Basic monitoring

ONTAP System Manager

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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 Event Management System (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
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
```

You can also review the following messages to determine if there is an error and take the appropriate corrective actions.

EMS Name	Description
smbc.pfo.failed	SMBC planned failover operation failed. Destination path:
smbc.pfo.start. Destination path:	SMBC planned failover operation started

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: -
```

You can also review the following messages to determine if there is an error and take the appropriate corrective actions.

EMS Name	Description
smbc.aufo.failed	SnapMirror automatic planned failover operation failed. Destination path:
smbc.aufo.start. Destination path:	SMBC planned failover operation started

EMS Name	Description
smbc.aufo.completed:	SnapMirror automatic planned failover operation completed. Destination path:
smbc.aufo.failover.incapable	block.giveback.during.aufo

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
                                                                    Progress
Source            Destination Mirror  Relationship   Total             Last
Path        Type  Path        State   Status         Progress  Healthy 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
```