



Configure custom snapshot policies

ONTAP 9

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Table of Contents

- Configure custom snapshot policies 1
- Configure custom Snapshot policies overview 1
- When to configure a custom Snapshot policy 1
- Create a Snapshot job schedule 1
- Create a Snapshot policy 2

Configure custom snapshot policies

Configure custom Snapshot policies overview

A *Snapshot policy* defines how the system creates Snapshot copies. The policy specifies when to create Snapshot copies, how many copies to retain, and how to name them. For example, a system might create one Snapshot copy every day at 12:10 a.m., retain the two most recent copies, and name the copies “daily.*timestamp*.”

The default policy for a volume automatically creates Snapshot copies on the following schedule, with the oldest Snapshot copies deleted to make room for newer copies:

- A maximum of six hourly Snapshot copies taken five minutes past the hour.
- A maximum of two daily Snapshot copies taken Monday through Saturday at 10 minutes after midnight.
- A maximum of two weekly Snapshot copies taken every Sunday at 15 minutes after midnight.

Unless you specify a Snapshot policy when you create a volume, the volume inherits the Snapshot policy associated with its containing storage virtual machine (SVM).

When to configure a custom Snapshot policy

If the default Snapshot policy is not appropriate for a volume, you can configure a custom policy that modifies the frequency, retention, and name of Snapshot copies. The schedule will be dictated mainly by the rate of change of the active file system.

You might back up a heavily used file system like a database every hour, while you back up rarely used files once a day. Even for a database, you will typically run a full backup once or twice a day, while backing up transaction logs every hour.

Other factors are the importance of the files to your organization, your Service Level Agreement (SLA), your Recovery Point Objective (RPO), and your Recovery Time Objective (RTO). Generally speaking, you should retain only as many Snapshot copies as necessary.

Create a Snapshot job schedule

A Snapshot policy requires at least one Snapshot copy job schedule. You can use System Manager or the `job schedule cron create` command to create a job schedule.

About this task

By default, ONTAP forms the names of Snapshot copies by appending a timestamp to the job schedule name.

If you specify values for both day of the month and day of the week, the values are considered independently. For example, a cron schedule with the day specification `Friday` and the day of the month specification `13` runs every Friday and on the 13th day of each month, not just on every Friday the 13th.

Example 1. Steps

System Manager

1. Navigate to **Protection > Overview** and expand **Local policy settings**.
2. In the **Schedules** pane, click **→**.
3. In the **Schedules** window, click **+ Add**.
4. In the **Add schedule** window, enter the schedule name, and choose the context and schedule type.
5. Click **Save**.

CLI

1. 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.

Beginning with ONTAP 9.10.1, you can include the Vserver for your job schedule:

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

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

```
cluster1::> job schedule cron create -name myweekly -dayofweek  
"Saturday" -hour 3 -minute 0
```

The following example creates a schedule named `myweeklymulti` that specifies multiple days, hours and minutes:

```
job schedule cron create -name myweeklymulti -dayofweek  
"Monday,Wednesday,Sunday" -hour 3,9,12 -minute 0,20,50
```

Create a Snapshot policy

A Snapshot policy specifies when to create Snapshot copies, how many copies to retain, and how to name them. For example, a system might create one Snapshot copy every day at 12:10 a.m., retain the two most recent copies, and name them “`daily.timestamp`.” A Snapshot policy can contain up to five job schedules.

About this task

By default, ONTAP forms the names of Snapshot copies by appending a timestamp to the job schedule name:

```
daily.2017-05-14_0013/          hourly.2017-05-15_1106/  
daily.2017-05-15_0012/          hourly.2017-05-15_1206/  
hourly.2017-05-15_1006/         hourly.2017-05-15_1306/
```

You can substitute a prefix for the job schedule name if you prefer.

The `snapmirror-label` option is for SnapMirror replication. For more information, see [Defining a rule for a policy](#).

Steps

You can create a Snapshot copy policy using System Manager or the ONTAP CLI. The procedure creates a Snapshot copy policy on the local cluster only.

System Manager

1. Navigate to **Protection > Overview** and expand **Local policy settings**.
2. In the **Snapshot policies** pane, click **→**.
3. In the **Snapshot policies** tab, click **+ Add**.
4. In the **Add Snapshot policy** window, enter the policy name, and choose the scope.
5. Click **+ Add**.
6. To select a schedule click the currently displayed schedule name, click **▼**, and choose a different schedule.
7. Enter the maximum Snapshot copies to retain, and, if needed, enter the SnapMirror label and the SnapLock retention period.
8. Click **Save**.

CLI

1. Create a Snapshot policy:

```
volume snapshot policy create -vserver <SVM> -policy <policy_name>
-enabled true|false -schedule1 <schedule1_name> -count1
<copies_to_retain> -prefix1 <snapshot_prefix> -snapmirror-label1
<snapshot_label> ... -schedule5 <schedule5_name> -count5
<copies_to_retain> -prefix5 <snapshot_prefix> -snapmirror-label5
<snapshot_label>
```

The following example creates a Snapshot policy named `snap_policy_daily` that runs on a `daily` schedule. The policy has a maximum of five Snapshot copies, each with the name `daily.timestamp` and the SnapMirror label `daily`:

```
cluster1::> volume snapshot policy create -vserver vs0 -policy
snap_policy_daily -schedule1 daily -count1 5 -snapmirror-label1
daily
```

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