

Disaster recovery for FlexGroup volumes ONTAP 9

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Disaster recovery for FlexGroup volumes

Disaster recovery workflow for FlexGroup volumes

When a disaster strikes on the source FlexGroup volume, you should activate the destination FlexGroup volume and redirect client access. Depending on whether the source FlexGroup volume can be recovered, you should either reactivate the source FlexGroup volume or reverse the SnapMirror relationship.



About this task

Client access to the destination FlexGroup volume is blocked for a brief period when some SnapMirror

operations, such as SnapMirror break and resynchronization, are running. If the SnapMirror operation fails, it is possible that some of the constituents remain in this state and access to the FlexGroup volume is denied. In such cases, you must retry the SnapMirror operation.

Activate the destination FlexGroup volume

When the source FlexGroup volume is unable to serve data due to events such as data corruption, accidental deletion or an offline state, you must activate the destination FlexGroup volume to provide data access until you recover the data on the source FlexGroup volume. Activation involves stopping future SnapMirror data transfers and breaking the SnapMirror relationship.

About this task

You must perform this task from the destination cluster.

Steps

1. Disable future transfers for the FlexGroup volume SnapMirror relationship: snapmirror quiesce
 dest_svm:dest_flexgroup

cluster2::> snapmirror quiesce -destination-path vsd:dst

2. Break the FlexGroup volume SnapMirror relationship: snapmirror break dest_svm:dest_flexgroup

cluster2::> snapmirror break -destination-path vsd:dst

3. View the status of the SnapMirror relationship: snapmirror show -expand

cluster2::> snapmirror show -expand									
Progress Source Last		Destination Mirror		for Rela	tionship	Total			
Path Updated	Туре	Path	Stat	te Stat	us	Progress	Healthy		
vss:s	XDP	vsd:dst	Bi	coken-off					
				Idle		-	true	-	
vss:s_0001	XDP	vsd:dst_000)1 Bi	roken-off					
				Idle		-	true	-	
vss:s_0002	XDP	vsd:dst_000)2 Bi	roken-off					
				Idle		-	true	-	
vss:s_0003	XDP	vsd:dst_000)3 Bi	coken-off					
				Idle		-	true	-	
vss:s_0004	XDP	vsd:dst_000)4 Bi	roken-off					
				Idle		-	true	-	
vss:s_0005	XDP	vsd:dst_000)5 Bi	roken-off					
				Idle		-	true	-	
vss:s_0006	XDP	vsd:dst_000)6 Bi	roken-off					
				Idle		-	true	-	
vss:s_0007	XDP	vsd:dst_000)7 Bi	roken-off					
				Idle		-	true	-	
vss:s_0008	XDP	vsd:dst_000)8 Bi	roken-off					
				Idle		-	true	-	
•••									

The SnapMirror relationship status of each constituent is Broken-off.

4. Verify that the destination FlexGroup volume is read/write: volume show -vserver svm_name

```
cluster2::> volume show -vserver vsd
Vserver Volume Aggregate State
                             Type Size
Available Used%
----- ------
                              ____ ____
 _____ _
vsd dst
               -
                      online **RW**
                                         2GB
1.54GB 22%
vsd d2
               -
                      online DP
                                    2GB
1.55GB 22%
vsd root vs0 aggr1 online RW 100MB
94.02MB
      5%
3 entries were displayed.
```

5. Redirect clients to the destination FlexGroup volume.

Reactivate the original source FlexGroup volume after disaster

When the source FlexGroup volume becomes available, you can resynchronize the original source and original destination FlexGroup volumes. Any new data on the destination FlexGroup volume is lost.

About this task

Any active quota rules on the destination volume are deactivated and the quota rules are deleted before resynchronization is performed.

You can use the volume quota policy rule create and volume quota modify commands to create and reactivate quota rules after the resynchronization operation is complete.

Steps

- 1. From the destination cluster, resynchronize the FlexGroup volume SnapMirror relationship: snapmirror resync -destination-path dst_svm:dest_flexgroup
- 2. View the status of the SnapMirror relationship: snapmirror show -expand

cluster2::> snapmirror show -expand								
Progress Source Last	Destination Mi		lirror	Relationship	Total			
Path Updated	Туре	Path S	tate	Status	Progress	Healthy		
vss:s	XDP	vsd:dst	Snapm	irrored				
				Idle	-	true	-	
vss:s_0001	XDP	vsd:dst_0001	Snapm	irrored				
				Idle	-	true	-	
vss:s_0002	XDP	vsd:dst_0002	Snapm	irrored				
			_	Idle	-	true	-	
vss:s_0003	XDP	vsd:dst_0003	Snapm	irrored				
	VDD		0	Idle	_	true	-	
VSS:S_0004	XDP	VSd:dSL_0004	Shapii	Ilrrorea		+ c		
W88.9 0005	מחע	wed.det 0005	Snanm	irrorod	_	true	-	
vss.s_0000	ADE	vsu.ust_0005	Shaph	IIIOIEU	_	true	_	
W88'8 0006	סחצ	wed.det 0006	Snanm	irrored		LIUE		
0000	NDL	vsa:asc0000	onaph	Idle	_	true	_	
vss:s 0007	XDP	vsd:dst 0007	Snapm	irrored		0140		
			onaph	Idle	_	true	_	
vss:s 0008	XDP	vsd:dst 0008	Snapm	irrored				
			T	Idle	_	true	_	

The SnapMirror relationship status of each constituent is Snapmirrored.

Reverse a SnapMirror relationship between FlexGroup volumes during disaster recovery

When a disaster disables the source FlexGroup volume of a SnapMirror relationship, you can use the destination FlexGroup volume to serve data while you repair or replace the source FlexGroup volume. After the source FlexGroup volume is online, you can make the original source FlexGroup volume a read-only destination and reverse the SnapMirror relationship.

About this task

Any active quota rules on the destination volume are deactivated and the quota rules are deleted before resynchronization is performed.

You can use the volume quota policy rule create and volume quota modify commands to create and reactivate quota rules after the resynchronization operation is complete.

Steps

1. On the original destination FlexGroup volume, remove the data protection mirror relationship between the source FlexGroup volume and the destination FlexGroup volume: snapmirror delete -destination -path svm name:volume name

cluster2::> snapmirror delete -destination-path vsd:dst

2. On the original source FlexGroup volume, remove the relationship information from the source FlexGroup volume: snapmirror release -destination-path svm_name:volume_name -relationship -info-only

After deleting a SnapMirror relationship, you must remove the relationship information from the source FlexGroup volume before attempting a resynchronization operation.

```
cluster1::> snapmirror release -destination-path vsd:dst -relationship
-info-only true
```

3. On the new destination FlexGroup volume, create the mirror relationship: snapmirror create -source-path src_svm_name:volume_name -destination-path dst svm name:volume name -type XDP -policy MirrorAllSnapshots

```
cluster1::> snapmirror create -source-path vsd:dst -destination-path
vss:src -type XDP -policy MirrorAllSnapshots
```

4. On the new destination FlexGroup volume, resynchronize the source FlexGroup: snapmirror resync -source-path svm_name:volume_name

cluster1::> snapmirror resync -source-path vsd:dst

5. Monitor the SnapMirror transfers: snapmirror show -expand

cluster2::> snapmirror show -expand								
Progress Source Last	Destination Mir	rror Relationship	Total					
Path Type Updated	Path Sta	ate Status	Progress	Healthy				
		Idle	_	true	_			
vss:dst_0001 XDI	vss:src_0001	Snapmirrored						
		Idle	-	true	-			
vsd:dst_0002 XDB	vsd:dst_0002 XDP vss:src_0002							
		Idle	-	true	-			
vsa:ast_0003 XDP	vss:src_0003	Snapmirrored	_	+ 110	_			
vsd:dst 0004 XDI	e vss:src 0004	Snapmirrored		LIUE				
		Idle	_	true	_			
vsd:dst0005 XDB	vss:src_0005	Snapmirrored						
		Idle	-	true	-			
vsd:dst_0006 XDB	2 vss:src_0006	Snapmirrored						
	0007	Idle	-	true	-			
vsa:ast_000/ XDP	vss:src_000/	Snapmirrored	_	+ r110	_			
vsd:dst 0008 XDF	P vss:src 0008	Snapmirrored		CIUE				
		Idle	-	true	_			

The SnapMirror relationship status of each constituent shows as *Snapmirrored* that indicates that the resynchronization was successful.

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