

Executing database backups

Snap Creator Framework

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Executing database backups

You can back up your SAP HANA database by using the Snap Creator GUI or the command line. To schedule backups, you can use the scheduler within the GUI, or you can use the command line in combination with an external scheduler like cron.

Overview of database backups

When Snap Creator is backing up the database, the following steps are executed.

- 1. Create a global synchronized backup save point (SAP HANA Snapshot copy) to obtain a consistent image on the persistence layer.
- 2. Create storage Snapshot copies for all data volumes.

In the example, there are three data volumes, which are distributed to both storage controllers, hana1a and hana1b.

- 3. Register the storage Snapshot backup within the SAP HANA backup catalog.
- 4. Delete the SAP HANA Snapshot copy.
- 5. Start SnapVault update for all data volumes.
- 6. Check SnapVault status and wait until finished or configurable timeout.
- 7. Delete storage Snapshot copies and delete backups in the SAP HANA backup catalog based on the defined retention policy for backups at the primary and secondary storage.
- 8. Delete all log backups, which are older than the oldest data backup on the file system and within the SAP HANA backup catalog.

Backing up the database with the Snap Creator GUI

You can back up a database with the Snap Creator GUI.

1. Select the HANA_database_backup configuration and then select Actions > Backup.



2. Select the backup policy and click **OK**.

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The backup starts. Snap Creator triggers the "SnapVault update," and Snap Creator waits until the data is replicated to the secondary storage. The wait time has been configured during the configuration and can be adapted in the SnapVault settings tab. Snap Creator triggers the SnapVault updates in parallel for each volume on the same storage controller, but in sequence for each storage controller.

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Backing up the database with Snap Creator command line

You can also back up the database by using the Snap Creator command line.

1. To back up the database, run the following command.

```
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/opt/NetApp/Snap Creator Framework 411/scServer4.1.1/snapcreator
--server
localhost --port 8443 --user scadmin --passwd scadmin --profile
HANA profile ANA --config
ANA database backup --action backup --policy daily --verbose
[Wed Mar 5 14:17:08 2014] INFO: Validating policy: daily finished
successfully
[Wed Mar 5 14:17:13 2014] INFO: STORAGE-03031: Getting system version
details of [hana2b]
[Wed Mar 5 14:17:13 2014] INFO: STORAGE-03032: Getting system version
details of [hana2b] finished successfully.
[Wed Mar 5 14:17:13 2014] INFO: STORAGE-03031: Getting system version
details of [hanala]
[Wed Mar 5 14:17:13 2014] INFO: STORAGE-03032: Getting system version
details of [hanala] finished successfully.
[Wed Mar 5 14:17:13 2014] INFO: STORAGE-03031: Getting system version
details of [hana1b]
[Wed Mar 5 14:17:13 2014] INFO: STORAGE-03032: Getting system version
details of [hana1b] finished successfully.
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Reviewing available backups in SAP HANA Studio

You can see the list of storage Snapshot backups in the SAP HANA Studio.

The highlighted backup in the following figure shows a Snapshot copy named "Backup-ANA_hourly_20140320103943." This backup includes Snapshot copies for all three data volumes of the SAP HANA system. The backup is also available at the secondary storage.

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The Snapshot copy name is used by Snap Creator as a backup ID when Snap Creator registers the storage Snapshot copy in the SAP HANA backup catalog. Within the SAP HANA Studio, the storage Snapshot backup is visible in the backup catalog. The external backup ID (EBID) has the same value as the Snapshot copy name as shown in the following figure.

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With every backup run, Snap Creator deletes Snapshot backups at the primary and at the secondary storage based on the retention policies defined for the different schedules (hourly, daily, and so on).

Snap Creator also deletes the backups within the SAP HANA backup catalog if the backup does not exist at the primary or secondary storage. The SAP HANA backup catalog always shows the complete list of backups that are available at the primary and/or the secondary storage.

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