



volume qtree commands

ONTAP 9.3 commands

NetApp
September 27, 2022

Table of Contents

- volume qtree commands 1
 - volume qtree create 1
 - volume qtree delete 2
 - volume qtree modify 3
 - volume qtree oplocks 5
 - volume qtree rename 6
 - volume qtree security 7
 - volume qtree show 8
 - volume qtree statistics-reset 10
 - volume qtree statistics 11

volume qtree commands

volume qtree create

Create a new qtree

Availability: This command is available to *cluster* and *Vserver* administrators at the *admin* privilege level.

Description

This command creates a qtree in the Vserver and volume you specify. You can create up to 4,994 qtrees per volume. This command is not supported on Infinite Volumes.

You can optionally specify the following attributes when creating a new qtree:

- Security style
- Opportunistic lock mode
- UNIX permissions
- Export Policy

Parameters

-vserver <vserver name> - Vserver Name

This specifies the name of the Vserver on which the volume containing the qtree belongs.

{ -volume <volume name> - Volume Name

This specifies the name of the volume that will contain the qtree you are creating.

-qtree <qtree name> - Qtree Name

This specifies the name of the qtree you are creating.

A qtree name cannot contain a forward slash (/). The qtree name cannot be more than 64 characters long.

| -qtree-path <qtree path> - Actual (Non-Junction) Qtree Path }

The qtree path argument in the format `/vol/<volume name>/<qtree name>` can be specified instead of specifying volume and qtree as separate arguments.

[-security-style <security style>] - Security Style

This optionally specifies the security style for the qtree, which determines how access to the qtree is controlled. The supported values are *unix* (for UNIX uid, gid and mode bits), *ntfs* (for CIFS ACLs), and *mixed* (for NFS and CIFS access). The *unified* security style, which applies only to Infinite Volumes, cannot be applied to a qtree. If you do not specify a security style for the qtree, it inherits the security style of its containing volume.

[-oplock-mode {enable|disable}] - Oplock Mode

This optionally specifies whether oplocks are enabled for the qtree. If you do not specify a value for this parameter, it inherits the oplock mode of its containing volume.

[`-m`, `-unix-permissions` <unix perm>] - Unix Permissions

This optionally specifies the UNIX permissions for the qtree when the `-security-style` is set to `unix` or `mixed`. You can specify UNIX permissions either as a four-digit octal value (for example, `0700`) or in the style of the UNIX `ls` command (for example, `-rwxr-x---`). For information on UNIX permissions, see the UNIX or Linux documentation. If you do not specify UNIX permissions for the qtree, it inherits the UNIX permissions of its containing volume.

[`-export-policy` <text>] - Export Policy

This optional parameter specifies the name of the export policy associated with the qtree. For information on export policies, see the documentation for the [vserver export-policy create](#) command. If you do not specify a value for this parameter, it inherits the export policy of its containing volume.

Examples

The following example creates a qtree named `qtree1`. The Vserver name is `vs0` and the volume containing the qtree is named `vol1`. The qtree has a mixed security style. Its other attributes are inherited from volume `vol1`.

```
cluster1::> volume qtree create -vserver vs0 -volume vol1 -qtree qtree1
-security-style mixed
```

The following example uses a 7G-compatible command to create the qtree.

```
cluster1::> vserver context vs0
vs0::> qtree create /vol/vol1/qtree1
```

Related Links

- [vserver export-policy create](#)

volume qtree delete

Delete a qtree

Availability: This command is available to *cluster* and *Vserver* administrators at the *admin* privilege level.

Description

This command deletes a qtree. The length of time that it takes to delete a qtree depends on the number of directories and files it contains. You can monitor the progress of the delete operation by using the [job show](#) and [job watch-progress](#) commands, respectively. This command is not supported on Infinite Volumes.

The automatically created qtree in the volume - `qtree0`, listed in CLI output as `""` - cannot be deleted.



Quota rules associated with this qtree in all the quota policies will be deleted when you delete this qtree. Qtree deletion will not be allowed if Storage-level Access Guard (SLAG) is configured.

Parameters

-vserver <vserver name> - Vserver Name

This specifies the name of the Vserver on which the volume containing the qtree belongs.

{ -volume <volume name> - Volume Name

This specifies the name of the volume containing the qtree to be deleted.

-qtree <qtree name> - Qtree Name

This specifies the name of the qtree to be deleted.

| -qtree-path <qtree path> - Actual (Non-Junction) Qtree Path }

The qtree path argument in the format /vol/<volume name>/<qtree name> can be specified instead of specifying volume and qtree as separate arguments.

[-force <>true>] - Force Delete

This optionally forces the qtree delete operation to proceed when the qtree contains files. The default setting is false (that is, the qtree will not be deleted if it contains files). This parameter is available only at the advanced privilege and higher.

[-foreground <>true>] - Foreground Process

This optionally specifies whether the qtree delete operation runs as a foreground process. The default setting is false (that is, the operation runs in the background).

Examples

The following example deletes a qtree named qtree4. The Vserver name is vs0 and the volume containing the qtree is named vol1.

```
cluster1::> volume qtree delete -vserver vs0 -volume vol1 -qtree qtree4
WARNING: Are you sure you want to delete qtree qtree4 in volume vol1
vserver vs0? {y|n}: y
[Job 38] Job is queued: Delete qtree qtree4 in volume vol1 vserver vs0.
```

Related Links

- [job show](#)
- [job watch-progress](#)

volume qtree modify

Modify qtree attributes

Availability: This command is available to *cluster* and *Vserver* administrators at the *admin* privilege level.

Description

This command allows you to modify the following attributes of an existing qtree in the given Vserver and

volume:

- Security style
- Opportunistic lock mode
- UNIX permissions
- Export policy

This command is not supported by Infinite Volumes.

Parameters

-vserver <vserver name> - Vserver Name

This specifies the name of the Vserver on which the volume containing the qtree belongs.

{ -volume <volume name> - Volume Name

This specifies the name of the volume containing the qtree to be modified.

-qtree <qtree name> - Qtree Name

This specifies the name of the qtree to be modified. You can modify the attributes of qtree0 (represented as "" in the CLI) by omitting the `-qtree` parameter from the command or by specifying the value "" for the `-qtree` parameter.

| -qtree-path <qtree path> - Actual (Non-Junction) Qtree Path }

The qtree path argument in the format `/vol/<volume name>/<qtree name>` can be specified instead of specifying volume and qtree as separate arguments. The automatically created qtree0 can be represented as `/vol/<volume name>`.

[-security-style <security style>] - Security Style

This optionally modifies the security style for the qtree. The supported values are *unix* (for UNIX uid, gid and mode bits), *ntfs* (for CIFS ACLs), and *mixed* (for NFS and CIFS access). The *unified* security style, which applies only to Infinite Volumes, cannot be applied to a qtree. Modifying a qtree's security style will not affect any of the files in the other qtrees of this volume.

[-oplock-mode {enable|disable}] - Oplock Mode

This optionally modifies whether oplocks are enabled for the qtree.

Modifying qtree0's oplock mode will not affect any of the files in the other qtrees of this volume.

[-unix-permissions <unix perm>] - Unix Permissions

This optionally modifies the UNIX permissions for the qtree. You can specify UNIX permissions either as a four-digit octal value (for example, 0700) or in the style of the UNIX `ls` command (for example, ``-rwxr-x---`). For information on UNIX permissions, see the UNIX or Linux documentation.

The unix permissions can be modified only for qtrees with *unix* or *mixed* security style.

[-export-policy <text>] - Export Policy

This optional parameter modifies the export policy associated with the qtree. If you do not specify an export policy name, the qtree inherits the export policy of the containing volume. For information on export policy, see the documentation for the [vserver export-policy create](#) command.

Examples

The following example modifies a qtree named qtree1. The Vserver name is vs0 and the volume containing the qtree is named vol1. The qtree now has a UNIX security style and oplocks are enabled.

```
cluster1::> volume qtree modify -vserver vs0 -volume vol1 -qtree qtree1
-security-style unix -oplocks enabled
```

Related Links

- [vserver export-policy create](#)

volume qtree oplocks

Modify qtree oplock mode

Availability: This command is available to *cluster* and *Vserver* administrators at the *admin* privilege level.

Description

This command allows you to display or modify the opportunistic lock mode of a qtree. This command is not supported on Infinite Volumes.

Parameters

-vserver <vserver name> - Vserver Name

This specifies the name of the Vserver on which the volume containing the qtree belongs.

{ -volume <volume name> - Volume Name

This specifies the name of the volume containing the qtree.

-qtree <qtree name> - Qtree Name

This specifies the name of the qtree for which the oplock mode is being displayed or modified.

[-qtree-path <qtree path> - Actual (Non-Junction) Qtree Path]

The qtree path argument in the format `/vol/<volume name>/<qtree name>` can be specified instead of specifying volume and qtree as separate arguments. The automatically created qtree0 can be represented as `/vol/<volume name>`.

[-oplock-mode {enable|disable}] - Oplock Mode

This specifies the new oplock mode of the qtree. If this parameter is not specified, then the current oplock mode of the qtree is displayed.

Modifying qtree0's oplock mode will not affect any of the files in the other qtrees of this volume.

Examples

The following example displays the oplock mode of a qtree called qtree1. The Vserver name is vs0 and the volume containing the qtree is named vol1.

```
cluster1::> volume qtree oplocks -vserver vs0 -volume voll -qtree qtrees1
/vol/voll/qtrees1 has mixed security style and oplocks are disabled.
```

The following example modifies the oplock mode of a qtree called qtrees2 to enabled. The Vserver name is vs0 and the volume containing the qtree is named voll.

```
cluster1::> volume qtree oplocks -vserver vs0 -volume voll -qtree qtrees2
-oplock-mode enable
```

The following example uses a 7G-compatible command to display and modify the oplock mode of a qtree.

```
cluster1::> vserver context vs0
vs0::> qtree oplocks /vol/voll/qtrees1
/vol/voll/qtrees1 has mixed security style and oplocks are disabled.
vs0::> qtree oplocks /vol/voll/qtrees2 enable
```

volume qtree rename

Rename an existing qtree

Availability: This command is available to *cluster* and *Vserver* administrators at the *admin* privilege level.

Description

This command allows you to rename an existing qtree. This command is not supported on Infinite Volumes.

The automatically created qtree in the volume - qtrees0, listed in CLI output as "" - cannot be renamed.

Parameters

-vserver <vserver name> - Vserver Name

This specifies the name of the Vserver on which the volume containing the qtree belongs.

{ -volume <volume name> - Volume Name

This specifies the name of the volume containing the qtree to be renamed.

-qtree <qtree name> - Qtree Name

This specifies the name of the qtree to be renamed.

| -qtree-path <qtree path> - Actual (Non-Junction) Qtree Path }

The qtree path argument in the format /vol/<volume name>/<qtree name> can be specified instead of specifying volume and qtree as separate arguments.

-newname <qtree name> - Qtree New Name

This specifies the new name of the qtree. The new qtree name cannot contain a forward slash (/) and cannot be more than 64 characters long.

Examples

The following example renames a qtree named qtree3 to qtree4. The Vserver name is vs0 and the volume containing the qtree is named vol1.

```
cluster1::> volume qtree rename -vserver vs0 -volume vol1 -qtree qtree3
-newname qtree4
```

volume qtree security

Modify qtree security style

Availability: This command is available to *cluster* and *Vserver* administrators at the *admin* privilege level.

Description

This command allows you to display or modify the security style of a qtree. This command is not supported on Infinite Volumes.

Parameters

-vserver <vserver name> - Vserver Name

This specifies the name of the Vserver on which the volume containing the qtree belongs.

{ -volume <volume name> - Volume Name

This specifies the name of the volume containing the qtree.

-qtree <qtree name> - Qtree Name

This specifies the name of the qtree for which the security style is being displayed or modified.

| -qtree-path <qtree path> - Actual (Non-Junction) Qtree Path }

The qtree path argument in the format `/vol/<volume name>/<qtree name>` can be specified instead of specifying volume and qtree as separate arguments. The automatically created qtree0 can be represented as `/vol/<volume name>`.

[-security-style <security style>] - Security Style

This specifies the new security style of the qtree. If this parameter is not specified, then the current security style of the qtree is displayed. The supported values are *unix* (for UNIX uid, gid and mode bits), *ntfs* (for CIFS ACLs), and *mixed* (for NFS and CIFS access). The *unified* security style, which applies only to Infinite Volumes, cannot be applied to a qtree. Modifying a qtree's security style will not affect any of the files in the other qtrees of this volume.

Examples

The following example displays the security style of a qtree called qtree1. The Vserver name is vs0 and the volume containing the qtree is named vol1.

```
cluster1::> volume qtree security -vserver vs0 -volume vol1 -qtree qtree1
/vol/vol1/qtree1 has mixed security style and oplocks are disabled.
```

The following example modifies the security style of a qtree called qtree2 to unix. The Vserver name is vs0 and the volume containing the qtree is named vol1.

```
cluster1::> volume qtree security -vserver vs0 -volume vol1 -qtree qtree2
-security-style unix
```

The following example uses a 7G-compatible command to display and modify the security style of a qtree.

```
cluster1::> vserver context vs0
vs0::> qtree security /vol/vol1/qtree1
/vol/vol1/qtree1 has mixed security style and oplocks are disabled.
vs0::> qtree security /vol/vol1/qtree2 unix
```

volume qtree show

Display a list of qtrees

Availability: This command is available to *cluster* and *Vserver* administrators at the *admin* privilege level.

Description

This command displays information about qtrees for online volumes. By default, the command displays the following information about all qtrees in the cluster:

- Vserver name
- Volume name
- Qtree name
- Security style (unix, ntfs, mixed or unified)
- Whether oplocks is enabled
- Status (normal or readonly)

The display will also include information about Qtree 0. When you create a volume, a special qtree referred to as "qtree0", also called the default qtree is automatically created for the volume. It represents all of the data stored in a volume that is not contained in a qtree. In the CLI output, qtree0 is denoted by empty quotation

marks ("") and has the ID zero (0). The qtree called qtree0 cannot be manually created or deleted. This command is not supported on Infinite Volumes.

The qtree status indicates readonly for data protection and load sharing volumes.

To display detailed information about a single qtree, run the command with the `-instance` and `-qtree` parameters. The detailed view adds the following information:

- UNIX permissions
- Qtree ID
- Export policy
- Is Export Policy Inherited

Parameters

{ [-fields <fieldname>,...]

If you specify the `-fields <fieldname>, ...` parameter, the command output also includes the specified field or fields. You can use `'-fields ?'` to display the fields to specify.

| [-exports]

Displays the following information about qtree exports:

- Vserver - The name of the Vserver the qtree belongs to
- Volume - The name of the volume the qtree resides on
- Qtree name - The name of the qtree
- Policy Name - The name of the export policy assigned to the qtree
- Is Export Policy Inherited - Whether the export policy assigned to the qtree is inherited

| [-id]

Displays qtree IDs in addition to the default output.

| [-instance] }

If you specify the `-instance` parameter, the command displays detailed information about all fields.

[-vserver <vserver name>] - Vserver Name

Selects information about the qtrees in the specified Vserver.

{ [-volume <volume name>] - Volume Name

Selects information about the qtrees in the specified volume.

[-qtree <qtree name>] - Qtree Name

Selects information about the qtrees that have the specified name.

| [-qtree-path <qtree path>] - Actual (Non-Junction) Qtree Path }

Selects information about the qtrees that have the specified path.

[-security-style <security style>] - Security Style

Selects information about the qtrees that have the specified security style. The *unified* security style,

which applies only to Infinite Volumes, cannot be applied to a qtree.

[`-oplock-mode {enable|disable}`] - Oplock Mode

Selects information about the qtrees that have the specified oplock mode.

[`-m, -unix-permissions <unix perm>`] - Unix Permissions

Selects information about the qtrees that have the specified UNIX permissions.

[`-qtree-id <integer>`] - Qtree Id

Selects information about the qtrees that have the specified ID. A valid qtree ID is an integer from 0 to 4994. All qtree0 (automatically created) qtrees have an ID of zero (0).

[`-status {normal|readonly}`] - Qtree Status

Selects information about the qtrees that have the specified status.

[`-export-policy <text>`] - Export Policy

Selects information about the qtrees that use the specified export policy.

[`-is-export-policy-inherited {true|false}`] - Is Export Policy Inherited

Selects information about the qtrees that inherit (true) or not inherit (false) the export policy of containing volume.

Examples

The following example displays default information about all qtrees along with each qtree ID. Note that on vs0, no qtrees have been manually created, so only the automatically created qtrees referred to as qtree 0 are shown. On vs1, the volume named vs1_vol1 contains qtree 0 and two manually created qtrees, qtree1 and qtree2.

```
cluster1::> volume qtree show -id
Vserver      Volume          Qtree          Style          Oplocks        Status        Id
-----
vs0          vs0_vol1        ""             unix           enable         readonly     0
vs0          vs0_vol2        ""             unix           enable         normal       0
vs0          vs0_vol3        ""             unix           enable         readonly     0
vs0          vs0_vol4        ""             unix           enable         readonly     0
vs0          root_vs_vs0    ""             unix           enable         normal       0
vs1          vs1_vol1        ""             unix           enable         normal       0
vs1          vs1_vol1        qtree1         unix           disable        normal       1
vs1          vs1_vol1        qtree2         unix           enable         normal       2
vs1          root_vs_vs1    ""             unix           enable         normal       0
9 entries were displayed.
```

volume qtree statistics-reset

Reset qtree statistics in a volume

Availability: This command is available to *cluster* and *Vserver* administrators at the *admin* privilege level.

Description

This command resets qtree statistics for all qtrees in a volume. This command is not supported on Infinite Volumes.

Parameters

-vserver <vserver name> - Vserver Name

This specifies the name of the Vserver on which the volume containing the qtree belongs.

-volume <volume name> - Volume Name

This specifies the name of the volume containing the qtrees whose statistics you want to reset.

Examples

The following example resets statistics for all qtrees on the volume named vol1 on the Vserver named vs0.

```
cluster1::> volume qtree statistics-reset -vserver vs0 -volume vol1
```

volume qtree statistics

Display qtree statistics

Availability: This command is available to *cluster* and *Vserver* administrators at the *admin* privilege level.

Description

This command displays NFS and CIFS operations statistics for qtrees. Note that qtree statistics are available only when the volume containing the qtree is online. This command is not supported on Infinite Volumes.

Statistics are cumulative values from the time the volume is brought online or when the statistics have been reset by using the "[volume qtree statistics-reset](#)" command.

The command output depends on the parameters specified with the command. If no parameters are specified, the command displays the following statistics information about all qtrees:

- Vserver name
- Volume name
- Qtree name
- NFS operations
- CIFS operations



Qtree statistics are not persistent. If you restart a node, if a storage takeover and giveback occurs, or if the containing volume is set to offline and then online, qtree statistics are set to zero.

Parameters

{ [-fields <fieldname>,...]

If you specify the `-fields <fieldname>`, ... parameter, the command output also includes the specified field or fields. You can use `'-fields ?'` to display the fields to specify.

| [-internal]

If this parameter is specified, the output will also include the internal operation statistics. Internal operation is any operation on the qtree that originated within Data ONTAP software.

| [-no-reset]

If this parameter is specified, the output will display the NFS and CIFS op statistics since the time the volume was online.

| [-no-reset-internal]

If this parameter is specified, the output will also include the internal op statistics since the time the volume was online.

| [-instance] }

If you specify the `-instance` parameter, the command displays detailed information about all fields.

[-vserver <vserver name>] - Vserver Name

If this parameter is specified, the command displays information about the qtrees on the specified Vserver.

{ [-volume <volume name>] - Volume Name

If this parameter is specified, the command displays information about the qtrees on the specified volume.

[-qtree <qtree name>] - Qtree Name

If this parameter is specified, the command displays information about the specified qtree.

| [-qtree-path <qtree path>] - Actual (Non-Junction) Qtree Path }

The qtree path argument in the format `/vol/<volume name>/<qtree name>` can be specified instead of specifying volume and qtree as separate arguments. The automatically created qtree0 can be represented as `/vol/<volume name>`.

Examples

The following example displays statistics information for all qtrees on the Vserver named vs0.

```
cluster1::> volume qtree statistics -vserver vs0
Vserver      Volume      Qtree      NFS Ops      CIFS Ops
-----
vs0          vol0        qtree1     10876        2678
vs0          vol1        qtree1a    16543        0
vs0          vol2        qtree2     0            0
vs0          vol2        qtree2a    0            0
4 entries were displayed.
```

The following example displays statistics information for qtrees on Vserver vs0 that have NFS ops more than 15000.

```
cluster1::> volume qtree statistics -vserver vs0 -nfs-ops >15000
Vserver      Volume      Qtree      NFS Ops      CIFS Ops
-----
vs0          voll        qtree1a    16543        0
```

Related Links

- [volume qtree statistics-reset](#)

Copyright Information

Copyright © 2022 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.

RESTRICTED RIGHTS LEGEND: Use, duplication, or disclosure by the government is subject to restrictions as set forth in subparagraph (c)(1)(ii) of the Rights in Technical Data and Computer Software clause at DFARS 252.277-7103 (October 1988) and FAR 52-227-19 (June 1987).

Trademark Information

NETAPP, the NETAPP logo, and the marks listed at <http://www.netapp.com/TM> are trademarks of NetApp, Inc. Other company and product names may be trademarks of their respective owners.