

Quest® QoreStor™ 5.1.0

Release Notes

March 2019 - Revision A for build 377

These release notes are intended to supplement the QoreStor documentation to provide last minute information available for the latest release of the QoreStor software. These release notes contain details about the latest updates and resolutions, known issues, resolutions, and other information.

i | **NOTE:** Please check for the latest versions of the QoreStor documentation available at support.quest.com/qorestor.

About this release

QoreStor is a software-defined secondary storage platform based on Quest's proven DR Series Appliance's resilient deduplication and replication technologies. With QoreStor, you can break free of backup appliances and accelerate backup performance, reduce storage requirements and costs, and replicate safer and faster to the cloud for data archiving, disaster recovery and business continuity.

QoreStor supports all of the major backup software applications in use today and can lower your backup storage costs to as little as \$.16/GB while reducing your total cost of ownership. (For a complete list of supported backup software, see [Supported backup applications](#)). QoreStor achieves these results using patented Rapid Data Access (RDA) technology as well as built-in, variable block-based deduplication and compression.

QoreStor helps you to:

- Reduce on-premises and cloud storage costs with industry-leading deduplication and compression.
- Accelerate backup completion with protocol accelerators and dedupe.
- Shrink replication time by transmitting only changed data.
- Improve data security and comply with FIPS 140-2.
- Maximize return on investment for existing data protection technologies.
- Lower total cost of ownership through all-inclusive licensing.

QoreStor5.1.0.377 is a hotfix release of QoreStor with defect resolutions and minor enhancements. See [New features and enhancements](#) for more information. See [Resolved issues](#) for information on issues resolved in this version.

New features and enhancements

New features included in QoreStor 5.1.0 build 377 include:

- Support for email notification of QoreStor Alerts.
- New text-based configuration menu to simplify QoreStor configuration and troubleshooting.

Enhancements included in QoreStor 5.1.0 build 377 include:

- Secure Connect is enabled by default in this release when using latest RDA and OST plug-ins.
- Support for RHEL, Oracle, and CentOS 7.6

Upgrade notes

This topic contains important information for users who are upgrading to this version of QoreStor.

- During the upgrade, the QoreStor installation script will verify that the Repository and Metadata filesystems are mounted with the **noatime** and **dirsync** mount options. If not, the installation script will make the necessary changes in */etc/fstab* and prompt you to reboot the system and re-run the QoreStor installation process.

i | **NOTE:** The above process does not occur when installing QoreStor in Demo mode.

- To ensure proper authentication of network shares, after upgrading to QoreStor 5.1, remove the QoreStor server from the domain and re-add it to the domain.

- QoreStor 5.1.0 adds support for VTL protocols. To enable VTL support, you must perform the following sequence of operations:
 - Upgrade your existing installation to QoreStor 5.1.0. Do not select the option to install VTL support at this point.
 - Using the steps documented in "Uninstalling QoreStor while maintaining configuration data" in the *QoreStor Installation Guide*, uninstall the newly updated QoreStor installation.
- i** **IMPORTANT:** Uninstalling your existing QoreStor with the command below will preserve your data and application configurations.
- ```
/opt/qorestor/bin/qs_uninst
```
- When running this command, you will receive the prompt:
- ```
To completely remove the application, user data, and configuration files, answer 'no' below,
```
- ```
and rerun the uninstaller with the '-a' option.
```
- ```
Do you wish to continue? yes\nno [no]:
```
- Enter **Yes** to continue without removing your data.
- Reinstall QoreStor 5.1.0 with VTL support by either using the `--install-vtl` option or answering "yes" to the prompt for adding VTL support.
 - When using QoreStor with VTL, upgrades to the operating system of the QoreStor server require additional configuration. Refer to "Upgrading the QoreStor Operating System" in the *QoreStor Installation Guide*.

Upgrading QoreStor instances on Microsoft Azure

For QoreStor instances running on Microsoft Azure, perform the actions below before upgrading to 5.1.0.377.

- At the prompt, execute the following commands:


```
curl -o azureclient.rpm https://rhui-1.microsoft.com/pulp/repos/microsoft-azure-rhel7/rhui-azure-rhel7-2.2-74.noarch.rpm
```

```
sudo rpm -U azureclient.rpm
```

```
sudo yum clean all
```

Resolved issues

The following is a list of issues addressed in this release.

Table 1: Resolved issues

Issue ID	Resolved Issue
QS-1607	A purchased license no longer overrides 1 TB demo capacity.
QS-3776	In some cases, viewing container details for a VTL container will cause the QoreStor GUI to reset.

Issue ID	Resolved Issue
QS-3833	When guestmode is enabled, access to the QoreStor GUI is not possible.
QS-3788	Added text-based menu to the standalone QoreStor installations as an option for simple configuration.
QS-4045	Provided a CLI command for configuring email notifications for QoreStor Alerts.

Known issues

The issues below are known to exist in this release.

Table 2: Known issues in this release

ID	Issue
QS-437 QS-438	When using multiple NetVault Backup Servers to access the same QoreStor Server, use storage group, container, and user names unique to each NetVault Backup server to avoid accidental deletions.
QS-627	After deleting a container and storage group, immediately creating a new container with the same name may fail. Workaround: This failure occurs because the old container is still in a delete_pending stage. To proceed with creating a new container, wait until the old container has been completely deleted via the QoreStor Cleaner run.
QS-1343	The Byte Ingested value for a container does not get reduced after space reclamation. This is by design as Bytes Ingested is a cumulative value
QS-1420	When executing the QoreStor uninstallation script, the script will report and continue if illegal options are entered.
QS-1446	If the QoreStor partition is not set to automount, and the QoreStor server is rebooted, the system appears to be operational but shows 0 physical capacity.
QS-1588	When running Optimized Duplication jobs in Backup Exec, the container quota is not enforced as it is for backup jobs.
QS-1595	In the QoreStor GUI, the Physical Capacity value shown in the system information pane refers to the licensed capacity, not the true physical capacity of the QoreStor server. To view the physical capacity, use the QoreStor CLI commands.
QS-1670	For Linux clients, the full version number of RDA plug-ins is not displayed.
QS-1810	When viewing graphs in the QoreStor UI, if two lines overlap, one line will be hidden by the other. Workaround: QoreStor graph values can be toggled on or off by clicking the colored circle next to the value name. Toggle the visible overlapping line to see the line that is hidden.

ID	Issue
QS-1823	In some situations, the deduplication savings for a storage group shows as 100% before a backup has occurred. Once a backup has occurred, the deduplication savings will be displayed accurately.
QS-1980	When deleting a storage group, the Storage Group page will display timestamp data where the storage group entry used to appear. This occurs because the storage group is still in a delete_ pending stage. Once the delete is completed and the UI refreshes, the timestamp will not longer appear.
QS-2039	If a QoreStor upgrade is performed while the Red Hat Automatic Bug Reporting Tool (ABRT) service is running, in some cases the default core file location may be changed to /var/cores. This can cause the root filesystem to become full. Workaround: Disable the ABRT service before performing the QoreStor upgrade.
QS-2236	When installing QoreStor, if a required port is unavailable the installation will continue and be considered successful, yet QoreStor will start in Maintenance Mode. Workaround: Ensure that all required ports are available to QoreStor.
QS-2242	When installing QoreStor, the filesystem selected for the QoreStor repository should not contain data from other application or users. QoreStor must have exclusive access to the repository filesystem.
QS-2255	When configuring replication through the QoreStor CLI, it is possible to configure the same QoreStor system as both the source and target. This is not a supported configuration.
QS-2258	The Rapid NFS plug-in does not support installation on SuSe 10
QS-2422	Due to changes in internal networking components, CIFS shares may fail to authenticate after upgrading to QoreStor 5.0.1. Workaround: Remove the QoreStor server from the domain, and re-add it to the domain.
QS-2617	Due to corrections in the way that CPU and memory usage is captured and charted, CPU and memory usage will appear to increase after an upgrade to QoreStor 5.0.1. Actual resource usage is unaffected.
QS-2694	When the system time on the QoreStor server is synchronized with the domain time, this may cause the system time to adjust backwards. If this occurs, system statistics (like read/write throughput statistics) will appear to be hung for an amount of time equal to the time adjustment.
QS-2699	The QoreStor installation process requires that the Repository and Metadata file systems are mounted with noatime and dirsync mount options. If necessary, the QoreStor installer will make the required changes to <i>/etc/fstab</i> and reboot the QoreStor server.
QS-2728	When a domain admin group is added to the QoreStor login group, users that are part of the domain admin group may will not be able to login using the <user name>@<domain name> format.

ID	Issue
	<p>Workaround: Use the <domain name>\<user name> format.</p>
QS-3766	<p>Customers using Fibre Channel VTL on QoreStor 5.1.0 who then upgrade to QoreStor 5.1.0.377 will need to reconfigure FC VTL connections with the new target WWPN shown in the output of the fc --show command.</p>
QS-3779	<p>When using Secure Connect with NetVault Backup in a multiple-machine configuration (NetVault server, NetVault client, QoreStor server), Secure Connect can respond to errors only for connections between the NetVault server and QoreStor or the NetVault client and QoreStor. Secure Connect does not address connections between the NetVault server and NetVault client.</p>
QS-3855	<p>When using the Windows RDA client, a secured connection with trusted certificates is not being established due to the client certificate not passing validation.</p> <p>Workaround: On the Windows machine, perform the steps below:</p> <ol style="list-style-type: none"> 1. Download and install Perl (https://www.activestate.com/ActivePerl). 2. Download the perl script c_rehash, stored inside OpenSSL (https://wiki.openssl.org/index.php/Binaries). 3. Run the Windows command prompt. 4. Execute perl.exe with path_to_the_c_rehash and path_to_the_cert_dir arguments populated for your environment. For example: <pre>perl.exe C:\<path_to_the_c_rehash> C:\<path_to_the_cert_dir></pre>
QS-3856	<p>When using Secure Connect, if the Secure Connect client and server use certificates from different certificate authorities, the connection will fallback to a standard, unencrypted connection.</p>
QS-4143	<p>In the QoreStor CLI, the help output for the email_alerts command incorrectly shows the argument --config. The correct argument is --configure.</p>
QS-4149	<p>It is possible to configure and test email alerts without providing an email address.</p> <p>Workaround: Ensure that when configuring email alerts, a valid email address is used.</p>
QS-4169	<p>When using the Linux exports http_proxy or https_proxy, no_proxy is also required for the watcher service to function correctly. Refer to "Accessing QoreStor" in the <i>QoreStor User Guide</i>.</p> <p>When using QoreStor with VTL, upgrades to the operating system of the QoreStor server require additional configuration. Refer to "Upgrading the QoreStor Operating System" in the <i>QoreStor Installation Guide</i>.</p>

Product Licensing

QoreStor offers a backend capacity licensing model to allow for simple integration with other Quest Data Protection products.

- **Standalone license** - QoreStor is licensed by the amount of backend capacity required. Standalone licenses are available as either **perpetual** licenses (with no expiration), or **term** licenses, which expire after a specified period of time.

- **i** | **NOTE:** Term licenses are intended for specific customer use cases, i.e., licensing according to yearly billing cycles. A perpetual license is appropriate for most customers.

QoreStor licenses are additive, meaning that if you purchase a 5TB license now, and a 10TB license in the future, you will have 15TB total capacity.

- **i** | **NOTE:** Licenses for QoreStor are specific to the QoreStor server. When installing a license, the System ID for your QoreStor server is required. You can obtain the System ID with the command **system --show | grep "System ID"**

Evaluating QoreStor

QoreStor offers two methods for evaluation:

- **Default installation** - If no license is installed, QoreStor defaults to a no-cost, 1TB capacity installation supported by the QoreStor Community. This option requires no license and does not expire.
 - If a license is applied to a server running in this mode, the free 1TB is **not** added to the purchased license capacity.
 - When installed in Demo mode, the capacity is limited to 100GB.
- **Full capacity trial** - available on the Quest Software Trial site, which provides a 30-day evaluation license for up to 360TB and access to Quest Support. After the evaluation period has expired, the QoreStor server will operate in Manual Intervention mode until a license is applied. To use QoreStor beyond that time frame, you will need to purchase a perpetual standalone license.
 - If installed in Demo mode, the capacity is limited to 100GB
 - If a longer trial period is required, please contact Quest Sales.

If you have purchased a standalone license, you can install it using the **system --license** command, as described in the *QoreStor Command Line Reference Guide*.

- **i** | **NOTE:** When ordering a license, the System ID for your QoreStor server is required. You can obtain the System ID with the command **system --show | grep "System ID"**

Supported software and hardware

For a complete list of the supported hardware and software for QoreStor, see the *QoreStor Interoperability Guide*. You can download this guide by visiting: <http://support.quest.com/qorestor> and selecting your specific QoreStor version, which opens the product support page to view product documentation for your system.

Other information you may need

The following table lists the documentation available for QoreStor. The documents listed in this table are available on the Quest support website by selecting your specific QoreStor version at:

<http://support.quest.com/QoreStor>

Table 3: QoreStor documentation

Document	Description
QoreStor Installation Guide	Provides information on installation and operation requirements, supported platforms as well as procedures for installing QoreStor.
QoreStor User Guide	Provides information on configuring and using QoreStor.
QoreStor Release Notes	Provides the latest information about new features and known issues with a specific product release.
QoreStor Command Line Reference Guide	Provides information about managing QoreStor data backup and replication operations using the QoreStor command line interface (CLI).
QoreStor Interoperability Guide	Provides information on supported infrastructure components.
QoreStor Virtual Machine Deployment Guide	Provides information on deploying the QoreStor virtual machine on VMware ESX or Microsoft Hyper-V.
Additional whitepapers	Instructions and best practices for configuring additional Quest and third-party applications to work with QoreStor.

NOTE: Check for the latest documentation updates and release notes at <http://support.quest.com/qorestor>. Read the release notes first because they contain the most recently documented information about known issues with a specific product release.

Information on compatible products

QoreStor offers direct integration with Quest Software's NetVault® Backup and vRanger®, as well as Veritas NetBackup and Backup Exec. For more information on those products refer to the documents below.

Table 4: Quest NetVault Backup documentation

Document	Description
NetVault Backup Installation Guide	Provides information about installing and upgrading the NetVault Backup server and client software.
NetVault Backup Administration Guide	Describes how to configure and use NetVault Backup to protect your data. This document also provides information on configuring QoreStor repositories and migrating NetVault SmartDisk data to the new QoreStor repository.
NetVault Backup Release Notes	Provides the latest information about new features and known issues with a specific product release.

NOTE: See the complete NetVault Backup documentation at <https://support.quest.com/netvault-backup>.

Table 5: Quest vRanger documentation

Document	Description
vRanger Installation/Upgrade Guide	This document provides information on supported platforms, system requirements, and instructions on installing and upgrading vRanger.
vRanger User Guide	This document provides information and procedures on configuring and using vRanger to protect virtual and physical environments.
vRanger Release Notes	This document details the issues resolved in this release, the known issues as of this release, and the third party components in vRanger.

NOTE: See the complete vRanger documentation at <https://support.quest.com/vranger>.

Table 6: Veritas documentation

Document	Description
Veritas NetBackup	For information on Veritas NetBackup, refer to the NetBackup product documentation .
Veritas Backup Exec	For information on Veritas Backup Exec, refer to the Backup Exec product documentation .

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.

Contacting Quest

For sales or other inquiries, visit www.quest.com/contact.

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 components

This product contains the following third-party components. For third-party license information, and copies of third party licenses not reproduced below, 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/>.

Component	License	Notes
angular2-clipboard 11	MIT 1.0	Copyright (c) 2016 Sam Lin A copy of the license can be found at The MIT License (MIT)
angular2-jwt 0.2.3	MIT 1.0	Copyright (c) 2017 Auth0 Inc. A copy of the license can be found at The MIT License (MIT)
Angular-jwt 1.0	MIT 1.0	Copyright (c) 2017 Auth0 Inc. A copy of the license can be found at The MIT License (MIT)
Boost 1.63	Boost 1.0	Copyright (c) 2001-2010 Joel de Guzman Copyright (c) 2010 Eric Niebler Copyright (c) 2015 John Fletcher A copy of the license can be found at The MIT License (MIT)
bzip2	BSD Simple	A copy of the license can be found at The MIT License (MIT)
core-js 2.5.3	MIT	Copyright (c) 2014-2016 Denis Pushkarev A copy of the license can be found at The MIT License (MIT)
cURL 7.57.0	MIT	Copyright (c) 1996 - 2016, Daniel Stenberg, <daniel@haxx.se>, and many contributors, see the THANKS file. A copy of the license can be found at The MIT License (MIT)
D3 3	BSD 3-Clause License	Copyright (c) 2013, Michael Bostock All rights reserved. A copy of the license can be found at The MIT License (MIT)
dmidecode 3.1_1*	GPL 2	* Copyright (C) 2000-2002 Alan Cox <alan@redhat.com> * Copyright (C) 2002-2010 Jean Delvare <khali@linux-fr.org> A copy of the license can be found below at GPL (GNU General Public License) 2.0 This component is not actually used by QoreStor, but is provided with our product for your convenience.
fio 3.7*	GPL 2	A copy of the license can be found below at GPL (GNU General Public License) 2.0 This component is not actually used by QoreStor, but is provided with our product for your convenience.

Component	License	Notes
Font Awesome 4.7.0	MIT	A copy of the license can be found at The MIT License (MIT)
Gin 1.2	MIT 1.0	Copyright (c) 2014 Manuel Martinez-Almeida A copy of the license can be found at The MIT License (MIT)
go-prettyjson 1.0	MIT 1.0	Copyright (c) 2018 Kazuhito Hokamura A copy of the license can be found at The MIT License (MIT)
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go-sqlite3 1.6	MIT 1.0	Copyright (c) 2014 Yasuhiro Matsumoto A copy of the license can be found at The MIT License (MIT)
iostat 10.1.15*	GPL 2	(C) 1998-2017 by Sebastien GODARD (sysstat <at> orange.fr) A copy of the license can be found below at GPL (GNU General Public License) 2.0 This component is not actually used by QoreStor, but is provided with our product for your convenience.
jq 1.5	MIT 1.0	jq is copyright (C) 2012 Stephen Dolan A copy of the license can be found at The MIT License (MIT)
jwt-go 3.2	MIT 1.0	Copyright (c) 2012 Dave Grijalva A copy of the license can be found at The MIT License (MIT)
libidn 1.31*	LGPL 2.1	Copyright (C) 1991, 1999 Free Software Foundation, Inc. A copy of the license can be found below at GNU (Lesser General Public License) 2.1
libxml2 2.9.3	MIT	Copyright (C) 1998-2012 Daniel Veillard. All Rights Reserved. A copy of the license can be found at The MIT License (MIT)
logrus 1.0.5	MIT 1.0	Copyright (c) 2014 Simon Eskildsen A copy of the license can be found at The MIT License (MIT)
MHVTL 0.18.15*	GPL 2	Copyright (C) 2005-2012 Mark Harvey markh794@gmail.com, mark_harvey@symantec.com

Component	License	Notes
		<p>A copy of the license can be found below at GPL (GNU General Public License) 2.0</p> <p>This component is not actually used by QoreStor, but is provided with our product for your convenience.</p>
Mux 1.6	BSD 3-Clause	<p>Copyright (c) 2012 Rodrigo Moraes. All rights reserved</p> <p>A copy of the license can be found at The MIT License (MIT)</p>
net-tools-1.60	GPL 2	<p>Copyright 1995-1996 Bernd Eckenfels, Germany</p> <p>A copy of the license can be found below at GPL (GNU General Public License) 2.0</p>
ng2-dropdown .0.0.3	MIT 1.0	<p>Copyright (c) 2015-2017 Angular ng-bootstrap team</p> <p>A copy of the license can be found at The MIT License (MIT)</p>
ng2-nvd3 2.0	MIT 1.0	<p>Copyright (c) 2016 Konstantin Skipor</p> <p>A copy of the license can be found at The MIT License (MIT)</p>
ng2-truncate 3.17	MIT 1.0	<p>A copy of the license can be found at The MIT License (MIT)</p>
ngx-modal 0.0.3	MIT 1.0	<p>A copy of the license can be found at The MIT License (MIT)</p>
OpenSSL 0.9.8e OpenSSL 1.0.1g OpenSSL 1.1.0e	OpenSSL License	<p>This product includes software developed by the OpenSSL Project for use in the OpenSSL Toolkit (http://www.openssl.org/)</p> <p>A copy of the license can be found below at Open SSL License</p>
POCO C++ Libraries 1.9	Boost 1.0	<p>Copyright (c) 2012, Applied Informatics Software Engineering GmbH. and Contributors.</p> <p>A copy of the license can be found at The MIT License (MIT)</p>
PowerBroker Identity Services 8.7*	LGPL 2.1	<p>Copyright (c) Likewise Software. All rights Reserved.</p> <p>A copy of the license can be found at The MIT License (MIT) The MIT License (MIT)</p>
Pretty 1.0	MIT 1.0	<p>Copyright 2012 Keith Rarick</p> <p>A copy of the license can be found at The MIT License (MIT)</p>
QLogic FC HBA driver Target Mode qla2x00t 3.1*	GPL 2	<p>A copy of the license can be found below at GPL (GNU General Public License) 2.0</p> <p>This component is not actually used by QoreStor, but is provided with our product for your convenience.</p>
rxjs 5.5.6	Apache 2.0	<p>Copyright (c) Microsoft. All rights reserved.</p> <p>A copy of the license can be found below at Apache 2.0</p>
sadc 10.1.15*	GPL 2	<p>(C) 1998-2017 by Sebastien GODARD (sysstat <at> orange.fr)</p> <p>A copy of the license can be found below at GPL (GNU General Public License) 2.0</p>

Component	License	Notes
		This component is not actually used by QoreStor, but is provided with our product for your convenience.
Samba 4.7.1*	GPL 3	Copyright (C) 2007 Free Software Foundation, Inc. http://fsf.org/ . A copy of the license can be found below at GPL (GNU General Public License) 2.0 This component is not actually used by QoreStor, but is provided with our product for your convenience.
sar 10.1.15	GPL 2	(C) 1998-2017 by Sebastien GODARD (sysstat <at> orange.fr) A copy of the license can be found below at GPL (GNU General Public License) 2.0 This component is not actually used by QoreStor, but is provided with our product for your convenience.
SCST 3.1*	GPL 2	Copyright (C) 2004-2006 Vladislav Bolkhovitin <vst@vlhb.net> and Leonid Stoljar A copy of the license can be found below at GPL (GNU General Public License) 2.0
TS-Helpers 1.1.2	MIT 1.0	Copyright (c) 2016 ngParty A copy of the license can be found at The MIT License (MIT)
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Version 2, June 1991

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