# Quest® QoreStor™ 7.0.1, Revision 2

## Release Notes

**February 2021**

**Revised May 2021**

**Revised June 2021**

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.

# 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 the *QoreStor Interoperability Guide*). 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.

QoreStor 7.0.1.238 is a minor release of QoreStor with new features and enhancements. See  New features and enhancements for more information. See Resolved issues for information on issues resolved in this version.

# New features and enhancements

QoreStor 7.0.1 includes the enhancements listed below:

- Support for IBM Cloud (S3) in Cloud Tier
- Qorestor Server Daily Status Email
- Support for SMB write-through in Rapid CIFS

# Upgrade notes

This topic contains important information for users who are upgrading from a previous QoreStor release.

- Existing QoreStor installations can not be upgraded to use Object Direct storage. To use QoreStor in Object Direct mode, you must perform a fresh installation.

- 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 prompt the user to allow the script to 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 7.0.1, remove the QoreStor server from the domain and re-add it to the domain.

- QoreStor 7.0.1 contains support for VTL protocols. To enable VTL support, you must perform the following sequence of operations:

  - Upgrade your existing installation to QoreStor 7.0.1. 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\no [no]:`
    >
    > Enter **Yes** to continue without removing your data.

  - Reinstall QoreStor 7.0.1 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 7.0.1.

- At the prompt, run 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
  ```

# Upgrading a migrated DR Series appliance to QoreStor 7.0.1.238

If you have previously migrated your DR Series system to QoreStor, you must upgrade your QoreStor software to build 6.1.0.814 **before** upgrading to this build (7.0.1.238). The upgrade process in build 6.1.0.814 includes a step that flushes WAM data, and that process must be completed before upgrading to 7.0.1.238.

# Upgrading to Rapid CIFS Plug-in 4.0.3.3 with Secure Connect

Secure Connect is comprised of a set of client and server components that create a resilient and secure communication channel for use by WAN-connected clients. The server components are installed and enabled by default during the installation of the QoreStor server. Starting with the Rapid CIFS plug-in version 4.0.3.3, the plug-in installer includes the option to install and enable Secure Connect.

> **i** **IMPORTANT:** Refer to the Known Issues section of this document for Rapid CIFS issues known to be present at the time of release.

If you have WAN-connected Rapid CIFS clients and choose to install Secure Connect, you can do so by following the steps below:

1. On the media server, map a network share to your CIFS-enabled container.

2. Download the plug-in installer from the website, as detailed previously.

3. Open a command prompt with the "Run as Administrator" option selected. To do this using the Windows Start menu, click **Start → All Programs → Accessories**. Right-click **Command Prompt** and select **Run as Administrator**.
   This gives all the required privileges to install/copy the driver files to the Windows drivers folder.

4. Run `QuestRapidCIFS-4.0.3318.0.exe`.

5. When prompted, select **Install a Secure Connection** to install Secure Connect.
Secure Connect ensures backups to QoreStor are completed in spite of slow or unreliable WAN connections. When selecting this option, you will be prompted for additional configuration information required to make Secure Connect function correctly.

6. At the **Configure Secure Connect** page, complete the dialog using the IP or fully qualified domain name (FQDN) of the QoreStor server and appropriate credentials.
The user account used must have the CIFS role assigned.

> **i** | **NOTE:** The **Configure Secure Connect** operation is not supported for CIFS containers on DR Series appliances. DR Series appliances do not contain the required Secure Connect server component . This operation is available only for QoreStor instances. For CIFS containers on DR Series appliances, connect using the Rapid CIFS plug-in and the DR Series host name.

> **i** | **NOTE:** The value entered in the **Display Name** field must **not** match the hostname of the QoreStor server.

# Upgrading to Rapid NFS Plug-in 4.0.3.3

Secure Connect is comprised of a set of client and server components that create a resilient and secure communication channel for use by WAN-connected clients. The server components are installed and enabled by default during the installation of the QoreStor server. Starting with the Rapid NFS plug-in version 4.0.3.3, the plug-in installation script includes the option to install and enable Secure Connect.

> **i** | **IMPORTANT:** Refer to the Known Issues section of this document for Rapid NFS issues known to be present at the time of release.

If you have WAN-connected Rapid NFS clients and choose to install Secure Connect, you can do so by following the steps below:

1. Download `QuestRapidNFS-4.0.3317.0-x86_64.bin.gz` from the website.

2. Unzip the package.

   `unzip QuestRapidNFS-4.0.3317.0-x86_64.bin.gz`

3. Change the permission of the binary package to allow it to run:

   `chmod +x QuestRapidNFS-4.0.3317.0-x86_64.bin`

4. Install the Rapid NFS package. Before installing, remove the stale NFS entry.

   `QuestRapidNFS-4.0.3317.0-x86_64.bin -install`

5. Load the file system in user space (FUSE) module, if not already loaded:

   `modprobe fuse`

6. Create a directory on the client. For example:

   `mkdir /mnt/backup`

7. Mount Rapid NFS as a file system type using the mount command. For example:

```
 mount -t rdnfs 10.0.0.1:/containers/backup/mnt/backup
```

To enable Secure Connect, mount Rapid NFS using the **sc** flag, as shown below:

```
mount -t rdnfs 10.0.0.1:/containers/backup/mnt/backup sc,user=backup_
user,password=<backup_user password>
```

If you are using a DMA that supports a marker, set the marker by using -o in the mount command. For example, if you wanted to set the CommVault marker (cv):

```
mount -t rdnfs 10.0.0.1:/containers/backup /mnt/backup -o marker=cv
```

> **i** **NOTE:** If you want to do a mount on AIX, you must set the nfs_use_reserved_ports and portcheck parameters first. The parameters cannot be set to 0. For example: `root@aixhost1 / # nfso -po portcheck=1 root@aixhost1 / # nfso -po nfs_use_reserved_ports=1`

# Resolved issues

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

**Table 1: Resolved issues in build 7.0.1.238**

| Issue ID | Resolved Issue |
| --- | --- |
| QS-6662 | Replication add for AIR should fail if **replication_traffic** and **encryption** options used in the **--add** CLI.<br><br>Both **replication_traffic** and **encryption** options are irrelevant to AIR and user should not be allowed to use them while adding AIR replication.<br><br>Above parameters are restricted in **--update** CLI so similarly should be blocked in add CLI. |
| QS-7711 | Corrected API documentation for **get-installers** and **upload-binary** commands. |
| QS-8470 | Added support for SMB write-through in Rapid CIFS. |
| QS-8728 | Cleaner caused the following maintenance mode error: Failed stat blockmap file. |
| QS-9122 | For very small files (128 bytes or smaller) in an archive tier, the data is stored in AWS S3 itself. These files do not need to be restored from the Glacier archive. S3 HEAD operation returns ContentLength for a given object. If it is 128 or less, no restore operation is required. |
| QS-10008 | The qs-smb service failed to start when the administrator account was not present. |
| QS-10119 | Performance degradation occurred after converting to DR QoreStor. |
| QS-10195 | Corrected an issue where failed NVRAM on QoreStor caused data loss. |
| QS-10349, QS-10350, QS-10719 | Resolved multiple DR-to-QoreStor replication issues. |
| QS-10354 | Disabled SElinux on migrated DRs and made associated changes in the *QoreStor 7.0.1 Installation Guide.* |
| QS-10530 | Could not replicate between 7.0.0 and 7.0.1. |
| QS-10617 | After enabling cloud replication, ocafsd coring occurred in the command line. |
| QS-10791, QS-10844, QS-10897 | Resolved minor replication issues. |

# 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. <br>**Workaround**: <br>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-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-1666 | When NetVault is installed on a Linux server, the RDA Client version is not displayed correctly. <br>**Workaround:** <br>To view the build number of the plugin, run the command <br>`strings /usr/netvault/dynlib/librofsoca.so | grep "(EAR-4.1.0) Build:"` |
| QS-1670 | For Linux clients, the full version number of RDA plug-ins is not displayed. |
| 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-2236 | When installing QoreStor, if a required port is unavailable the installation will continue and be |

| ID | Issue |
|---|---|
| | considered successful, yet QoreStor will start in Maintenance Mode.<br>**Workaround:**<br>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-2604 | If unregistered clients access QoreStor CIFS shares by mounting the share, the /var/log/messages will contain numerous host name/mismatch errors.<br>**Workaround:**<br>Unregistered clients need to be updated in DNS server manually. |
| 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-3779 | 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. |
| QS-4169 | 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 *QoreStor User Guide*. |
| QS-5072 | When authenticated to a domain, connecting to CIFS shares with a localhost account is not successful. |
| QS-5105 | Changes to a Cloud Tier Policy for inclusions or exclusions will not take effect until the QoreStor service has been restarted. |
| QS-5438 | After performing a DR to QoreStor migration, network settings are reset to default. |
| QS-5627 | The current error output of "rda --limit" without any argument incorrect suggests limits are enforced via Mbps (megabits per second) when the limit is actually in MBps (megabytes per second). |
| QS-5629 | When configuring a custom graph, if you select a period for which there is no data, the graph will be blank and display "No Data Available" |
| QS-5826 | When performing a DR to QoreStor migration, bonding modes and MTU settings are not |
| QS-5891 | Rapid CIFS is not supported on Windows Server 2016 with secure boot enabled. |
| QS-6291 | When using the latest version of the Rapid CIFS plug-in with Veeam Backup and Recovery, the configurations below are required:<br><br>• For the Backup Repository, change the **Gateway Server** option to **The following server** and enter the IP or hostname of the local machine.<br><br>• For **VMware Backup**, the **Gateway server** should be changed from the **Automatic selection** to the **Use the selected backup proxy servers only**. |
| QS-6653 | OST MSI plugin reports a new version is already installed when installing an updated driver |

| ID | Issue |
|---|---|
| | **Workaround**: |
| | Uninstall the OST driver before installing the newer driver |
| QS-6782 | When installing Rapid CIFS on Windows 2008 R2, the installation deploys driver version 4.0.3207.1 , causing the version displayed by **rcifsctl.exe driver -q** to be different from the version in the Windows Programs and Features dialog. The functionality of Secure Connect is not changed. |
| QS-6808 | When configuring Backup Exec with CIFS shares using the display name, the steps below must be followed: |

1. In the command prompt, change directpries to the path **C:\Program Files\Quest\Rapid CIFS**.

2. Run **rdcifsctl.exe sc -d** for disable a secure connection.

3. Configure storage in Backup Exec by specifying **\\displayname\container** as network share. During this configuration all connections from Backup Exec to QoreStor are secured.

4. Run **rdcifsctl.exe sc -e** to enable a secure connection.

| ID | Issue |
|---|---|
| QS-6860 | During upgrade, the SMB config file is overwritten. Any manual changes to this file will be lost on upgrade. |
| QS-7029 | When using Rapid NFS with Secure Connect, the NFS container must have **insecure** option set. This must be done via the command line. Refer to Upgrade notesfor more information. |
| QS-8945 | When QoreStor is installed on Linux versions 7.3 - 7.7, configuring an archive tier may result in a memory leak. This is due to an issue with the curl package installed on those versions of Linux.<br>**Workaround**<br>Either upgrade the Linux version on the QoreStor server to 7.8, or update the curl package to curl 7.29.0-57.el7. DR Series systems migrated to QoreStor which are on Oracle Linux 7.3 should update the curl package to 7.29.0-57.el7 |
| QS-9056 | On DR Series Systems migrated to QoreStor, the maximum **inode limit** for an object container is set to 1 million. In some cases, this may result in a "maximum allowable File(s) and Directories limit" error.<br>**Workaround**:<br>To increase that, the environmental variable MDS_OT_INODES_ALLOWED in */etc/oca/customer.env* has to be set to a higher value. Please contact Quest Support for assistance making this change. |
| QS-9021 | During object direct installation, if the message "Failed to validate object direct connection string! "may be received if the certificate has been changed or is expired on the QoreStor server.<br>**Workaround**<br>Purge the certificate with the command below<br>`cloud_tier --purge-ssl-certificate` |
| QS-9177 | When configuring the Rapid NFS client with Secure Connect, You may mount the plug-in with either the IP address or the fully qualified domain name (FQDN). If you use the FQDN, you must also add an entry in the */etct/hosts* file on the QoreStor system and verify that the hostname is resolvable. |

| ID | Issue |
|---|---|
| QS-10018 | When writing to an NFS container on a system with 24GB or less of memory, some customers may receive "out of memory" errors.<br><br>Workaround:<br><br>On the QoreStor system, run the command **sysctl -a \| grep tcp_mem**.<br><br>This will return your tcp memory consumption, like the example value below. The return indicates your minimum, average, and maximum values.<br><br>`net.ipv4.tcp_mem = 285198 380264 570396`<br><br>Using the command below, set the **tcp_mem** maximum value to the average value (380264, in the example above). Note that your values will be different. The value in the center is the average.<br><br>**sysctl -w "net.ipv4.tcp_mem=285198 380264 380264"** |
| QS-10042 | When attempting to delete a bucket containing a large amount of data, QoreStor will appear to freeze. This is due to an AWS S3 limitation that requires the objects within a bucket to be deleted before the bucket can be deleted. During the bucket delete operation, the objects are enumerated and deleted one at a time.<br><br>**Workaround**:<br><br>Before deleting the bucket, delete the objects within the bucket using the AWS S3 console. |
| QS-10772 | Replication update fails with replication between QoreStor 7.0.1 and QoreStor 7.0 or the DR appliance.<br><br>**Workaround:**<br><br>For DR-to-QoreStor replication, update replication by way of the QoreStor user interface or command line interface. |

# 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. |

> **i** **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.

# 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/. For items marked with a‡, a copy of the license can be found at https://www.quest.com/legal/license-agreements.aspx

| Component | License | Notes |
| --- | --- | --- |
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| angular2-clipboard 11 | MIT 1.0 | Copyright (c) 2016 Sam Lin |
| angular2-jwt 0.2.3‡ | MIT 1.0 | Copyright (c) 2017 Auth0 Inc. |
| Angular-jwt 1.0‡ | MIT 1.0 | Copyright (c) 2017 Auth0 Inc. |
| AWS CPP SDK 1.0 | Apache 2.0 | Copyright Notice - AWS CPP SDK 1.0<br>AWS SDK for C++ |

| Component | License | Notes |
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| Component | License | Notes |
|-----------|---------|-------|
| Boost 1.63‡ | Boost 1.0 | Copyright (c) 2001-2010 Joel de Guzman<br>Copyright (c) 2010 Eric Niebler<br>Copyright (c) 2015 John Fletcher |
| bzip2‡ | BSD Simple | |
| C++ REST SDK 1.0 ‡ | MIT 1.0 | Copyright (c) Microsoft Corporation |
| cli v1.20.0‡ | MIT 1.0 | Copyright (c) 2016 Jeremy Saenz & Contributors |
| color-go 1.7.0‡ | MIT 1.0 | Copyright (c) 2013 Fatih Arslan |
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Version 2.1, February 1999

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