Manage SnapMirror SVM replication

ONTAP 9

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Learn about ONTAP SnapMirror SVM replication

You can use SnapMirror to create a data protection relationship between SVMs. In this type of data protection relationship, all or part of the SVM's configuration, from NFS exports and SMB shares to RBAC, is replicated, as well as the data in the volumes that the SVM owns.

Supported relationship types

Only data-serving SVMs can be replicated. The following data protection relationship types are supported:

- *SnapMirror DR,* in which the destination typically contains only the snapshots currently on the source.

  Beginning with ONTAP 9.9.1, this behavior changes when you are using the mirror-vault policy. Beginning with ONTAP 9.9.1, you can create different snapshot policies on the source and destination, and the snapshots on the destination are not overwritten by snapshots on the source:

  - They are not overwritten from the source to the destination during normal scheduled operations, updates and resync
  - They are not deleted during break operations.
  - They are not deleted during flip-resync operations. When you configure an SVM disaster relationship using the mirror-vault policy using ONTAP 9.9.1 and later, the policy behaves as follows:
  - User-defined snapshot policies at the source are not copied to the destination.
  - System-defined snapshot policies are not copied to the destination.
  - Volume association with user and system defined snapshot policies are not copied to the destination. SVM.
- *SnapMirror unified replication,* in which the destination is configured for both DR and long-term retention.

For more information about SnapMirror unified replication, see SnapMirror unified replication basics.

The *policy type* of the replication policy determines the type of relationship it supports. The following table shows the available policy types.

Policy type	Relationship type
async-mirror	SnapMirror DR
mirror-vault	Unified replication

XDP replaces DP as the SVM replication default in ONTAP 9.4

Beginning with ONTAP 9.4, SVM data protection relationships default to XDP mode. SVM data protection relationships continue to default to DP mode in ONTAP 9.3 and earlier.

Existing relationships are not affected by the XDP default. If a relationship is already of type DP, it will continue to be of type DP. The following table shows the behavior you can expect.

If you specify…	The type is…	The default policy (if you do not specify a policy) is…
DP	XDP	MirrorAllSnapshots (SnapMirror DR)
Nothing	XDP	MirrorAllSnapshots (SnapMirror DR)
XDP	XDP	MirrorAndVault (Unified replication)

You can find information about converting DP relationships to XDP relationships and other details here: Convert an existing ONTAP DP-type relationship to XDP.

Version-independence is not supported for SVM replication. In an SVM disaster recovery configuration, the destination SVM must be on a cluster running the same ONTAP version as the source SVM cluster to support failover and fail back operations.

Compatible ONTAP versions for SnapMirror relationships

How SVM configurations are replicated

The content of an SVM replication relationship is determined by the interaction of the following fields:

- The `-identity-preserve true` option of the `snapmirror create` command replicates the entire SVM configuration.

  The `-identity-preserve false` option replicates only the volumes and authentication and authorization configurations of the SVM, and the protocol and name service settings listed in Configurations replicated in SVM disaster recovery relationships.

- The `-discard-configs network` option of the `snapmirror policy create` command excludes LIFs and related network settings from SVM replication, for use in cases where the source and destination SVMs are in different subnets.
- The `-vserver-dr-protection unprotected` option of the `volume modify` command excludes the specified volume from SVM replication.

Otherwise, SVM replication is almost identical to volume replication. You can use virtually the same workflow for SVM replication as you use for volume replication.

Support details

The following table shows support details for SnapMirror SVM replication.

Resource or feature	Support details

Deployment types	• Single source to single destination • Beginning with ONTAP 9.4, fan-out. You can fan-out to two destinations only. By default, only one -identity-preserve true relationship is allowed per source SVM.
Relationship types	• SnapMirror disaster recovery • SnapMirror unified replication
Replication scope	Intercluster only. You cannot replicate SVMs in the same cluster.
Autonomous Ransomware Protection	• Supported beginning with ONTAP 9.12.1. For more information, see Autonomous Ransomware Protection.
Consistency groups asynchronous support	Beginning with ONTAP 9.14.1, a maximum of 32 SVM disaster recovery relationships are supported when consistency groups exist. See Protect a consistency group and Consistency group limits for more information.
FabricPool	Beginning with ONTAP 9.6, SnapMirror SVM replication is supported with FabricPool. When in an SVM DR relationship, source and destination volumes do not need to use FabricPool aggregates, but they must use the same tiering policy. Beginning with ONTAP 9.12.1, SnapMirror SVM replication is supported with FabricPool and FlexGroup volumes working in conjunction. Prior to 9.12.1, any two of these features worked together, but not all three together.

MetroCluster	Beginning with ONTAP 9.11.1, both sides of a SVM disaster recovery relationship within a MetroCluster configuration can act as a source for additional SVM disaster recovery configurations. Beginning with ONTAP 9.5, SnapMirror SVM replication is supported on MetroCluster configurations. • In releases earlier than ONTAP 9.10.X, a MetroCluster configuration cannot be the destination of an SVM disaster recovery relationship. • In ONTAP 9.10.1 and later releases, a MetroCluster configuration can be the destination of an SVM disaster recovery relationship for migration purposes only, and it must meet all necessary requirements described in TR-4966: Migrating a SVM into a MetroCluster solution. • Only an active SVM within a MetroCluster configuration can be the source of an SVM disaster recovery relationship. A source can be a sync-source SVM before switchover or a sync-destination SVM after switchover. • When a MetroCluster configuration is in a steady state, the MetroCluster sync-destination SVM cannot be the source of an SVM disaster recovery relationship, since the volumes are not online. • When the sync-source SVM is the source of an SVM disaster recovery relationship, the source SVM disaster recovery relationship information is replicated to the MetroCluster partner. • During the switchover and switchback processes, replication to the SVM disaster recovery destination might fail. However, after the switchover or switchback process completes, the next SVM disaster recovery scheduled updates will succeed.
Consistency group	Supported beginning with ONTAP 9.14.1. For more information, see Protect a consistency group.
ONTAP S3	Not supported with SVM disaster recovery.
SnapMirror Synchronous	Not supported with SVM disaster recovery.

Version-independence	Not supported.
Volume encryption	• Encrypted volumes on the source are encrypted on the destination. • Onboard Key Manager or KMIP servers must be configured on the destination. • New encryption keys are generated at the destination. • If the destination does not contain a node that supports volume .encryption, replication succeeds, but the destination volumes are not encrypted.

Configurations replicated in SVM disaster recovery relationships

The following table shows the interaction of the `snapmirror create -identity-preserve` option and the `snapmirror policy create -discard-configs network` option:

Configuration replicated		**`-identity-preserve true`**		**`-identity-preserve false`**
		Policy without `-discard -configs network` set	**Policy with `-discard -configs network` set**	
Network	NAS LIFs	Yes	No	No
	LIF Kerberos configuration	Yes	No	No
	SAN LIFs	No	No	No
	Firewall policies	Yes	Yes	No
	Service policies	Yes	Yes	No
	Routes	Yes	No	No
	Broadcast domain	No	No	No
	Subnet	No	No	No
	IPspace	No	No	No

SMB	SMB server	Yes	Yes	No
	Local groups and local user	Yes	Yes	Yes
	Privilege	Yes	Yes	Yes
	Shadow copy	Yes	Yes	Yes
	BranchCache	Yes	Yes	Yes
	Server options	Yes	Yes	Yes
	Server security	Yes	Yes	No
	Home directory, share	Yes	Yes	Yes
	Symlink	Yes	Yes	Yes
	Fpolicy policy, Fsecurity policy, and Fsecurity NTFS	Yes	Yes	Yes
	Name mapping and group mapping	Yes	Yes	Yes
	Audit information	Yes	Yes	Yes
NFS	Export policies	Yes	Yes	No
	Export policy rules	Yes	Yes	No
	NFS server	Yes	Yes	No
RBAC	Security certificates	Yes	Yes	No
	Login user, public key, role, and role configuration	Yes	Yes	Yes
	SSL	Yes	Yes	No

Name services	DNS and DNS hosts	Yes	Yes	No
	UNIX user and UNIX group	Yes	Yes	Yes
	Kerberos realm and Kerberos keyblocks	Yes	Yes	No
	LDAP and LDAP client	Yes	Yes	No
	Netgroup	Yes	Yes	No
	NIS	Yes	Yes	No
	Web and web access	Yes	Yes	No
Volume	Object	Yes	Yes	Yes
	Snapshots and snapshot policy	Yes	Yes	Yes
	Autodelete policy	No	No	No
	Efficiency policy	Yes	Yes	Yes
	Quota policy and quota policy rule	Yes	Yes	Yes
	Recovery queue	Yes	Yes	Yes

Root volume	Namespace	Yes	Yes	Yes
	User data	No	No	No
	Qtrees	No	No	No
	Quotas	No	No	No
	File-level QoS	No	No	No
	Attributes: state of the root volume, space guarantee, size, autosize, and total number of files	No	No	No
Storage QoS	QoS policy group	Yes	Yes	Yes
Fibre Channel (FC)		No	No	No
iSCSI		No	No	No
LUNs	Object	Yes	Yes	Yes
	igroups	No	No	No
	portsets	No	No	No
	Serial numbers	No	No	No
SNMP	v3 users	Yes	Yes	No

SVM disaster recovery storage limits

The following table shows the recommended maximum number of volumes and SVM disaster recovery relationships supported per storage object. You should be aware that limits are often platform dependent. Refer to the Hardware Universe to learn the limits for your specific configuration.

Storage object	Limit
SVM	300 Flexible volumes
HA pair	1,000 Flexible Volumes
Cluster	128 SVM disaster relationships

Related information

- snapmirror create
- snapmirror policy create

Replicate SVM configurations

ONTAP SnapMirror SVM replication workflow

SnapMirror SVM replication involves creating the destination SVM, creating a replication job schedule, and creating and initializing a SnapMirror relationship.

You should determine which replication workflow best suits your needs:

- Replicate an entire SVM configuration
- Exclude LIFs and related network settings from SVM replication
- Exlude network, name service, and other settings from SVM configuration

Criteria for placing volumes on ONTAP SnapMirror destination SVMs

When replicating volumes from the source SVM to the destination SVM, it's important to know the criteria for selecting aggregates.

Aggregates are selected based on the following criteria:

- Volumes are always placed on non-root aggregates.
- Non-root aggregates are selected based on the available free space and the number of volumes already hosted on the aggregate.

  Aggregates with more free space and fewer volumes are given priority. The aggregate with the highest priority is selected.

- Source volumes on FabricPool aggregates are placed on FabricPool aggregates on the destination with the same tiering-policy.
- If a volume on the source SVM is located on a Flash Pool aggregate, then the volume is placed on a Flash Pool aggregate on the destination SVM, if such an aggregate exists and has enough free space.
- If the `-space-guarantee` option of the volume that is replicated is set to `volume`, only aggregates with free space greater than the volume size are considered.
- The volume size grows automatically on the destination SVM during replication, based on the source volume size.

  If you want to pre-reserve the size on the destination SVM, you must resize the volume. The volume size does not shrink automatically on the destination SVM based on the source SVM.

If you want to move a volume from one aggregate to another, you can use the `volume move` command on the destination SVM.

Replicate an entire ONTAP SVM configuration

You can create an SVM disaster recovery (SVM DR) relationship to replicate one SVM configuration to another. In the event of a disaster at the primary site, you can quickly activate the destination SVM.

Before you begin

The source and destination clusters and SVMs must be peered. For more information, see Create a cluster peer relationship and Create an SVM intercluster peer relationship.

Learn more about the commands described in this procedure in the ONTAP command reference.

About this task

This workflow assumes that you are already using a default policy or a custom replication policy.

Beginning with ONTAP 9.9.1, when you use the mirror-vault policy, you can create different snapshot policies on the source and destination SVM, and the snapshots on the destination are not overwritten by snapshots on the source. For more information, see Understanding SnapMirror SVM replication.

Complete this procedure from the destination. If you need to create a new protection policy, for instance, when your source storage VM has SMB configured, you should create the policy and use the **Identity preserve** option. For details see Create custom data protection policies.

Steps

You can perform this task from System Manager or the ONTAP CLI.

System Manager

1. On the destination cluster, click **Protection > Relationships**.
2. Under **Relationships**, click **Protect** and choose **Storage VMs (DR)**.
3. Select a protection policy. If you created a custom protection policy, select it, then choose the source cluster and storage VM you want to replicate. You can also create a new destination storage VM by entering a new storage VM name.
4. If desired, change the destination settings to override identity preserve and to include or exclude network interfaces and protocols.
5. Click **Save**.

CLI

1. Create a destination SVM:

   ```
   vserver create -vserver <SVM_name> -subtype dp-destination
   ```

   The SVM name must be unique across the source and destination clusters.

   The following example creates a destination SVM named `svm_backup`:

   ```
   cluster_dst:> vserver create -vserver svm_backup -subtype dp-
   destination
   ```

   Learn more about `vserver create` in the ONTAP command reference.

2. From the destination cluster, create an SVM peer relationship using the `vserver peer create` command.

   For more information, see Create an SVM intercluster peer relationship.

   Learn more about `vserver peer create` in the ONTAP command reference.

3. Create a replication job schedule:

   ```
   job schedule cron create -name <job_name> -month <month> -dayofweek
   <day_of_week> -day <day_of_month> -hour <hour> -minute <minute>
   ```

   For `-month`, `-dayofweek`, and `-hour`, you can specify `all` to run the job every month, day of the week, and hour, respectively.

   > The minimum supported schedule (RPO) for FlexVol volumes in an SVM SnapMirror relationship is 15 minutes. The minimum supported schedule (RPO) for FlexGroup volumes in an SVM SnapMirror relationship is 30 minutes.

   The following example creates a job schedule named `my_weekly` that runs on Saturdays at 3:00 a.m.:

```
cluster_dst::> job schedule cron create -name my_weekly -dayofweek
saturday -hour 3 -minute 0
```

Learn more about `job schedule cron create` in the ONTAP command reference.

4. From the destination SVM or the destination cluster, create a replication relationship:

```
snapmirror create -source-path <SVM_name>: -destination-path
<SVM_name>: -type <DP|XDP> -schedule <schedule> -policy <policy>
-identity-preserve true
```

> You must enter a colon (:) after the SVM name in the `-source-path` and `-destination-path` options.

The following example creates a SnapMirror DR relationship using the default `MirrorAllSnapshots` policy:

```
cluster_dst::> snapmirror create -source-path svm1: -destination
-path svm_backup: -type XDP -schedule my_daily -policy
MirrorAllSnapshots -identity-preserve true
```

The following example creates a unified replication relationship using the default `MirrorAndVault` policy:

```
cluster_dst:> snapmirror create -source-path svm1: -destination-path
svm_backup: -type XDP -schedule my_daily -policy MirrorAndVault
-identity-preserve true
```

Assuming you have created a custom policy with the policy type `async-mirror`, the following example creates a SnapMirror DR relationship:

```
cluster_dst::> snapmirror create -source-path svm1: -destination
-path svm_backup: -type XDP -schedule my_daily -policy my_mirrored
-identity-preserve true
```

Assuming you have created a custom policy with the policy type `mirror-vault`, the following example creates a unified replication relationship:

```
cluster_dst::> snapmirror create -source-path svm1: -destination
-path svm_backup: -type XDP -schedule my_daily -policy my_unified
-identity-preserve true
```

Learn more about `snapmirror create` in the ONTAP command reference.

5. Stop the destination SVM:

```
vserver stop -vserver <SVM_name>
```

The following example stops a destination SVM named svm_backup:

```
cluster_dst::> vserver stop -vserver svm_backup
```

Learn more about `vserver stop` in the ONTAP command reference.

6. From the destination SVM or the destination cluster, initialize the SVM replication relationship:

```
snapmirror initialize -source-path <SVM_name>: -destination-path
<SVM_name>:
```

> You must enter a colon (:) after the SVM name in the `-source-path` and `-destination-path` options.

The following example initializes the relationship between the source SVM, `svm1`, and the destination SVM, `svm_backup`:

```
cluster_dst::> snapmirror initialize -source-path svm1: -destination
-path svm_backup:
```

Learn more about `snapmirror initialize` in the ONTAP command reference.

Exclude LIFs and related network settings from ONTAP SnapMirror SVM replication

If the source and destination SVMs are in different subnets, you can use the `-discard -configs network` option of the `snapmirror policy create` command to exclude LIFs and related network settings from SVM replication.

Before you begin

The source and destination clusters and SVMs must be peered.

For more information, see Create a cluster peer relationship and Create an SVM intercluster peer relationship.

About this task

The `-identity-preserve` option of the `snapmirror create` command must be set to `true` when you create the SVM replication relationship.

Steps

1. Create a destination SVM:

   `vserver create -vserver SVM -subtype dp-destination`

   The SVM name must be unique across the source and destination clusters.

   The following example creates a destination SVM named `svm_backup`:

   ```
   cluster_dst:> vserver create -vserver svm_backup -subtype dp-destination
   ```

2. From the destination cluster, create an SVM peer relationship using the `vserver peer create` command.

   For more information, see Create an SVM intercluster peer relationship.

   Learn more about `vserver peer create` in the ONTAP command reference.

3. Create a job schedule:

   `job schedule cron create -name job_name -month month -dayofweek day_of_week -day day_of_month -hour hour -minute minute`

   For `-month`, `-dayofweek`, and `-hour`, you can specify `all` to run the job every month, day of the week, and hour, respectively.

   > The minimum supported schedule (RPO) for FlexVol volumes in an SVM SnapMirror relationship is 15 minutes. The minimum supported schedule (RPO) for FlexGroup volumes in an SVM SnapMirror relationship is 30 minutes.

   The following example creates a job schedule named `my_weekly` that runs on Saturdays at 3:00 a.m.:

   ```
   cluster_dst::> job schedule cron create -name my_weekly -dayofweek
   "Saturday" -hour 3 -minute 0
   ```

4. Create a custom replication policy:

   `snapmirror policy create -vserver SVM -policy policy -type async-mirror|vault|mirror-vault -comment comment -tries transfer_tries -transfer -priority low|normal -is-network-compression-enabled true|false -discard -configs network`

   The following example creates a custom replication policy for SnapMirror DR that excludes LIFs:

   ```
   cluster_dst::> snapmirror policy create -vserver svm1 -policy
   DR_exclude_LIFs -type async-mirror -discard-configs network
   ```

   The following example creates a custom replication policy for unified replication that excludes LIFs:

```
cluster_dst::> snapmirror policy create -vserver svm1 -policy
unified_exclude_LIFs -type mirror-vault -discard-configs network
```

Consider creating the same custom SnapMirror policy on the source cluster for future failover and failback scenarios.

Learn more about `snapmirror policy create` in the ONTAP command reference.

5. From the destination SVM or the destination cluster, run the following command to create a replication relationship:

   `snapmirror create -source-path SVM: -destination-path SVM: -type DP|XDP -schedule schedule -policy policy -identity-preserve true|false -discard -configs true|false`

   You must enter a colon (:) after the SVM name in the `-source-path` and `-destination -path` options. See the examples below.

   The following example creates a SnapMirror DR relationship that excludes LIFs:

   ```
   cluster_dst::> snapmirror create -source-path svm1: -destination-path
   svm_backup: -type XDP -schedule my_weekly -policy DR_exclude_LIFs
   -identity-preserve true
   ```

   The following example creates a SnapMirror unified replication relationship that excludes LIFs:

   ```
   cluster_dst::> snapmirror create -source-path svm1: -destination-path
   svm_backup: -type XDP -schedule my_weekly -policy unified_exclude_LIFs
   -identity-preserve true -discard-configs true
   ```

   Learn more about `snapmirror create` in the ONTAP command reference.

6. Stop the destination SVM:

   `vserver stop`

   SVM name

   The following example stops the destination SVM named svm_backup:

   ```
   cluster_dst::> vserver stop -vserver svm_backup
   ```

7. From the destination SVM or the destination cluster, initialize a replication relationship:

   `snapmirror initialize -source-path SVM: -destination-path SVM:`

The following example initializes the relationship between the source, `svm1` and the destination, `svm_backup`:

```
cluster_dst::> snapmirror initialize -source-path svm1: -destination
-path svm_backup:
```

Learn more about `snapmirror initialize` in the ONTAP command reference.

After you finish

You must configure the network and protocols on the destination SVM for data access in the event a disaster occurs.

Related information

- snapmirror create
- snapmirror initialize
- snapmirror policy create

Exclude network, name service, and other settings from SVM replication with ONTAP

You might want to exclude network, name service, and other settings from an SVM replication relationship to avoid conflicts or configuration differences with the destination SVM.

You can use the `-identity-preserve false` option of the `snapmirror create` command to replicate only the volumes and security configurations of an SVM. Some protocol and name service settings are also preserved.

About this task

For a list of preserved protocol and name service settings, see Configurations replicated in SVM DR relationships.

Before you begin

The source and destination clusters and SVMs must be peered.

For more information, see Create a cluster peer relationship and Create an SVM intercluster peer relationship.

Steps

1. Create a destination SVM:

   `vserver create -vserver` *SVM* `-subtype dp-destination`

   The SVM name must be unique across the source and destination clusters.

   The following example creates a destination SVM named `svm_backup`:

   ```
   cluster_dst:> vserver create -vserver svm_backup -subtype dp-destination
   ```

2. From the destination cluster, create an SVM peer relationship using the `vserver peer create` command.

   For more information, see Create an SVM intercluster peer relationship.

   Learn more about `vserver peer create` in the ONTAP command reference.

3. Create a replication job schedule:

   `job schedule cron create -name job_name -month month -dayofweek day_of_week -day day_of_month -hour hour -minute minute`

   For `-month`, `-dayofweek`, and `-hour`, you can specify `all` to run the job every month, day of the week, and hour, respectively.

   > The minimum supported schedule (RPO) for FlexVol volumes in an SVM SnapMirror relationship is 15 minutes. The minimum supported schedule (RPO) for FlexGroup volumes in an SVM SnapMirror relationship is 30 minutes.

   The following example creates a job schedule named `my_weekly` that runs on Saturdays at 3:00 a.m.:

   ```
   cluster_dst::> job schedule cron create -name my_weekly -dayofweek
   "Saturday" -hour 3 -minute 0
   ```

4. Create a replication relationship that excludes network, name service, and other configuration settings:

   `snapmirror create -source-path SVM: -destination-path SVM: -type DP|XDP -schedule schedule -policy policy -identity-preserve false`

   > You must enter a colon (:) after the SVM name in the `-source-path` and `-destination-path` options. See the examples below. You must run this command from the destination SVM or the destination cluster.

   The following example creates a SnapMirror DR relationship using the default `MirrorAllSnapshots` policy. The relationship excludes network, name service, and other configuration settings from SVM replication:

   ```
   cluster_dst::> snapmirror create -source-path svm1: -destination-path
   svm_backup: -type XDP -schedule my_daily -policy MirrorAllSnapshots
   -identity-preserve false
   ```

   The following example creates a unified replication relationship using the default `MirrorAndVault` policy. The relationship excludes network, name service, and other configuration settings:

```
cluster_dst:> snapmirror create svm1: -destination-path svm_backup:
-type XDP -schedule my_daily -policy MirrorAndVault -identity-preserve
false
```

Assuming you have created a custom policy with the policy type `async-mirror`, the following example creates a SnapMirror DR relationship. The relationship excludes network, name service, and other configuration settings from SVM replication:

```
cluster_dst::> snapmirror create -source-path svm1: -destination-path
svm_backup: -type XDP -schedule my_daily -policy my_mirrored -identity
-preserve false
```

Assuming you have created a custom policy with the policy type `mirror-vault`, the following example creates a unified replication relationship. The relationship excludes network, name service, and other configuration settings from SVM replication:

```
cluster_dst::> snapmirror create -source-path svm1: -destination-path
svm_backup: -type XDP -schedule my_daily -policy my_unified -identity
-preserve false
```

Learn more about `snapmirror create` in the ONTAP command reference.

5. Stop the destination SVM:

   `vserver stop`

   `SVM name`

   The following example stops a destination SVM named dvs1:

   ```
   destination_cluster::> vserver stop -vserver dvs1
   ```

6. If you are using SMB, you must also configure an SMB server.

   See SMB only: Creating an SMB server.

7. From the destination SVM or the destination cluster, initialize the SVM replication relationship:

   `snapmirror initialize -source-path` *`SVM_name`*`: -destination-path` *`SVM_name`*`:`

   Learn more about `snapmirror initialize` in the ONTAP command reference.

After you finish

You must configure the network and protocols on the destination SVM for data access in the event a disaster occurs.

Specify local tiers to use for ONTAP SnapMirror SVM DR relationships

After a disaster recovery SVM is created, you can use the `aggr-list` option with `vserver modify` command to limit which local tiers are used to host SVM DR destination volumes.

Steps

1. Create a destination SVM:

   ```
   vserver create -vserver SVM -subtype dp-destination
   ```

2. Modify the disaster recovery SVM's aggr-list to limit the local tiers that are used to host the disaster recovery SVM's volume:

   ```
   cluster_dest::> vserver modify -vserver SVM -aggr-list <comma-separated-list>
   ```

Create an SMB server for an ONTAP SnapMirror destination SVM in a DR relationship

If the source SVM has an SMB configuration, and you chose to set `identity-preserve` to `false`, you must create an SMB server for the destination SVM. An SMB server is required for some SMB configurations, such as shares during initialization of the SnapMirror relationship.

Steps

1. Start the destination SVM by using the `vserver start` command.

   ```
   destination_cluster::> vserver start -vserver dvs1
   [Job 30] Job succeeded: DONE
   ```

   Learn more about `vserver start` in the ONTAP command reference.

2. Verify that the destination SVM is in the `running` state and subtype is `dp-destination` by using the `vserver show` command.

   ```
   destination_cluster::> vserver show
                                       Admin      Operational Root
   Vserver  Type    Subtype            State      State       Volume
   Aggregate
   -------- ------- ----------       ---------- ----------- ----------
   ----------
   dvs1     data    dp-destination    running    running       -         -
   ```

   Learn more about `vserver show` in the ONTAP command reference.

3. Create a LIF by using the `network interface create` command.

```
destination_cluster::>network interface create -vserver dvs1 -lif NAS1
-role data -data-protocol cifs -home-node destination_cluster-01 -home
-port a0a-101  -address 192.0.2.128 -netmask 255.255.255.128
```

Learn more about `network interface create` in the ONTAP command reference.

4. Create a route by using the `network route create` command.

```
destination_cluster::>network route create -vserver dvs1 -destination
0.0.0.0/0
-gateway 192.0.2.1
```

Network management

Learn more about `network route create` in the ONTAP command reference.

5. Configure DNS by using the `vserver services dns create` command.

```
destination_cluster::>vserver services dns create -domains
mydomain.example.com -vserver
dvs1 -name-servers 192.0.2.128 -state enabled
```

Learn more about `vserver services dns create` in the ONTAP command reference.

6. Add the preferred domain controller by using the `vserver cifs domain preferred-dc add` command.

```
destination_cluster::>vserver cifs domain preferred-dc add -vserver dvs1
-preferred-dc
192.0.2.128 -domain mydomain.example.com
```

Learn more about `vserver cifs domain preferred-dc add` in the ONTAP command reference.

7. Create the SMB server by using the `vserver cifs create` command.

```
destination_cluster::>vserver cifs create -vserver dvs1 -domain
mydomain.example.com
-cifs-server CIFS1
```

Learn more about `vserver cifs create` in the ONTAP command reference.

8. Stop the destination SVM by using the `vserver stop` command.

```
destination_cluster::> vserver stop -vserver dvs1
[Job 46] Job succeeded: DONE
```

Learn more about `vserver stop` in the ONTAP command reference.

Exclude volumes from an ONTAP SnapMirror SVM DR relationship

By default, all RW data volumes of the source SVM are replicated. If you do not want to protect all the volumes on the source SVM, you can use the `-vserver-dr -protection unprotected` option of the `volume modify` command to exclude volumes from SVM replication.

Steps

1. Exclude a volume from SVM replication:

   `volume modify -vserver SVM -volume volume -vserver-dr-protection unprotected`

   Learn more about `volume modify` in the ONTAP command reference.

   The following example excludes the volume `volA_src` from SVM replication:

   ```
   cluster_src::> volume modify -vserver SVM1 -volume volA_src -vserver-dr
   -protection unprotected
   ```

   If you later want to include a volume in the SVM replication that you originally excluded, run the following command:

   `volume modify -vserver SVM -volume volume -vserver-dr-protection protected`

   The following example includes the volume `volA_src` in the SVM replication:

   ```
   cluster_src::> volume modify -vserver SVM1 -volume volA_src -vserver-dr
   -protection protected
   ```

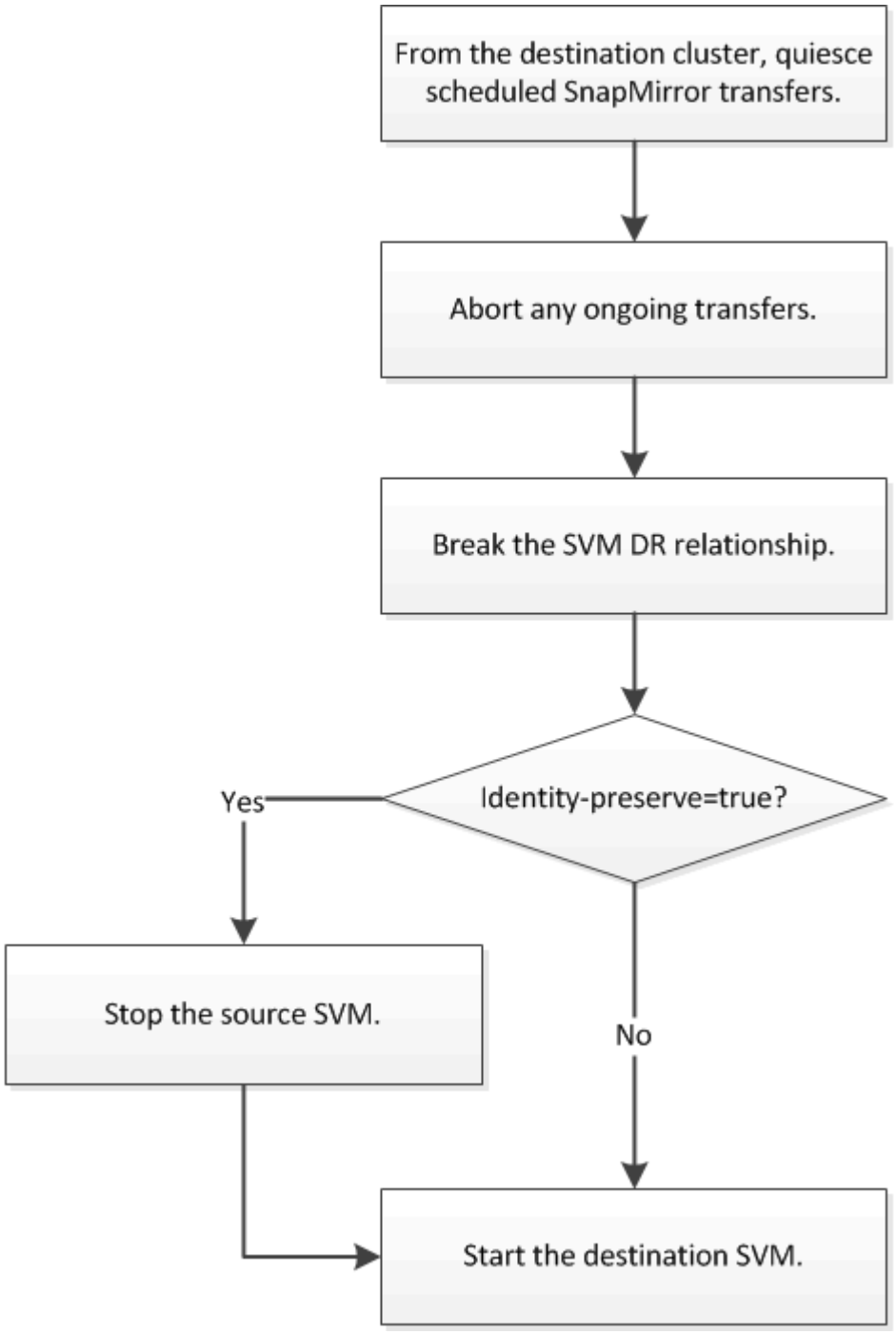
2. Create and initialize the SVM replication relationship as described in Replicating an entire SVM configuration.

Serve data from a SnapMirror SVM DR destination

ONTAP SnapMirror SVM disaster recovery workflow

To recover from a disaster and serve data from the destination SVM, you must activate the destination SVM. Activating the destination SVM involves stopping scheduled SnapMirror transfers, aborting ongoing SnapMirror transfers, breaking the replication

relationship, stopping the source SVM, and starting the destination SVM.



Configure the ONTAP SnapMirror SVM destination volume as writable

You need to make SVM destination volumes writeable before you can serve data to clients.

The procedure is largely identical to the procedure for volume replication, with one exception. If you set `-identity-preserve true` when you created the SVM replication relationship, you must stop the source SVM before activating the destination SVM.

About this task

Learn more about the commands described in this procedure in the ONTAP command reference.

> In a disaster recovery scenario, you cannot perform a SnapMirror update from the source SVM to the disaster recovery destination SVM because your source SVM and its data will be inaccessible, and because updates since the last resync might be bad or corrupt.

Beginning with ONTAP 9.8, you can use System Manager to activate a destination storage VM after a disaster. Activating the destination storage VM makes the SVM destination volumes writable and enables you to serve data to clients.

Steps

You can perform this task from System Manager or the ONTAP CLI.

System Manager

1. If the source cluster is accessible, verify that the SVM is stopped: navigate to **Storage > Storage VMs** and check the **State** column for the SVM.
2. If the source SVM state is "Running", stop it: select ⋮ and choose **Stop**.
3. On the destination cluster, locate the desired protection relationship: navigate to **Protection > Relationships**.
4. Hover over the desired source storage VM name, click ⋮, and choose **Activate destination Storage VM**.
5. In the **Activate destination storage VM** window, select **Activate the destination storage VM and break the relationship**.
6. Click **Activate**.

CLI

1. From the destination SVM or the destination cluster, quiesce the SVM to stop scheduled transfers to the destination:

```
snapmirror quiesce -source-path <SVM>: -destination-path <SVM>:
```

ⓘ You must enter a colon (:) after the SVM name in the `-source-path` and `-destination-path` options. See the example below.

The following example stops scheduled transfers between the source SVM `svm1` and the destination SVM `svm_backup`:

```
cluster_dst::> snapmirror quiesce -source-path svm1: -destination
-path svm_backup:
```

Learn more about `snapmirror quiesce` in the ONTAP command reference.

2. From the destination SVM or the destination cluster, stop ongoing transfers to the destination:

```
snapmirror abort -source-path <SVM>: -destination-path <SVM>:
```

ⓘ You must enter a colon (:) after the SVM name in the `-source-path` and `-destination-path` options. See the example below.

The following example stops ongoing transfers between the source SVM `svm1` and the destination SVM `svm_backup`:

```
cluster_dst::> snapmirror abort -source-path svm1: -destination-path
svm_backup:
```

Learn more about `snapmirror abort` in the ONTAP command reference.

3. From the destination SVM or the destination cluster, break the replication relationship:

```
snapmirror break -source-path <SVM>: -destination-path <SVM>:
```

> You must enter a colon (:) after the SVM name in the `-source-path` and `-destination-path` options. See the example below.

The following example breaks the relationship between the source SVM `svm1` and the destination SVM `svm_backup`:

```
cluster_dst::> snapmirror break -source-path svm1: -destination-path
svm_backup:
```

Learn more about `snapmirror break` in the ONTAP command reference.

4. If you set `-identity-preserve true` when you created the SVM replication relationship, stop the source SVM:

```
vserver stop -vserver <SVM>
```

The following example stops the source SVM `svm1`:

```
cluster_src::> vserver stop svm1
```

5. Start the destination SVM:

```
vserver start -vserver <SVM>
```

The following example starts the destination SVM `svm_backup`:

```
cluster_dst::> vserver start svm_backup
```

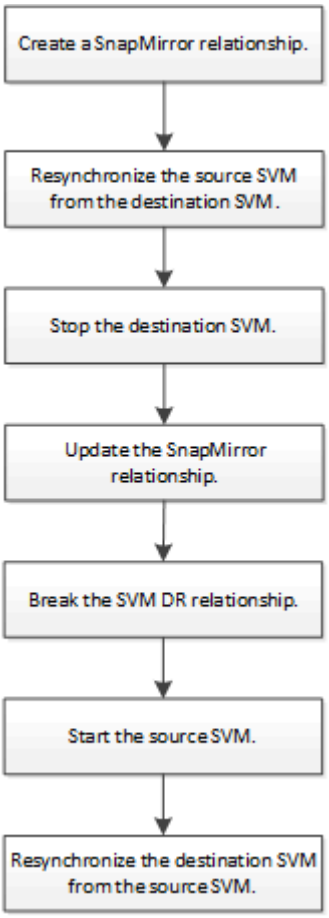
After you finish

Configure SVM destination volumes for data access, as described in Configuring the destination volume for data access.

Reactivate the SnapMirror source SVM

ONTAP SnapMirror source SVM reactivation workflow

If the source SVM exists after a disaster, you can reactivate it and protect it by recreating the SVM disaster recovery relationship.



Reactivate the original ONTAP SnapMirror source SVM

You can reestablish the original data protection relationship between the source and destination SVM when you no longer need to serve data from the destination. The procedure is largely identical to the procedure for volume replication, with one exception. You must stop the destination SVM before reactivating the source SVM.

Before you begin

- If you have increased the size of destination volume while serving data from it, before you reactivate the source volume, you should manually increase max-autosize on the original source volume to ensure it can grow sufficiently.

When a destination volume grows automatically

The cluster administrator should pause writes from the client before reactivating the original source SVM to avoid data loss.

About this task

Beginning with ONTAP 9.11.1, you can reduce resynchronization time during a disaster recovery rehearsal by using the CLI `-quick-resync true` option of the `snapmirror resync` command while performing a reverse resync of an SVM DR relationship. A quick resync can reduce the time it takes to return to production by bypassing the data warehouse rebuild and restore operations. Learn more about `snapmirror resync` in the ONTAP command reference.

> Quick resync does not preserve the storage efficiency of the destination volumes. Enabling quick resync might increase the volume space used by the destination volumes.

This procedure assumes that the baseline in the original source volume is intact. If the baseline is not intact, you must create and initialize the relationship between the volume you are serving data from and the original source volume before performing the procedure.

Beginning with ONTAP 9.8, you can use System Manager to reactivate a source storage VM after a disaster.

Steps

You can perform this task using System Manager or the ONTAP CLI.

System Manager ONTAP 9.17.1 and later

1. On the destination cluster, select the desired protection relationship: click **Protection > Replication**.
2. Hover your cursor over the source name, click ⋮, and click **Reverse resync**.
3. In the **Reverse resync relationship** window, click **Reverse resync**.

   The relationship disappears from the **Replication** table and is now being managed by the original source cluster.
4. On the original source cluster, click **Protection > Replication**, and verify the reverse resync is complete by checking that the state displays **Mirrored**.
5. On the original destination cluster, navigate to **Cluster > Storage VMs**.
6. Locate the storage VM, hover your cursor over the storage VM name, click ⋮, and click **Stop**.
7. In the **Stop storage VM** window, click **Stop**.
8. On the source cluster, navigate to **Protection > Replication**, and locate the storage VM you want to reactivate, hover your cursor over the storage VM name, click ⋮, and click **Activate destination storage VM**.
9. In the **Activate destination storage VM** window, select **Activate the destination storage VM and break the relationship**, and click **Activate**.
10. When you return to the **Replication** page, hover your cursor over the storage VM name again, click ⋮, and click **Reverse resync**.

System Manager ONTAP 9.16.1 and earlier

1. On the destination cluster, select the desired protection relationship: click **Protection > Relationships**.
2. Hover your cursor over the source name, click ⋮, and click **Reverse resync**.
3. In the **Reverse resync relationship** window, click **Reverse resync**.

   The relationship disappears from the **Relationships** table because it's now being managed by the original source cluster.
4. On the original source cluster, click **Protection > Relationships** and verify the reverse resync is complete by checking that the state shows as **Mirrored**.
5. On the original destination cluster, navigate to **Storage > Storage VMs**.
6. Locate the storage VM, hover your cursor over the storage VM name, click ⋮, and click **Stop**.
7. In the **Stop storage VM** window, click **Stop**.
8. On the source cluster, locate the storage VM (which is now the source SVM of the reversed relationship), hover your cursor over the SVM name, click ⋮, and click **Activate destination storage VM**.
9. In the **Activate destination storage VM** window, select **Activate the destination storage VM and break the relationship** and click **Activate**.
10. When you return to the **Relationships** page, hover your cursor over the storage VM name again, click ⋮, and click **Reverse resync**.

CLI

1. From the original source SVM or the original source cluster, create a reverse SVM DR relationship using the same configuration, policy, and identity-preserve setting as the original SVM DR

relationship:

```
snapmirror create -source-path <SVM>: -destination-path <SVM>:
```

> You must enter a colon (:) after the SVM name in the `-source-path` and `-destination-path` options. See the example below.

The following example creates a relationship between the SVM from which you are serving data, `svm_backup`, and the original source SVM, `svm1`:

```
cluster_src::> snapmirror create -source-path svm_backup:
-destination-path svm1:
```

Learn more about `snapmirror create` in the ONTAP command reference.

2. From the original source SVM or the original source cluster, run the following command to reverse the data protection relationship:

```
snapmirror resync -source-path <SVM>: -destination-path <SVM>:
```

> You must enter a colon (:) after the SVM name in the `-source-path` and `-destination-path` options. See the example below.

Although resync does not require a baseline transfer, it can be time-consuming. You might want to run the resync in off-peak hours.

> The command fails if a common snapshot does not exist on the source and destination. Use `snapmirror initialize` to reinitialize the relationship.

The following example reverses the relationship between the original source SVM, `svm1`, and the SVM from which you are serving data, `svm_backup`:

```
cluster_src::> snapmirror resync -source-path svm_backup:
-destination-path svm1:
```

Example using -quick-resync option:

```
cluster_src::> snapmirror resync -source-path svm_backup:
-destination-path svm1: -quick-resync true
```

3. When you are ready to reestablish data access to the original source SVM, stop the original destination SVM to disconnect any clients currently connected to the original destination SVM.

```
vserver stop -vserver <SVM>
```

The following example stops the original destination SVM which is currently serving data:

```
cluster_dst::> vserver stop svm_backup
```

4. Verify that the original destination SVM is in the stopped state by using the `vserver show` command.

```
cluster_dst::> vserver show
                                 Admin      Operational Root
Vserver        Type    Subtype   State      State       Volume
Aggregate
--------       ------- --------- ---------- ----------- ----------
----------
svm_backup     data    default   stopped    stopped     rv
aggr1
```

5. From the original source SVM or the original source cluster, run the following command to perform the final update of the reversed relationship to transfer all changes from the original destination SVM to the original source SVM:

```
snapmirror update -source-path <SVM>: -destination-path <SVM>:
```

> You must enter a colon (:) after the SVM name in the `-source-path` and `-destination-path` options. See the example below.

The following example updates the relationship between the original destination SVM from which you are serving data,`svm_backup`, and the original source SVM, `svm1`:

```
cluster_src::> snapmirror update -source-path svm_backup:
-destination-path svm1:
```

Learn more about `snapmirror update` in the ONTAP command reference.

6. From the original source SVM or the original source cluster, run the following command to stop scheduled transfers for the reversed relationship:

```
snapmirror quiesce -source-path <SVM>: -destination-path <SVM>:
```

You must enter a colon (:) after the SVM name in the `-source-path` and `-destination-path` options. See the example below.

The following example stops scheduled transfers between the SVM you are serving data from, `svm_backup`, and the original SVM, `svm1`:

```
cluster_src::> snapmirror quiesce -source-path svm_backup:
-destination-path svm1:
```

7. When the final update is complete and the relationship indicates "Quiesced" for the relationship status, run the following command from the original source SVM or the original source cluster to break the reversed relationship:

```
snapmirror break -source-path <SVM>: -destination-path <SVM>:
```

You must enter a colon (:) after the SVM name in the `-source-path` and `-destination-path` options. See the example below.

The following example breaks the relationship between the original destination SVM from which you were serving data, `svm_backup`, and the original source SVM, `svm1`:

```
cluster_src::> snapmirror break -source-path svm_backup:
-destination-path svm1:
```

Learn more about `snapmirror break` in the ONTAP command reference.

8. If the original source SVM was previously stopped, from the original source cluster, start the original source SVM:

```
vserver start -vserver <SVM>
```

The following example starts the original source SVM:

```
cluster_src::> vserver start svm1
```

9. From the original destination SVM or the original destination cluster, reestablish the original data protection relationship:

```
snapmirror resync -source-path <SVM>: -destination-path <SVM>:
```

You must enter a colon (:) after the SVM name in the `-source-path` and `-destination-path` options. See the example below.

The following example reestablishes the relationship between the original source SVM, `svm1`, and the original destination SVM, `svm_backup`:

```
cluster_dst::> snapmirror resync -source-path svm1: -destination
-path svm_backup:
```

10. From the original source SVM or the original source cluster, run the following command to delete the reversed data protection relationship:

```
snapmirror delete -source-path <SVM>: -destination-path <SVM>:
```

You must enter a colon (:) after the SVM name in the `-source-path` and `-destination-path` options. See the example below.

The following example deletes the reversed relationship between the original destination SVM, `svm_backup`, and the original source SVM, `svm1`:

```
cluster_src::> snapmirror delete -source-path svm_backup:
-destination-path svm1:
```

11. From the original destination SVM or the original destination cluster, release the reversed data protection relationship:

```
snapmirror release -source-path <SVM>: -destination-path <SVM>:
```

You must enter a colon (:) after the SVM name in the `-source-path` and `-destination-path` options. See the example below.

The following example releases the reversed relationship between the original destination SVM, svm_backup, and the original source SVM, `svm1`

```
cluster_dst::> snapmirror release -source-path svm_backup:
-destination-path svm1:
```

What's next

- Use the `snapmirror show` command to verify that the SnapMirror relationship was created.

  Learn more about `snapmirror show` in the ONTAP command reference.

- Resume write operations from your client to the original source SVM.

Related information

- snapmirror create
- snapmirror delete
- snapmirror initialize
- snapmirror quiesce
- snapmirror release
- snapmirror resync

Reactivate the original ONTAP SnapMirror source SVM for FlexGroup volumes

You can reestablish the original data protection relationship between the source and destination SVM when you no longer need to serve data from the destination. To reactivate the original source SVM when you are using FlexGroup volumes, you need to perform some additional steps, including deleting the original SVM DR relationship and releasing the original relationship before you reverse the relationship. You also need to release the reversed relationship and recreate the original relationship before stopping scheduled transfers.

Steps

1. From the original destination SVM or the original destination cluster, delete the original SVM DR relationship:

   `snapmirror delete -source-path SVM: -destination-path SVM:`

   > You must enter a colon (:) after the SVM name in the `-source-path` and `-destination-path` options. See the example below.

   The following example deletes the original relationship between the original source SVM, svm1, and the original destination SVM, `svm_backup`:

   ```
   cluster_dst::> snapmirror delete -source-path svm1: -destination-path
   svm_backup:
   ```

2. From the original source SVM or the original source cluster, release the original relationship while keeping the snapshots intact:

   `snapmirror release -source-path SVM: -destination-path SVM: -relationship-info-only true`

   > You must enter a colon (:) after the SVM name in the `-source-path` and `-destination-path` options. See the example below.

   The following example releases the original relationship between the original source SVM, svm1, and the original destination SVM, `svm_backup`.

```
cluster_src::> snapmirror release -source-path svm1: -destination-path
svm_backup: -relationship-info-only true
```

3. From the original source SVM or the original source cluster, create a reverse SVM DR relationship using the same configuration, policy, and identity-preserve setting as the original SVM DR relationship:

   `snapmirror create -source-path SVM: -destination-path SVM:`

   > You must enter a colon (:) after the SVM name in the `-source-path` and `-destination-path` options. See the example below.

   The following example creates a relationship between the SVM from which you are serving data, `svm_backup`, and the original source SVM, `svm1`:

   ```
   cluster_src::> snapmirror create -source-path svm_backup: -destination
   -path svm1:
   ```

4. From the original source SVM or the original source cluster, run the following command to reverse the data protection relationship:

   `snapmirror resync -source-path SVM: -destination-path SVM:`

   > You must enter a colon (:) after the SVM name in the `-source-path` and `-destination-path` options. See the example below.

   Although resync does not require a baseline transfer, it can be time-consuming. You might want to run the resync in off-peak hours.

   > The command fails if a common snapshot does not exist on the source and destination. Use `snapmirror initialize` to reinitialize the relationship.

   The following example reverses the relationship between the original source SVM, `svm1`, and the SVM from which you are serving data, `svm_backup`:

   ```
   cluster_src::> snapmirror resync -source-path svm_backup: -destination
   -path svm1:
   ```

5. When you are ready to reestablish data access to the original source SVM, stop the original destination SVM to disconnect any clients currently connected to the original destination SVM.

   `vserver stop -vserver SVM`

   The following example stops the original destination SVM which is currently serving data:

```
cluster_dst::> vserver stop svm_backup
```

6. Verify that the original destination SVM is in the stopped state by using the `vserver show` command.

```
cluster_dst::> vserver show
                                 Admin      Operational Root
Vserver        Type    Subtype   State      State       Volume
Aggregate
--------       ------- ---------- ---------- ----------- ----------
----------
svm_backup     data    default    stopped    stopped     rv
aggr1
```

7. From the original source SVM or the original source cluster, run the following command to perform the final update of the reversed relationship to transfer all changes from the original destination SVM to the original source SVM:

   `snapmirror update -source-path` *SVM*`:` `-destination-path` *SVM*`:`

   > You must enter a colon (:) after the SVM name in the `-source-path` and `-destination-path` options. See the example below.

   The following example updates the relationship between the original destination SVM from which you are serving data,`svm_backup`, and the original source SVM, `svm1`:

```
cluster_src::> snapmirror update -source-path svm_backup: -destination
-path svm1:
```

   Learn more about `snapmirror update` in the ONTAP command reference.

8. From the original source SVM or the original source cluster, run the following command to stop scheduled transfers for the reversed relationship:

   `snapmirror quiesce -source-path` *SVM*`:` `-destination-path` *SVM*`:`

   > You must enter a colon (:) after the SVM name in the `-source-path` and `-destination-path` options. See the example below.

   The following example stops scheduled transfers between the SVM you are serving data from, `svm_backup`, and the original SVM, `svm1`:

```
cluster_src::> snapmirror quiesce -source-path svm_backup: -destination
-path svm1:
```

Learn more about `snapmirror quiesce` in the ONTAP command reference.

9. When the final update is complete and the relationship indicates "Quiesced" for the relationship status, run the following command from the original source SVM or the original source cluster to break the reversed relationship:

   `snapmirror break -source-path SVM: -destination-path SVM:`

   > You must enter a colon (:) after the SVM name in the `-source-path` and `-destination-path` options. See the example below.

   The following example breaks the relationship between the original destination SVM from which you were serving data, `svm_backup`, and the original source SVM, `svm1`:

   ```
   cluster_src::> snapmirror break -source-path svm_backup: -destination
   -path svm1:
   ```

   Learn more about `snapmirror break` in the ONTAP command reference.

10. If the original source SVM was previously stopped, from the original source cluster, start the original source SVM:

    `vserver start -vserver SVM`

    The following example starts the original source SVM:

    ```
    cluster_src::> vserver start svm1
    ```

11. From the original source SVM or the original source cluster, delete the reversed SVM DR relationship:

    `snapmirror delete -source-path SVM: -destination-path SVM:`

    > You must enter a colon (:) after the SVM name in the `-source-path` and `-destination-path` options. See the example below.

    The following example deletes the reversed relationship between the original destination SVM, svm_backup, and the original source SVM, `svm1`:

    ```
    cluster_src::> snapmirror delete -source-path svm_backup: -destination
    -path svm1:
    ```

12. From the original destination SVM or the original destination cluster, release the reversed relationship while keeping the snapshots intact:

    `snapmirror release -source-path SVM: -destination-path SVM: -relationship-info -only true`

You must enter a colon (:) after the SVM name in the `-source-path` and `-destination-path` options. See the example below.

The following example releases the reversed relationship between the original destination SVM, svm_backup, and the original source SVM, svm1:

```
cluster_dst::> snapmirror release -source-path svm_backup: -destination
-path svm1: -relationship-info-only true
```

13. From the original destination SVM or the original destination cluster, recreate the original relationship. Use the same configuration, policy, and identity-preserve setting as the original SVM DR relationship:

    `snapmirror create -source-path SVM: -destination-path SVM:`

    You must enter a colon (:) after the SVM name in the `-source-path` and `-destination-path` options. See the example below.

    The following example creates a relationship between the original source SVM, `svm1`, and the original destination SVM, `svm_backup`:

    ```
    cluster_dst::> snapmirror create -source-path svm1: -destination-path
    svm_backup:
    ```

14. From the original destination SVM or the original destination cluster, reestablish the original data protection relationship:

    `snapmirror resync -source-path` *`SVM`*`: -destination-path` *`SVM`*`:`

    You must enter a colon (:) after the SVM name in the `-source-path` and `-destination-path` options. See the example below.

    The following example reestablishes the relationship between the original source SVM, `svm1`, and the original destination SVM, `svm_backup`:

    ```
    cluster_dst::> snapmirror resync -source-path svm1: -destination-path
    svm_backup:
    ```

Related information

- snapmirror create
- snapmirror delete
- snapmirror initialize
- snapmirror quiesce
- snapmirror release

- snapmirror resync

Resynchronize the data on an ONTAP SnapMirror destination SVM

ONTAP 9.11.1 introduces an option to bypass a full data warehouse rebuild when you perform a disaster recovery rehearsal, enabling you to return to production faster.

Beginning with ONTAP 9.8, you can use System Manager to resynchronize the data and configuration details from the source storage VM to the destination storage VM in a broken protection relationship and reestablish the relationship.

You perform the resync operation only from the destination of the original relationship. The resync deletes any data in the destination storage VM that is newer than the data in the source storage VM.

Steps

You can use System Manager or the ONTAP CLI to perform this task.

System Manager

1. From the destination, select the desired protection relationship: click **Protection > Relationships**.
2. Optionally, select **Perform a quick resync** to bypass a full data warehouse rebuild during a disaster recovery rehearsal.
3. Click ⋮ and click **Resync**.
4. Under **Relationships**, monitor the resynchronization progress by viewing **Transfer Status** for the relationship.

CLI

1. From the destination cluster, resynchronize the relationship:

```
snapmirror resync -source-path <svm>: -destination-path <svm>:
-quick-resync true|false
```

Related information

- snapmirror resync

Convert an ONTAP SnapMirror volume DR relationship to an SVM DR relationship

You can convert replication relationships between volumes to a replication relationship between the storage virtual machines (SVMs) that own the volumes, provided that each volume on the source (except the root volume) is being replicated, and each volume on the source (including the root volume) has the same name as the volume on the destination.

About this task

Use the `volume rename` command when the SnapMirror relationship is idle to rename destination volumes if

necessary. Learn more about `volume rename` in the ONTAP command reference.

Steps

1. From the destination SVM or the destination cluster, run the following command to resync the source and destination volumes:

   ```
   snapmirror resync -source-path <SVM:volume> -destination-path <SVM:volume>
   -type DP|XDP -policy <policy>
   ```

   Learn more about `snapmirror resync` in the ONTAP command reference.

   > Although resync does not require a baseline transfer, it can be time-consuming. You might want to run the resync in off-peak hours.

   The following example resyncs the relationship between the source volume `volA` on `svm1` and the destination volume `volA` on `svm_backup`:

   ```
   cluster_dst::> snapmirror resync -source-path svm1:volA -destination
   -path svm_backup:volA
   ```

2. Create an SVM replication relationship between the source and destination SVMs, as described in Replicating SVM configurations.

   You must use the `-identity-preserve true` option of the `snapmirror create` command when you create your replication relationship.

   Learn more about `snapmirror create` in the ONTAP command reference.

3. Stop the destination SVM:

   ```
   vserver stop -vserver SVM
   ```

   Learn more about `vserver stop` in the ONTAP command reference.

   The following example stops the destination SVM `svm_backup`:

   ```
   cluster_dst::> vserver stop svm_backup
   ```

4. From the destination SVM or the destination cluster, run the following command to resync the source and destination SVMs:

   ```
   snapmirror resync -source-path <SVM>: -destination-path <SVM>: -type DP|XDP
   -policy <policy>
   ```

   > You must enter a colon (:) after the SVM name in the `-source-path` and `-destination-path` options. See the example below.
   >
   > Although resync does not require a baseline transfer, it can be time-consuming. You might want to run the resync in off-peak hours.

The following example resyncs the relationship between the source SVM `svm1` and the destination SVM `svm_backup`:

```
cluster_dst::> snapmirror resync -source-path svm1: -destination-path
svm_backup:
```

Related information

- snapmirror create
- snapmirror resync

Delete an ONTAP SnapMirror SVM replication relationship

You can use the `snapmirror delete` and `snapmirror release` commands to delete an SVM replication relationship. You can then delete unneeded destination volumes manually. Learn more about the commands described in this procedure in the ONTAP command reference.

About this task

The `snapmirror release` command deletes any SnapMirror-created snapshots from the source. You can use the `-relationship-info-only` option to preserve the snapshots.

Steps

1. Run the following command from the destination SVM or the destination cluster to break the replication relationship:

   `snapmirror break -source-path` *`SVM`*`: -destination-path` *`SVM`*`:`

   > You must enter a colon (:) after the SVM name in the `-source-path` and `-destination-path` options. See the example below.

   The following example breaks the relationship between the source SVM `svm1` and the destination SVM `svm_backup`:

   ```
   cluster_dst::> snapmirror break -source-path svm1: -destination-path
   svm_backup:
   ```

   Learn more about `snapmirror break` in the ONTAP command reference.

2. Run the following command from the destination SVM or the destination cluster to delete the replication relationship:

   `snapmirror delete -source-path` *`SVM`*`: -destination-path` *`SVM`*`:`

   > You must enter a colon (:) after the SVM name in the `-source-path` and `-destination-path` options. See the example below.

The following example deletes the relationship between the source SVM `svm1` and the destination SVM `svm_backup`:

```
cluster_dst::> snapmirror delete -source-path svm1: -destination-path
svm_backup:
```

Learn more about `snapmirror delete` in the ONTAP command reference.

3. Run the following command from the source cluster or source SVM to release the replication relationship information from the source SVM:

   `snapmirror release -source-path` *SVM*`: -destination-path` *SVM*`:`

   > You must enter a colon (:) after the SVM name in the `-source-path` and `-destination-path` options. See the example below.

   The following example releases information for the specified replication relationship from the source SVM `svm1`:

   ```
   cluster_src::> snapmirror release -source-path svm1: -destination-path
   svm_backup:
   ```

   Learn more about `snapmirror release` in the ONTAP command reference.

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