

# Quest<sup>®</sup> NetVault<sup>®</sup> Backup Plug-in *for VMware* 12.3.3 Release Notes

**September 2020**

These release notes provide information about the Quest<sup>®</sup> NetVault<sup>®</sup> Backup Plug-in *for VMware* release.

Topics:

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

## About this release

Quest NetVault Backup (NetVault Backup) Plug-in *for VMware* (Plug-in *for VMware*) 12.3.3 is a minor release, with enhanced features and functionality. For complete product documentation, visit <https://support.quest.com/technical-documents>.

# Enhancements

The following is a list of enhancements implemented in Plug-in *for VMware* 12.3.3.

Table 1. General enhancements

Enhancement	Issue ID
Added support for VDDK 7.0 to support Windows Server 2019 and Red Hat Enterprise Linux (RHEL) 7.7 and 8.0 as a proxy. VDDK supports the following operating systems for proxy backup: <ul style="list-style-type: none"><li>Windows Server 2019</li><li>Windows Server 2016, including versions 1709 and 1803</li><li>Windows Server 2012 and 2012 R2</li><li>Red Hat Enterprise Linux (RHEL) 7.7 and 8.0</li><li>CentOS 7.7</li><li>SUSE Linux Enterprise Server SLES 12 SP5 and 15 SP1</li></ul>	DNVMWARE-2345

For more information, see the [VDDK 7.0 release notes](#).

# 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 2. General known issues

Known issue	Issue ID
When restoring data to an alternate datastore, the plug-in does not verify whether the datastore is available. Verify that the datastore is valid and has sufficient disk space to accommodate the virtual machine.	DNVMWARE-18 (1714)
The configuration setting [ <b>Custom:MountOperationTimeoutSecs</b> ], which is stored in the <b>vmware.cfg</b> file, determines how long the plug-in process waits for the mount daemon to respond to a request. The default value is set to 600 seconds during a fresh install and 300 seconds during an upgrade. If the mount daemon is unable to complete a request within the specified interval, the virtual machine is left in a mounted state. If you have many backups running simultaneously or your server is running under heavy load, modify the value for the [ <b>Custom:MountOperationTimeoutSecs</b> ] setting to avoid this issue.	DNVMWARE-505 (3131)
Virtual Disk Development Kit (VDDK) does not support non-UTF8 locales. On Linux-based clients that use non-UTF8 locales, the plug-in reports the error “Child Process died unexpectedly” and exits abnormally.	DNVMWARE-584 (3340)
You cannot back up virtual machine templates using the Plug-in <i>for VMware</i> . <b>Workaround:</b> Convert the template to a virtual machine.	DNVMWARE-713 (13728, VMW-202)
The file-level indexing process does not generate indexes for symlinks.	DNVMWARE-977 (21793)
The file-level indexing process does not treat hard links in any special way and generates index entries for them as if they are separate entities. When you restore a saveset that includes a hard link, the plug-in stops responding.	DNVMWARE-978 (21794)
When restoring NTFS sparse files, if the actual allocated size of a data run is smaller than the total size of the data run, the restored file might be corrupted.	DNVMWARE-1456 (29043)
Backups that have Active Block Mapping (ABM) enabled might stop working when memory is exceeded.	DNVMWARE-1584

**Table 2. General known issues**

Known issue	Issue ID
The plug-in is unable to restore a virtual machine protected by VMware vSphere Fault Tolerance (vSphere FT) to an alternate VMware vCenter Server.	DNVMWARE-1691 (32398)
Backing up a virtual machine succeeds if the Virtual Machine Disk (VMDK) fails to open and the <b>Exclude data disks</b> option is selected.	DNVMWARE-1696
If the inventory view is toggled, the selection set is grayed out on the Edit Set and Clone Set operations.	DNVMWARE-1900
<b>ATTENTION:</b> Aborting a restore to the original location deletes the original virtual machine. This issue may result in data loss. <b>Workaround:</b> Before you begin a restore to the original location, clone the original virtual machine.	DNVMWARE-1906
Plug-in <i>for VMware</i> does not work on CentOS 6.x and RHEL 6.x, because those operating systems do not include glibc-2.14. <b>Workarounds:</b> Upgrade NetVault Backup Client server to CentOS 7.x or RHEL 7.x, or Downgrade the plug-in to Plug-in <i>for VMware</i> 12.3.0.	NV-1086

**Table 3. Third-party known issues**

Known issue	Issue ID
When backing up a powered on virtual machine through a VMware vCenter Server, the plug-in may fail to back up the “.nvram”, “.vmx”, and “.log” files. For more information, see <a href="http://kb.vmware.com/kb/1019286">http://kb.vmware.com/kb/1019286</a> .	
When a snapshot is created on a virtual machine that uses thin-provisioned disks, VMware vSphere (the client and the underlying disk library) identifies the disk as thick. For more information, see <a href="http://kb.vmware.com/kb/1020137">http://kb.vmware.com/kb/1020137</a> .	
At the time of enabling CBT for a virtual machine, no snapshots must exist on it. For more information, see <a href="http://kb.vmware.com/kb/1033816">http://kb.vmware.com/kb/1033816</a> .	
If an ESXi 5.x host is managed by a vCenter Server, the virtual machines should not be restored when connected directly to the ESXi host. This restriction is due to a feature introduced in vSphere 5. For more information, see <a href="http://www.vmware.com/support/developer/vddk/VDDK-500-ReleaseNotes.html#knownissues">http://www.vmware.com/support/developer/vddk/VDDK-500-ReleaseNotes.html#knownissues</a> .	
To prevent the migration of a virtual machine while its disks are being accessed for a backup or restore, the plug-in uses VDDK APIs to lock and unlock a virtual machine. This functionality is disabled by default. To enable it, see the user's guide for the plug-in. Currently, the locking functionality has the following known issues: <ul style="list-style-type: none"> <li>• Locking a virtual machine may not always succeed even though API indicates success. This issue is under review with VMware. You can usually ignore this failure.</li> <li>• Unlocking is known to fail occasionally. This issue has been documented in the VDDK 5 release notes. For details, review the “<b>EndAccess sometimes does not reenale migration after PrepareForAccess</b>” section in the VDDK 5.0 Release Notes.</li> <li>• If the plug-in exits unexpectedly after locking a virtual machine, the virtual machine may be left in a locked state so that it is disabled for migration. For information about removing the lock and enabling migration for the virtual machine, see <a href="http://kb.vmware.com/kb/2008957">http://kb.vmware.com/kb/2008957</a>.</li> </ul>	
On a Windows 2012 virtual machine, data corruption may occur during or after a network copy operation. For more information, see <a href="http://kb.vmware.com/kb/2058692">http://kb.vmware.com/kb/2058692</a> .	

# System requirements

Before installing Plug-in for VMware, ensure that your system meets the requirements outlined in the following table and in the *Quest NetVault Backup Compatibility Guide* available at <https://support.quest.com/technical-documents>.

Table 4. System requirements

Requirement	Details
Operating systems	For a list of supported OS distributions and versions, see the <a href="#">VDDK 6.7 Release Notes</a> .
NetVault Backup versions	The Plug-in for VMware 12.3.3 requires NetVault Backup 12.1 or later. <b>NOTE:</b> Be aware of the following: <ul style="list-style-type: none"><li>• If you used the Distributed Jobs feature with an earlier version of the plug-in—the feature was added starting with version 12.0—you must upgrade your NetVault Backup Server and Client software to 12.3.3 as well as updating the plug-in to take advantage of the enhancements.</li><li>• Existing backup jobs that were created using version 12.0 through 12.3 of the plug-in and used the Distributed Jobs feature continue to function the same way in which they were created.</li></ul> For complete supported-platform information, see the <i>Quest NetVault Backup Compatibility Guide</i> available at <a href="https://support.quest.com/technical-documents">https://support.quest.com/technical-documents</a> .
Packages	On a Windows operating system, the Plug-in for VMware 12.3.3 requires Microsoft Visual C++ 2017 or later. Using the plug-in without this package results in a “Failed to get connection to plugin” error.

**i** | **NOTE:** To use the Virtual Disk Development Kit (VDDK) with OEM ESXi, you require VMware ESXi Foundation, Standard, or Enterprise license. This license can be obtained from OEM or VMware directly.

## Upgrade and compatibility

Plug-in for VMware 12.3.3 requires NetVault Backup 12.1 or later. For complete supported-platform information, see the *Quest NetVault Backup Compatibility Guide*.

- **Cannot browse mounted virtual machines after upgrading NetVault Backup:** After installing the plug-in, if you upgrade the NetVault Backup software, you must reinstall the plug-in on that machine. Otherwise, you cannot open the **Drives** node of a mounted virtual machine for any new file-level backups.
- **Restart the NetVault Backup Service if “nvmwmount.exe” was running during upgrade:** If the mount process “nvmwmount.exe” was running during an upgrade from 2.x, restart the NetVault Backup Service on the client.

# Product licensing

To obtain the license key for your NetVault Backup Server environment, determine the NetVault Machine ID of your main NetVault Backup 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 NetVault Configuration Wizard to install the product license keys. Alternatively, you can install the license keys from the Manage Clients page.

- [Obtaining a machine ID](#)
- [Installing a license key using the configuration wizard](#)
- [Installing a license key from the Manage Clients page](#)

## Obtaining a machine ID

- 1 Start the NetVault Backup WebUI.
- 2 In the Navigation pane, click **Manage Clients**.
- 3 In the **NetVault Backup Clients** list, select the applicable machine, and click **Manage**.
- 4 On the **View Client** page, note the machine ID exactly as it is displayed in the **Client Summary** table.

## Installing a license key using the configuration wizard

- 1 In the Navigation pane, click **Guided Configuration**.
- 2 On the **NetVault Configuration Wizard** page, click **Install Licenses**.
- 3 In the **NetVault Backup Clients** list, select the applicable machine, and click **Next**.
- 4 In the **Enter the license key string** box, type or copy and paste the license key, and click **Apply**.  
After the key is applied successfully, a message is displayed.

## Installing a license key from the Manage Clients page

- 1 In the Navigation pane, click **Manage Clients**.
- 2 In the **NetVault Backup Clients** list, select the applicable machine, and click **Manage**.
- 3 On the **View Client** page, click **Install License**.
- 4 In the **Install License** dialog box, type or copy and paste the license key, and click **Apply**.  
After the key is applied successfully, a message is displayed.
- 5 To dismiss the dialog box, click **Close**.

# Upgrade and installation instructions

The standard method for upgrading the plug-in is to install the latest version over the previous version of the plug-in. For installation instructions, see the *Quest NetVault Backup Plug-in for VMware User's Guide*.

To use the plug-in for file-level backup operations when upgrading the hybrid version of the plug-in on Windows, complete the following tasks in the given order:

- 1 Verify that no virtual machine is mounted for a file-level browse or backup operation.  
If any virtual is mounted in a browse session, unmount it, or if it is mounted for a backup, wait until the backup completes.
- 2 From the NetVault Backup Process Viewer, check if any instance of **NetVault VM mount daemon** or **NetVault VM mount CLI** is running on the client.  
Alternatively, use the Windows Task Manager to see if any instance of **nvvmwmount.exe** is running. If so, restart the NetVault Backup Service.
- 3 Verify that the Working Directory configured for the plug-in does not contain any subfolders named after the display names of virtual machines.  
If the directory includes any mount folder, manually remove the folder. For more information, see the user's guide. If you fail to complete the cleanup routine, a subsequent mount operation fails with the error "A stale mount was found."
- 4 To ensure that a "Driver not found" error does not occur during the upgrade, follow the steps outlined in [Upgrade procedure](#).

## Upgrade procedure

VDDK uses a kernel-mode driver for mounting a virtual machine during file-level backup and browse operations. The Plug-in *for VMware* automatically starts a service for the driver when you install the plug-in, but it does not verify whether the service is running when you perform an upgrade or a reinstallation.

If this service is not running on the client, the plug-in fails to complete the mount request and reports the error "Driver not found."

### ***To upgrade the hybrid version of the plug-in on Windows:***

- 1 Open a command prompt window.
- 2 Stop the service, if it is running:  

```
sc stop vstor2-mntapi20-shared
```
- 3 Delete the service:  

```
sc delete vstor2-mntapi20-shared
```
- 4 Verify that the service has been deleted:  

```
sc query vstor2-mntapi20-shared
```

  
If the service is stuck in a "stopping" state, restart the machine.
- 5 Install the plug-in.

For information about installing the plug-in, see the *Quest NetVault Backup Plug-in for VMware User's 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 supports any single-byte or multi-byte 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, Japan.

The release is localized to the following languages: Chinese (Simplified), French, German, Japanese, Korean.

## 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](http://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 <https://www.quest.com/legal/license-agreements.aspx>. Source code for components marked with an asterisk (\*) is available at <https://opensource.quest.com>.

**Table 5. List of third-party contributions**

Component	License or acknowledgment
libcurl 7.46.0	MIT/X derivate N/A © 1996–2010, Daniel Stenberg. All rights reserved.
OpenSSL 1.0.1j	<p>OpenSSL 1.0 © 1998–2015 The OpenSSL Project. All rights reserved.</p> <p>LICENSE ISSUES</p> <p>The OpenSSL toolkit stays under a dual license, i.e. both the conditions of the OpenSSL License and the original SSLeay license apply to the toolkit. See below for the actual license texts. Actually both licenses are BSD-style Open Source licenses. In case of any license issues related to OpenSSL please contact <a href="mailto:openssl-core@openssl.org">openssl-core@openssl.org</a>.</p> <p>OpenSSL License © 1998-2007 The OpenSSL Project. 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"> <li>1 Redistributions of source code must retain the above copyright notice, this list of conditions and the following disclaimer.</li> <li>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.</li> <li>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 (<a href="http://www.openssl.org/">http://www.openssl.org/</a>).</li> <li>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 <a href="mailto:openssl-core@openssl.org">openssl-core@openssl.org</a>.</li> <li>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.</li> <li>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 (<a href="http://www.openssl.org/">http://www.openssl.org/</a>).</li> </ol> <p>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.</p> <p>This product includes cryptographic software written by Eric Young (<a href="mailto:ey@cryptsoft.com">ey@cryptsoft.com</a>). This product includes software written by Tim Hudson (<a href="mailto:tjh@cryptsoft.com">tjh@cryptsoft.com</a>).</p>



**Table 5. List of third-party contributions**

Component	License or acknowledgment
OpenSSL 1.0.1j (continued)	<p data-bbox="403 275 670 304">Original SSLeay License</p> <p data-bbox="403 315 895 344">© 1995-1998 Eric Young (<a href="mailto:eay@cryptsoft.com">eay@cryptsoft.com</a>)</p> <p data-bbox="403 353 603 383">All rights reserved.</p> <p data-bbox="403 392 1294 421">This package is an SSL implementation written by Eric Young (<a href="mailto:eay@cryptsoft.com">eay@cryptsoft.com</a>).</p> <p data-bbox="403 430 1158 459">The implementation was written so as to conform with Netscapes SSL.</p> <p data-bbox="403 468 1402 611">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 (<a href="mailto:tjh@cryptsoft.com">tjh@cryptsoft.com</a>).</p> <p data-bbox="403 620 1402 674">Copyright remains Eric Young's, and as such any Copyright notices in the code are not to be removed.</p> <p data-bbox="403 683 1402 741">If this package is used in a product, Eric Young should be given attribution as the author of the parts of the library used.</p> <p data-bbox="403 750 1402 808">This can be in the form of a textual message at program startup or in documentation (online or textual) provided with the package.</p> <p data-bbox="403 817 1402 875">Redistribution and use in source and binary forms, with or without modification, are permitted provided that the following conditions are met:</p> <ol data-bbox="443 884 1402 1350" style="list-style-type: none"> <li data-bbox="443 884 1402 943">1 Redistributions of source code must retain the copyright notice, this list of conditions and the following disclaimer.</li> <li data-bbox="443 952 1402 1055">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.</li> <li data-bbox="443 1064 1402 1279">3 All advertising materials mentioning features or use of this software must display the following acknowledgement:   <div data-bbox="483 1144 1190 1202" style="margin-left: 20px;">This product includes cryptographic software written by Eric Young (<a href="mailto:eay@cryptsoft.com">eay@cryptsoft.com</a>).</div> <div data-bbox="483 1211 1402 1270" style="margin-left: 20px;">The word "cryptographic" can be left out if the routines from the library being used are not cryptographic related :-).</div> </li> <li data-bbox="443 1288 1402 1350">4 If you include any Windows-specific code (or a derivative thereof) from the apps directory (application code) you must include an acknowledgement:</li> </ol> <p data-bbox="483 1359 1278 1388" style="margin-left: 20px;">This product includes software written by Tim Hudson (<a href="mailto:tjh@cryptsoft.com">tjh@cryptsoft.com</a>).</p> <p data-bbox="403 1397 1402 1731">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.</p> <p data-bbox="403 1740 1402 1823">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.]</p>

© 2020 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, 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.