a specific NetVault Server and all licenses are installed on the NetVault Server, there is no need to select a Client machine.
3. In the **Choose License File** dialog box, click **Select a file**, point to the **".dlv"** file that contains the license key, and click **Open**.
4. In the dialog box, click **OK** to apply the selected license file.

   After the license file is installed successfully, a message is displayed.
5. To dismiss the message, click **X**.

8

Removing NetVault

- Removing NetVault Server or Client

Removing NetVault Server or Client

When you install the NetVault Server or Client software on a machine, the installation process creates an uninstaller executable file named **"uninstall"** under the NetVault installation directory. You can use this executable to remove NetVault. The installation process also creates a data file named "uninstall.dat," which contains information about the installation. To properly uninstall the software, both the uninstaller executable and the uninstall.dat files must exist on the machine.

NOTE: When you remove NetVault, the backup indexes are deleted from the NetVault Database. However, the actual backed up data remains intact on the media.

To remove NetVault Server or Client

1 Log on to the system with administrator or root-level access, and navigate to NetVault installation directory.

2 Use any of the following methods to run the uninstaller.

Mode	Description
GUI mode	Double-click the file named "uninstall." The filename extension is ".exe" on Windows and ".app" on Mac OS X.
Text mode	Depending on the operating system, type the following command: • **Linux and UNIX:** `./uninstall --mode text` **NOTE:** • You can omit the `--mode text` option when running the uninstaller on a local Mac OS X machine. When running the uninstaller on Mac OS X from a remote terminal (SSH or telnet), it may be necessary to use the `--mode text` option. Otherwise, the installer may run in full graphic mode without showing any output in the console.
Unattended mode	Depending on the operating system, type the following command: • **Linux and UNIX:** `./uninstall --mode unattended` • **Windows:** `uninstall --mode unattended`

IMPORTANT: When uninstalling NetVault on a Windows environment where the NetVault Plug-in for VMware is currently installed, the VMware mount driver service (vstor2-mntapi20-shared) will remain running in the background. Because the binary remains loaded in system memory, the uninstaller cannot automatically delete the directory at <NetVault_Install_Folder>\bin\vmware\bin\vstor2-mntapi20-shared.

If this directory and service are left behind, subsequent attempts to reinstall NetVault on the same machine will fail.

Before or immediately after uninstalling NetVault, manually stop and delete this leftover driver service. Open a Windows Command Prompt as Administrator and run the following commands:

```
sc stop vstor2-mntapi20-shared
sc delete vstor2-mntapi20-shared
```

Once the service is deleted, you can safely delete the remaining <NetVault _Install_Folder> directory manually if it was not completely removed.

> **NOTE:** On Windows, you can also use **Programs and Features** to uninstall NetVault:
>
> 1. Open P**rograms and Features** (**Start > Control Panel > Programs > Programs and Features**).
> 2. In the list of installed programs, select **NetVault**, and then click **Uninstall**.
> 3. In the confirmation dialog, click **Yes** to remove the program.

- The uninstaller generates a log file named `netvault_{GUID}_uninstall.log` in the system temporary directory. If the uninstallation fails, the uninstaller may not generate the regular log file. Instead, it may leave an intermediate log file is named `bitrock_installer.log` or `bitrock_installer_nnn.log` in the system temporary directory.

> **NOTE:** An uninstall of the built-in Plug-in for Rapid Data Access (RDA) may leave behind the following items, which you must uninstall manually:
>
> - The `/usr/local/qsobject-libs` soft link, which points to `/usr/netvault/dynlib/qsobject-libs`
> - The `/usr/netvault/dynlib/qsobject-libs` folder and its contents

A

Troubleshooting

- Common errors

Common errors

This section describes some common errors and their solutions. It includes the following topics:

- NetVault Installation fails on Windows after a previous installation
- NetVault Service fails to start on Windows
- NetVault Service fails to start after the machine is restarted
- NetVault Service starts, but stops immediately on Linux
- Installation aborted on Windows after installer fails to delete an existing directory
- Upgrade fails on a client running Plug-in for DB2

NetVault Installation fails on Windows after a previous installation

Description

NetVault installation fails on Windows-based NetVault Server after a previous installation.

Symptom

When attempting to reinstall NetVault on a system that previously had the NetVault Plug-in for VMware installed, the installation procedure halts or fails because the previous installation directory cannot be overwritten or accessed.

Cause

During the previous uninstallation, the VMware mount driver service (vstor2-mntapi20-shared) was not stopped. As a result, the <NetVault_Install_Folder>\bin\vmware\bin folder could not be deleted by the uninstaller because the system was still holding the driver file in memory.

Solution

1. Open a Command Prompt as Administrator.
2. Stop the conflicting service by running: sc stop vstor2-mntapi20-shared
3. Delete the service by running: sc delete vstor2-matapi20-shared
4. In Windows File Explorer, navigate to and manually delete the remaining <NetVault _Install_Folder>
5. Restart the NetVault installation process.

NetVault Service fails to start on Windows

Description

The NetVault Service fails to start on a Windows-based NetVault Server.

Symptom

Check the Windows Event Viewer to see if it displays the following message:

PDT FATAL: lock file “postmaster.pid” already exists

Solution

NetVault cannot start if the PostgreSQL database that is used to store the system data does not start. To correct this issue, delete the **“postmaster.pid”** file from the location referenced in the log and restart the NetVault Server.

NetVault Service fails to start after the machine is restarted

Description

After restarting the machine, the NetVault Service sometimes fails to start on a Windows-based NetVault Server.

Symptom

Check the Windows Event Viewer to see if it displays the following message:

FATAL: could not create any TCP/IP sockets " for a PostgreSQL source

Solution

NetVault cannot start if the PostgreSQL database that is used to store the system data does not start. To correct this issue, start the Task Manager, and click **Show processes from all users**. You can see multiple instances of **postgres.exe** running on the system. Select any one instance of this process, and click **End Process** to remove all instances of **postgres.exe**. Then, start the NetVault Service.

NetVault Service starts, but stops immediately on Linux

Description

On a Linux-based machine, the NetVault Service starts, and then stops immediately.

Symptom

No error messages are displayed.

Solution

This issue can occur if the PostgreSQL service cannot resolve the host name **localhost**, and fails to start.

Check the /etc/hosts file, and if the file does not contain an entry for **localhost**, add the entry.

Installation aborted on Windows after installer fails to delete an existing directory

Description

On a Windows-based machine, installation fails if the installer is unable to remove the existing contents from the installation directory.

Symptom

The installer reports a preinstall script error and cancels the installation process.

Solution

This error can occur if there are any open files in the installation directory. If a file is locked by the Windows OS, the installer cannot delete it.

When this error occurs, do the following:

- Check if the installation folder contains any open files, and try to close the files or programs that use the files. Delete the files and run the installer.
- If you are unable to delete the files, restart the machine, and then run the installer.

Upgrade fails on a client running Plug-in *for DB2*

Description

Upgrade fails on a Windows-based NetVault Server or Client on which the Plug-in *for DB2* is running.

Symptom

Upgrade fails because the installer is unable to delete the library files in the **Windows\System32** folder due to sharing violations.

Solution

The Plug-in *for DB2* causes this problem. When you run a DB2 backup or restore job, the DB2 Server process invokes the shared library used by the Plug-in *for DB2*. After the backup or restore job completes, the DB2 Server process does not unload the library and release the shared memory. During upgrade, the installer is unable to overwrite the library files because they are in use. So, the process fails.

To successfully upgrade the NetVault Server or Client software, do the following:

1. Restart the DB2 Server. This step is necessary to unload the plug-in library and release the shared memory.
2. Restart the NetVault Service.
3. Run the upgrade process.

About us

Quest provides software solutions for the rapidly-changing world of enterprise IT. We help simplify the challenges caused by data explosion, cloud expansion, hybrid datacenters, security threats, and regulatory requirements. We are a global provider to 130,000 companies across 100 countries, including 95% of the Fortune 500 and 90% of the Global 1000. Since 1987, we have built a portfolio of solutions that now includes database management, data protection, identity and access management, Microsoft platform management, and unified endpoint management. With Quest, organizations spend less time on IT administration and more time on business innovation. For more information, visit www.quest.com.

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.