



Any ONTAP 9 version

ONTAP 9

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Any ONTAP 9 version

Terminate certain SMB sessions before reverting ONTAP

Before you revert an ONTAP cluster from any version of ONTAP 9, you should identify and gracefully terminate any SMB sessions that are not continuously available.

Continuously available SMB shares, which are accessed by Hyper-V or Microsoft SQL Server clients using the SMB 3.0 protocol, do not need to be terminated before upgrading or downgrading.

Steps

1. Identify any established SMB sessions that are not continuously available:

```
vserver cifs session show -continuously-available No -instance
```

This command displays detailed information about any SMB sessions that have no continuous availability. You should terminate them before proceeding with the ONTAP downgrade.

```
cluster1::> vserver cifs session show -continuously-available No  
-instance
```

```
                Node: node1  
                Vserver: vs1  
                Session ID: 1  
                Connection ID: 4160072788  
Incoming Data LIF IP Address: 198.51.100.5  
                Workstation IP address: 203.0.113.20  
                Authentication Mechanism: NTLMv2  
                Windows User: CIFSLAB\user1  
                UNIX User: nobody  
                Open Shares: 1  
                Open Files: 2  
                Open Other: 0  
                Connected Time: 8m 39s  
                Idle Time: 7m 45s  
                Protocol Version: SMB2_1  
                Continuously Available: No  
1 entry was displayed.
```

2. If necessary, identify the files that are open for each SMB session that you identified:

```
vserver cifs session file show -session-id session_ID
```

```

cluster1::> vserver cifs session file show -session-id 1

Node:      node1
Vserver:   vs1
Connection: 4160072788
Session:   1
File      File      Open Hosting
Continuously
ID        Type        Mode Volume      Share      Available
-----
-----
1         Regular    rw   vol10        homedirshare  No
Path:    \TestDocument.docx
2         Regular    rw   vol10        homedirshare  No
Path:    \file1.txt
2 entries were displayed.

```

ONTAP revert requirements for SnapMirror and SnapVault relationships

The `system node revert-to` command notifies you of any SnapMirror and SnapVault relationships that need to be deleted or reconfigured for the revert process to be completed. However, you should be aware of these requirements before you begin the reversion.

- All SnapVault and data protection mirror relationships must be quiesced and then broken.

After the reversion is completed, you can resynchronize and resume these relationships if a common Snapshot copy exists.

- SnapVault relationships must not contain the following SnapMirror policy types:

- `async-mirror`

You must delete any relationship that uses this policy type.

- `MirrorAndVault`

If any of these relationships exist, you should change the SnapMirror policy to `mirror-vault`.

- All load-sharing mirror relationships and destination volumes must be deleted.
- SnapMirror relationships with FlexClone destination volumes must be deleted.
- Network compression must be disabled for each SnapMirror policy.
- The `all_source_snapshot` rule must be removed from any `async-mirror` type SnapMirror policies.



The Single File Snapshot Restore (SFSR) and Partial File Snapshot Restore (PFSR) operations are deprecated on the root volume.

- Any currently running single file and Snapshot restore operations must be completed before the reversion can proceed.

You can either wait for the restore operation to finish, or you can abort it.

- Any incomplete single file and Snapshot restore operations must be removed by using the `snapmirror restore` command.

Verify free space for deduplicated volumes before reverting ONTAP

Before you revert an ONTAP cluster from any version of ONTAP 9, you must ensure that the volumes contain sufficient free space for the revert operation.

The volume must have enough space to accommodate the savings that were achieved through the inline detection of blocks of zeros. See the Knowledge Base article [How to see space savings from deduplication, compression, and compaction in ONTAP 9](#).

If you have enabled both deduplication and data compression on a volume that you want to revert, then you must revert data compression before reverting deduplication.

Steps

1. View the progress of the efficiency operations that are running on the volumes:

```
volume efficiency show -fields vserver,volume,progress
```

2. Stop all active and queued deduplication operations:

```
volume efficiency stop -vserver <svm_name> -volume <volume_name> -all
```

3. Set the privilege level to advanced:

```
set -privilege advanced
```

4. Downgrade the efficiency metadata of a volume to the target version of ONTAP:

```
volume efficiency revert-to -vserver <svm_name> -volume <volume_name> -version <version>
```

The following example reverts the efficiency metadata on volume VolA to ONTAP 9.x.

```
volume efficiency revert-to -vserver vs1 -volume VolA -version 9.x
```



The volume efficiency revert-to command reverts volumes that are present on the node on which this command is executed. This command does not revert volumes across nodes.

5. Monitor the progress of the downgrade:

```
volume efficiency show -vserver <svm_name> -op-status Downgrading
```

6. If the revert does not succeed, display the instance to see why the revert failed.

```
volume efficiency show -vserver <svm_name> -volume <volume_name> -  
instance
```

7. After the revert operation is complete, return to the admin privilege level:

```
set -privilege admin
```

Learn more about [Logical storage management](#).

Prepare Snapshots before reverting an ONTAP cluster

Before you revert an ONTAP cluster from any version of ONTAP 9, you must disable all Snapshot copy policies and delete any Snapshot copies that were created after upgrading to the current release.

If you are reverting in a SnapMirror environment, you must first have deleted the following mirror relationships:

- All load-sharing mirror relationships
- Any data protection mirror relationships that were created in ONTAP 8.3.x
- All data protection mirror relationships if the cluster was re-created in ONTAP 8.3.x

Steps

1. Disable Snapshot copy policies for all data SVMs:

```
volume snapshot policy modify -vserver * -enabled false
```

2. Disable Snapshot copy policies for each node's aggregates:

- a. Identify the node's aggregates:

```
run -node <nodename> -command aggr status
```

- b. Disable the Snapshot copy policy for each aggregate:

```
run -node <nodename> -command aggr options aggr_name nosnap on
```

- c. Repeat this step for each remaining node.

3. Disable Snapshot copy policies for each node's root volume:

- a. Identify the node's root volume:

```
run-node <node_name> -command vol status
```

You identify the root volume by the word **root** in the **Options** column of the `vol status` command output.

```
vs1::> run -node node1 vol status
```

Volume State	Status	Options
vol0 online	raid_dp, flex 64-bit	root, nvfail=on

- b. Disable the Snapshot copy policy on the root volume:

```
run -node <node_name> vol options root_volume_name nosnap on
```

- c. Repeat this step for each remaining node.

4. Delete all Snapshot copies that were created after upgrading to the current release:

- a. Set the privilege level to advanced:

```
set -privilege advanced
```

- b. Disable the snapshots:

```
snapshot policy modify -vserver * -enabled false
```

- c. Delete the node's newer-version Snapshot copies:

```
volume snapshot prepare-for-revert -node <node_name>
```

This command deletes the newer-version Snapshot copies on each data volume, root aggregate, and root volume.

If any Snapshot copies cannot be deleted, the command fails and notifies you of any required actions you must take before the Snapshot copies can be deleted. You must complete the required actions and then rerun the `volume snapshot prepare-for-revert` command before proceeding to the next step.

```
cluster1::*> volume snapshot prepare-for-revert -node node1
```

```
Warning: This command will delete all Snapshot copies that have the
format used by the current version of ONTAP. It will fail if any
Snapshot copy polices are enabled, or
        if any Snapshot copies have an owner. Continue? {y|n}: y
```

d. Verify that the Snapshot copies have been deleted:

```
volume snapshot show -node nodename
```

e. If any newer-version Snapshot copies remain, force them to be deleted:

```
volume snapshot delete {-fs-version 9.0 -node nodename -is
-constituent true} -ignore-owners -force
```

f. Repeat these steps for each remaining node.

g. Return to the admin privilege level:

```
set -privilege admin
```



You must perform these steps on both the clusters in MetroCluster configuration.

Set autocommit periods for SnapLock volumes before reverting ONTAP

Before you revert an ONTAP cluster from any version of ONTAP 9, the value of the autocommit period for SnapLock volumes must be set in hours, not days. You should check the autocommit value for your SnapLock volumes and modify it from days to hours, if necessary.

Steps

1. Verify that there are SnapLock volumes in the cluster that have unsupported autocommit periods:


```
volume snaplock show -autocommit-period *days
```

2. Modify the unsupported autocommit periods to hours

```
volume snaplock modify -vserver <vserver_name> -volume <volume_name>  
-autocommit-period value hours
```

Disable automatic unplanned switchover before reverting two-node and four-node MetroCluster configurations

Before reverting a two-node or four-node MetroCluster configuration running any version of ONTAP 9, you must disable automatic unplanned switchover (AUSO).

Step

1. On both the clusters in MetroCluster, disable automatic unplanned switchover:

```
metrocluster modify -auto-switchover-failure-domain auso-disabled
```

Related information

[MetroCluster management and disaster recovery](#)

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