



# 使用指令碼保護資料庫備份 SnapManager for SAP

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# 使用指令碼保護資料庫備份

當主要與次要儲存系統之間建立SnapMirror或SnapMirror關係時、可使用指令碼來保護資料庫備份。SnapManager SnapVault您可以使用預設的後指令碼、從SnapManager CLI和GUI進行備份作業的後處理活動。

您可以使用下列預設的POST指令碼：「預設安裝目錄\外掛程式\備份\建立\貼文」：

- SnapMirror附有「鏡射\_the\_backup.cmd」（如果您使用Data ONTAP 以7-Mode運作的功能）
- 如果您使用以7-Mode運作的功能、請使用SnapVault 《支援資訊》、「Vault\_the\_backup.cmd」Data ONTAP
- SnapMirror的「鏡射」、「鏡射\_the\_backup\_cDOT.cmd」（如果您使用叢集Data ONTAP 式的功能）
- 如果您使用叢集式的支援功能、請使用SnapVault 「Vault\_the\_backup\_cDOT.cmd」Data ONTAP

如需詳細資訊、請參閱「預設安裝目錄\外掛程式」中的「Readme.txt」。

僅針對複製作業提供前置處理或後置處理指令碼。SnapManager提供供備份與還原作業使用的前置處理與後置處理指令碼。SnapManager您可以使用這些指令碼在備份或還原作業之前或之後執行。



這些指令碼僅供參考。這些產品已通過SnapDrive 適用於Windows或更新版本的NetApp 7.0測試、但可能無法在所有環境中運作。您應該根據次要保護需求自訂指令碼。指令碼無法搭配SnapDrive 6.2之前的版本使用。

## 指令碼後的範例

您可以參照範例指令碼、並根據環境建立自訂指令碼、以執行鏡射和保存。範例指令碼可在預設安裝目錄\外掛程式\備份\建立\貼文中找到。

### mirror備份.cmd

如果您使用Data ONTAP 以7-Mode運作的功能、可以使用此範例指令碼來鏡射備份。其中包括三項作業（檢查、說明及執行）、並在指令碼結尾執行。指令碼也包含錯誤訊息處理、代碼為0至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Data ONTAP 以7-Mode運作的功能、可以使用此範例指令碼來保存備份資料。其中包括三項作業（檢查、說明及執行）、並在指令碼結尾執行。指令碼也包含錯誤訊息處理、代碼為0至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
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

如果您使用叢集Data ONTAP 式的樣例指令碼來鏡射備份、其中包括三項作業（檢查、說明及執行）、並在指令碼結尾執行。指令碼也包含錯誤訊息處理、代碼為0至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

如果您使用叢集Data ONTAP 式的支援、可以使用此範例指令碼來保存備份。其中包括三項作業（檢查、說明及執行）、並在指令碼結尾執行。指令碼也包含錯誤訊息處理、代碼為0至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-requisite/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%

```

## 建立或更新POST指令碼

您可以建立新的POST指令碼、或使用「預設安裝目錄」\外掛程式\備份\建立\貼文中的指令碼。

### 關於這項工作

您必須以特定方式建立指令碼結構、以便在SnapManager 執行動作的情境中執行指令碼。根據預期的作業、可用的輸入參數及傳回程式碼慣例來建立指令碼。

#### 步驟

1. 建立新指令碼或使用可用的範例指令碼。
2. 視需要修改或包含函數、變數和參數。
3. 儲存自訂指令碼。
4. 在後處理工作規格XML檔案中新增指令碼名稱和必要輸入、或選取適當的指令碼和輸入參數、從GUI提供輸入。



您不需要在工作規格XML檔案中提供次要儲存設備詳細資料。

## 建立後置處理、工作規格檔案

利用此功能、您可以建立後處理、工作規格的XML檔案、以供備份作業使用、其中包括SnapMirror或還原指令碼。SnapManager SnapVault指令碼可讓您將備份鏡射或保存至次要儲存設備。

### 步驟

1. 開啟新的XML檔案。

您可以在「預設安裝目錄」\外掛程式\範例中看到範例工作規格XML檔案。

2. 將指令碼名稱新增為輸入參數。
3. 儲存工作規格的XML檔案。

### 使用後處理工作規格來鏡射磁碟區

SAP版的支援功能可讓您在Windows環境中執行備份作業之後、使用指令碼鏡射磁碟區。SnapManager

### 步驟

1. 建立工作規格XML檔案。
2. 在XML檔案中、輸入指令碼名稱作為輸入參數。
3. 儲存工作規格XML檔案。
4. 使用下列命令建立資料庫到次要儲存設備的受保護備份。

在建立受保護的備份時、您必須在「taskspecs」選項之後、提供已儲存工作規格XML檔案的完整路徑。

範例：「msapbackup create -profile test\_profile -full -online -taskspec 「C:\鏡射\ SnapMirror.xml」

以下範例顯示Data ONTAP 當您使用以7-Mode運作的功能時、後處理工作規格的結構：

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

以下範例顯示使用叢集Data ONTAP 式的後處理工作規格結構：

```

# <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>

```

使用後處理工作規格來保存qtree

SAP版的支援功能可讓您在Windows環境中執行備份作業之後、使用指令碼來保存qtree  
 ◦ SnapManager

步驟

1. 建立工作規格XML檔案。
2. 在XML檔案中、輸入指令碼名稱作為輸入參數。
3. 儲存工作規格XML檔案。
4. 使用下列命令建立資料庫到次要儲存設備的受保護備份。

在建立受保護的備份時、您必須在「taskspecs」選項之後、提供已儲存工作規格XML檔案的完整路徑。

範例：「msapbackup create -profile test\_profile -full -online -taskspec 「C : \\ mirror \ SnapVault .xml」

以下範例顯示Data ONTAP 當您使用以7-Mode運作的功能時、後處理工作規格的結構：

```

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

```

以下範例顯示使用叢集Data ONTAP 式的後處理工作規格結構：

```
# <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>
```

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