

Quest[®] NetVault[®] 13.2 Revision1

Release Notes

August 2023

Revised November 2023

These release notes provide information about the Quest[®] NetVault[®] release.

Topics:

- [About this release](#)
- [Enhancements](#)
- [Resolved issues](#)
- [Known issues](#)
- [System requirements](#)
- [Product licensing](#)
- [Upgrade and installation instructions](#)
- [More resources](#)
- [Globalization](#)
- [About us](#)

About this release

Quest NetVault (NetVault) offers the most advanced, cross-platform data protection capabilities on the market and 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.

NetVault 13.2 is a minor release, with enhanced features and functionality. For complete product documentation, visit <https://support.quest.com/technical-documents>.

- i** | **NOTE:** NetVault 13.2 Client does not support AIX, FreeBSD, LinuxIA64, and Solaris Intel.
- NOTE:** NetVault 13.2 does not support MSP installation mode for this release.

NOTE: For the RDA feature work on an HP-UX platform, you must manually copy **librofsoca.so** from `/usr/netvault/dynlib/bit64` to `/usr/netvault/dynlib/`. Without this change, RDA backup does not work on HP-UX.

NOTE: When installed on a NetVault Client running NetVault 13.0, NetVault Plug-in *for Oracle* 12.3 and earlier does not support Oracle controlfile autobackups and Oracle RMAN CLI backups. Restoring from Oracle RMAN CLI is supported, but Oracle controlfile autobackups and RMAN CLI backups are not supported.

If running NetVault Plug-in *for Oracle* 12.3 or earlier, to allow full usage from NetVault WebUI and Oracle RMAN CLI, use NetVault 12.4 Client software or earlier on the NetVault Client with Oracle installed. Alternatively, use NetVault 13.0 Client software on the NetVault Client with Oracle installed and disable Oracle controlfile autobackups and run backups only from the NetVault WebUI.

NOTE: While upgrading from NetVault 12.3.0.15, you may face authentication issues at few places while performing various operations. This is due to a change in the algorithm from NetVault 12.3.0.15 to NetVault 13.2. For more information, see [Upgrading from NetVault Backup 12.3](#)

CAUTION: If you are using NetVault Client 12.2 with HP-UX and QoreStor, Quest recommends that you do not upgrade the client to 13.2. If you have the NetVault Client installed on an HP-UX or macOS operating system, Quest recommends that you use a fresh install of NetVault 13.2 rather than upgrade from an older version.

Licensing changes

With the release of NetVault 13.0, instead of a license key, NetVault uses license files in the .dlv format that install on the NetVault Server machine. NetVault 13.0 is compatible with older versions of the client and plug-ins, but for each older client or plug-in installation, you must obtain a license in the new format.

Before an upgrade

Prior to upgrading your NetVault Server to release 13.0, Go to My Account at www.quest.com, download the .dlv license files for NetVault Server and all licensed plug-ins used in your configuration, and then save the files to your current NetVault Backup 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. For more information, see the *Quest NetVault 13.2 Installation Guide*.

NOTE: If the plug-in exists on a previous version of NetVault Client, you need to confirm that the old license key for that plug-in is installed on the client and the new license file for it on the NetVault Server machine. If the plug-in exists on a NetVault 13.0 Client or Server, you need only install the new license file.

After an upgrade

The new license format is not compatible with the old format of license keys. If you do not download and install the appropriate license files before you upgrade, subsequent backups could fail.

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. For more information, see the *Quest NetVault 13.2 Installation Guide*.

The format of license and number of licenses you need depends on your system configuration and the products that you upgrade. All plug-ins released prior to NetVault 13.0 require that you install a license in the new format, but certain scenarios require the old license key format as well. To know what licenses you need to have to prevent backup interruptions, see the following scenarios.

Scenario 1: Older plug-in on NetVault 13.0 Server. If you install a plug-in that was released prior to 13.0 on a NetVault 13.x Server, a trial license key is included in the installation package for the plug-in, but it is not installed. You must obtain a new license file for this plug-in to install on the NetVault Server.

Scenario 2: Older plug-in on NetVault 13.0 Client and attached to NetVault 13.0 Server. If you install a plug-in that was released prior to 13.0 on a NetVault 13.0 Client, a "Plug-in installed successfully" message appears along with a message that prompts you to manually install the trial or permanent plug-in license on the server. The packaged trial license does not automatically install with the plug-in, so you must obtain and install a trial license, and eventually the permanent license, in the .dlv format and install it on the NetVault Server. You do not need to install a license on the client.

Scenario 3: Older plug-in on older NetVault Client attached to NetVault 13.0 Server. If you install a plug-in that was released prior to 13.0 on a NetVault Client that was released prior to 13.0, and that client is attached to a NetVault 13.0 Server, you need both license formats. A trial license in the old format is included in the installation package for the plug-in and automatically installs on the older client. When the trial is over, you must obtain and install a permanent license in the same format. To allow the older client to communicate with the NetVault 13.0 Server and prevent plug-in backups from failing, you must also install the trial .dlv license file, and eventually the permanent .dlv license file, on the NetVault 13.0 Server.

To install new .dlv licenses for versions of NetVault plug-ins that were released prior to 13.0, see [Product licensing](#) or the *Quest NetVault 13.2 Installation Guide*.

Enhancements

The following is a list of enhancements implemented in NetVault 13.2.

Table 1. Enhancements

Enhancement	Issue ID
<ul style="list-style-type: none">CDP Replication Phase 2 jobsOpenSSL 3.0 supportCDP Scheduler improvementsCustomizable immutability	

Resolved issues

The following is a list of issues addressed in NetVault 13.2.

Table 2. Resolved issues

Resolved issue	Issue ID
NetVault WebUI displays Labels Placeholders (BTN_SIGN_IN, CLIENT_STATUS_TITLE. etc) instead of displaying the actual labels, in particular, for tabs running WebUI NetVault other than the first tab that is running NetVault WebUI	NV-2191
Datacopy Phase 2 job always failed between two DataDomain (both Datadomains are of same version: DDOS 7.2) when "Use optimised replication" is selected between devices that support this feature on Datacopy Plug-in option.	NV-3243
"Shared Memory (Kb) Used for Process Table" default values in Japanese local	NV-3290
Upgrade to NetVault 13.1.x: RAS device, for example QoreStor getting full as segments seems not to be deleted by NetVault; medmgrretiredrassegment columns actualbyteswritten, iscdpsegment, and v3imageinfo are missing	NV-3321
Workflows using BACKUP_TARGET may crash; NVBU/base/include/jobs/guijobcontents.h BACKUP_TARGET object format was changed but object magic was not changed to allow to use versions of the BACKUP_TARGET object	NV-3369
After adding missing columns to SmartDisk and NetVault (as per NV-3321), the newly generated segments are not expired in SmartDisk, and the retired RAS segments table keeps growing in NetVault. The indices are deleted with success but the segments are not deleted.	NV-3379
'nvexpiresaveset' should also allow editing 'only duplicates' life	NV-3546

Known issues

The following is a list of issues, including those issues attributed to third-party products, known to exist at the time of release.

Table 3. General known issues

Known issue	Issue ID
When performing a push install from NetVault Server running on a CentOS 6 32-bit operating system to Windows Server 2019, the temporary share created on the target server cannot be mounted on the CentOS machine, which causes the operation to fail. This issue also prevents the share created on the Windows Server 2019 machine from being added as a package store to the NetVault Server running on the CentOS 6 32-bit operating system.	DNAD-2014
If you are using Huawei OceanStor Device Manager and a snapshot is mounted on multiple NetVault clients, unmounting that snapshot from any one of the NetVault Clients also unmounts the snapshot from all NetVault Clients.	NV-64, NVBU-18684
When created on a Windows 32-bit operating system with a NetVault 13.0 hybrid installation, array-based persistent snapshots fail.	NV-652
When multistreaming jobs, the Job Status may not represent the exact amount of data backed up, as aggregation logic is inaccurate for multiple streams. Workaround: View the Device Activity.	NV-840
In the WebUI, the configuration setting for the license warning message does not work properly.	NV-889
On a Windows server, when upgrading and performing a hybrid-to-pure migration, the catalog service does not start.	NV-896

Table 3. General known issues

Known issue	Issue ID
When a user installs a version of a plug-in that is prior to 13.0, an “installation successful” message appears, along with a warning that the user must manually install a temporary or permanent license.	NV-935
A DataCopy phase 2 job fails with a crash dump when DataCopy starts from DDOS version 6.0 to 7.2 using DD Boost devices.	NV-1398
In Push Installation, if the installation path is /usr, the installation fails and then removes the contents of the /usr directory on the target machine, which includes the system commands and libraries from /usr/bin, /usr/sbin, /usr/lib, and /usr/lib64 directories. Workaround: When using Push Installation, use /usr/netvault as the installation path.	NV-1416
Resolved an issue where a blank Job Monitor page loaded when using Internet Explorer version 11.	NV-1518
The procedure for creating a continuous data protection (CDP) backup job is not available from the NetVault Guided Configuration screen.	NV-2491
A CDP job that runs for an extended amount of time may prevent a VMware 6.7 VM from being locked again for future jobs. Workaround: Before you begin taking CDP backups, upgrade VMware to version 7.x.	NV-2547
Unable to run two Instant Restore jobs from two different NetVault Servers at the same time. Workaround: Run one job after the other by deleting the NFS connection before the second job.	NV-2580
When a CDP saveset has an excluded data disk, Instant Restore fails	NV-3105
While editing a restore selection set on the Edit Selection Set page, the Next button is disabled. Workaround: Select or clear the data selection tree check box on the Edit Selection Set page.	NVBU-16148
The diagnostic data for some NetVault Client machines with an older configuration is intermittently collected only partially due to a timeout. Workaround: Increase the value in the Physical Client Long Timeout field of the Web Service dialog box.	NVBU-15735
Quest DR Device is not accessible after you change the DR Device user password.	NVBU-15843
CLI displaying non English characters incorrectly. For example, C:\Program Files\Quest\NetVault\util>nvscanmedia.exe -medialabel "FOREIGN:VM_WIN2016_FR 14 avr 11:14-1" Sent scan media request... Scan request failed - 'M @dia inconnu'	NVBU-13974 (31104)
The restore job from NDMP backup data copied to 256Kib drive fails and displays an “NDMP data does not start on a block boundary” error message. Workaround: https://support.quest.com/netvault/kb/212701	DNNDMP-657 (31825)
On the Manage Devices page, in Tree View, clicking Scan starts scanning the selected slot, drive, or library immediately. It does not show the Minimum life for imported backups (days) dialog box or confirmation message.	NVBU-14745 (32197)
On the Manage Devices page, in Tree View, you cannot select multiple media from the list of available media for a bulk blank operation.	NVBU-14758 (32214)
On the Manage Devices page, in Tree View, you cannot select multiple media from the list of available media for a bulk label operation.	NVBU-14759 (32215)
When performing backups with the NetVault Plug-in for <i>Teradata</i> , if the number of parallel streams exceeds the SoftStreamLimit set for the target NetVault SmartDisk, the backup job stops responding.	NVBU-389 (1948)

Table 3. General known issues

Known issue	Issue ID
When a backup that is configured as “restartable” is duplicated, only the data backed up in the last restarted instance of the job is duplicated.	NVBU-1160 (3971, (NVG-4022)
In NetVault with a non-English locale, the Running Status field does not display a current job status as the output of <code>nvreport</code> command and Report Job.	NVBU-1186 (3997) (NVG-4206)
On Linux- and UNIX-based systems, the progress message that is displayed during NetVault installation is displayed correctly only if the system is configured to use the UTF-8 character set.	NVBU-10588 (26249)
If the Network Manager process (nvnmgr) stops responding due to any error and fails to exit properly, it prevents the NetVault Service from starting on that machine. Workaround: If this error occurs, manually stop or end the nvnmgr process before restarting the NetVault Service.	NVBU-11005 (26778)
After upgrading to Firefox 31, if you try to log in to the NetVault WebUI, the following error message is displayed: Issuer certificate is invalid. (Error code: sec_error_ca_cert_invalid) The new security library security.use_mozillapkix_verification raises this certification error when you try to access a self-signed certificate. Workaround: To resolve this issue, do the following: <ol style="list-style-type: none"> 1 Type about: config in the Firefox address bar. 2 Locate the preference security.use_mozillapkix_verification, and set it to false. 3 To save the setting, close the browser window. 	NVBU-11321 (27189)
On Windows, if a copy of a “.cfg” file is created in the <NetVault home>/config directory, the WebUI may display empty or partly empty dialog boxes when the settings are accessed from the Change Settings page after restarting the service.	NVBU-12734 (29149)
Under certain conditions, the NetVault Server may be unable to determine the status of the push installation task on a remote client. In such cases, the task status may remain in the “Running” state. This error can occur under the following conditions: <ul style="list-style-type: none"> • The deployment agent (nvclientinstaller) exits unexpectedly. • The deployment agent fails to update its completion status to the server due to unknown errors. • The deployment agent fails to send the status update messages to the correct IP address. This error can occur if the NetVault Server is running on a multihomed machine and the preferred network address is not configured for the server. Subsequent tasks remain in a “Pending” state until you cancel the previous task.	NVBU-13610 (30508)
When performing push installations, if you use any illegal characters in the machine password for a new client, the remote installer reports an error and fails to install the software on the client.	NVBU-13632 (30537)
If the server IP address is used to configure a local package store (for example, \\10.11.12.3\PkgStore), the user credentials are not validated when the package store is added or updated. If you specify invalid credentials, no errors are reported. However, the deployment task fails if the authentication fails and the packages cannot be retrieved from the store. Therefore, Quest recommends that you use the server name when configuring the path to a local store (for example, \\WinServer1\PkgStore).	NVBU-13647 (30558)

Table 3. General known issues

Known issue	Issue ID
Known issues related to Plug-in for RDA on Solaris: <ul style="list-style-type: none"> • Backing up file system data from Solaris clients to DR Series Systems: When you perform file system backups to DR Series systems, the backups run in the Passthrough mode by default. You can change the default setting on the DR Series system to run backups in the Dedupe mode, but you may experience slow backup performance in this mode. • Restoring data from a DR Series System to a Solaris Client: When you run multiple restore jobs at the same time, it can affect the performance of individual jobs and result in low aggregate throughput. 	NVBU-13678 (30596)
Known issues related to DR Series Systems: <ul style="list-style-type: none"> • When performing optimized replication between two DR Series systems, if the source DR Series system becomes unavailable, a normal data copy operation using the NetVault Server or Client is performed when the device becomes available again. • When performing a backup using the NetVault Plug-in for VMware (Plug-in for VMware), if you set the client mode type to dedupe, the throughput is lower when compared with the passthrough mode. If you do not set the client mode on the DR Series system, the Plug-in for RDA automatically chooses the best mode for the backup. • Restore to a NFS location fails when a Duplicate saveset created using the optimized replication option is used for the job. 	
<p>On a Linux system, NetVault fails to access a DR Series system if you do the following:</p> <ol style="list-style-type: none"> 1 Install the Plug-in for RDA. 2 Install NetVault. 3 Stop NetVault Service. 4 Remove the Plug-in for RDA. <p>When you remove the plug-in, it deletes the directory /usr/local/oca-libs, which causes an error when NetVault tries to access the device.</p> <p>Workaround: After removing the plug-in, complete the following steps:</p> <ol style="list-style-type: none"> 1 Ensure that the /usr/local/oca-libs directory has been removed. If not, remove the directory. 2 To create a symbolic link, type the following command: <pre>ln -sf /usr/netvault/dynlib/oca-libs /usr/local/oca-libs</pre> 3 Restart the NetVault Service. 	
<p>The Delete Non-Scheduled Jobs option is intended to delete unscheduled jobs after a specified period. Because the jobs using the Triggered schedule type have no physical scheduled time, they are also deleted after the specified period elapses. If you are using Triggered jobs in your NetVault environment, do not use the Delete Non-Scheduled Jobs option.</p>	
<p>When using NetVault Plug-in for NDMP (Plug-in for NDMP), if you run multiple jobs with the auto-deletion option set to "On," the parent and child jobs may still be listed on the Job Status page.</p> <p>Workaround: To correct this issue, close the NetVault WebUI, and start it again. There is no need to stop and restart the NetVault Service.</p>	
<p>The canned report "Disk Storage Devices — General" is intended for the NetVault SmartDisk devices; this report does not show details about the DR Series systems and Data Domain Systems.</p>	
<p>After restoring the NetVault Database, when you restart the NetVault Service, the job status shows "Scheduler Aborted Whilst Job Running." This message can be ignored.</p>	
<p>On a Solaris (SPARC or x86-64) system, when the LANG variable is set to en_US.UTF-8, the restore job wizard does not display the filenames on the Create Selection Set page. This issue is not encountered when LANG is set to C.</p>	

Table 3. General known issues

Known issue	Issue ID
<p>If the default locale is changed (for example, from UTF8 to EUC or from EUC to UTF8), the EULA may not be displayed properly.</p> <p>Workaround: To view the EULA, use a terminal that can display EUC character set.</p>	
<p>Beginning with NetVault Backup 11.1, if Plug-in <i>for Oracle</i> or Plug-in <i>for Informix</i> is installed on a Linux machine where NetVault Server is also installed, the backups of the plug-ins may fail due to certain libraries loading.</p> <p>Workaround: Add the NetVault library path to the NetVault <code>startup.sh</code> script. For example, on a Linux-based NetVault Server:</p> <pre>LD_LIBRARY_PATH=/usr/netvault/lib:/lib:/usr/lib:\$LD_LIBRARY_PATH export LD_LIBRARY_PATH</pre>	NVBU-14424 (31721)
<p>Pre-configured reports, including Disk Storage Devices - General, Front Side Data, Storage Utilization, and Storage Utilization - RAS, did not report the correct value for Licensed Protected Capacity.</p>	NVBU-14623
<p>Job details are not displayed when you click a policy job in the Job Status widget on the NetVault Dashboard page.</p>	NVBU-17538
<p>After running a job, when you go to the Job Status page to monitor the status of the job, it shows all the jobs with previously applied filters instead of showing all current activity.</p> <p>Workaround: Select the Current Activity option in the View By job status filter option.</p>	NVBU-17582
<p>You cannot restore the data items of a network share backup located using the catalog search feature.</p>	NVBU-17632
<p>If you perform multi-stream backups to tape, select the Archive and Migration options in Backup Life, and identify an expiration date, the savesets are corrupted after the expiration is reached.</p> <p>Workarounds:</p> <ul style="list-style-type: none"> When you scan the media to recover data, select the Migrate (Discard) Original option. Take the index offline and perform the restore. 	NVBU-18297
<p>When a LUN is mounted on an unsupported volume and the disk information is retrieved for a snapshot, the disk properties shows for VMware disk and not Huawei or Compellent disk. This causes the snapshot to fail.</p>	NV-47, NV-49, (NVBU-18642, DNFSP-1016)
<p>In the NetVault WebUI, when editing the Notification Profile, Extra Environment variables do not display.</p>	NVBU-18925
<p>In specific instances, changing the time window in the server monitor from 8 hours to another time range then back to 8 hours results in an incorrect graph.</p> <p>Workaround: Use the 12-hour or 24-hour setting.</p>	NVBU-18975
<p>The Unusable Media widget on the dashboard does not show media that must be recovered.</p>	NVBU-19214
<p>The error “duplicate key value violates unique constraint” message appears multiple times in the <code>pg_sql</code> log files.</p>	NVBU-19246
<p>For LTO-7 tapes, the Explore Storage page inaccurately displays the size of an unused tape.</p>	NVBU-19250
<p>When running a historic job report by date on a Japanese Standard Time server, not all information displays in the report.</p>	NVBU-19313
<p>The Storage Utilization report shows the wrong licensed capacity for SmartDisk.</p>	NVBU-19385
<p>While choosing a default plug-in option after switching the language, the Web UI goes into deadlock, and performs no further operations.</p>	NVBU-19427
<p>When you try to reset the locale from French to English from the Server Change Setting page, the NetVault Server goes into Safe Mode.</p>	NVBU-19493

Table 3. General known issues

Known issue	Issue ID
On Linux, when creating a Large_VTL, if the WebUI times out due to inactivity or the user closes the WebUI while the creation is still in progress, the VTL creation does not occur. Workaround: In the WebUI, create a VTL using the “Re-add previously generated virtual device” option, and then, in the webservice.cfg file, increase the SessionExpiryTime.	NVBU-19625
When a large number of jobs are in Running state, the Job Status page hangs.	NVBU-19694
When using file immutability, removing a full backup saveset with no immutable files also removes persistent immutable Incremental Backup savesets. Workaround: In the Advanced Options > Backup Life section, do NOT select Make Backup Immutable . If you select this option for an incremental backup but you do not select it for a full backup, if you try to delete the saveset, then an error occurs.	NV-2044, NV-2045
According to <i>Plug-in for Advanced Encryption Release Notes</i> : The Plug-in for Advanced Encryption is incompatible with the following NetVault Backup Plug-ins:	
<ul style="list-style-type: none"> • <i>NetVault Backup Plug-in for Consolidation</i> • <i>NetVault Backup Plug-in for NDMP</i> • <i>NetVault Backup Plug-in for SnapMirror to Tape</i> • <i>NetVault Backup Plug-in for Informix</i> • <i>NetVault Backup Plug-in for Teradata</i> • <i>NetVault Backup Plug-in for NetWare:</i> 	
If you enable the encryption for a backup, the saveset header indicates that the backup is encrypted, and when you try to restore the data, the plug-in requests for the encryption key. However, the saveset does not contain any encrypted data.	
<ul style="list-style-type: none"> • NetVault Bare Metal Recovery Plug-ins: <ul style="list-style-type: none"> ▪ <i>Plug-in Offline Client</i> : It ignores the encryption settings as the client is taken offline for backup. ▪ <i>Plug-in Live Client</i> : It cannot recover encrypted backups. 	
NDMP Plugin: Sec copy with “Use Life of Original” and 1 Day immutability not being honored.	NV-3450
Immutability not set as expected for phase 2 job which is created with ‘Duplicate’ option	NV-3647

Table 4. QoreStor known issues

Known issue	Issue ID
NetVault job fails if it uses the same container with data stubbed for new jobs.	NV-1428
An Plug-in <i>for Oracle</i> restore job passes silently with errors when it should fail because the data is still on a QoreStor glacier tier.	NV-1430
A Plug-in <i>for NDMP</i> restore job succeeds when it should fail immediately as the data is archived with QoreStor.	NV-1431
QoreStor does not support multi-tenancy.	QS-437, DNR3-71
If you run parallel backup or restore jobs on an AIX client with a QoreStor target, the jobs fail with a “Job Manger has lost the message channel unexpected” error message.	QS-4252, DNR3-870

Table 5. Command-Line Interface known issues

Known issue	Issue ID
<p>When the Broadcast details to machines on local networks setting is disabled on a client, the nvclient utility fails to add the client.</p> <p>Workaround: Use the <code>nvclientadd -clientip <Client IP address></code> command to add the client.</p>	NVBU-12966 (28829)
<p>The asf_load_media command fails if the machine name contains any spaces.</p> <p>When the asf_release_drive command is issued to various brands of library devices (for example, those containing various Exabyte or 9840 drives), a delay of up to eight (8) minutes may occur before a piece of media is unloaded.</p> <p>Workaround: The workaround is to issue the “Unload” command from the NetVault WebUI.</p> <ol style="list-style-type: none"> 1 In the Navigation pane, click Manage Devices, and then in the list of devices, click the applicable drive or the corresponding Manage Device icon. 2 On the Tape Drive Management page, click Unload. <p>The drive remains in and “Idle” state, and media are not unloaded as expected. If the logs for the selected device are viewed, an entry stating “Unload media in drive <X> failed — Device unavailable” is displayed. Repeat Step 2 to unload the media.</p>	
<p>The range function does not work properly for the nvacslsmedia command.</p> <p>Workaround: The workaround is to explicitly run this command for each media item that you want to allocate or deallocate. You can use a script to do this task.</p>	
<p>When a space character is all that is specified for a library name with the nvcleandrive command, the first library on the Manage Devices page performs a clean operation on the specified drive. For example, if you run the command <code>nvcleandrive libraryname "<space character only>" -librarydrivenumber <X></code>, NetVault automatically targets the first library on the Manage Devices page and perform a clean operation on drive <X>.</p>	
<p>When a null value is specified with the nvexpiresaveset command, any random saveset is expired.</p>	
<p>When you run the nvjobmodify command, the job is submitted to run, even if you do not include the “-submit” option in the syntax.</p>	
<p>When a null string is specified with the nvremovemedi command, the first entry is deleted from the Media Database.</p>	
<p>The nvsetcleaninglives command does not report any errors if you configure incorrect values for the lives option.</p>	
<p>The “-include” option for nvsetcreate cannot be used to specify data selections below the “Fixed Drives” node in the selection tree.</p>	
<p>The nvsetmodify command cannot be used to modify Schedule Sets. You can create a set using nvsetcreate, and assign it the same name to overwrite the existing set.</p>	
<p>On Windows-based installations, the nvsyncronizesilomedia command does not update the media status on the Manage Devices page.</p>	
<p>In an environment where the NetVault Client is installed on a Linux machine and the NetVault Server is installed on a Windows machine, if a non-default user password contains eight or more characters, the Command-Line Interface (CLI) utilities fail.</p> <p>Workaround: Reset the user password to one that contains seven or fewer characters.</p>	NVBU-17861
<p>When used to select nodes for backup and restore, the nvsetcreate command does not interpret a single quote and instead changes it to a blank space.</p> <p>Workaround: To avoid this issue, write the string argument into a parameter file and use the <code>nvsetcreate -parameters switch</code> to specify the file.</p>	NV-2157
<p>The start date of some jobs in the CLI report is not the same as the GUI report for the Historic Jobs by date template.</p>	NVBU-19746

Table 6. Plug-in for *FileSystem* known issues

Known issue	Issue ID
On Snap Appliance Filers, data must only be relocated to existing directories. Items relocated to directories that do not exist cannot be accessed due to permissions settings on the newly created directories.	DNFSP-113 (13979, FSG-188)
On ZFS, if the backup data contains ACLs on extended attributes, the restore job fails when you use the default restore options. If errors occur on restore of metadata, select the Discard Metadata option to restore the data.	DNFSP-456 (14324, FSG-514)
On Solaris ZFS and UFS file systems, the files and directories for which only the extended attributes have changed do not qualify for Incremental Backups.	DNFSP-636 (14504, FSG-684)
When restoring a Linux or UNIX backup to a Windows-based NetVault Client, the items are restored successfully, but the job generates the following warning and log context: Log message: <num> items and their contents could not be restored Log context: <filename>: writing to file: Incorrect function These messages can be ignored.	DNFSP-718 (14586, FSG-760)
NetVault does not allow Apple Xsan restores when there are no affinity tags on the target server.	DNFSP-727 (14596, FSG-770)
The exclusion list is not enforced for a corrupt file in an Incremental Backup.	DNFSP-910
On Oracle Solaris hosts, enabling a multi-stream FileSystem backup causes Incremental Backup performance to appear similar or worse than a Full Backup.	DNFSP-921
If the name of a network share folder includes Japanese characters, NetVault does not add it.	DNFSP-932
The FileSystem backup and restore job fails to write an entry into the log file when the Path to Backup log and Path to Restore log options are selected.	DNFSP-991
On Windows 2008 and Windows 2003, the System State node does not include the Removable Storage Manager Database node.	
The Verify After Backup option does not work for a restarted job instance.	
When you submit a policy job created for a UNIX file system on a Windows system, the job status shows “ Completed with Warnings, ” but no data is backed up.	
The following known issues apply to the Backup Windows File Short Names and Restore Windows File Short Names options: <ul style="list-style-type: none"> Restoring short names only works if an existing file with the same short name does not exist. Attempts to back up or restore short names fail if you enable Windows-based Compression or Encryption option on a target system. 	
Although VSS backups complete successfully, the message “Error deleting volume snapshot(s): VSS_E_BAD_STATE” is written to the NetVault logs.	
If a job restores a Windows symbolic link (file created using mklink , not Windows shortcut), where the symbolic link file exists on the target file system and the data file the symbolic link targets also exists, the data in the targeted data file is lost. Ensure that the data files targeted by symbolic links are included in backups. Quest recommends that you delete the existing symbolic links that you want to restore from the target file system before running a restore job. To avoid any risks of data loss, you can also perform backup of data files possibly at risk before running the restore job.	
When a symbolic link is restored, GuardianOS applies the Xattr attribute user.SnACL to it. This behavior is expected and does not have any negative effects.	
Backups on GFS and GFS2 can stop responding if the files or directories are frozen.	

Table 6. Plug-in for *FileSystem* known issues

Known issue	Issue ID
In an environment with many direct automounts on Solaris Clients, a backup job may remain at “ Waiting for Job Options ” status while the Plug-in for <i>FileSystem</i> attempts to load the automounts temporarily to determine whether they are on remote systems. This delay can be alleviated by selecting the “ Backup through Remote Mounts ” option. If necessary, clear or exclude remote mounts or add the following stanza to the file nvfs.cfg : [Performance:DoRecursiveAutoMountScan] Value=FALSE	
Restore operation of multi-volume selection for an offhost backup fails after successful off-host backup for multi-volume selection.	NV-48 (NVBU-18349)

Table 7. Managed Service Provider (MSP) known issues

Known issue	Issue ID
The nvreport utility does not work in the MSP environment.	NVBU-18346
A tenant user can see and delete other tenant users’ Plug-in Options and Source sets.	NVBU-19795

System requirements

Before installing NetVault 13.2, ensure that your system meets the following minimum hardware and software requirements.

Table 8. System requirements

Requirement	Details
Platform	For complete supported platform information, see the <i>Quest NetVault Compatibility Guide</i> available at https://support.quest.com/technical-documents .
Memory	Memory requirements on a target system can vary based on the intended use.
Hard disk space	A NetVault server installation requires about 800 MB of disk space on Windows-based systems and 800 MB of disk space on Linux-based systems.

Table 8. System requirements

Requirement	Details
Operating system	<p>NetVault Server</p> <p>The server can be installed on the following operating systems:</p> <ul style="list-style-type: none"> • Linux (x86 and x86-64) • CentOS • Debian • Red Hat Enterprise Linux (RHEL) • SUSE Linux Enterprise Server (SLES) • Windows (x86 and x86-64) <p>NetVault Client</p> <p>The client can be installed on the following operating systems:</p> <ul style="list-style-type: none"> • FreeBSD • Linux • Windows <p>For more information, see the <i>Quest NetVault Compatibility Guide</i> available at https://support.quest.com/technical-documents.</p>
Web browser	<p>The NetVault WebUI supports the following browsers:</p> <ul style="list-style-type: none"> • Internet Explorer 11 and later • Firefox 20 and later • Chrome 28 and later • Microsoft Edge 44 and later

Upgrade and compatibility

- **FIPS and NetVault Plug-in for Encryption:** As of version 13.0.3, NetVault Plug-in for Encryption includes both a FIPS compliant AES-256 option and a non FIPS compliant AES-256 option. For more information about the NetVault Plug-in for Encryption FIPS compliant AES-256 and non FIPS compliant AES-256 encryption algorithms, see the *Quest NetVault Built-in Plug-ins User's Guide*.
- **Licensing:** NetVault Server 13.2 uses License Validator, which was introduced with NetVault 13.0. If you are running a NetVault Server version prior to 13.0, before you upgrade to 13.2, you must install the new license file on the NetVault Server. For more information, see "Upgrading NetVault" in the *Quest NetVault Installation Guide*.
- **Previous versions:** NetVault 13.2 Server installations are backwards compatible with previous releases of the client and plug-ins. However, before you upgrade NetVault Server, download the license file for each licensed plug-in. Without the license file, the plug-in may stop working. For more information, see the *Quest NetVault Installation Guide*.
- **NetVault Server OS requirements:** The NetVault Server installation is supported on Windows and Linux operating systems. The NetVault Server installation is not supported on Mac OS X and UNIX operating systems. For information about supported operating system versions, see the *Quest NetVault Compatibility Guide* available at <https://support.quest.com/technical-documents>. For information on migrating NetVault Server 9.2 from Mac OS X or UNIX to Windows or Linux, see <https://support.quest.com/kb/SOL126805>.
- **NetVault Database migration:** Upgrade from 9.2 involves the migration of NetVault Database from proprietary format to the PostgreSQL database. The migration can take a significant amount of time depending on the size of your NetVault Database and other factors such as system performance.

i | NOTE: Before upgrading from NetVault 9.2, purging unnecessary logs can significantly reduce the database migration time. For more information about purging log files, see the *Quest NetVault Administrator's Guide*.

IMPORTANT: Before upgrading from 9.2, verify that you created a backup of the NetVault Database. The database format introduced in 10.0 increases the importance of performing NetVault Database backups before upgrading from 9.2. For more information about backing up the NetVault Database with the Plug-in for Databases, see the *Quest NetVault Built-in Plug-ins User's Guide*.

- **Select the correct installation package on Linux and Windows:** 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 hybrid and pure 64-bit versions:

- **Hybrid server and client packages:** The hybrid packages are intended for users who do not have a pure 64-bit-only requirement.

These packages let you upgrade from pure 32-bit and hybrid installations of NetVault. The hybrid packages retain binary compatibility with all previous versions of 32-bit and 64-bit plug-ins. These packages also work on 32-bit systems that do not have 64-bit capability.

- **Pure 64-bit server and client packages:** The pure 64-bit packages are intended for pure 64-bit operating systems. If you have a specific reason that you cannot use any 32-bit components (for example, you are using a Linux distribution that does not run 32-bit code), use these packages.

The pure 64-bit packages cannot be used to upgrade existing pure 32-bit or hybrid NetVault installations. You must remove the existing pure 32-bit or hybrid version and install the pure 64-bit version separately. To reduce confusion, warning messages have been added to both the upgrade and installation packages to ensure that you understand that they are incompatible.

Depending on your OS type, ensure that you select the correct installation package to install the NetVault Server software:

- **netvault-<YYYYMMDD>-vx.x.x.x-Server-{LinuxX86Hybrid|WindowsX86Hybrid}:** Use this package to install or upgrade NetVault Server on 32-bit or 64-bit systems.
- **netvault-<YYYYMMDD>-vx.x.x.x-Server-{LinuxX86Pure64|WindowsX86Pure64}:** Use this package to install or upgrade NetVault Server on pure 64-bit systems.

For client installations, ensure that you select the appropriate package based on your system.

IMPORTANT: Before installing the hybrid package of NetVault on 64-bit Linux machines, ensure that all the required 32-bit libraries are installed on the system. For more information about the requirements, see the *Quest NetVault Installation Guide*. The installation process may fail silently if the installer is unable to find the required libraries on the system.

Table 9. Pure64 builds

OS	Core Build	Plug-in				
		32-bit	64-bit	Hybrid	Itanium	Pure64
32-bit	32-bit	X		X		
	Hybrid	X		X		
64-bit	Itanium				X	
	64-bit		X	X		
	Hybrid	X	X	X		
	Pure64					X

NOTE: X = Compatible

- **Licensed plug-ins:** After upgrading to the latest version of NetVault, you may be unable to create new backup jobs with previously installed licensed plug-ins. This issue occurs in the following upgrade scenarios:
 - 9.2 -> 10.0 -> any later version
 - Pre-9.2 -> 9.x -> any later version

The issue can be fixed by reinstalling the plug-ins. The issue does not occur when you upgrade directly from 9.2 to 10.0.1 or a later version or when you upgrade from any 10.x version without a previous upgrade from 9.2.

- **SNMP Trap Notification Object Identifier (OID):** After you upgrade from NetVault 9.2, the OID for the SNMP Trap Notification method is changed.
- **NetVault Plug-in for NetWare (Plug-in for NetWare):** NetVault 10.0 and later do not support Plug-in for NetWare.
- **Plug-in for VMware and NetVault Plug-in for Hyper-V (Plug-in for Hyper-V):** After installing the Plug-in for VMware or Plug-in for Hyper-V, if you upgrade the NetVault software, you must re-install the plug-in on that machine. If you do not reinstall the plug-ins, you cannot open the **Drives** node of a mounted virtual machine to create any new file-level backup jobs.
- **Device names containing multibyte characters:** After upgrading from NetVault Server 9.2, a device that uses multibyte characters in its name must be removed and added again.

Upgrading from NetVault Backup 12.3

Due to a change in the encryption and decryption algorithm in NetVault Backup, you may experience authentication-related issues after upgrading from NetVault Backup 12.3.0.15.

See the following table for known issues and their possible workarounds.

Table 10. Authentication error workarounds

Impacted Area	Resolution
If "Bulk Blank" for Tape Library or Virtual Tape Library (VTL) fails with an authentication error...	Reset the password using the same existing password. For more information, see "Changing NetVault password" in the <i>NetVault 13.2 Administration Guide</i> .
If "Expire All" for DR fails with an authentication error...	Reset the password using the same existing. For more information, see "Changing NetVault password" in the <i>NetVault 13.2 Administration Guide</i> .
If backups are not cataloged after an upgrade...	Reconfigure catalog search with the same existing password. For more information, see "Configuring catalog search" in the <i>NetVault 13.2 Administration Guide</i> .
If CLI utilities fails with an authentication error...	Reset the password of the NetVault user that you used for CLI using the same existing password. For more information, see "Modifying a user account" in the <i>NetVault 13.2 Administration Guide</i> .
If VMware backups or restores fail with an authentication error in the logs...	Reset the password for vCenter or ESX Server using the Edit Server dialog box. For more information, see "Reconfiguring a server" in the <i>NetVault Plug-in for VMware 12.3 User's Guide</i> .

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.

Product licensing

To obtain the license file for your NetVault Server environment, determine the NetVault Machine ID of your main NetVault Server. Also identify the machine IDs of any clients running application plug-ins, such as Oracle, MySQL, PostgreSQL, SQL Server, and Exchange.

You can use the License Management page to install the product license files.

- [Obtaining a machine ID](#)
- [Obtaining a permanent license file](#)
- [Installing a license file](#)

Obtaining a machine ID

- 1 Start the NetVault WebUI.
- 2 In the Navigation pane, click **License Management**.
- 3 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 a 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**.

Upgrade and installation instructions

- Before installing or upgrading NetVault, you must upgrade the attached DR appliance to version 4.0.3 or later.
- After upgrading NetVault, you must re-run Full Backup jobs before resuming the scheduled backup jobs (Incremental/Differential/Consolidated) using NetVault Plug-in *for File System*.
- To ensure the smooth operation of NetVault, after upgrading NetVault, you must clear the browser cache.

For information about installing and upgrading the NetVault Server and Client software, see the *Quest NetVault Installation Guide*.

More resources

Additional information is available from the following:

- [Online product documentation](#)
- [NetVault community](#)

Globalization

This section contains information about installing and operating this product in non-English configurations, such as those needed by customers outside of North America. This section does not replace the materials about supported platforms and configurations found elsewhere in the product documentation.

This release is Unicode-enabled and supports any character set. It supports simultaneous operation with multilingual data. This release is targeted to support operations in the following regions: North America, Western Europe and Latin America, Central and Eastern Europe, Far-East Asia, and Japan.

This release has the following known capabilities or limitations: Previously in NetVault, Quest predominantly supported Multibyte Character Sets, but had some Unicode Support. Starting with 10.0, Quest predominantly supports Unicode, however, Quest still supports MBCS sometimes.

NetVault13.2 is available in English, Japanese, Korean, Chinese, French, and German.

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.

Third-party contributions

This product contains the following third-party components. For third-party license information, go to <http://www.quest.com/legal/license-agreements.aspx>. Source code is available for some components on <https://opensource.quest.com>.

Table 11. List of third-party contributions

Component	License or acknowledgment
Elasticsearch 6.8.22	Apache 2.0 © 2018. All Right Reserved - Elasticsearch.
Expat XML Parser 1.6.0	MIT N/A © 1998, 1999, 2000 Thai Open Source Software Center Ltd and Clark Cooper © 2001, 2002, 2003, 2004, 2005, 2006 Expat maintainers.
freetype 6.8.1	FreeType Project License 1.0 © 1996-2002, 2006 David Turner, Robert Wilhelm, and Werner Lemberg Portions of this software are © 2006 The FreeType Project (www.freetype.org). All rights reserved.
glibmm 2.4	GNU Lesser General Public License 2.1 Copyright (C) 2002 The gtkmm Development Team
Iconv 1.9.1	GNU Library General License 2 © 2003 Free Software Foundation, Inc. This file is part of the GNU CHARSET Library. The GNU CHARSET Library is free software; you can redistribute it and/or modify it under the terms of the GNU Library General Public License as published by the Free Software Foundation; either version 2 of the License, or (at your option) any later version.
jquery-toastmessage-plugin 0.2.0	Apache 2.0 Copyright © akquinet AG, 2009-2013.
Kerberos client libraries 5	MIT Kerberos 5.0
libeay32.dll 1.0.0f	OpenSSL 1.0 This product includes software developed by the OpenSSL Project for use in the OpenSSL Toolkit (http://www.openssl.org/).

Table 11. List of third-party contributions

Component	License or acknowledgment
libedit 0.3	<p>BSD-style license</p> <p>© 1992, 1993</p> <p>The Regents of the University of California. All rights reserved.</p> <p>Redistribution and use in source and binary forms, with or without modification, are permitted provided that the following conditions are met:</p> <ol style="list-style-type: none"> 1. Redistributions of source code must retain the above copyright notice, this list of conditions and the following disclaimer. 2. Redistributions in binary form must reproduce the above copyright notice, this list of conditions and the following disclaimer in the documentation and/or other materials provided with the distribution. 3. The names of the authors may not be used to endorse or promote products derived from this software without specific prior written permission. <p>THIS SOFTWARE IS PROVIDED "AS IS" AND ANY EXPRESSED OR IMPLIED WARRANTIES, INCLUDING, BUT NOT LIMITED TO, THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE ARE DISCLAIMED. IN NO EVENT SHALL JCRAFT, INC. OR ANY CONTRIBUTORS TO THIS SOFTWARE BE LIABLE FOR ANY DIRECT, INDIRECT, INCIDENTAL, SPECIAL, EXEMPLARY, OR CONSEQUENTIAL DAMAGES (INCLUDING, BUT NOT LIMITED TO, PROCUREMENT OF SUBSTITUTE GOODS OR SERVICES; LOSS OF USE, DATA, OR PROFITS; OR BUSINESS INTERRUPTION) HOWEVER CAUSED AND ON ANY THEORY OF LIABILITY, WHETHER IN CONTRACT, STRICT LIABILITY, OR TORT (INCLUDING NEGLIGENCE OR OTHERWISE) ARISING IN ANY WAY OUT OF THE USE OF THIS SOFTWARE, EVEN IF ADVISED OF THE POSSIBILITY OF SUCH DAMAGE.</p>
libjpeg 8.4.0	<p>Freeware Public domain 1.0</p> <p>© 2000, 2001, 2002, 2003, 2004, 2006, 2007 Keith Packard</p> <p>© 2005 Patrick Lam</p> <p>© 2009 Roozbeh Pournader</p> <p>© 2008,2009 Red Hat, Inc.</p> <p>© 2008 Danilo Šegan</p> <p>© 2012 Google, Inc.</p>
Libpam 1.3.1	<p>GNU General Public License (GPL) 3</p> <p>Quest is providing this component as part of the operating system on which our product runs.</p>
libpng 1.2.10	<p>zlib/libpng license 1.0</p> <p>This product contains portions of the PAWN scripting software (formerly known as SMALL).</p>
libsigc++20 2.0.17.1	<p>LGPL (GNU Lesser General Public License) 2.1</p> <p>Copyright (C) 1991, 1999 Free Software Foundation, Inc.</p>
libssh 0.7.5	<p>LGPL (GNU Lesser General Public License) 2.1</p>
libstdc++ 3.3.3	<p>GPL 2.0 with the 'runtime exception'</p>
libstdc++ 4.1.1	
libtiff 5.0.6	<p>libtiff 3.8.2</p> <p>© 1988-1997 Sam Leffler</p> <p>© 1991-1997 Silicon Graphics, Inc.</p>

Table 11. List of third-party contributions

Component	License or acknowledgment
libxml2 2.8	MIT
libxslt 1.0	<p>© 1998-2012 Daniel Veillard. All Rights Reserved.</p> <p>Permission is hereby granted, free of charge, to any person obtaining a copy of this software and associated documentation files (the "Software"), to deal in the Software without restriction, including without limitation the rights to use, copy, modify, merge, publish, distribute, sublicense, and/or sell copies of the Software, and to permit persons to whom the Software is furnished to do so, subject to the following conditions:</p> <p>The above copyright notice and this permission notice shall be included in all copies or substantial portions of the Software.</p> <p>THE SOFTWARE IS PROVIDED "AS IS", WITHOUT WARRANTY OF ANY KIND, EXPRESS OR IMPLIED, INCLUDING BUT NOT LIMITED TO THE WARRANTIES OF MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE AND NONINFRINGEMENT. IN NO EVENT SHALL THE AUTHORS OR COPYRIGHT HOLDERS BE LIABLE FOR ANY CLAIM, DAMAGES OR OTHER LIABILITY, WHETHER IN AN ACTION OF CONTRACT, TORT OR OTHERWISE, ARISING FROM, OUT OF OR IN CONNECTION WITH THE SOFTWARE OR THE USE OR OTHER DEALINGS IN THE SOFTWARE.</p>
Microsoft Authentication Library (MSAL) 0.2.3	MIT License (MIT) 2007
ncurses 5.0	<p>Freeware Public domain 1.0</p> <p>© 2000, 2001, 2002, 2003, 2004, 2006, 2007 Keith Packard</p> <p>© 2005 Patrick Lam</p> <p>© 2009 Roozbeh Pournader</p> <p>© 2008, 2009 Red Hat, Inc.</p> <p>© 2008 Danilo Šegan</p> <p>© 2012 Google, Inc.</p>
Open Management Infrastructure 1.1.0	MIT N/A
OpenLDAP client Libraries 2.4	<p>OpenLDAP 2.8</p> <p>© 1998-2013 The OpenLDAP Foundation</p> <p>All rights reserved.</p> <p>Redistribution and use in source and binary forms, with or without modification, are permitted only as authorized by the OpenLDAP Public License.</p> <p>A copy of this license is available in the file LICENSE in the top-level directory of the distribution or, alternatively, at http://www.OpenLDAP.org/license.html.</p> <p>OpenLDAP is a registered trademark of the OpenLDAP Foundation.</p>
OpenMotif 2.2.3	© 2010 The Open Group Ltd. and others. All Rights Reserved.
OpenSSL 3.0.8	All Rights Reserved.

Table 11. List of third-party contributions

Component	License or acknowledgment
pgAdmin 1.16.1	<p>PostgreSQL</p> <p>Portions © 1996-2012, The PostgreSQL Global Development Group.</p> <p>Portions © 1994, The Regents of the University of California.</p> <p>© 2002 - 2009, The pgAdmin Development Team</p> <p>PostgreSQL is released under the PostgreSQL License, a liberal Open Source license, similar to the BSD or MIT licenses.</p> <p>PostgreSQL Database Management System (formerly known as Postgres, then as Postgres95)</p> <p>Portions © 1996-2012, The PostgreSQL Global Development Group</p> <p>Portions © 1994, The Regents of the University of California</p> <p>Permission to use, copy, modify, and distribute this software and its documentation for any purpose, without fee, and without a written agreement is hereby granted, provided that the above copyright notice and this paragraph and the following two paragraphs appear in all copies.</p> <p>IN NO EVENT SHALL THE UNIVERSITY OF CALIFORNIA BE LIABLE TO ANY PARTY FOR DIRECT, INDIRECT, SPECIAL, INCIDENTAL, OR CONSEQUENTIAL DAMAGES, INCLUDING LOST PROFITS, ARISING OUT OF THE USE OF THIS SOFTWARE AND ITS DOCUMENTATION, EVEN IF THE UNIVERSITY OF CALIFORNIA HAS BEEN ADVISED OF THE POSSIBILITY OF SUCH DAMAGE.</p> <p>THE UNIVERSITY OF CALIFORNIA SPECIFICALLY DISCLAIMS ANY WARRANTIES, INCLUDING, BUT NOT LIMITED TO, THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE. THE SOFTWARE PROVIDED HEREUNDER IS ON AN "AS IS" BASIS, AND THE UNIVERSITY OF CALIFORNIA HAS NO OBLIGATIONS TO PROVIDE MAINTENANCE, SUPPORT, UPDATES, ENHANCEMENTS, OR MODIFICATIONS.</p>
PhantomJS 2.1	BSD 3-Clause License
Search guard 6.8.22	<p>Apache 2.0</p> <p>Search Guard is a trademark of floragunn GmbH, registered in the U.S.</p>
Stack Builder 3.1.0	<p>BSD - PostgreSQL 1.0</p> <p>© 1997-2005 PostgreSQL Global Development Group. All rights reserved.</p> <p>© 2007-2011, EnterpriseDB</p>
zlib 1.2.11	<p>zlib 1.2.7</p> <p>Portions © 1995-2012 Jean-loup Gailly and Mark Adler.</p>

GNU General Public License (GPL) 3

GNU GENERAL PUBLIC LICENSE

Version 3, 29 June 2007

© 2007 Free Software Foundation, Inc.

Everyone is permitted to copy and distribute verbatim copies of this license document, but changing it is not allowed.

Preamble

The GNU General Public License is a free, copyleft license for software and other kinds of works.

The licenses for most software and other practical works are designed to take away your freedom to share and change the works. By contrast, the GNU General Public License is intended to guarantee your freedom to share and change all versions of a program--to make sure it remains free software for all its users. We, the Free Software Foundation, use the GNU General Public License for most of our software; it applies also to any other work released this way by its authors. You can apply it to your programs, too.

When we speak of free software, we are referring to freedom, not price. Our General Public Licenses are designed to make sure that you have the freedom to distribute copies of free software (and charge for them if you wish), that you receive source code or can get it if you want it, that you can change the software or use pieces of it in new free programs, and that you know you can do these things.

To protect your rights, we need to prevent others from denying you these rights or asking you to surrender the rights. Therefore, you have certain responsibilities if you distribute copies of the software, or if you modify it: responsibilities to respect the freedom of others.

For example, if you distribute copies of such a program, whether gratis or for a fee, you must pass on to the recipients the same freedoms that you received. You must make sure that they, too, receive or can get the source code. And you must show them these terms so they know their rights.

Developers that use the GNU GPL protect your rights with two steps: (1) assert copyright on the software, and (2) offer you this License giving you legal permission to copy, distribute and/or modify it.

For the developers' and authors' protection, the GPL clearly explains that there is no warranty for this free software. For both users' and authors' sake, the GPL requires that modified versions be marked as changed, so that their problems will not be attributed erroneously to authors of previous versions.

Some devices are designed to deny users access to install or run modified versions of the software inside them, although the manufacturer can do so. This is fundamentally incompatible with the aim of protecting users' freedom to change the software. The systematic pattern of such abuse occurs in the area of products for individuals to use, which is precisely where it is most unacceptable. Therefore, we have designed this version of the GPL to prohibit the practice for those products. If such problems arise substantially in other domains, we stand ready to extend this provision to those domains in future versions of the GPL, as needed to protect the freedom of users.

Finally, every program is threatened constantly by software patents. States should not allow patents to restrict development and use of software on general-purpose computers, but in those that do, we wish to avoid the special danger that patents applied to a free program could make it effectively proprietary. To prevent this, the GPL assures that patents cannot be used to render the program non-free.

The precise terms and conditions for copying, distribution and modification follow.

TERMS AND CONDITIONS

0. Definitions.

"This License" refers to version 3 of the GNU General Public License.

"Copyright" also means copyright-like laws that apply to other kinds of works, such as semiconductor masks.

"The Program" refers to any copyrightable work licensed under this License. Each licensee is addressed as "you".

"Licensees" and "recipients" may be individuals or organizations.

To "modify" a work means to copy from or adapt all or part of the work in a fashion requiring copyright permission, other than the making of an exact copy. The resulting work is called a "modified version" of the earlier work or a work "based on" the earlier work.

A "covered work" means either the unmodified Program or a work based on the Program.

To "propagate" a work means to do anything with it that, without permission, would make you directly or secondarily liable for infringement under applicable copyright law, except executing it on a computer or modifying a private copy. Propagation includes copying, distribution (with or without modification), making available to the public, and in some countries other activities as well.

To "convey" a work means any kind of propagation that enables other parties to make or receive copies. Mere interaction with a user through a computer network, with no transfer of a copy, is not conveying.

An interactive user interface displays "Appropriate Legal Notices" to the extent that it includes a convenient and prominently visible feature that (1) displays an appropriate copyright notice, and (2) tells the user that there is no warranty for the work (except to the extent that warranties are provided), that licensees may convey the work under this License, and how to view a copy of this License. If the interface presents a list of user commands or options, such as a menu, a prominent item in the list meets this criterion.

1. Source Code.

The "source code" for a work means the preferred form of the work for making modifications to it. "Object code" means any non-source form of a work.

A "Standard Interface" means an interface that either is an official standard defined by a recognized standards body, or, in the case of interfaces specified for a particular programming language, one that is widely used among developers working in that language.

The "System Libraries" of an executable work include anything, other than the work as a whole, that (a) is included in the normal form of packaging a Major Component, but which is not part of that Major Component, and (b) serves

only to enable use of the work with that Major Component, or to implement a Standard Interface for which an implementation is available to the public in source code form. A "Major Component", in this context, means a major essential component (kernel, window system, and so on) of the specific operating system (if any) on which the executable work runs, or a compiler used to produce the work, or an object code interpreter used to run it.

The "Corresponding Source" for a work in object code form means all the source code needed to generate, install, and (for an executable work) run the object code and to modify the work, including scripts to control those activities. However, it does not include the work's System Libraries, or general-purpose tools or generally available free programs which are used unmodified in performing those activities but which are not part of the work. For example, Corresponding Source includes interface definition files associated with source files for the work, and the source code for shared libraries and dynamically linked subprograms that the work is specifically designed to require, such as by intimate data communication or control flow between those subprograms and other parts of the work.

The Corresponding Source need not include anything that users can regenerate automatically from other parts of the Corresponding Source.

The Corresponding Source for a work in source code form is that same work.

2. Basic Permissions.

All rights granted under this License are granted for the term of copyright on the Program, and are irrevocable provided the stated conditions are met. This License explicitly affirms your unlimited permission to run the unmodified Program. The output from running a covered work is covered by this License only if the output, given its content, constitutes a covered work. This License acknowledges your rights of fair use or other equivalent, as provided by copyright law.

You may make, run and propagate covered works that you do not convey, without conditions so long as your license otherwise remains in force. You may convey covered works to others for the sole purpose of having them make modifications exclusively for you, or provide you with facilities for running those works, provided that you comply with the terms of this License in conveying all material for which you do not control copyright. Those thus making or running the covered works for you must do so exclusively on your behalf, under your direction and control, on terms that prohibit them from making any copies of your copyrighted material outside their relationship with you.

Conveying under any other circumstances is permitted solely under the conditions stated below. Sublicensing is not allowed; section 10 makes it unnecessary.

3. Protecting Users' Legal Rights From Anti-Circumvention Law.

No covered work shall be deemed part of an effective technological measure under any applicable law fulfilling obligations under article 11 of the WIPO copyright treaty adopted on 20 December 1996, or similar laws prohibiting or restricting circumvention of such measures.

When you convey a covered work, you waive any legal power to forbid circumvention of technological measures to the extent such circumvention is effected by exercising rights under this License with respect to the covered work, and you disclaim any intention to limit operation or modification of the work as a means of enforcing, against the work's users, your or third parties' legal rights to forbid circumvention of technological measures.

4. Conveying Verbatim Copies.

You may convey verbatim copies of the Program's source code as you receive it, in any medium, provided that you conspicuously and appropriately publish on each copy an appropriate copyright notice; keep intact all notices stating that this License and any non-permissive terms added in accord with section 7 apply to the code; keep intact all notices of the absence of any warranty; and give all recipients a copy of this License along with the Program.

You may charge any price or no price for each copy that you convey, and you may offer support or warranty protection for a fee.

5. Conveying Modified Source Versions.

You may convey a work based on the Program, or the modifications to produce it from the Program, in the form of source code under the terms of section 4, provided that you also meet all of these conditions:

- a) The work must carry prominent notices stating that you modified it, and giving a relevant date.
- b) The work must carry prominent notices stating that it is released under this License and any conditions added under section 7. This requirement modifies the requirement in section 4 to "keep intact all notices".
- c) You must license the entire work, as a whole, under this License to anyone who comes into possession of a copy. This License will therefore apply, along with any applicable section 7 additional terms, to the whole of the work, and all its parts, regardless of how they are packaged. This License gives no permission to license the work in any other way, but it does not invalidate such permission if you have separately received it.

d) If the work has interactive user interfaces, each must display Appropriate Legal Notices; however, if the Program has interactive interfaces that do not display Appropriate Legal Notices, your work need not make them do so.

A compilation of a covered work with other separate and independent works, which are not by their nature extensions of the covered work, and which are not combined with it such as to form a larger program, in or on a volume of a storage or distribution medium, is called an “aggregate” if the compilation and its resulting copyright are not used to limit the access or legal rights of the compilation’s users beyond what the individual works permit. Inclusion of a covered work in an aggregate does not cause this License to apply to the other parts of the aggregate.

6. Conveying Non-Source Forms.

You may convey a covered work in object code form under the terms of sections 4 and 5, provided that you also convey the machine-readable Corresponding Source under the terms of this License, in one of these ways:

a) Convey the object code in, or embodied in, a physical product (including a physical distribution medium), accompanied by the Corresponding Source fixed on a durable physical medium customarily used for software interchange.

b) Convey the object code in, or embodied in, a physical product (including a physical distribution medium), accompanied by a written offer, valid for at least three years and valid for as long as you offer spare parts or customer support for that product model, to give anyone who possesses the object code either (1) a copy of the Corresponding Source for all the software in the product that is covered by this License, on a durable physical medium customarily used for software interchange, for a price no more than your reasonable cost of physically performing this conveying of source, or (2) access to copy the Corresponding Source from a network server at no charge.

c) Convey individual copies of the object code with a copy of the written offer to provide the Corresponding Source. This alternative is allowed only occasionally and noncommercially, and only if you received the object code with such an offer, in accord with subsection 6b.

d) Convey the object code by offering access from a designated place (gratis or for a charge), and offer equivalent access to the Corresponding Source in the same way through the same place at no further charge. You need not require recipients to copy the Corresponding Source along with the object code. If the place to copy the object code is a network server, the Corresponding Source may be on a different server (operated by you or a third party) that supports equivalent copying facilities, provided you maintain clear directions next to the object code saying where to find the Corresponding Source. Regardless of what server hosts the Corresponding Source, you remain obligated to ensure that it is available for as long as needed to satisfy these requirements.

e) Convey the object code using peer-to-peer transmission, provided you inform other peers where the object code and Corresponding Source of the work are being offered to the general public at no charge under subsection 6d.

A separable portion of the object code, whose source code is excluded from the Corresponding Source as a System Library, need not be included in conveying the object code work.

A “User Product” is either (1) a “consumer product”, which means any tangible personal property which is normally used for personal, family, or household purposes, or (2) anything designed or sold for incorporation into a dwelling. In determining whether a product is a consumer product, doubtful cases shall be resolved in favor of coverage. For a particular product received by a particular user, “normally used” refers to a typical or common use of that class of product, regardless of the status of the particular user or of the way in which the particular user actually uses, or expects or is expected to use, the product. A product is a consumer product regardless of whether the product has substantial commercial, industrial or non-consumer uses, unless such uses represent the only significant mode of use of the product.

“Installation Information” for a User Product means any methods, procedures, authorization keys, or other information required to install and execute modified versions of a covered work in that User Product from a modified version of its Corresponding Source. The information must suffice to ensure that the continued functioning of the modified object code is in no case prevented or interfered with solely because modification has been made.

If you convey an object code work under this section in, or with, or specifically for use in, a User Product, and the conveying occurs as part of a transaction in which the right of possession and use of the User Product is transferred to the recipient in perpetuity or for a fixed term (regardless of how the transaction is characterized), the Corresponding Source conveyed under this section must be accompanied by the Installation Information. But this requirement does not apply if neither you nor any third party retains the ability to install modified object code on the User Product (for example, the work has been installed in ROM).

The requirement to provide Installation Information does not include a requirement to continue to provide support service, warranty, or updates for a work that has been modified or installed by the recipient, or for the User Product in which it has been modified or installed. Access to a network may be denied when the modification itself materially and adversely affects the operation of the network or violates the rules and protocols for communication across the network.

Corresponding Source conveyed, and Installation Information provided, in accord with this section must be in a format that is publicly documented (and with an implementation available to the public in source code form), and must require no special password or key for unpacking, reading or copying.

7. Additional Terms.

“Additional permissions” are terms that supplement the terms of this License by making exceptions from one or more of its conditions. Additional permissions that are applicable to the entire Program shall be treated as though they were included in this License, to the extent that they are valid under applicable law. If additional permissions apply only to part of the Program, that part may be used separately under those permissions, but the entire Program remains governed by this License without regard to the additional permissions.

When you convey a copy of a covered work, you may at your option remove any additional permissions from that copy, or from any part of it. (Additional permissions may be written to require their own removal in certain cases when you modify the work.) You may place additional permissions on material, added by you to a covered work, for which you have or can give appropriate copyright permission.

Notwithstanding any other provision of this License, for material you add to a covered work, you may (if authorized by the copyright holders of that material) supplement the terms of this License with terms:

- a) Disclaiming warranty or limiting liability differently from the terms of sections 15 and 16 of this License; or
- b) Requiring preservation of specified reasonable legal notices or author attributions in that material or in the Appropriate Legal Notices displayed by works containing it; or
- c) Prohibiting misrepresentation of the origin of that material, or requiring that modified versions of such material be marked in reasonable ways as different from the original version; or
- d) Limiting the use for publicity purposes of names of licensors or authors of the material; or
- e) Declining to grant rights under trademark law for use of some trade names, trademarks, or service marks; or
- f) Requiring indemnification of licensors and authors of that material by anyone who conveys the material (or modified versions of it) with contractual assumptions of liability to the recipient, for any liability that these contractual assumptions directly impose on those licensors and authors.

All other non-permissive additional terms are considered “further restrictions” within the meaning of section 10. If the Program as you received it, or any part of it, contains a notice stating that it is governed by this License along with a term that is a further restriction, you may remove that term. If a license document contains a further restriction but permits relicensing or conveying under this License, you may add to a covered work material governed by the terms of that license document, provided that the further restriction does not survive such relicensing or conveying.

If you add terms to a covered work in accord with this section, you must place, in the relevant source files, a statement of the additional terms that apply to those files, or a notice indicating where to find the applicable terms.

Additional terms, permissive or non-permissive, may be stated in the form of a separately written license, or stated as exceptions; the above requirements apply either way.

8. Termination.

You may not propagate or modify a covered work except as expressly provided under this License. Any attempt otherwise to propagate or modify it is void, and will automatically terminate your rights under this License (including any patent licenses granted under the third paragraph of section 11).

However, if you cease all violation of this License, then your license from a particular copyright holder is reinstated (a) provisionally, unless and until the copyright holder explicitly and finally terminates your license, and (b) permanently, if the copyright holder fails to notify you of the violation by some reasonable means prior to 60 days after the cessation.

Moreover, your license from a particular copyright holder is reinstated permanently if the copyright holder notifies you of the violation by some reasonable means, this is the first time you have received notice of violation of this License (for any work) from that copyright holder, and you cure the violation prior to 30 days after your receipt of the notice.

Termination of your rights under this section does not terminate the licenses of parties who have received copies or rights from you under this License. If your rights have been terminated and not permanently reinstated, you do not qualify to receive new licenses for the same material under section 10.

9. Acceptance Not Required for Having Copies.

You are not required to accept this License in order to receive or run a copy of the Program. Ancillary propagation of a covered work occurring solely as a consequence of using peer-to-peer transmission to receive a copy likewise does not require acceptance. However, nothing other than this License grants you permission to propagate or modify any covered work. These actions infringe copyright if you do not accept this License. Therefore, by modifying or propagating a covered work, you indicate your acceptance of this License to do so.

10. Automatic Licensing of Downstream Recipients.

Each time you convey a covered work, the recipient automatically receives a license from the original licensors, to run, modify and propagate that work, subject to this License. You are not responsible for enforcing compliance by third parties with this License.

An “entity transaction” is a transaction transferring control of an organization, or substantially all assets of one, or subdividing an organization, or merging organizations. If propagation of a covered work results from an entity transaction, each party to that transaction who receives a copy of the work also receives whatever licenses to the work the party’s predecessor in interest had or could give under the previous paragraph, plus a right to possession of the Corresponding Source of the work from the predecessor in interest, if the predecessor has it or can get it with reasonable efforts.

You may not impose any further restrictions on the exercise of the rights granted or affirmed under this License. For example, you may not impose a license fee, royalty, or other charge for exercise of rights granted under this License, and you may not initiate litigation (including a cross-claim or counterclaim in a lawsuit) alleging that any patent claim is infringed by making, using, selling, offering for sale, or importing the Program or any portion of it.

11. Patents.

A “contributor” is a copyright holder who authorizes use under this License of the Program or a work on which the Program is based. The work thus licensed is called the contributor’s “contributor version”.

A contributor’s “essential patent claims” are all patent claims owned or controlled by the contributor, whether already acquired or hereafter acquired, that would be infringed by some manner, permitted by this License, of making, using, or selling its contributor version, but do not include claims that would be infringed only as a consequence of further modification of the contributor version. For purposes of this definition, “control” includes the right to grant patent sublicenses in a manner consistent with the requirements of this License.

Each contributor grants you a non-exclusive, worldwide, royalty-free patent license under the contributor’s essential patent claims, to make, use, sell, offer for sale, import and otherwise run, modify and propagate the contents of its contributor version.

In the following three paragraphs, a “patent license” is any express agreement or commitment, however denominated, not to enforce a patent (such as an express permission to practice a patent or covenant not to sue for patent infringement). To “grant” such a patent license to a party means to make such an agreement or commitment not to enforce a patent against the party.

If you convey a covered work, knowingly relying on a patent license, and the Corresponding Source of the work is not available for anyone to copy, free of charge and under the terms of this License, through a publicly available network server or other readily accessible means, then you must either (1) cause the Corresponding Source to be so available, or (2) arrange to deprive yourself of the benefit of the patent license for this particular work, or (3) arrange, in a manner consistent with the requirements of this License, to extend the patent license to downstream recipients. “Knowingly relying” means you have actual knowledge that, but for the patent license, your conveying the covered work in a country, or your recipient’s use of the covered work in a country, would infringe one or more identifiable patents in that country that you have reason to believe are valid.

If, pursuant to or in connection with a single transaction or arrangement, you convey, or propagate by procuring conveyance of, a covered work, and grant a patent license to some of the parties receiving the covered work authorizing them to use, propagate, modify or convey a specific copy of the covered work, then the patent license you grant is automatically extended to all recipients of the covered work and works based on it.

A patent license is “discriminatory” if it does not include within the scope of its coverage, prohibits the exercise of, or is conditioned on the non-exercise of one or more of the rights that are specifically granted under this License. You may not convey a covered work if you are a party to an arrangement with a third party that is in the business of distributing software, under which you make payment to the third party based on the extent of your activity of conveying the work, and under which the third party grants, to any of the parties who would receive the covered work from you, a discriminatory patent license (a) in connection with copies of the covered work conveyed by you (or copies made from those copies), or (b) primarily for and in connection with specific products or compilations that contain the covered work, unless you entered into that arrangement, or that patent license was granted, prior to 28 March 2007.

Nothing in this License shall be construed as excluding or limiting any implied license or other defenses to infringement that may otherwise be available to you under applicable patent law.

12. No Surrender of Others' Freedom.

If conditions are imposed on you (whether by court order, agreement or otherwise) that contradict the conditions of this License, they do not excuse you from the conditions of this License. If you cannot convey a covered work so as to satisfy simultaneously your obligations under this License and any other pertinent obligations, then as a consequence you may not convey it at all. For example, if you agree to terms that obligate you to collect a royalty for further conveying from those to whom you convey the Program, the only way you could satisfy both those terms and this License would be to refrain entirely from conveying the Program.

13. Use with the GNU Affero General Public License.

Notwithstanding any other provision of this License, you have permission to link or combine any covered work with a work licensed under version 3 of the GNU Affero General Public License into a single combined work, and to convey the resulting work. The terms of this License will continue to apply to the part which is the covered work, but the special requirements of the GNU Affero General Public License, section 13, concerning interaction through a network will apply to the combination as such.

14. Revised Versions of this License.

The Free Software Foundation may publish revised and/or new versions of the GNU General Public License from time to time. Such new versions will be similar in spirit to the present version, but may differ in detail to address new problems or concerns.

Each version is given a distinguishing version number. If the Program specifies that a certain numbered version of the GNU General Public License "or any later version" applies to it, you have the option of following the terms and conditions either of that numbered version or of any later version published by the Free Software Foundation. If the Program does not specify a version number of the GNU General Public License, you may choose any version ever published by the Free Software Foundation.

If the Program specifies that a proxy can decide which future versions of the GNU General Public License can be used, that proxy's public statement of acceptance of a version permanently authorizes you to choose that version for the Program.

Later license versions may give you additional or different permissions. However, no additional obligations are imposed on any author or copyright holder as a result of your choosing to follow a later version.

15. Disclaimer of Warranty.

THERE IS NO WARRANTY FOR THE PROGRAM, TO THE EXTENT PERMITTED BY APPLICABLE LAW. EXCEPT WHEN OTHERWISE STATED IN WRITING THE COPYRIGHT HOLDERS AND/OR OTHER PARTIES PROVIDE THE PROGRAM "AS IS" WITHOUT WARRANTY OF ANY KIND, EITHER EXPRESSED OR IMPLIED, INCLUDING, BUT NOT LIMITED TO, THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE. THE ENTIRE RISK AS TO THE QUALITY AND PERFORMANCE OF THE PROGRAM IS WITH YOU. SHOULD THE PROGRAM PROVE DEFECTIVE, YOU ASSUME THE COST OF ALL NECESSARY SERVICING, REPAIR OR CORRECTION.

16. Limitation of Liability.

IN NO EVENT UNLESS REQUIRED BY APPLICABLE LAW OR AGREED TO IN WRITING WILL ANY COPYRIGHT HOLDER, OR ANY OTHER PARTY WHO MODIFIES AND/OR CONVEYS THE PROGRAM AS PERMITTED ABOVE, BE LIABLE TO YOU FOR DAMAGES, INCLUDING ANY GENERAL, SPECIAL, INCIDENTAL OR CONSEQUENTIAL DAMAGES ARISING OUT OF THE USE OR INABILITY TO USE THE PROGRAM (INCLUDING BUT NOT LIMITED TO LOSS OF DATA OR DATA BEING RENDERED INACCURATE OR LOSSES SUSTAINED BY YOU OR THIRD PARTIES OR A FAILURE OF THE PROGRAM TO OPERATE WITH ANY OTHER PROGRAMS), EVEN IF SUCH HOLDER OR OTHER PARTY HAS BEEN ADVISED OF THE POSSIBILITY OF SUCH DAMAGES.

17. Interpretation of Sections 15 and 16.

If the disclaimer of warranty and limitation of liability provided above cannot be given local legal effect according to their terms, reviewing courts shall apply local law that most closely approximates an absolute waiver of all civil liability in connection with the Program, unless a warranty or assumption of liability accompanies a copy of the Program in return for a fee.

Apache 2.0

© 2018. All Rights Reserved - Elasticsearch.

Elasticsearch is a trademark of Elasticsearch BV

Apache License

TERMS AND CONDITIONS FOR USE, REPRODUCTION, AND DISTRIBUTION

1. Definitions.

"License" shall mean the terms and conditions for use, reproduction, and distribution as defined by Sections 1 through 9 of this document.

"Licensor" shall mean the copyright owner or entity authorized by the copyright owner that is granting the License.

"Legal Entity" shall mean the union of the acting entity and all other entities that control, are controlled by, or are under common control with that entity. For the purposes of this definition, "control" means (i) the power, direct or indirect, to cause the direction or management of such entity, whether by contract or otherwise, or (ii) ownership of fifty percent (50%) or more of the outstanding shares, or (iii) beneficial ownership of such entity.

"You" (or "Your") shall mean an individual or Legal Entity exercising permissions granted by this License.

"Source" form shall mean the preferred form for making modifications, including but not limited to software source code, documentation source, and configuration files.

"Object" form shall mean any form resulting from mechanical transformation or translation of a Source form, including but not limited to compiled object code, generated documentation, and conversions to other media types.

"Work" shall mean the work of authorship, whether in Source or Object form, made available under the License, as indicated by a copyright notice that is included in or attached to the work (an example is provided in the Appendix below).

"Derivative Works" shall mean any work, whether in Source or Object form, that is based on (or derived from) the Work and for which the editorial revisions, annotations, elaborations, or other modifications represent, as a whole, an original work of authorship. For the purposes of this License, Derivative Works shall not include works that remain separable from, or merely link (or bind by name) to the interfaces of, the Work and Derivative Works thereof.

"Contribution" shall mean any work of authorship, including the original version of the Work and any modifications or additions to that Work or Derivative Works thereof, that is intentionally submitted to Licensor for inclusion in the Work by the copyright owner or by an individual or Legal Entity authorized to submit on behalf of the copyright owner. For the purposes of this definition, "submitted" means any form of electronic, verbal, or written communication sent to the Licensor or its representatives, including but not limited to communication on electronic mailing lists, source code control systems, and issue tracking systems that are managed by, or on behalf of, the Licensor for the purpose of discussing and improving the Work, but excluding communication that is conspicuously marked or otherwise designated in writing by the copyright owner as "Not a Contribution."

"Contributor" shall mean Licensor and any individual or Legal Entity on behalf of whom a Contribution has been received by Licensor and subsequently incorporated within the Work.

2. Grant of Copyright License. Subject to the terms and conditions of this License, each Contributor hereby grants to You a perpetual, worldwide, non-exclusive, no-charge, royalty-free, irrevocable copyright license to reproduce, prepare Derivative Works of, publicly display, publicly perform, sublicense, and distribute the Work and such Derivative Works in Source or Object form.

3. Grant of Patent License. Subject to the terms and conditions of this License, each Contributor hereby grants to You a perpetual, worldwide, non-exclusive, no-charge, royalty-free, irrevocable (except as stated in this section) patent license to make, have made, use, offer to sell, sell, import, and otherwise transfer the Work, where such license applies only to those patent claims licensable by such Contributor that are necessarily infringed by their Contribution(s) alone or by combination of their Contribution(s) with the Work to which such Contribution(s) was submitted. If You institute patent litigation against any entity (including a cross-claim or counterclaim in a lawsuit) alleging that the Work or a Contribution incorporated within the Work constitutes direct or contributory patent infringement, then any patent licenses granted to You under this License for that Work shall terminate as of the date such litigation is filed.

4. Redistribution. You may reproduce and distribute copies of the Work or Derivative Works thereof in any medium, with or without modifications, and in Source or Object form, provided that You meet the following conditions:

- (a) You must give any other recipients of the Work or Derivative Works a copy of this License; and
- (b) You must cause any modified files to carry prominent notices stating that You changed the files; and
- (c) You must retain, in the Source form of any Derivative Works that You distribute, all copyright, patent, trademark, and attribution notices from the Source form of the Work, excluding those notices that do not pertain to any part of the Derivative Works; and

(d) If the Work includes a "NOTICE" text file as part of its distribution, then any Derivative Works that You distribute must include a readable copy of the attribution notices contained within such NOTICE file, excluding those notices that do not pertain to any part of the Derivative Works, in at least one of the following places: within a NOTICE text file distributed as part of the Derivative Works; within the Source form or documentation, if provided along with the Derivative Works; or, within a display generated by the Derivative Works, if and wherever such third-party notices normally appear. The contents of the NOTICE file are for informational purposes only and do not modify the License. You may add Your own attribution notices within Derivative Works that You distribute, alongside or as an addendum to the NOTICE text from the Work, provided that such additional attribution notices cannot be construed as modifying the License.

You may add Your own copyright statement to Your modifications and may provide additional or different license terms and conditions for use, reproduction, or distribution of Your modifications, or for any such Derivative Works as a whole, provided Your use, reproduction, and distribution of the Work otherwise complies with the conditions stated in this License.

5. Submission of Contributions. Unless You explicitly state otherwise, any Contribution intentionally submitted for inclusion in the Work by You to the Licensor shall be under the terms and conditions of this License, without any additional terms or conditions.

Notwithstanding the above, nothing herein shall supersede or modify the terms of any separate license agreement you may have executed with Licensor regarding such Contributions.

6. Trademarks. This License does not grant permission to use the trade names, trademarks, service marks, or product names of the Licensor, except as required for reasonable and customary use in describing the origin of the Work and reproducing the content of the NOTICE file.

7. Disclaimer of Warranty. Unless required by applicable law or agreed to in writing, Licensor provides the Work (and each Contributor provides its Contributions) on an "AS IS" BASIS, WITHOUT WARRANTIES OR CONDITIONS OF ANY KIND, either express or implied, including, without limitation, any warranties or conditions of TITLE, NON-INFRINGEMENT, MERCHANTABILITY, or FITNESS FOR A PARTICULAR PURPOSE. You are solely responsible for determining the appropriateness of using or redistributing the Work and assume any risks associated with Your exercise of permissions under this License.

8. Limitation of Liability. In no event and under no legal theory, whether in tort (including negligence), contract, or otherwise, unless required by applicable law (such as deliberate and grossly negligent acts) or agreed to in writing, shall any Contributor be liable to You for damages, including any direct, indirect, special, incidental, or consequential damages of any character arising as a result of this License or out of the use or inability to use the Work (including but not limited to damages for loss of goodwill, work stoppage, computer failure or malfunction, or any and all other commercial damages or losses), even if such Contributor has been advised of the possibility of such damages.

9. Accepting Warranty or Additional Liability. While redistributing the Work or Derivative Works thereof, You may choose to offer, and charge a fee for, acceptance of support, warranty, indemnity, or other liability obligations and/or rights consistent with this License. However, in accepting such obligations, You may act only on Your own behalf and on Your sole responsibility, not on behalf of any other Contributor, and only if You agree to indemnify, defend, and hold each Contributor harmless for any liability incurred by, or claims asserted against, such Contributor by reason of your accepting any such warranty or additional liability.

END OF TERMS AND CONDITIONS

MIT Kerberos 5.0

© 1985-2013 Massachusetts Institute of Technology

© 1993-1996 OenVision Technologies, Inc. All Rights Reserved.

Portions contributed by Matt Crawford crawdad@fnal.gov were work performed at Fermi National Accelerator Laboratory, which

is operated by Universities Research Association, Inc., under contract DE-AC02-76CHO3000 with the U.S. Department of Energy.

© 1998 by the FundsXpress, INC. All rights reserved.

© 2001 Dr Brian Gladman brg@gladman.uk.net, Worcester, UK. All rights reserved.

© 2006, 2011 Red Hat, Inc. All Rights Reserved.

© 2004 Sun Microsystems, Inc.

© 1983 Regents of the University of California. All rights reserved.

© 2004-2005, Novell, Inc. All rights reserved.
© 2006-2007 THE REGENTS OF THE UNIVERSITY OF MICHIGAN. ALL RIGHTS RESERVED.
© 2006 g10 Code GmbH
© 2006 Andreas Jellinghaus
© 2004-2008 Apple Inc. All Rights Reserved.
© 1999-2003 The OpenLDAP Foundation. All Rights Reserved.
© 2006 Kungliga Tekniska Högskola (Royal Institute of Technology, Stockholm, Sweden). All rights reserved.
© 2010 Oracle America, Inc. All rights reserved.
© 2006, 2007, 2009 NTT (Nippon Telegraph and Telephone Corporation). All rights reserved.
© 2000 Carnegie Mellon University. All Rights Reserved
© 2002 Naval Research Laboratory (NRL/CCS)
© The Internet Society (2006).
© 1991, 1992, 1994 by Cygnus Support.
© 2006 Secure Endpoints Inc.
© 2005 Marko Kreen. All rights reserved.
© 1994 University of Southern California
© 1995 The President and Fellows of Harvard University
This code is derived from software contributed to Harvard by Jeremy Rassen.
This product includes software developed by the University of California, Berkeley and its contributors.
© 1995 Richard P. Basch. All Rights Reserved.
© 1995 Lehman Brothers, Inc. All Rights Reserved.
© 1997, 1998 The NetBSD Foundation, Inc. All rights reserved.
This code was contributed to The NetBSD Foundation by Klaus Klein.
© 1997, 1998, 1999 Computing Research Labs, New Mexico State University
© 1998 Todd C. Miller Todd.Miller@courtesan.com
© 1999 by Theodore Ts'o.
© 1999-2000 The University of Chicago
© 2000 The Regents of the University of Michigan. All rights reserved.
© 2000 Dug Song dugsong@UMICH.EDU. All rights reserved, all wrongs reversed.
© 1990-2, RSA Data Security, Inc. All rights reserved.
©1994 CyberSAFE Corporation.
© 2011, PADL Software Pty Ltd. All rights reserved.
© 2007,2008,2009 Marc Alexander Lehmann.
© 2010 Intel Corporation All rights reserved.

OpenSSL 1.0

This product includes software developed by the OpenSSL Project for use in the OpenSSL Toolkit (<http://www.openssl.org/>).

© 1998-2017 The OpenSSL Project. All rights reserved.
© 1998-2016 The OpenSSL Project. All rights reserved.
© 1998-2011 The OpenSSL Project. All rights reserved.

OpenSSL License

© 1998-2007 The OpenSSL Project. All rights reserved.

Redistribution and use in source and binary forms, with or without modification, are permitted provided that the following conditions are met:

1. Redistributions of source code must retain the above copyright notice, this list of conditions and the following disclaimer.

2. Redistributions in binary form must reproduce the above copyright notice, this list of conditions and the following disclaimer in the documentation and/or other materials provided with the distribution.

3. All advertising materials mentioning features or use of this software must display the following acknowledgment:
This product includes software developed by the OpenSSL Project for use in the OpenSSL Toolkit
(<http://www.openssl.org/>).

4. The names "OpenSSL Toolkit" and "OpenSSL Project" must not be used to endorse or promote products derived from this software without prior written permission. For written permission, please contact openssl-core@openssl.org.

5. Products derived from this software may not be called "OpenSSL" nor may "OpenSSL" appear in their names without prior written permission of the OpenSSL Project.

6. Redistributions of any form whatsoever must retain the following acknowledgment:

This product includes software developed by the OpenSSL Project for use in the OpenSSL Toolkit
(<http://www.openssl.org/>).

THIS SOFTWARE IS PROVIDED BY THE OpenSSL PROJECT "AS IS" AND ANY EXPRESSED OR IMPLIED WARRANTIES, INCLUDING, BUT NOT LIMITED TO, THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE ARE DISCLAIMED. IN NO EVENT SHALL THE OpenSSL PROJECT OR ITS CONTRIBUTORS BE LIABLE FOR ANY DIRECT, INDIRECT, INCIDENTAL, SPECIAL, EXEMPLARY, OR CONSEQUENTIAL DAMAGES (INCLUDING, BUT NOT LIMITED TO, PROCUREMENT OF SUBSTITUTE GOODS OR SERVICES; LOSS OF USE, DATA, OR PROFITS; OR BUSINESS INTERRUPTION) HOWEVER CAUSED AND ON ANY THEORY OF LIABILITY, WHETHER IN CONTRACT, STRICT LIABILITY, OR TORT (INCLUDING NEGLIGENCE OR OTHERWISE) ARISING IN ANY WAY OUT OF THE USE OF THIS SOFTWARE, EVEN IF ADVISED OF THE POSSIBILITY OF SUCH DAMAGE.

This product includes cryptographic software written by Eric Young (eay@cryptsoft.com). This product includes software written by Tim Hudson (tjh@cryptsoft.com).

Original SSLeay License

© 1995-1998 Eric Young (eay@cryptsoft.com)

All rights reserved.

This package is an SSL implementation written by Eric Young (eay@cryptsoft.com).

The implementation was written so as to conform with Netscapes SSL.

This library is free for commercial and non-commercial use as long as the following conditions are adhered to. The following conditions apply to all code found in this distribution, be it the RC4, RSA, lhash, DES, etc., code; not just the SSL code. The SSL documentation included with this distribution is covered by the same copyright terms except that the holder is Tim Hudson (tjh@cryptsoft.com).

Copyright remains Eric Young's, and as such any Copyright notices in the code are not to be removed.

If this package is used in a product, Eric Young should be given attribution as the author of the parts of the library used. This can be in the form of a textual message at program startup or in documentation (online or textual) provided with the package.

Redistribution and use in source and binary forms, with or without modification, are permitted provided that the following conditions are met:

1. Redistributions of source code must retain the copyright notice, this list of conditions and the following disclaimer.

2. Redistributions in binary form must reproduce the above copyright notice, this list of conditions and the following disclaimer in the documentation and/or other materials provided with the distribution.

3. All advertising materials mentioning features or use of this software must display the following acknowledgement:

This product includes cryptographic software written by Eric Young (eay@cryptsoft.com)

The word 'cryptographic' can be left out if the routines from the library being used are not cryptographic related :-).

4. If you include any Windows specific code (or a derivative thereof) from the apps directory (application code) you must include an acknowledgement:

This product includes software written by Tim Hudson (tjh@cryptsoft.com)

THIS SOFTWARE IS PROVIDED BY ERIC YOUNG "AS IS" AND ANY EXPRESS OR IMPLIED WARRANTIES, INCLUDING, BUT NOT LIMITED TO, THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE ARE DISCLAIMED. IN NO EVENT SHALL THE AUTHOR OR CONTRIBUTORS BE LIABLE FOR ANY DIRECT, INDIRECT, INCIDENTAL, SPECIAL, EXEMPLARY, OR CONSEQUENTIAL

DAMAGES (INCLUDING, BUT NOT LIMITED TO, PROCUREMENT OF SUBSTITUTE GOODS OR SERVICES; LOSS OF USE, DATA, OR PROFITS; OR BUSINESS INTERRUPTION) HOWEVER CAUSED AND ON ANY THEORY OF LIABILITY, WHETHER IN CONTRACT, STRICT LIABILITY, OR TORT (INCLUDING NEGLIGENCE OR OTHERWISE) ARISING IN ANY WAY OUT OF THE USE OF THIS SOFTWARE, EVEN IF ADVISED OF THE POSSIBILITY OF SUCH DAMAGE.

The licence and distribution terms for any publically available version or derivative of this code cannot be changed. i.e. this code cannot simply be copied and put under another distribution licence [including the GNU Public Licence.]

NetApp Data OnTAP 9.5

Copyright © 2018 NetApp, Inc. All rights reserved. Printed in the U.S.

No part of this document covered by copyright may be reproduced in any form or by any means—graphic, electronic, or mechanical, including photocopying, recording, taping, or storage in an electronic retrieval system—without prior written permission of the copyright owner.

Software derived from copyrighted NetApp material is subject to the following license and disclaimer:

THIS SOFTWARE IS PROVIDED BY NETAPP "AS IS" AND WITHOUT ANY EXPRESS OR IMPLIED WARRANTIES, INCLUDING, BUT NOT LIMITED TO, THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE, WHICH ARE HEREBY DISCLAIMED. IN NO EVENT SHALL NETAPP BE LIABLE FOR ANY DIRECT, INDIRECT, INCIDENTAL, SPECIAL, EXEMPLARY, OR CONSEQUENTIAL DAMAGES (INCLUDING, BUT NOT LIMITED TO, PROCUREMENT OF SUBSTITUTE GOODS OR SERVICES; LOSS OF USE, DATA, OR PROFITS; OR BUSINESS INTERRUPTION) HOWEVER CAUSED AND ON ANY THEORY OF LIABILITY, WHETHER IN CONTRACT, STRICT LIABILITY, OR TORT (INCLUDING NEGLIGENCE OR OTHERWISE) ARISING IN ANY WAY OUT OF THE USE OF THIS SOFTWARE, EVEN IF ADVISED OF THE POSSIBILITY OF SUCH DAMAGE.

NetApp reserves the right to change any products described herein at any time, and without notice. NetApp assumes no responsibility or liability arising from the use of products described herein, except as expressly agreed to in writing by NetApp. The use or purchase of this product does not convey a license under any patent rights, trademark rights, or any other intellectual property rights of NetApp.

The product described in this manual may be protected by one or more U.S. patents, foreign patents, or pending applications.

Data contained herein pertains to a commercial item (as defined in FAR 2.101) and is proprietary to NetApp, Inc. The U.S. Government has a non-exclusive, non-transferrable, non-sublicensable, worldwide, limited irrevocable license to use the Data only in connection with and in support of the U.S. Government contract under which the Data was delivered. Except as provided herein, the Data may not be used, disclosed, reproduced, modified, performed, or displayed without the prior written approval of NetApp, Inc. United States Government license rights for the Department of Defense are limited to those rights identified in DFARS clause 252.227-7015(b).

© 2023 Quest Software Inc.

ALL RIGHTS RESERVED.

This guide contains proprietary information protected by copyright. The software described in this guide is furnished under a software license or nondisclosure agreement. This software may be used or copied only in accordance with the terms of the applicable agreement. No part of this guide may be reproduced or transmitted in any form or by any means, electronic or mechanical, including photocopying and recording for any purpose other than the purchaser's personal use without the written permission of Quest Software Inc.

The information in this document is provided in connection with Quest Software products. No license, express or implied, by estoppel or otherwise, to any intellectual property right is granted by this document or in connection with the sale of Quest Software products. EXCEPT AS SET FORTH IN THE TERMS AND CONDITIONS AS SPECIFIED IN THE LICENSE AGREEMENT FOR THIS PRODUCT, QUEST SOFTWARE ASSUMES NO LIABILITY WHATSOEVER AND DISCLAIMS ANY EXPRESS, IMPLIED OR STATUTORY WARRANTY RELATING TO ITS PRODUCTS INCLUDING, BUT NOT LIMITED TO, THE IMPLIED WARRANTY OF MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE, OR NON-INFRINGEMENT. IN NO EVENT SHALL QUEST SOFTWARE BE LIABLE FOR ANY DIRECT, INDIRECT, CONSEQUENTIAL, PUNITIVE, SPECIAL OR INCIDENTAL DAMAGES (INCLUDING, WITHOUT LIMITATION, DAMAGES FOR LOSS OF PROFITS, BUSINESS INTERRUPTION OR LOSS OF INFORMATION) ARISING OUT OF THE USE OR INABILITY TO USE THIS DOCUMENT, EVEN IF QUEST SOFTWARE HAS BEEN ADVISED OF THE POSSIBILITY OF SUCH DAMAGES. Quest Software makes no representations or warranties with respect to the accuracy or completeness of the contents of this document and reserves the right to make changes to specifications and product descriptions at any time without notice. Quest Software does not make any commitment to update the information contained in this document.

If you have any questions regarding your potential use of this material, contact:

Quest Software Inc.
Attn: LEGAL Dept.
4 Polaris Way
Aliso Viejo, CA 92656

Refer to our website (<https://www.quest.com>) for regional and international office information.




Patents

Quest Software is proud of our advanced technology. Patents and pending patents may apply to this product. For the most current information about applicable patents for this product, please visit our website at <https://www.quest.com/legal>.

Trademarks

Quest Software, Quest, the Quest logo, QoreStor, and NetVault are trademarks and registered trademarks of Quest Software Inc. For a complete list of Quest marks, visit <https://www.quest.com/legal/trademark-information.aspx>. All other trademarks and registered trademarks are property of their respective owners.

Legend

-  **WARNING:** A WARNING icon indicates a potential for property damage, personal injury, or death.
-  **CAUTION:** A CAUTION icon indicates potential damage to hardware or loss of data if instructions are not followed.
-  **IMPORTANT NOTE, NOTE, TIP, MOBILE, or VIDEO:** An information icon indicates supporting information.

