Restore IBM Db2

SnapCenter Software 6.0

NetApp
July 23, 2024

This PDF was generated from https://docs.netapp.com/us-en/snapcenter/protect-db2/restore-ibm-db2.html on July 23, 2024. Always check docs.netapp.com for the latest.

Table of Contents

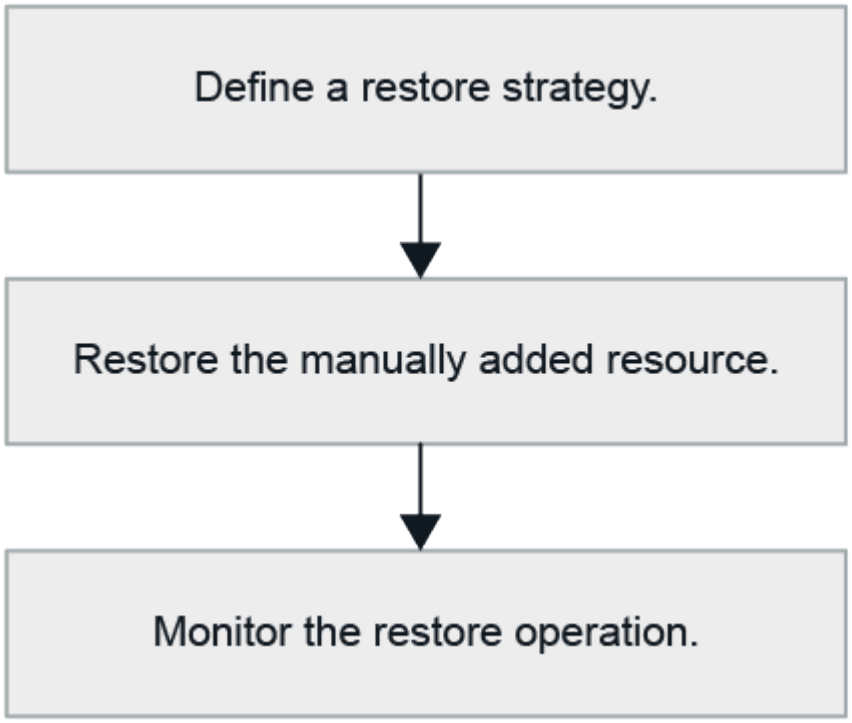
Restore IBM Db2 . . . 1
- Restore workflow . . . 1
- Restore a manually added resource backup . . . 1
- Restore and recover an auto discovered database backup . . . 3
- Restore IBM Db2 database using PowerShell cmdlets . . . 5
- Monitor IBM Db2 restore operations . . . 7

Restore IBM Db2

Restore workflow

The restore and recovery workflow includes planning, performing the restore operations, and monitoring the operations.

The following workflow shows the sequence in which you must perform the restore operation:



You can also use PowerShell cmdlets manually or in scripts to perform backup, restore, and clone operations. The SnapCenter cmdlet help and the cmdlet reference information contain detailed information about PowerShell cmdlets.

SnapCenter Software Cmdlet Reference Guide.

Restore a manually added resource backup

You can use SnapCenter to restore and recover data from one or more backups.

Before you begin

- You must have backed up the resource or resource groups.
- You must have canceled any backup operation that is currently in progress for the resource or resource group that you want to restore.
- For pre restore, post restore, mount, and unmount commands, you should check if the commands exist in the command list available on the plug-in host from the following paths:

  For Windows: *C:\Program Files\NetApp\SnapCenter\Snapcenter Plug-in Creator\etc\allowed_commands.config*

For Linux: */opt/NetApp/snapcenter/scc/etc/allowed_commands.config*

If the commands do not exist in the command list, then the operation will fail.

About this task

- For ONTAP 9.12.1 and below version, the clones created from the SnapLock Vault Snapshots as part of restore will inherit the SnapLock Vault expiry time. Storage admin should manually cleanup the clones post the SnapLock expiry time.

Steps

1. In the left navigation pane, click **Resources**, and then select the appropriate plug-in from the list.
2. In the Resources page, filter resources from the **View** drop-down list based on resource type.

   The resources are displayed along with type, host, associated resource groups and policies, and status.

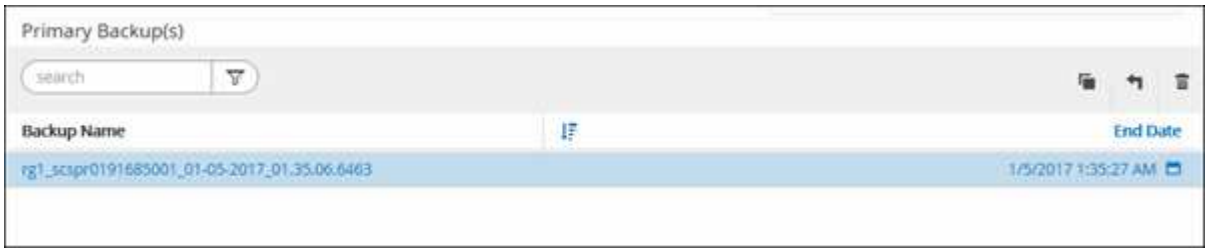
   Although a backup might be for a resource group, when you restore, you must select the individual resources you want to restore.

   If the resource is not protected, “Not protected” is displayed in the Overall Status column. This can mean either that the resource is not protected, or that the resource was backed up by a different user.

3. Select the resource, or select a resource group and then select a resource in that group.

   The resource topology page is displayed.

4. From the Manage Copies view, select **Backups** either from the primary or secondary (mirrored or vaulted) storage systems.
5. In the Primary backup(s) table, select the backup that you want to restore from, and then click .



6. In the Restore Scope page, select **Complete Resource**.

   a. If you select **Complete Resource**, all of the configured data volumes of the IBM Db2 database are restored.

      If the resource contains volumes or qtrees, the Snapshots taken after the Snapshot selected for restore on such volumes or qtrees are deleted and cannot be recovered. Also, if any other resource is hosted on same volumes or qtrees, then that resource is also deleted.

      You can select multiple LUNs.

      If you select **All**, all the files on the volumes, qtrees, or LUNs are restored.

7. In the Pre ops page, enter pre restore and unmount commands to run before performing a restore job.
8. In the Post ops page, enter mount and post restore commands to run after performing a restore job.

   For pre and post commands for quiesce, Snapshot, and unquiesce operations, you should check if the commands exist in the command list available on the plug-in host from the */opt/snapcenter/snapenter/scc/allowed_commands.config* path for Linux and *C:\Program Files\NetApp\SnapCenter\Snapcenter Plug-in Creator\etc\allowed_commands.config* for Windows.

9. In the Notification page, from the **Email preference** drop-down list, select the scenarios in which you want to send the emails.

   You must also specify the sender and receiver email addresses and the subject of the email. SMTP must also be configured on the **Settings** > **Global Settings** page.

10. Review the summary, and then click **Finish**.
11. Monitor the operation progress by clicking **Monitor** > **Jobs**.

After you finish

Recovery is possible only if the Rollforward status is in "DB pending" status. This status is applicable to Db2 databases with archive logging enabled.

Restore and recover an auto discovered database backup

You can use SnapCenter to restore and recover data from one or more backups.

Before you begin

- You must have backed up the resource or resource groups.
- You must have canceled any backup operation that is currently in progress for the resource or resource group that you want to restore.
- For pre restore, post restore, mount, and unmount commands, you should check if the commands exist in the command list available on the plug-in host from the following paths:

  For Windows: *C:\Program Files\NetApp\SnapCenter\Snapcenter Plug-in Creator\etc\allowed_commands.config*

  For Linux: */opt/NetApp/snapcenter/scc/etc/allowed_commands.config*

  If the commands do not exist in the command list, then the operation will fail.

About this task

- For Auto-discovered resources, restore is supported with SFSR.
- Auto-recovery is not supported.
- For ONTAP 9.12.1 and below version, the clones created from the SnapLock Vault snapshots as part of restore will inherit the SnapLock Vault expiry time. Storage admin should manually cleanup the clones post the SnapLock expiry time.

Steps

1. In the left navigation pane, click **Resources**, and then select the appropriate plug-in from the list.
2. In the Resources page, filter resources from the **View** drop-down list based on resource type.

   The resources are displayed along with type, host, associated resource groups and policies, and status.

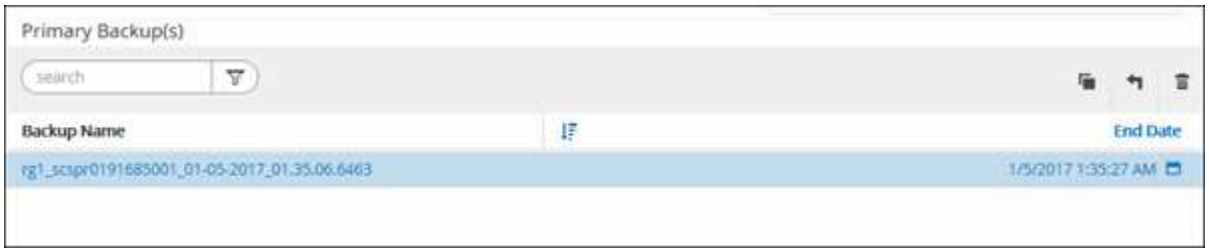
   Although a backup might be for a resource group, when you restore, you must select the individual resources you want to restore.

   If the resource is not protected, “Not protected” is displayed in the Overall Status column. This can mean either that the resource is not protected, or that the resource was backed up by a different user.

3. Select the resource, or select a resource group and then select a resource in that group.

   The resource topology page is displayed.

4. From the Manage Copies view, select **Backups** either from the primary or secondary (mirrored or vaulted) storage systems.
5. In the Primary backup(s) table, select the backup that you want to restore from, and then click .



6. In the Restore Scope page, select **Complete Resource** to restore the configured data volumes of the IBM Db2 database.
7. In the Pre ops page, enter pre restore and unmount commands to run before performing a restore job.

   Unmount commands are not required for auto discovered resources.

8. In the Post ops page, enter mount and post restore commands to run after performing a restore job.

   Mount commands are not required for auto discovered resources.

   For pre and post commands for quiesce, snapshot, and unquiesce operations, you should check if the commands exist in the command list available on the plug-in host from the */opt/snapcenter/snapenter/scc/allowed_commands.config* path for Linux and *C:\Program Files\NetApp\SnapCenter\Snapcenter Plug-in Creator\etc\allowed_commands.config* for Windows.

9. In the Notification page, from the **Email preference** drop-down list, select the scenarios in which you want to send the emails.

   You must also specify the sender and receiver email addresses and the subject of the email. SMTP must also be configured on the **Settings** > **Global Settings** page.

10. Review the summary, and then click **Finish**.
11. Monitor the operation progress by clicking **Monitor** > **Jobs**.

After you finish

Recovery is possible only if the Rollforward status is in "DB pending" status. This status is applicable to Db2 databases with archive logging enabled.

Restore IBM Db2 database using PowerShell cmdlets

Restoring a IBM Db2 backup includes initiating a connection session with the SnapCenter Server, listing the backups and retrieving backup information, and restoring a backup.

Before you begin

You must have prepared the PowerShell environment to execute the PowerShell cmdlets.

Steps

1. Initiate a connection session with the SnapCenter Server for a specified user by using the Open-SmConnection cmdlet.

```
PS C:\> Open-SmConnection
```

2. Identify the backup that you want to restore by using the Get-SmBackup and Get-SmBackupReport cmdlets.

   This example shows that there are two backups available for the restore:

```
 PS C:\> Get-SmBackup -AppObjectId
cn24.sccore.test.com\DB2\db2inst1\Library

        BackupId    BackupName                    BackupTime
BackupType
        --------    ----------                    ----------
----------
         1          Payroll Dataset_vise-f6_08... 8/4/2015 11:02:32 AM
Full Backup
         2          Payroll Dataset_vise-f6_08... 8/4/2015 11:23:17 AM
```

   This example displays detailed information about the backup from January 29th 2015 to February 3rd, 2015:

```
PS C:\> Get-SmBackupReport -FromDateTime "1/29/2015" -ToDateTime
"2/3/2015"

SmBackupId           : 113
   SmJobId              : 2032
   StartDateTime        : 2/2/2015 6:57:03 AM
   EndDateTime          : 2/2/2015 6:57:11 AM
   Duration             : 00:00:07.3060000
   CreatedDateTime      : 2/2/2015 6:57:23 AM
   Status               : Completed
   ProtectionGroupName  : Clone
   SmProtectionGroupId  : 34
   PolicyName           : Vault
   SmPolicyId           : 18
   BackupName           : Clone_SCSPR0019366001_02-02-2015_06.57.08
   VerificationStatus   : NotVerified

   SmBackupId           : 114
   SmJobId              : 2183
   StartDateTime        : 2/2/2015 1:02:41 PM
   EndDateTime          : 2/2/2015 1:02:38 PM
   Duration             : -00:00:03.2300000
   CreatedDateTime      : 2/2/2015 1:02:53 PM
   Status               : Completed
   ProtectionGroupName  : Clone
   SmProtectionGroupId  : 34
   PolicyName           : Vault
   SmPolicyId           : 18
   BackupName           : Clone_SCSPR0019366001_02-02-2015_13.02.45
   VerificationStatus   : NotVerified
```

3. Restore data from the backup by using the Restore-SmBackup cmdlet.

> AppObjectId is "Host\Plugin\UID", where UID = <instance_name> is for manually discovered DB2 instance resource and UID = <instance_name>\<databse_name> is for IBM Db2 database resource. You can get the ResourceID from the Get-smResources cmdlet.

```
Get-smResources  -HostName cn24.sccore.test.com  -PluginCode DB2
```

This example shows how to restore the database from the primary storage:

```
Restore-SmBackup -PluginCode DB2 -AppObjectId
cn24.sccore.test.com\DB2\db2inst1\DB01 -BackupId 3
```

This example shows how to restore the database from the secondary storage:

```
Restore-SmBackup -PluginCode 'DB2' -AppObjectId
cn24.sccore.test.com\DB2\db2inst1\DB01 -BackupId 399 -Confirm:$false
-Archive @( @{"Primary"="<Primary
Vserver>:<PrimaryVolume>";"Secondary"="<Secondary
Vserver>:<SecondaryVolume>"})
```

The information regarding the parameters that can be used with the cmdlet and their descriptions can be obtained by running *Get-Help command_name*. Alternatively, you can also refer to the SnapCenter Software Cmdlet Reference Guide.

Monitor IBM Db2 restore operations

You can monitor the progress of different SnapCenter restore operations by using the Jobs page. You might want to check the progress of an operation to determine when it is complete or if there is an issue.

About this task

Post-restore states describe the conditions of the resource after a restore operation and any further restore actions that you can take.

The following icons appear on the Jobs page, and indicate the state of the operation:

- In progress
- Completed successfully
- Failed
- Completed with warnings or could not start due to warnings
- Queued
- Canceled

Steps

1. In the left navigation pane, click **Monitor**.
2. In the **Monitor** page, click **Jobs**.
3. In the **Jobs** page, perform the following steps:
   a. Click to filter the list so that only restore operations are listed.
   b. Specify the start and end dates.
   c. From the **Type** drop-down list, select **Restore**.
   d. From the **Status** drop-down list, select the restore status.
   e. Click **Apply** to view the operations that have been completed successfully.
4. Select the restore job, and then click **Details** to view the job details.
5. In the **Job Details** page, click **View logs**.

The **View logs** button displays the detailed logs for the selected operation.

Copyright information

Copyright © 2024 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.

LIMITED RIGHTS LEGEND: Use, duplication, or disclosure by the government is subject to restrictions as set forth in subparagraph (b)(3) of the Rights in Technical Data -Noncommercial Items at DFARS 252.227-7013 (FEB 2014) and FAR 52.227-19 (DEC 2007).

Data contained herein pertains to a commercial product and/or commercial service (as defined in FAR 2.101) and is proprietary to NetApp, Inc. All NetApp technical data and computer software provided under this Agreement is commercial in nature and developed solely at private expense. The U.S. Government has a non-exclusive, non-transferrable, nonsublicensable, worldwide, limited irrevocable license to use the Data only in connection with and in support of the U.S. Government contract under which the Data was delivered. Except as provided herein, the Data may not be used, disclosed, reproduced, modified, performed, or displayed without the prior written approval of NetApp, Inc. United States Government license rights for the Department of Defense are limited to those rights identified in DFARS clause 252.227-7015(b) (FEB 2014).

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.