



# Restoring databases after primary storage failure

## Snap Creator Framework

NetApp  
April 09, 2021

This PDF was generated from [https://docs.netapp.com/us-en/snap-creator-framework/sap-hana-ops/task\\_restoring\\_databases\\_after\\_a\\_primary\\_storage\\_failure\\_with\\_data\\_ontap\\_operating\\_in\\_7\\_mode.html](https://docs.netapp.com/us-en/snap-creator-framework/sap-hana-ops/task_restoring_databases_after_a_primary_storage_failure_with_data_ontap_operating_in_7_mode.html) on April 09, 2021. Always check docs.netapp.com for the latest.

# Table of Contents

- Restoring databases after primary storage failure ..... 1
  - Restoring databases after a primary storage failure with Data ONTAP operating in 7-Mode ..... 1
  - Restoring databases after a primary storage failure with clustered Data ONTAP ..... 2

# Restoring databases after primary storage failure

After a primary storage failure, or when all Snapshot copies are deleted from the volumes at the primary storage, Snap Creator will not be able to handle the restore, because there will no longer be a SnapVault relationship on the primary storage systems.

## Restoring databases after a primary storage failure with Data ONTAP operating in 7-Mode

You can restore an SAP HANA database after a primary storage system running Data ONTAP operating in 7-Mode fails.

1. In this case, the restore has to be executed directly on the secondary storage system by using the following command:  
`snapvault                  restore                  --s                  snapshot_name                  -S  
backup_controller:backup_volumesource_controller:source_volume`

Perform this step for all volumes belonging to the SAP HANA database.

```
hanala> snapvault restore -s Backup-ANA-SV_hourly_20140410103943 -S  
hana2b:/vol/backup_data_00001/mnt00001 hanala:/vol/data_00001/mnt00001  
Restore will overwrite existing data in /vol/data_00001/mnt00001.  
Are you sure you want to continue? y  
Thu Apr 10 11:55:55 CEST [hanala:vdisk.qtreePreserveComplete:info]:  
Qtree preserve is complete for /vol/data_00001/mnt00001.  
Transfer started.  
Monitor progress with 'snapvault status' or the snapmirror log.
```

```
hanala> snapvault restore -s Backup-ANA-SV_hourly_20140410103943 -S  
hana2b:/vol/backup_data_00003/mnt00003 hanala:/vol/data_00003/mnt00003  
Restore will overwrite existing data in /vol/data_00003/mnt00003.  
Are you sure you want to continue? y  
Thu Apr 10 11:58:18 CEST [hanala:vdisk.qtreePreserveComplete:info]:  
Qtree preserve is complete for /vol/data_00003/mnt00003.  
Transfer started.  
Monitor progress with 'snapvault status' or the snapmirror log.
```

```
hana1b> snapvault restore -s Backup-ANA-SV_hourly_20140410103943 -S
hana2b:/vol/backup_data_00002/mnt00002 hana1b:/vol/data_00002/mnt00002
Restore will overwrite existing data in /vol/data_00002/mnt00002.
Are you sure you want to continue? y
Thu Apr 10 12:01:29 CEST [hana1b:vdisk.qtreePreserveComplete:info]:
Qtree preserve is complete for /vol/data_00002/mnt00002.
Transfer started.
Monitor progress with 'snapvault status' or the snapmirror log.
```

When the restore process is finished, you use SAP HANA to perform the recovery.

## Restoring databases after a primary storage failure with clustered Data ONTAP

You can restore an SAP HANA database after a primary storage system running clustered Data ONTAP fails.

Assuming the primary volume is lost completely, you need to create a new primary volume and then restore from the backup volume.

1. Create a primary volume with type data protection.

```
hana::> volume create -vserver hanala -volume hana_data -aggregate
aggr_sas_101 -size 300G -state online -type DP -policy default -autosize
-mode grow_shrink -space-guarantee none
-snapshot-policy none -foreground true
[Job 6744] Job is queued: Create hana_data.
[Job 6744] Job succeeded: Successful
```

2. Restore all data from the backup volume.

```
hana::> snapmirror restore -destination-path hanala:hana_data -source
-path hana2b:backup_hana_data -source-snapshot sc-backup-
daily_20140505121000
[Job 6746] Job is queued: snapmirror restore from source
"hana2b:backup_hana_data" for the
snapshot sc-backup-daily_20140505121000.
```

```
hana::> job show -id 6746
```

```
Owning
```

Job ID	Name	Vserver	Node	State
6746	SnapMirror restore	hana	hana01	Running

Description: snapmirror restore from source  
"hana2b:backup\_hana\_data" for the snapshot sc-backup-  
daily\_20140505121000

When the restore process is finished, you use SAP HANA to perform the recovery.

## Copyright Information

Copyright © 2021 NetApp, Inc. All rights reserved. Printed in the U.S. No part of this document covered by copyright may be reproduced in any form or by any means-graphic, electronic, or mechanical, including photocopying, recording, taping, or storage in an electronic retrieval system- without prior written permission of the copyright owner.

Software derived from copyrighted NetApp material is subject to the following license and disclaimer:

THIS SOFTWARE IS PROVIDED BY NETAPP "AS IS" AND WITHOUT ANY EXPRESS OR IMPLIED WARRANTIES, INCLUDING, BUT NOT LIMITED TO, THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE, WHICH ARE HEREBY DISCLAIMED. IN NO EVENT SHALL NETAPP BE LIABLE FOR ANY DIRECT, INDIRECT, INCIDENTAL, SPECIAL, EXEMPLARY, OR CONSEQUENTIAL DAMAGES (INCLUDING, BUT NOT LIMITED TO, PROCUREMENT OF SUBSTITUTE GOODS OR SERVICES; LOSS OF USE, DATA, OR PROFITS; OR BUSINESS INTERRUPTION) HOWEVER CAUSED AND ON ANY THEORY OF LIABILITY, WHETHER IN CONTRACT, STRICT LIABILITY, OR TORT (INCLUDING NEGLIGENCE OR OTHERWISE) ARISING IN ANY WAY OUT OF THE USE OF THIS SOFTWARE, EVEN IF ADVISED OF THE POSSIBILITY OF SUCH DAMAGE.

NetApp reserves the right to change any products described herein at any time, and without notice. NetApp assumes no responsibility or liability arising from the use of products described herein, except as expressly agreed to in writing by NetApp. The use or purchase of this product does not convey a license under any patent rights, trademark rights, or any other intellectual property rights of NetApp.

The product described in this manual may be protected by one or more U.S. patents, foreign patents, or pending applications.

RESTRICTED RIGHTS LEGEND: Use, duplication, or disclosure by the government is subject to restrictions as set forth in subparagraph (c)(1)(ii) of the Rights in Technical Data and Computer Software clause at DFARS 252.277-7103 (October 1988) and FAR 52-227-19 (June 1987).

## Trademark Information

NETAPP, the NETAPP logo, and the marks listed at <http://www.netapp.com/TM> are trademarks of NetApp, Inc. Other company and product names may be trademarks of their respective owners.