∏ NetApp

使用后脚本保护数据库备份
SnapManager for SAP

NetApp
November 04, 2025

目录

使用后脚本保护数据库备份

在主存储系统和二级存储系统之间建立 SnapMirror 或 SnapVault 关系时，您可以通过 SnapManager 使用后脚本保护数据库备份。您可以从 SnapManager 命令行界面和 GUI 对备份操作的后处理活动使用默认后处理脚本。

您可以使用`default_install_directory\plugins\backup\create\post`中提供的以下默认后处理脚本：

- 如果您使用的是在7-模式下运行的Data ONTAP 、则为SnapMirror后脚本`Mirror_the_backup.cmd`
- 如果您使用的是在7-模式下运行的Data ONTAP 、则SnapVault postScript `Vault_the_backup.cmd`
- SnapMirror后脚本`Mirror_the_backup_cDOT.cmd`(如果使用的是集群模式Data ONTAP)
- 如果您使用的是集群模式Data ONTAP 、则SnapVault 后脚本`Vault_the_backup_cDOT.cmd`

有关详细信息、请参见`default_install_directory\plugins`中的`reADME.txt`。

SnapManager 3.1 或更早版本仅为克隆操作提供预处理或后处理脚本。SnapManager 3.2 或更高版本为备份和还原操作提供了预处理和后处理脚本。您可以使用这些脚本在备份或还原操作之前或之后运行。

(i) 提供的脚本仅供参考。它们已通过适用于 Windows 的 SnapDrive 7.0 或更高版本的测试，但可能不适用于所有环境。您应根据二级保护要求自定义脚本。这些脚本不适用于 6.2 之前的 SnapDrive 版本。

示例后脚本

您可以参考示例脚本并根据环境创建自定义脚本，以执行镜像和存储。示例脚本位于 default_install_directory\plugins\backup\create\post 。

mirror_the_backup.cmd

如果您使用的是在 7- 模式下运行的 Data ONTAP ，则可以使用此示例脚本镜像备份。它包括三个操作（检查，描述和执行），并在脚本末尾执行这些操作。该脚本还包括错误消息处理，代码为 0 到 4 和 > 4 ：

```
@echo off
REM $Id:
//depot/prod/capstan/main/src/plugins/windows/examples/backup/create/post/
Mirror_the_backup.cmd#1 $
REM
REM Copyright \(c\) 2011 NetApp, Inc.
REM All rights reserved.
REM
REM
REM This is a sample post-task script to mirror the volumes to the
secondary storage after successful backup operation.
REM|----------------------------------------------------------------------
-----------------------------------------------|
```

```
REM| Pre-requisite/Assumption:
 |
REM|   SnapMirror relationship for the requested secondary storage volumes
must be configured in Secondary storage. |
REM|-----------------------------------------------------------------
--------------------------------------------|
REM
REM
REM This script can be used from the SnapManager graphical user interface
(GUI) and command line interface (CLI).
REM
REM To execute the post-task script for the backup operation from
SnapManager GUI, follow these steps:
REM  1. From the Backup wizard > Task Specification page > Post-Tasks tab
> select the post-task scripts from the Available Scripts section.
REM
REM
REM To execute the post-task script for the backup operation from
SnapManager CLI, follow these steps:
REM  1. create a task specification XML file.
REM  2. Add the post-script name in the <post-tasks> tag of the XML file.
REM
REM Example:
REM             <post-tasks>
REM                <task>
REM                    <name>Mirror the backup</name>
REM                      <description>Mirror the backup</description>
REM                </task>
REM             <post-tasks>
REM
REM
REM
REM IMPORTANT NOTE: This script is provided for reference only. It has
been tested with SnapDrive 6.3.0 for Windows but may not work in all
environments.  Please review and then customize based on your secondary
protection requirements.
REM
set /a EXIT=0
set name="Mirror the backup"
set description="Mirror the backup"
set parameter=()


if /i "%1" == "-check" goto :check
if /i "%1" == "-execute" goto :execute
if /i "%1" == "-describe" goto :describe
```

```
:usage
        echo usage: %0 ^{ -check ^| -describe ^| -execute ^}
        set /a EXIT=99
        goto :exit

:check
        set /a EXIT=0
        goto :exit

:describe
        echo SM_PI_NAME:%name%
        echo SM_PI_DESCRIPTION:%description%
        echo SM_PRIMARY_MOUNT_POINTS : %SM_PRIMARY_MOUNT_POINTS%
        set /a EXIT=0
        goto :exit

REM - Split the comma-separated PRIMARY_MOUNT_POINTS and Mirror the
PRIMARY_MOUNT_POINTS one-by-one.

:execute
        set /a EXIT=0

        echo "execution started"

        REM FOR %%G IN (%SM_PRIMARY_MOUNT_POINTS%) DO echo %%G

        FOR %%V IN (%SM_PRIMARY_MOUNT_POINTS%) DO sdcli snap update_mirror
-d %%V

        if "%ERRORLEVEL%" NEQ "0" (
           set /a EXIT=4
           exit /b %EXIT%
        )

        echo "execution ended"

        goto :exit

:exit
        echo Command complete.
        exit /b %EXIT%
```

vault_the_backup.cmd

如果您使用的是在 7- 模式下运行的 Data ONTAP ，则可以使用此示例脚本来存储备份。它包括三个操作（检查

，描述和执行），并在脚本末尾执行这些操作。该脚本还包括错误消息处理，代码为 0 到 4 和 > 4：

```
@echo off
REM $Id:
//depot/prod/capstan/main/src/plugins/windows/examples/backup/create/post/
Vault_the_backup.cmd#1 $
REM
REM Copyright \(c\) 2011 NetApp, Inc.
REM All rights reserved.
REM
REM
REM This is a sample post-task script to vault the qtrees to the secondary
storage after successful backup operation.
REM|----------------------------------------------------------------------
-----------------------------------------|
REM| Pre-requisite/Assumption:
|
REM|   SnapVault relationship for the requested secondary storage qtrees
must be configured in Secondary storage. |
REM|----------------------------------------------------------------------
-----------------------------------------|
REM
REM
REM This script can be used from the SnapManager graphical user interface
(GUI) and command line interface (CLI).
REM
REM To execute the post-task script for the backup operation from
SnapManager GUI, follow these steps:
REM  1. From the Backup wizard > Task Specification page > Post-Tasks tab
> select the post-task scripts from the Available Scripts section.
REM
REM
REM To execute the post-task script for the backup operation from
SnapManager CLI, follow these steps:
REM  1. create a task specification XML file.
REM  2. Add the post-script name in the <post-tasks> tag of the XML file.
REM
REM Example:
REM             <post-tasks>
REM                <task>
REM                    <name>Vault the backup</name>
REM                    <description>Vault the backup</description>
REM                </task>
REM             <post-tasks>
REM
REM IMPORTANT NOTE: This script is provided for reference only. It has
```

4

```
been tested with SnapDrive 6.3.0 for Windows but may not work in all
environments.  Please review and then customize based on your secondary
protection requirements.
REM
REM
REM
REM
REM
set /a EXIT=0
set name="Vault the backup"
set description="Vault the backup"
set parameter=()



if /i "%1" == "-check" goto :check
if /i "%1" == "-execute" goto :execute
if /i "%1" == "-describe" goto :describe

:usage
        echo usage: %0 ^{ -check ^| -describe ^| -execute ^}
        set /a EXIT=99
        goto :exit

:check
        set /a EXIT=0
        goto :exit

:describe
        echo SM_PI_NAME:%name%
        echo SM_PI_DESCRIPTION:%description%
        echo SM_PRIMARY_SNAPSHOTS_AND_MOUNT_POINTS :
%SM_PRIMARY_SNAPSHOTS_AND_MOUNT_POINTS%
        set /a EXIT=0
        goto :exit

REM Split the colon-separated SM_PRIMARY_SNAPSHOTS_AND_MOUNT_POINTS And
SnapVault the mountpoints one-by-one

:execute
        set /a EXIT=0

        echo "execution started"

        FOR %%A IN (%SM_PRIMARY_SNAPSHOTS_AND_MOUNT_POINTS%) DO FOR /F
"tokens=1,2 delims=:" %%B IN ("%%A") DO sdcli snapvault archive  -a %%B
-DS %%C %%B
```

```
        if "%ERRORLEVEL%" NEQ "0" (
            set /a EXIT=4
            exit /b %EXIT%
        )
        echo "execution ended"

        goto :exit

:exit
        echo Command complete.
        exit /b %EXIT%
```

mirror_the_backup_cDOT.cmd

如果您使用的是集群模式 Data ONTAP，则可以使用此示例脚本镜像备份。它包括三个操作（检查，描述和执行），并在脚本末尾执行这些操作。该脚本还包括错误消息处理，代码为 0 到 4 和 > 4 ：

```
@echo off
REM $Id:
//depot/prod/capstan/main/src/plugins/windows/examples/backup/create/post/
Mirror_the_backup_cDOT.cmd#1 $
REM
REM  Copyright \(c\) 2011 NetApp, Inc.
REM All rights reserved.
REM
REM
REM This is a sample post-task script to mirror the volumes to the
secondary storage after successful backup operation.
REM|---------------------------------------------------------------------
-----------------------------------------|
REM| Pre-requisite/Assumption:
|
REM|   SnapMirror relationship should be set for the primary volumes and
secondary volumes                            |
REM|---------------------------------------------------------------------
-----------------------------------------|
REM
REM
REM This script can be used from the SnapManager graphical user interface
(GUI) and command line interface (CLI).
REM
REM To execute the post-task script for the backup operation from
SnapManager GUI, follow these steps:
REM  1. From the Backup wizard > Task Specification page > Post-Tasks tab
```

```
> select the post-task scripts from the Available Scripts section.
REM
REM
REM To execute the post-task script for the backup operation from
SnapManager CLI, follow these steps:
REM  1. create a task specification XML file.
REM  2. Add the post-script name in the <post-tasks> tag of the XML file.
REM
REM Example:
REM             <preposttask-specification xmlns="http://www.netapp.com">
REM               <task-specification>
REM                 <post-tasks>
REM                   <task>
REM                     <name>"Mirror the backup for cDOT"</name>
REM                   </task>
REM                 </post-tasks>
REM               </task-specification>
REM             </preposttask-specification>
REM
REM
REM
REM IMPORTANT NOTE: This script is provided for reference only. It has
been tested with SnapDrive 7.0 for Windows but may not work in all
environments.  Please review and then customize based on your secondary
protection requirements.
REM
set /a EXIT=0
set name="Mirror the backup cDOT"
set description="Mirror the backup cDOT"
set parameter=()



if /i "%1" == "-check" goto :check
if /i "%1" == "-execute" goto :execute
if /i "%1" == "-describe" goto :describe

:usage
        echo usage: %0 ^{ -check ^| -describe ^| -execute ^}
        set /a EXIT=99
        goto :exit


:check
        set /a EXIT=0
        goto :exit
```

```
:describe
        echo SM_PI_NAME:%name%
        echo SM_PI_DESCRIPTION:%description%
        set /a EXIT=0
        goto :exit

REM - Split the comma-separated SM_PRIMARY_MOUNT_POINTS then Mirror the
PRIMARY_MOUNT_POINTS one-by-one.

:execute
        set /a EXIT=0

        echo "execution started"

        REM FOR %%G IN (%SM_PRIMARY_MOUNT_POINTS%) DO powershell.exe -file
"c:\snapmirror.ps1" %%G < CON

        powershell.exe -file "c:\snapmirror.ps1"
%SM_PRIMARY_FULL_SNAPSHOT_NAME_FOR_TAG% < CON


        if "%ERRORLEVEL%" NEQ "0" (
            set /a EXIT=4
            exit /b %EXIT%
        )

        echo "execution ended"

        goto :exit

:exit
        echo Command complete.
        exit /b %EXIT%
```

vault_the_backup_cDOT.cmd

如果您使用的是集群模式 Data ONTAP ，则可以使用此示例脚本来存储备份。它包括三个操作（检查，描述和执行），并在脚本末尾执行这些操作。该脚本还包括错误消息处理，代码为 0 到 4 和 > 4 ：

```
@echo off
REM $Id:
//depot/prod/capstan/main/src/plugins/windows/examples/backup/create/post/
Vault_the_backup_cDOT.cmd#1 $
REM
REM  Copyright \(c\) 2011 NetApp, Inc.
REM All rights reserved.
```

```
REM
REM
REM This is a sample post-task script to do vault update to the secondary
storage after successful backup operation.
REM|----------------------------------------------------------------
------------------------------------------|
REM| Pre-requsite/Assumption:
|
REM|    Vaulting relationship with policy and rule needs to be established
between primary and secondary storage volumes |
REM|----------------------------------------------------------------
------------------------------------------|
REM
REM
REM This script can be used from the SnapManager graphical user interface
(GUI) and command line interface (CLI).
REM
REM To execute the post-task script for the backup operation from
SnapManager GUI, follow these steps:
REM
REM  1. From the Backup wizard > Task Specification page > Post-Tasks tab
> select the post-task scripts from the Available Scripts section.
REM  2. You can view the parameters available in the post-task script in
the Parameter section of the Task Specification page.
REM  3. Provide values to the following parameters:
REM     SNAPSHOT_LABEL    - Label Name to be set for snapshots before
doing the vault update
REM
REM FOR WINDOWS ITS ADVISED TO USE THE post-task script FROM THE GUI BY
SAVING THE BELOW SPEC XML AND GIVING THIS IN THE GUI LOAD XML FILE .
REM
REM To execute the post-task script for the backup operation from
SnapManager CLI, follow these steps:
REM  1. create a task specification XML file.
REM  2. Add the post-script name in the <post-tasks> tag of the XML file .
REM Example:
REM           <preposttask-specification xmlns="http://www.netapp.com">
REM             <task-specification>
REM               <post-tasks>
REM                 <task>
REM                   <name>"Vault the backup for cDOT"</name>
REM                   <parameter>
REM                   <name>SNAPSHOT_LABEL</name>
REM                   <value>TST</value>
REM                   </parameter>
REM                 </task>
```

```
REM                      </post-tasks>
REM                    </task-specification>
REM               </preposttask-specification>
REM
REM
REM IMPORTANT NOTE: This script is provided for reference only. It has
been tested with SnapDrive 7.0.0 for Windows but may not work in all
environments.
Please review and then customize based on your secondary protection
requirements.
REM
REM
REM Need to take care of the parameter variable, its not like shell script
array handling, so declare a new variable
REM for one more argument and set that variable SM_PI_PARAMETER in the
describe method. Then only that variable will be
REM Visible in the GUI task specification wizard else it wont list.

set /a EXIT=0
set name="Vault the backup for cDOT"
set description="Vault the backup For cDOT volumes"
set parameter=SNAPSHOT_LABEL :

if /i "%1" == "-check" goto :check
if /i "%1" == "-execute" goto :execute
if /i "%1" == "-describe" goto :describe

:usage
        echo usage: %0 ^{ -check ^| -describe ^| -execute ^}
        set /a EXIT=99
        goto :exit

:check
        set /a EXIT=0
        goto :exit

:describe
        echo SM_PI_NAME:%name%
        echo SM_PI_DESCRIPTION:%description%
    echo SM_PI_PARAMETER:%parameter%

        set /a EXIT=0
        goto :exit

REM Split the colon-separated SM_PRIMARY_SNAPSHOTS_AND_MOUNT_POINTS And
SnapVault the mountpoints one-by-one
```

```
:execute
        set /a EXIT=0

    echo "execution started"

    powershell.exe -file "c:\snapvault.ps1"
%SM_PRIMARY_FULL_SNAPSHOT_NAME_FOR_TAG%  %SNAPSHOT_LABEL% < CON

        if "%ERRORLEVEL%" NEQ "0" (
           set /a EXIT=4
           exit /b %EXIT%
        )
    echo "execution ended"

        goto :exit

:exit
        echo Command complete.
        exit /b %EXIT%
```

创建或更新**POST**脚本

您可以创建新的POST脚本、也可以使用`default_install_directory`
plugins\backup\create\post中提供的脚本。

关于此任务

您必须以特定方式对脚本进行结构调整，以便可以在 SnapManager 操作的上下文中执行该脚本。根据预期操作，可用输入参数和返回代码约定创建脚本。

步骤

1. 创建新脚本或使用可用的示例脚本。

2. 根据需要修改或包括函数，变量和参数。

3. 保存自定义脚本。

4. 在后处理任务规范 XML 文件中添加脚本名称和所需输入，或者通过选择正确的脚本和输入参数从图形用户界面提供输入。

   > (i) 您不必在任务规范 XML 文件中提供二级存储详细信息。

创建后处理、任务规范文件

通过 SnapManager ，您可以为备份操作创建后处理，任务规范的 XML 文件，其中包括 SnapMirror 或 SnapVault 后脚本。通过这些脚本，您可以将备份镜像或存储到二级存储。

步骤

1. 打开新的 XML 文件。

   您可以在`default_install_directory`\plugins\examples查看任务规范XML文件示例。

2. 将脚本名称添加为输入参数。

3. 保存任务规范 XML 文件。

使用后处理任务规范镜像卷

通过SnapManager for SAP、您可以在Windows环境中执行备份操作后使用脚本镜像卷。

步骤

1. 创建任务规范 XML 文件。

2. 在 XML 文件中，输入脚本名称作为输入参数。

3. 保存任务规范 XML 文件。

4. 使用以下命令创建数据库到二级存储的受保护备份。

   创建受保护的备份时、您必须在-`taskspect`选项后面提供已保存任务规范XML文件的完整路径。

   示例: `smsapbackup create -profile test_profile -full -online -taskspec" C` `: \\mirror\\snapmirror.xml "`

以下示例显示了使用 7- 模式 Data ONTAP 时的后处理任务规范结构：

```
#     <post-tasks>
#             <task>
#                 <name>Mirror the backup</name>
#                 <description>Mirror the backup</description>
#             </task>
#         <post-tasks>
```

以下示例显示了使用集群模式 Data ONTAP 时的后处理任务规范结构：

```
# <task-specification>
#               <post-tasks>
#                   <task>
#                    <name>"Vault the backup for cDOT"</name>
#                     <parameter>
#                     <name>SNAPSHOT_LABEL</name>
#                    <value>TST</value>
#                     </parameter>
#                   </task>
#                </post-tasks>
#              </task-specification>
#            </preposttask-specification>
```

使用后处理任务规范来存储qtree

通过SnapManager for SAP、您可以在Windows环境中执行备份操作后使用脚本来存储qtree。

步骤

1. 创建任务规范 XML 文件。

2. 在 XML 文件中，输入脚本名称作为输入参数。

3. 保存任务规范 XML 文件。

4. 使用以下命令创建数据库到二级存储的受保护备份。

   创建受保护的备份时、您必须在-`taskspect`选项后面提供已保存任务规范XML文件的完整路径。

   示例：smsapbackup create -profile test_profile -full -online -taskspec" C
   : \\mirror\\snapvault.xml"

以下示例显示了使用 7- 模式 Data ONTAP 时的后处理任务规范结构：

```
# <post-tasks>
#                 <task>
#                   <name>Vault the backup</name>
#                    <description>Vault the backup</description>
#               </task>
#         <post-tasks>
```

以下示例显示了使用集群模式 Data ONTAP 时的后处理任务规范结构：

```
# <task-specification>
#                <post-tasks>
#                  <task>
#                   <name>"Vault the backup for cDOT"</name>
#                 <parameter>
#                    <name>SNAPSHOT_LABEL</name>
#                    <value>TST</value>
#                    </parameter>
#                  </task>
#                </post-tasks>
#              </task-specification>
#            </preposttask-specification>
```