



Administration

ONTAP System Manager

NetApp

November 18, 2020

This PDF was generated from https://docs.netapp.com/us-en/ontap/smbc_admin_creating_a_common_snapshot_copy.html on November 18, 2020. Always check docs.netapp.com for the latest.



Table of Contents

- Administration..... 1
 - Creating a common Snapshot copy 1
 - Performing a planned failover 1
 - What happens during an automatic unplanned failover..... 2
 - Basic monitoring..... 2

Administration

Creating a common Snapshot copy

In addition to the regularly scheduled Snapshot copy operations, you can manually create a common Snapshot copy between the volumes in the primary SnapMirror consistency group and the volumes in the secondary SnapMirror consistency group.

Before you begin

The SnapMirror group relationship must be in sync.

Steps

1. Create a common Snapshot copy:

```
destination::>snapmirror update -destination-path vs1_dst:/cg/cg_dst
```

2. Monitor the progress of the update:

```
destination::>snapmirror show -fields -newest-snapshot
```

Performing a planned failover

You can perform a planned failover to test your disaster recovery configuration or to perform maintenance on the primary cluster.

Before you begin

- The relationship must be in sync
- Nondisruptive operations must not be running
- The ONTAP Mediator must be configured, connected, and in quorum

About this task

A planned failover is initiated by the administrator of the secondary cluster. The operation requires switching the primary and secondary roles so that the secondary cluster takes over from the primary. The new primary cluster can then begin processing input and output requests locally without disrupting client operations.

Steps

1. Start the failover operation:

```
destination::>snapmirror failover start -destination-path vs1_dst:/cg/cg_dst
```

2. Monitor the progress of the failover:

```
destination::>snapmirror failover show
```

- When the failover operation is complete, you can monitor the Synchronous SnapMirror protection relationship status from the destination:

```
destination::>snapmirror show
```

What happens during an automatic unplanned failover

An automatic unplanned failover (AUFO) operation occurs when the primary cluster is down or isolated. When this occurs, the secondary cluster is converted to the primary and begins serving clients. This operation is performed only with assistance from the ONTAP Mediator.



After the automatic unplanned failover, it is important to rescan the host LUN I/O paths so that there is no loss of I/O paths.

You can monitor the status of the automatic unplanned failover by using the `snapmirror failover show` command.

Basic monitoring

There are several SM-BC components and operations you can monitor.

ONTAP mediator

During normal operation, the Mediator state should be connected. If it is in any other state, this might indicate an error condition. You can review the EMS messages to determine the error and appropriate corrective actions.

EMS Name	Description
sm.mediator.added	Mediator is added successfully
sm.mediator.removed	Mediator is removed successfully
sm.mediator.unusable	Mediator is unusable due to a corrupted mediator server
sm.mediator.misconfigured	Mediator is repurposed or the Mediator package is no longer installed on the Mediator server
sm.mediator.unreachable	Mediator is unreachable
sm.mediator.removed.force	Mediator is removed from the cluster using the "force" option

EMS Name	Description
sm.mediator.cacert.expiring	Mediator certificate authority (CA) certificate is due to expire in 30 days or less
sm.mediator.serverc.expiring	Mediator server certificate is due to expire in 30 days or less
sm.mediator.clientc.expiring	Mediator client certificate is due to expire in 30 days or less
sm.mediator.cacert.expired	Mediator certificate authority (CA) certificate has expired
sm.mediator.serverc.expired	Mediator server certificate has expired
sm.mediator.clientc.expired	Mediator client certificate has expired
sm.mediator.in.quorum	All the SM-BC records are resynchronized with Mediator

Planned failover operations

You can monitor status and progress of a planned failover operation using the `snapmirror failover show` command. For example:

```
ClusterB::> snapmirror failover start -destination-path vs1:/cg/dcg1
```

Once the failover operation is complete, you can monitor the Synchronous SnapMirror protection status from the new destination cluster. For example:

```
ClusterA::> snapmirror show
```

Automatic unplanned failover operations

During an unplanned automatic failover, you can monitor the status of the operation using the `snapmirror failover show` command. For example:

```
ClusterB::> snapmirror failover show -instance
Start Time: 9/23/2020 22:03:29
    Source Path: vs1:/cg/scg3
    Destination Path: vs3:/cg/dcg3
    Failover Status: completed
    Error Reason:
        End Time: 9/23/2020 22:03:30
Primary Data Cluster: cluster-2
Last Progress Update: -
    Failover Type: unplanned
Error Reason codes: -
```

SM-BC availability

You can check the availability of the SM-BC relationship using a series of commands, either on the primary cluster, the secondary cluster, or both.

Commands you use include the `snapmirror mediator show` command on both the primary and secondary cluster to check the connection and quorum status, the `snapmirror show` command, and the `volume show` command. For example:

```
SMBC_A::*> snapmirror mediator show
```

Mediator	Address	Peer Cluster	Connection Status	Quorum Status
10.236.172.86		SMBC_B	connected	true

```
SMBC_B::*> snapmirror mediator show
```

Mediator	Address	Peer Cluster	Connection Status	Quorum Status
10.236.172.86		SMBC_A	connected	true

```
SMBC_B::*> snapmirror show -expand
```

Source Path	Type	Destination Path	Mirror State	Relationship Status	Total Progress	Healthy	Progress Last Updated
vs0:/cg/cg1	XDP	vs1:/cg/cg1_dp	Snapmirrored	InSync	-	true	-
vs0:vol1	XDP	vs1:vol1_dp	Snapmirrored	InSync	-	true	-

2 entries were displayed.

```
SMBC_A::*> volume show -fields is-smbc-master,smbc-consensus,is-smbc-failover-capable -volume vol1
```

vserver	volume	is-smbc-master	is-smbc-failover-capable	smbc-consensus
vs0	vol1	true	false	Consensus

```
SMBC_B::*> volume show -fields is-smbc-master,smbc-consensus,is-smbc-failover-capable -volume vol1_dp
```

vserver	volume	is-smbc-master	is-smbc-failover-capable	smbc-consensus
vs1	vol1_dp	false	true	No-consensus

Copyright Information

Copyright © 2020 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.