# snapmirror policy commands

ONTAP 9.15.1 commands

NetApp
May 17, 2024

# Table of Contents

# snapmirror policy commands

## snapmirror policy add-rule

Add a new rule to SnapMirror policy

**Availability:** This command is available to *cluster* and *Vserver* administrators at the *admin* privilege level.

### Description

The `snapmirror policy add-rule` command adds a rule to a SnapMirror policy. Rules define which Snapshot copies are protected by vault relationships or define the schedule at which Snapshot copies are created on the SnapMirror destination. Rules which do not include a schedule are rules for protecting Snapshot copies. Rules which include a schedule are rules for creating Snapshot copies on the SnapMirror destination. A rule with a schedule can only be added to SnapMirror policies of type `vault` or `mirror-vault`. A rule must not be added to a policy that will be associated with a SnapMirror data protection relationship. A policy that will be associated with a SnapMirror vault relationship must have at least one rule and at most ten rules. A SnapMirror policy with rules must have at least one rule without a schedule.

### Parameters

**-vserver <vserver name> - Vserver Name**

Specifies the Vserver for the SnapMirror policy.

**-policy <sm_policy> - SnapMirror Policy Name**

Specifies the SnapMirror policy name.

**-snapmirror-label <text> - Snapshot Copy Label**

This parameter is primarily used for the purpose of Snapshot copy selection for extended data protection (XDP) relationships. Only Snapshot copies that have a SnapMirror label that matches this parameter will be transferred to the SnapMirror destination. However, when this parameter is associated with a rule containing a schedule, Snapshot copies will be created on the SnapMirror destination using this snapmirror-label parameter. The label can be 31 or fewer characters in length. SnapMirror policies of type `async-mirror` and `mirror-vault` have a rule added for label `sm_created` at the time of policy creation. This rule cannot be removed or modified by the user. This rule when coupled with `create-snapshot` field set to `true` indicates that the SnapMirror relationship using this policy shall create a new Snapshot copy and transfer it as part of a snapmirror update operation. SnapMirror policies of type `async-mirror` support one additional rule with SnapMirror label `all_source_snapshots`. This rule along with the rule for SnapMirror label `sm_created` indicates that `all` new Snapshot copies on the primary volume along with the newly created Snapshot copy are transferred as a part of a snapmirror update or snapmirror initialize operation. Rules with any other SnapMirror labels cannot be added to SnapMirror policies of type `async-mirror`. The rule for label `sm_created` when added to a `snapmirror policy` of type `vault` indicates that all SnapMirror created Snapshot copies of the primary volume are selected for transfer.

**-keep <text> - Snapshot Copy Retention Count**

Specifies the maximum number of Snapshot copies that are retained on the SnapMirror destination volume for a rule. The total number of Snapshot copies retained for all the rules in a policy cannot exceed 1019. For all the rules in SnapMirror policies of type `async-mirror`, this parameter must be set to value `1`.

**[-preserve {true|false}]** - **Snapshot Copy Preserve Enabled**

Specifies the behavior when the Snapshot copy retention count is reached on the SnapMirror vault destination for the rule. The default value is `false`, which means that the oldest Snapshot copy will be deleted to make room for new ones only if the number of Snapshot copies has exceeded the retention count specified in the "keep" parameter. When set to `true`, and when the Snapshot copies have reached the retention count, then an incremental SnapMirror vault update transfer will fail or if the rule has a schedule, Snapshot copies will no longer be created on the SnapMirror destination. For all the rules in SnapMirror policies of type `async-mirror` this parameter must be set to value `false`.

**[-warn <integer>]** - **Warning Threshold Count**

Specifies the warning threshold count for the rule. The default value is `0`. When set to a value greater than zero, an event is generated after the number of Snapshot copies (for the particular rule) retained on a SnapMirror vault destination reaches the specified warn limit. The preserve parameter for the rule must be `true` to set the warn parameter to a value greater than zero.

**[-schedule <text>]** - **Snapshot Copy Creation Schedule**

This optional parameter specifies the name of the schedule associated with a rule. This parameter is allowed only for rules associated with SnapMirror policies of type `vault` or `mirror-vault`. When this parameter is specified, Snapshot copies are directly created on the SnapMirror destination. The Snapshot copies created will have the same content as the latest Snapshot copy already present on the SnapMirror destination. Snapshot copies on the source that have a SnapMirror label matching this rule will not be selected for transfer. The default value is `-`.

> (i)   You define and name a schedule using the job schedule cron create command.

**[-prefix <text>]** - **Snapshot Copy Creation Prefix**

This optional parameter specifies the prefix for the Snapshot copy name to be created as per the schedule. If no value is specified, then the `snapmirror-label` will be used as the prefix. The prefix parameter can only be specified for rules which have a schedule.

**[-retention-period {{<integer> seconds|minutes|hours|days|months|years} | infinite}]** - **Snapshot Copy Retention Period**

This optional parameter specifies the duration for which the Snapshot copies associated with this rule will be locked. The parameter is specified as a number followed by a suffix. The valid suffixes are `seconds`, `minutes`, `hours`, `days`, `months`, and `years`. For example, a value of `6months` represents a retention period of 6 months. It can also be set to a special value of `infinite` for infinite retention. The destination volume must have the `snapshot-locking-enabled` parameter set to true for this field to take effect else it will be ignored.

## Examples

The following example adds a rule named `nightly` to the SnapMirror policy named `TieredBackup` on Vserver `vs0.example.com`. The rule will retain a maximum of `5 nightly` Snapshot copies.

```
vs0.example.com::> snapmirror policy add-rule -vserver vs0.example.com
        -policy TieredBackup -snapmirror-label nightly -keep 5
```

# snapmirror policy create

Create a new SnapMirror policy

**Availability:** This command is available to *cluster* and *Vserver* administrators at the *admin* privilege level.

## Description

The `snapmirror policy create` command creates a SnapMirror policy. When applied to a SnapMirror relationship, the SnapMirror policy controls the behavior of the relationship and specifies the configuration attributes for that relationship. The policies *DPDefault*, *MirrorAllSnapshots*, *MirrorAndVault*, *MirrorLatest*, *Unified7year*, and *XDPDefault* are created by the system for asynchronous replication. The policies *Sync*, *StrictSync*, *AutomatedFailOver*, and *AutomatedFailOverDuplex* are created by the system for synchronous replication.

> ⓘ  All SnapMirror policies have a field *create-snapshot*. This field specifies whether SnapMirror creates a new Snapshot copy on the primary volume at the beginning of a snapmirror update or snapmirror resync operation. Currently this field cannot be set or modified by the user. It is set to *true* for SnapMirror policies of type *async-mirror* and *mirror-vault* at the time of creation. SnapMirror policies of type *vault* have *create-snapshot* set to *false* at the time of creation.

> ⓘ  Use the snapmirror policy add-rule command to add a rule to a policy.

## Parameters

**-vserver <vserver name> - Vserver Name**

Specifies the Vserver for the SnapMirror policy.

**-policy <sm_policy> - SnapMirror Policy Name**

This parameter specifies the SnapMirror policy name. A policy name can be made up of the characters A to Z, a to z, 0 to 9, ".", "-", and "_". The name can be up to 256 characters in length.

**[-type {vault|async-mirror|mirror-vault|strict-sync-mirror|sync-mirror|automated-failover|automated-failover-duplex|continuous}] - Snapmirror Policy Type**

This parameter specifies the SnapMirror policy type. The supported values are *async-mirror*, *vault*, *mirror-vault*, *sync-mirror* and *strict-sync-mirror*. Data protection (DP) relationships support only *async-mirror* policy type, while extended data protection (XDP) relationships support all policy types.

If the type is set to *async-mirror* then the policy is for Disaster Recovery. When the policy type is associated with extended data protection (XDP) relationships, snapmirror update and snapmirror resync operations transfer selected Snapshot copies from the primary volume to the secondary volume. The

selection of Snapshot copies is governed by the rules in the policy. However snapmirror initialize and snapmirror update operations on data protection (DP) relationships ignore the rules in the policy and transfer `all` Snapshot copies of the primary volume which are newer than the common Snapshot copy on the destination. For both data protection (DP) and extended data protection (XDP) relationships, the Snapshot copies are kept on the secondary volume as long as they exist on the primary volume. Once a protected Snapshot copy is deleted from the primary volume, it is deleted from the secondary volume as part of the next transfer. The policy type supports rules with certain pre-defined label names only. Refer to the man page for the snapmirror policy add-rule command for the details.

If the type is set to `vault` then the policy is used for Backup and Archive. The rules in this policy type determine which Snapshot copies are protected and how long they are retained on the secondary volume. This policy type is supported by extended data protection (XDP) relationships only.

If the type is set to `mirror-vault` then the policy is used for unified data protection which provides both Disaster Recovery and Backup using the same secondary volume. This policy type is supported by extended data protection (XDP) relationships only.

If the type is set to `sync-mirror` or `strict-sync-mirror` then the policy is used for synchronous Disaster Recovery. These are supported only by extended data protection (XDP) relationships between FlexVol volumes. Once the relationship is initialized with snapmirror initialize , the relationship will be InSync such that all writes to the primary will be replicated to the secondary before the write is acknowledged to the client. Upon a replication failure, relationship falls OutOfSync. Upon an OutOfSync event, the `strict-sync-mirror` variant restricts further client IO on the primary, whereas the `sync-mirror` variant does not. SnapMirror will automatically trigger resync to bring the OutOfSync relationships back InSync as soon as it can, unless the relationship is `Quiesced` or `Broken-off` . Once a relationship is initialized, you normally use the snapmirror quiesce command to stop synchronous replication and the snapmirror resume command to resume synchronous replication. These policy types do not support replication of user Snapshot copies.

**[-comment <text>] - Comment**

Specifies a text comment for the SnapMirror policy. If the comment contains spaces, it must be enclosed within quotes.

**[-tries <integer_or_unlimited>] - Tries Limit**

Determines the maximum number of times to attempt each manual or scheduled transfer for a SnapMirror relationship. The value of this parameter must be a positive integer or `unlimited` . The default value is `8` .

**[-transfer-priority {low|normal}] - Transfer Scheduling Priority**

Specifies the priority at which a transfer runs. The supported values are `normal` or `low` . The `normal` transfers are scheduled before the `low` priority transfers. The default is `normal` .

**[-ignore-atime {true|false}] - Ignore File Access Time**

This parameter applies only to extended data protection (XDP) relationships. It specifies whether incremental transfers will ignore files which have only their access time changed. The supported values are `true` or `false` . The default is `false` .

**[-restart {always|never|default}] - Restart Behavior**

This parameter applies only to data protection relationships. It defines the behavior of SnapMirror if an interrupted transfer exists. The supported values are `always` , `never` , or `default` . If the value is set to `always` , an interrupted SnapMirror transfer always restarts provided it has a restart checkpoint and the conditions are the same as they were before the transfer was interrupted. In addition, a new SnapMirror Snapshot copy is created which will then be transferred. If the value is set to `never` , an interrupted

SnapMirror transfer will never restart, even if a restart checkpoint exists. A new SnapMirror Snapshot copy will still be created and transferred. Data ONTAP version 8.2 will interpret a value of `default` as being the same as `always` . Vault transfers will always resume based on a restart checkpoint, provided the Snapshot copy still exists on the source volume.

### `[-is-network-compression-enabled {true|false}]` - Is Network Compression Enabled

Specifies whether network compression is enabled for transfers. The supported values are `true` or `false` . The default is `false` .

### `[-rpo <integer>]` - Recovery Point Objective (seconds)

Specifies the time for recovery point objective, in seconds. This parameter is only supported for a policy of type `continuous` .

### `[-always-replicate-snapshots {true|false}]` - This prioritizes replication of app-consistent snapshots over synchronous replication

If this parameter is set to true, it specifies that SnapMirror Synchronous relationships will lose the zero RPO protection upon failure in replicating application created snapshots. The default value is false.

### `[-common-snapshot-schedule <text>]` - Common Snapshot Copy Creation Schedule for SnapMirror Synchronous (privilege: advanced)

Specifies the common Snapshot creating schedule. This parameter is only supported for SnapMirror Synchronous relationships.

### `[-are-data-ops-sequentially-split {true|false}]` - Is Sequential Splitting of Data Operations Enabled? (privilege: advanced)

This parameter specifies whether I/O, such as write, copy-offload and punch-holes, are split sequentially, rather than being run in parallel on the source and destination. Spliiting I/O sequentially will make the system more robust, and less prone to I/O errors. Starting 9.11.1, enabling this feature improves the performance when the workload is NAS based and is metadata heavy. However, it will make the IO performance slower for large file workloads like LUNs, databases, virtualization containers, etc. The default value for the parameter `-are-data-ops-sequentially-split` is `false` . The parameter `-are-data-ops-sequentially-split` should only be used if frequent I/O timeout or "OutOfSync" has happened. The parameter `-are-data-ops-sequentially-split` requires an effective cluster version of Data ONTAP 9.6.0 or later on both the source and destination clusters.

### `[-sequential-split-op-timeout-secs <integer>]` - Sequential Split Op Timeout in Seconds (privilege: advanced)

This parameter specifies the op timeout value used when the splitting mode is sequential. This parameter is used only for Sync relationships. Supported values are from 15 to 25 seconds.

### `[-disable-fast-resync {true|false}]` - Disable Fast Resync (privilege: advanced)

Specifies whether fast resync for a SnapMirror Synchronous relationship is disabled or not. The default value for this parameter is `false` .

### `[-discard-configs <network>,…]` - Configurations Not Replicated During Identity Preserve Vserver DR

Specifies the configuration to be dropped during replication. The supported values are:

- `network` - Drops network interfaces, routes, and kerberos configuration.

This parameter is supported only for policies of type `async-mirror` and applicable only for identity-preserve Vserver SnapMirror relationships.

**`[-transfer-schedule-name <text>]` - Transfer Schedule Name**

This optional parameter specifies the schedule which is used to update the SnapMirror relationships.

**`[-throttle <throttleType>]` - Throttle (KB/sec)**

This optional parameter limits the network bandwidth used for transfers. It configures for the relationships the maximum rate (in Kbytes/sec) at which data can be transferred. If no throttle is configured, by default the SnapMirror relationships fully utilize the network bandwidth available. You can also configure the relationships to fully use the network bandwidth available by explicitly setting the throttle to *unlimited* or *0*. The minimum effective throttle value is four Kbytes/sec, so if you specify a throttle value between *1* and *4*, it will be treated as *4*. For FlexGroup volume relationships, the throttle value is applied individually to each constituent relationship.

## Examples

The following example creates a SnapMirror policy named *TieredBackup* on a Vserver named *vs0.example.com*.

```
vs0.example.com::> snapmirror policy create -vserver vs0.example.com
        -policy TieredBackup -type vault -tries 10 -restart never
```

## Related Links

- snapmirror update
- snapmirror resync
- snapmirror policy add-rule
- snapmirror initialize
- snapmirror quiesce
- snapmirror resume

# snapmirror policy delete

Delete a SnapMirror policy

**Availability:** This command is available to *cluster* and *Vserver* administrators at the *admin* privilege level.

## Description

The `snapmirror policy delete` command deletes a SnapMirror policy. A policy that is to be deleted must not be associated with any SnapMirror relationship. The built-in policies cannot be deleted.

## Parameters

**`-vserver <vserver name>` - Vserver Name**

Specifies the Vserver for the SnapMirror policy.

**-policy <sm_policy> - SnapMirror Policy Name**

    Specifies the SnapMirror policy name.

## Examples

The following example deletes a SnapMirror policy named `TieredBackup` on Vserver `vs0.example.com` :

```
vs0.example.com::> snapmirror policy delete -vserver vs0.example.com
        -policy TieredBackup
```

# snapmirror policy modify-rule

Modify an existing rule in SnapMirror policy

**Availability:** This command is available to *cluster* and *Vserver* administrators at the *admin* privilege level.

## Description

The `snapmirror policy modify-rule` command can be used to modify the retention count, preserve setting, warning threshold count, schedule, and prefix for a rule in a SnapMirror policy. Reducing the retention count or disabling the preserve setting for a rule in a SnapMirror policy might result in the deletion of Snapshot copies on the vault destination when the next transfer by the snapmirror update command occurs or when the next scheduled Snapshot copy creation on the destination for the rule occurs. Modifying a rule to add a schedule will enable creation of Snapshot copies on the SnapMirror destination. Snapshot copies on the source that have a SnapMirror label matching this rule will not be selected for transfer. Schedule and prefix can only be modified for rules associated with SnapMirror policies of type `vault` or `mirror-vault` . A SnapMirror policy with rules must have at least one rule without a schedule.

ⓘ     The rules in SnapMirror policies of type `async-mirror` cannot be modified.

## Parameters

**-vserver <vserver name> - Vserver Name**

    Specifies the Vserver for the SnapMirror policy.

**-policy <sm_policy> - SnapMirror Policy Name**

    Specifies the SnapMirror policy name.

**-snapmirror-label <text> - Snapshot Copy Label**

    This parameter specifies the rule that is to be modified in a SnapMirror policy.

**[-keep <text>] - Snapshot Copy Retention Count**

    Specifies the maximum number of Snapshot copies that are retained on the SnapMirror destination volume for a rule. The total number of Snapshot copies retained for all the rules in a policy cannot exceed 1019. For all the rules in SnapMirror policies of type `async-mirror` , this parameter must be set to value `1` .

**[-preserve {true|false}] - Snapshot Copy Preserve Enabled**

Specifies the behavior when the Snapshot copy retention count is reached on the SnapMirror vault destination for the rule. The default value is `false`, which means that the oldest Snapshot copy will be deleted to make room for new ones only if the number of Snapshot copies has exceeded the retention count specified in the "keep" parameter. When set to `true`, and when the Snapshot copies have reached the retention count, then an incremental SnapMirror vault update transfer will fail or if the rule has a schedule, Snapshot copies will no longer be created on the SnapMirror destination. For all the rules in SnapMirror policies of type `async-mirror` this parameter must be set to value `false`.

**[-warn <integer>] - Warning Threshold Count**

Specifies the warning threshold count for the rule. The default value is `0`. When set to a value greater than zero, an event is generated after the number of Snapshot copies (for the particular rule) retained on a SnapMirror vault destination reaches the specified warn limit. The preserve parameter for the rule must be `true` to set the warn parameter to a value greater than zero.

**[-schedule <text>] - Snapshot Copy Creation Schedule**

This optional parameter specifies the name of the schedule associated with a rule. This parameter is allowed only for rules associated with SnapMirror policies of type `vault` or `mirror-vault`. When this parameter is specified, Snapshot copies are directly created on the SnapMirror destination. The Snapshot copies created will have the same content as the latest Snapshot copy already present on the SnapMirror destination. Snapshot copies on the source that have a SnapMirror label matching this rule will not be selected for transfer. The default value is `-`.

> (i) You define and name a schedule using the [job schedule cron create]() command.

**[-prefix <text>] - Snapshot Copy Creation Prefix**

This optional parameter specifies the prefix for the Snapshot copy name to be created as per the schedule. If no value is specified, then the `snapmirror-label` will be used as the prefix. The prefix parameter can only be specified for rules which have a schedule.

**[-retention-period {{<integer> seconds|minutes|hours|days|months|years} | infinite}] - Snapshot Copy Retention Period**

This optional parameter specifies the duration for which the Snapshot copies associated with this rule will be locked. The parameter is specified as a number followed by a suffix. The valid suffixes are `seconds`, `minutes`, `hours`, `days`, `months`, and `years`. For example, a value of `6months` represents a retention period of 6 months. It can also be set to a special value of `infinite` for infinite retention. The destination volume must have the `snapshot-locking-enabled` parameter set to true for this field to take effect else it will be ignored.

## Examples

The following example changes the retention count for `nightly` Snapshot copies to `6` for a rule named `nightly` on a SnapMirror policy named `TieredBackup` on Vserver `vs0.example.com`:

```
vs0.example.com::> snapmirror policy modify-rule -vserver vs0.example.com
        -policy TieredBackup -snapmirror-label nightly -keep 6
```

## Related Links

- snapmirror update
- job schedule cron create

# snapmirror policy modify

Modify a SnapMirror policy

**Availability:** This command is available to *cluster* and *Vserver* administrators at the *admin* privilege level.

## Description

The `snapmirror policy modify` command can be used to modify the policy attributes.

ⓘ    Use the snapmirror policy modify-rule command to modify a rule in a SnapMirror policy.

## Parameters

**`-vserver <vserver name>` - Vserver Name**

Specifies the Vserver for the SnapMirror policy.

**`-policy <sm_policy>` - SnapMirror Policy Name**

Specifies the SnapMirror policy name.

**`[-comment <text>]` - Comment**

Specifies a text comment for the SnapMirror policy. If the comment contains spaces, it must be enclosed within quotes.

**`[-tries <integer_or_unlimited>]` - Tries Limit**

Determines the maximum number of times to attempt each manual or scheduled transfer for a SnapMirror relationship. The value of this parameter must be a positive integer or `unlimited`. The default value is `8`.

**`[-transfer-priority {low|normal}]` - Transfer Scheduling Priority**

Specifies the priority at which a transfer runs. The supported values are `normal` or `low`. The `normal` transfers are scheduled before the `low` priority transfers. The default is `normal`.

**`[-ignore-atime {true|false}]` - Ignore File Access Time**

This parameter applies only to extended data protection (XDP) relationships. It specifies whether incremental transfers will ignore files which have only their access time changed. The supported values are `true` or `false`. The default is `false`.

**`[-restart {always|never|default}]` - Restart Behavior**

This parameter applies only to data protection relationships. It defines the behavior of SnapMirror if an interrupted transfer exists. The supported values are `always`, `never`, or `default`. If the value is set to `always`, an interrupted SnapMirror transfer always restarts provided it has a restart checkpoint and the conditions are the same as they were before the transfer was interrupted. In addition, a new SnapMirror Snapshot copy is created which will then be transferred. If the value is set to `never`, an interrupted SnapMirror transfer will never restart, even if a restart checkpoint exists. A new SnapMirror Snapshot copy

will still be created and transferred. Data ONTAP version 8.2 will interpret a value of `default` as being the same as `always` . Vault transfers will always resume based on a restart checkpoint, provided the Snapshot copy still exists on the source volume.

**`[-is-network-compression-enabled {true|false}]` - Is Network Compression Enabled**

Specifies whether network compression is enabled for transfers. The supported values are `true` or `false` . The default is `false` .

**`[-rpo <integer>]` - Recovery Point Objective (seconds)**

Specifies the time for recovery point objective, in seconds. This parameter is only supported for a policy of type `continuous` .

**`[-always-replicate-snapshots {true|false}]` - This prioritizes replication of app-consistent snapshots over synchronous replication**

If this parameter is set to true, it specifies that SnapMirror Synchronous relationships will lose the zero RPO protection upon failure in replicating application created snapshots. The default value is false.

**`[-common-snapshot-schedule <text>]` - Common Snapshot Copy Creation Schedule for SnapMirror Synchronous (privilege: advanced)**

Specifies the common Snapshot creating schedule. This parameter is only supported for Snapmirror Synchronous relationships.

**`[-are-data-ops-sequentially-split {true|false}]` - Is Sequential Splitting of Data Operations Enabled? (privilege: advanced)**

This parameter specifies whether I/O, such as write, copy-offload and punch-holes, are split sequentially, rather than being run in parallel on the source and destination. Spliiting the I/O sequentially will make the system more robust, and less prone to I/O errors. Starting 9.11.1, enabling this feature improves the performance when the workload is NAS based and is metadata heavy. However, it will make the IO performance slower for large file workloads like LUNs, databases, virtualization containers, etc. The default value of parameter `-sequential-split-data-ops` is `false` . The parameter `-are-data-ops -sequentially-split` should only be used if frequent I/O timeout or "OutOfSync" has happened. Changes made by the `snapmirror policy modify -sequential-split-data-ops` command do not take effect until the next resync. Changes do not affect resync or initialize operations that have started and have not finished yet. The parameter `-are- data-ops-sequentially-split` requires an effective cluster version of Data ONTAP 9.6.0 or later on both the source and destination clusters.

**`[-sequential-split-op-timeout-secs <integer>]` - Sequential Split Op Timeout in Seconds (privilege: advanced)**

This parameter specifies the op timeout value used when the splitting mode is sequential. This parameter is used only for Sync relationships. Supported values are from 15 to 25 seconds. The default value of the parameter `-sequential-split-op-timeout` is `15 seconds` . Changes made by the `snapmirror policy modify -sequential-split-op-timeout-secs` command do not take effect until the next resync. Changes do not affect resync or initialize operations that have started and have not finished yet.

**`[-disable-fast-resync {true|false}]` - Disable Fast Resync (privilege: advanced)**

Specifies whether fast resync for a SnapMirror Synchronous relationship is disabled or not. The default value for this parameter when a policy is created is `false` .

**`[-discard-configs <network>,…]` - Configurations Not Replicated During Identity Preserve Vserver DR**

Specifies the configuration to be dropped during replication. The supported values are:

- *network* - Drops network interfaces, routes, and kerberos configuration.

This parameter is supported only for policies of type *async-mirror* and applicable only for identity-preserve Vserver SnapMirror relationships.

**[-transfer-schedule-name <text>] - Transfer Schedule Name**

This optional parameter specifies the schedule which is used to update the SnapMirror relationships.

**[-throttle <throttleType>] - Throttle (KB/sec)**

This optional parameter limits the network bandwidth used for transfers. It configures for the relationships the maximum rate (in Kbytes/sec) at which data can be transferred. If no throttle is configured, by default the SnapMirror relationships fully utilize the network bandwidth available. You can also configure the relationships to fully use the network bandwidth available by explicitly setting the throttle to *unlimited* or *0*. The minimum effective throttle value is four Kbytes/sec, so if you specify a throttle value between *1* and *4*, it will be treated as *4*. For FlexGroup volume relationships, the throttle value is applied individually to each constituent relationship.

## Examples

The following example changes the "transfer-priority" and the "comment" text of a snapmirror policy named *TieredBackup* on Vserver *vs0.example.com*:

```
vs0.example.com::> snapmirror policy modify -vserver vs0.example.com
-policy TieredBackup -transfer-priority low -comment "Use for tiered
backups"
```

## Related Links

- snapmirror policy modify-rule

# snapmirror policy remove-rule

Remove a rule from SnapMirror policy

**Availability:** This command is available to *cluster* and *Vserver* administrators at the *admin* privilege level.

## Description

The `snapmirror policy remove-rule` command removes a rule from a SnapMirror policy. On the destination of a SnapMirror relationship with `snapmirror policy` of type *vault* or *mirror-vault*, all Snapshot copies with a SnapMirror label matching the rule being removed are no longer processed by SnapMirror and might need to be deleted manually. A `snapmirror policy` of type *vault* must have at least one rule if that policy is associated with a SnapMirror relationship. A SnapMirror policy with rules must have at least one rule without a schedule.

## Parameters

**`-vserver <vserver name>` - Vserver Name**

    Specifies the Vserver for the SnapMirror policy.

**`-policy <sm_policy>` - SnapMirror Policy Name**

    Specifies the SnapMirror policy name.

**`-snapmirror-label <text>` - Snapshot Copy Label**

    This parameter specifies the rule that is removed from the SnapMirror policy.

    The rule for SnapMirror label *`sm_created`* cannot be removed from SnapMirror policies of type *`async-mirror`* or *`mirror-vault`*.

## Examples

The following example removes a rule named *`nightly`* from a SnapMirror policy named *`TieredBackup`* on Vserver *`vs0.example.com`*:

```
vs0.example.com::> snapmirror policy remove-rule -vserver vs0.example.com
-policy TieredBackup -snapmirror-label nightly
```

# snapmirror policy show

Show SnapMirror policies

**Availability:** This command is available to *cluster* and *Vserver* administrators at the *admin* privilege level.

## Description

The `snapmirror policy show` command displays the following information about SnapMirror policies:

- Vserver Name
- SnapMirror Policy Name
- SnapMirror Policy Type
- Number of Rules in the policy
- Tries
- Transfer Priority
- Comment for the policy
- Individual Rule Names
- Keep value for the Rule
- Total of Keep values across all Rules in the policy

## Parameters

**{ [-fields <fieldname>,…]**

If you specify the `-fields <fieldname>`, … parameter, the command output also includes the specified field or fields. You can use '-fields ?' to display the fields to specify.

**| [-instance ] }**

If you specify the `-instance` parameter, the command displays detailed information about all fields.

**[-vserver <vserver name>] - Vserver Name**

Selects the policies that match this parameter value.

**[-policy <sm_policy>] - SnapMirror Policy Name**

Selects the policies that match this parameter value.

**[-type {vault|async-mirror|mirror-vault|strict-sync-mirror|sync-mirror|automated-failover|automated-failover-duplex|continuous}] - Snapmirror Policy Type**

Selects the policies that match this parameter value. A policy can be of type `async-mirror`, `vault` or `mirror-vault`.

**[-owner {cluster-admin|vserver-admin}] - Owner of the Policy**

Selects the policies that match this parameter value. A policy can be owned by either the `"Cluster Admin"` or a `"Vserver Admin"`.

**[-comment <text>] - Comment**

Selects the policies that match this parameter value.

**[-tries <integer_or_unlimited>] - Tries Limit**

Selects the policies that match this parameter value.

**[-transfer-priority {low|normal}] - Transfer Scheduling Priority**

Selects the policies that match this parameter value.

**[-ignore-atime {true|false}] - Ignore File Access Time**

Selects the policies that match this parameter value.

**[-restart {always|never|default}] - Restart Behavior**

Selects the policies that match this parameter value.

**[-is-network-compression-enabled {true|false}] - Is Network Compression Enabled**

Selects the policies that match this parameter value.

**[-create-snapshot {true|false}] - Create a New Snapshot Copy**

Selects the policies that match this parameter value.

**[-rpo <integer>] - Recovery Point Objective (seconds)**

Selects the policies that match this parameter value.

**[-always-replicate-snapshots {true|false}] - This prioritizes replication of app-consistent snapshots over synchronous replication**

Selects the policies that match this parameter value.

**[-snapmirror-label <text>,…] - Snapshot Copy Label**

Selects the policies that match this parameter value.

**[-keep <text>,…] - Snapshot Copy Retention Count**

Selects the policies that match this parameter value.

**[-preserve {true|false}] - Snapshot Copy Preserve Enabled**

Selects the policies that match this parameter value.

**[-warn <integer>,…] - Warning Threshold Count**

Selects the policies that match this parameter value.

**[-schedule <text>,…] - Snapshot Copy Creation Schedule**

Selects the policies that match this parameter value.

**[-prefix <text>,…] - Snapshot Copy Creation Prefix**

Selects the policies that match this parameter value.

**[-retention-period {{<integer> seconds|minutes|hours|days|months|years} | infinite}] - Snapshot Copy Retention Period**

This optional parameter specifies the duration for which the Snapshot copies associated with this rule will be locked. The parameter is specified as a number followed by a suffix. The valid suffixes are *seconds* , *minutes* , *hours* , *days* , *months* , and *years* . For example, a value of *6months* represents a retention period of 6 months. It can also be set to a special value of *infinite* for infinite retention. The destination volume must have the *snapshot-locking-enabled* parameter set to true for this field to take effect else it will be ignored.

**[-total-rules <integer>] - Total Rules in the Policy**

Selects the policies that match this parameter value.

**[-total-keep <integer>] - Total Retention Count for All Rules in the Policy**

Selects the policies that match this parameter value.

**[-common-snapshot-schedule <text>] - Common Snapshot Copy Creation Schedule for SnapMirror Synchronous (privilege: advanced)**

Selects the policies that match this parameter value.

**[-are-data-ops-sequentially-split {true|false}] - Is Sequential Splitting of Data Operations Enabled? (privilege: advanced)**

Selects the policies that match this parameter value.

**[-sequential-split-op-timeout-secs <integer>] - Sequential Split Op Timeout in Seconds (privilege: advanced)**

Selects the policies that match this parameter value.

**[-disable-fast-resync {true|false}] - Disable Fast Resync (privilege: advanced)**

Selects the policies that match this parameter value.

**`[-discard-configs <network>,…]` - Configurations Not Replicated During Identity Preserve Vserver DR**

Selects the policies that match this parameter value.

**`[-transfer-schedule-name <text>]` - Transfer Schedule Name**

Selects the policies that match this parameter value.

**`[-throttle <throttleType>]` - Throttle (KB/sec)**

Selects the policies that match this parameter value.

## Examples

The following example displays information about all SnapMirror policies:

```
cs::> snapmirror policy show
Vserver Policy                Policy Number        Transfer
Name    Name                  Type   Of Rules Tries Priority Comment
------- ----------------- ------ -------- ----- -------- ----------
cs      DPDefault             async-mirror  2     8   normal  Asynchronous
SnapMirror policy for mirroring all Snapshot copies and the latest active
file system.
   SnapMirror Label: sm_created                      Keep:      1
                 all_source_snapshots                           1
                                         Total Keep:      2

cs      MirrorAllSnapshots async-mirror  2     8   normal  Asynchronous
SnapMirror policy for mirroring all Snapshot copies and the latest active
file system.
   SnapMirror Label: sm_created                      Keep:      1
                 all_source_snapshots                           1
                                         Total Keep:      2

cs      MirrorAndVault    mirror-vault  3     8   normal  A unified
Asynchronous SnapMirror and SnapVault policy for mirroring the latest
active file system and daily and weekly Snapshot copies.
   SnapMirror Label: sm_created                      Keep:      1
                 daily                                          7
                 weekly                                         52
                                         Total Keep:      60

cs      MirrorLatest         async-mirror  1     8   normal  Asynchronous
SnapMirror policy for mirroring the latest active file system.
   SnapMirror Label: sm_created                      Keep:      1
                                         Total Keep:      1


vs0.example.com
        TieredBackup         vault         0     8   normal  Use for tiered
```

```
backups
  Snapmirror-label: -                                         Keep:        -
                                                        Total Keep:        0


cs   Unified7year    mirror-vault  4    8   normal  Unified SnapMirror
policy with 7year retention.
  SnapMirror Label: sm_created                              Keep:        1
                    daily                                                7
                    weekly                                              52
                    monthly                                             84
                                                        Total Keep:     144


cs      XDPDefault       vault      2    8   normal  Vault policy
with daily and weekly rules.
  SnapMirror Label: daily                                   Keep:        7
                    weekly                                              52
                                                        Total Keep:      59


7 entries were displayed.
```

The following example shows all the policies with the following fields - vserver (default), policy (default) and transfer-priority:

```
cs::> snapmirror policy show -fields transfer-priority
vserver       policy      transfer-priority
----------- --------- -----------------
cs       DPDefault normal
cs       MirrorAllSnapshots
                    normal
cs       MirrorAndVault
                    normal
cs       MirrorLatest
                    normal
vs0.example.com
     TieredBackup
                    normal
cs       Unified7year
                    normal
cs       XDPDefault
                    normal
7 entries were displayed.
```