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Overview: This is a sample NetApp procedure to run a DR Test Procedure or ‘Dry-run’ using a companies existing Production DR site data without interrupting the active Production to DR site asynchronous Volume SnapMirror replication or configuration for normal disaster recovery readiness. The procedure leverages the FlexClone feature in Clustered Data OnTap to make a second writable copy of each active DR volume and shares and pointing the network logical interfaces and test storage virtual machines to the isolation DR infrastructure (network, server and desktops).

Disclaimer: This is a public available procedure via NetApp Customer Support resource on a high level and is just customized for the Storage Cluster Names for a particular case study. Some special customization were added to adjust to particular client(s) DR infrastructure setup. This is from a live case study and the subject company of the case and any private or personal information has been scrubbed from the procedure to comply with Information Privacy. This is not private and proprietary instructions developed by my own knowledge and is does not apply to Privacy Code regulations which would make my current employer sole owner of this procedure.

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NASProsSiteCLUCLU = Production Cluster ( DR Source)

NASDRSiteCLUCLU = DR Destination Cluster

NASDRSiteCLU::\*> snapmirror show -fields last-transfer-size,throttle

source-path destination-path throttle last-transfer-size

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NASProsSiteCLU\_svmtest:testmvolume NASProsSiteCLU\_svmtest:testvolume unlimited -

NASProsSiteCLU\_svm1: NASProsSiteCLU\_svm1dr: 300000 9.11GB

NASNASProsSiteCLU\_svm2dr: NASProsSiteCLU\_svm2dr: 300000 627.4MB

NASProsSiteCLU\_svm3dr: NASProsSiteCLU\_svm3drdr: 300000 9.05MB

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FAILOVER:

NASDRSiteCLU::> set adv

Warning: These advanced commands are potentially dangerous; use them only when

directed to do so by NetApp personnel.

Do you want to continue? {y|n}: y

Logon to NASDRSiteCLU:

1.

snapmirror show -destination-vserver NASProsSiteCLU\_svm1dr

snapmirror show -destination-vserver NASProsSiteCLU\_svm2dr

snapmirror show -destination-vserver NASProsSiteCLU\_svm3drdr

2.

snapmirror update -destination-vserver NASProsSiteCLU\_svm1dr

snapmirror update -destination-vserver NASProsSiteCLU\_svm2dr

snapmirror update -destination-vserver NASProsSiteCLU\_svm3drdr

3.

snapmirror show -destination-vserver NASProsSiteCLU\_svm1dr -instance

snapmirror show -destination-vserver NASProsSiteCLU\_svm2dr -instance

snapmirror show -destination-vserver NASProsSiteCLU\_svm3drdr -instance

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vserver cifs share show -vserver \*drTEST

Vserver Share Path Properties Comment ACL

-------------- ------------- ----------------- ---------- -------- -----------

NASProsSiteCLU\_svm1drTEST admin$ / browsable - -

NASProsSiteCLU\_svm1drTEST FinanceApps /FinanceShare\_vol1/ browsable - XYZCo\File Servers Admins / Full Control

oplocks XYZCo\Domain Admins / Full Control

changenotify XYZCo\File Servers Access / Read

XYZCo\FinanceAppOwners

XYZCo\File Servers Admins / Full Control

NASProsSiteCLU\_svm1drTEST c$ / oplocks - BUILTIN\Administrators / Full Control

browsable

changenotify

show-previous-versions

NASProsSiteCLU\_svm1drTEST D$ /FinanceShare\_vol1 browsable - XYZCo\File Servers Admins / Full Control

oplocks XYZCo\NetApp Admins / Full Control

changenotify

NASProsSiteCLU\_svm1drTEST ipc$ / browsable - -

NASProsSiteCLU\_svm1drTEST FinanceRisk /FinanceShare\_vol1/ browsable XYZCo\Domain Admins / Full Control

oplocks via XYZCo\File Servers Admins / Full Control

changenotify XYZCo\Finance Users / Change

DocsMove XYZCo\DocTransferAdmins / Full Control

from

FinTechW2K16

NASProsSiteCLU\_svm1drTEST FinanceTech /FinanceShare\_vol1/ browsable - XYZCo\FinTechUsers / Change

oplocks

changenotify

NASProsSiteCLU\_svm2drTEST browsable NT AUTHORITY\Authenticated Users / Change

%w$ %w changenotify

homedirectory

oplocks -

NASProsSiteCLU\_svm2drTEST browsable

admin$ / - -

NASProsSiteCLU\_svm2drTEST oplocks BUILTIN\Administrators / Full Control

c$ / browsable -

changenotify

show-previous-versions

NASProsSiteCLU\_svm2drTEST oplocks NT AUTHORITY\Authenticated Users / Change

CIFS.HOMEDIR %w browsable -

changenotify

homedirectory

NASProsSiteCLU\_svm2drTEST browsable XYZCo\File Servers Access / Read

D$ /XYZCoStaff\_vol1 oplocks - XYZCo\File Servers Admins / Full Control

changenotify XYZCo\NetApp Admins / Full Control

NASProsSiteCLU\_svm2drTEST browsable

ipc$ / - -

Vserver Share Path Properties Comment ACL

-------------- ------------- ----------------- ---------- -------- -----------

NASProsSiteCLU\_svm2drTEST browsable NT AUTHORITY\Authenticated Users / Change

HomeDirs /XYZCoStaff\_vol1 oplocks Users XYZCo\NetApp Admins / Change

changenotify XYZCo\File Servers Access / Read

XYZCo\File Servers Admins / Full Control

XYZCo\NetApp Admins / Full Control

NASProsSiteCLU\_svm2drTEST oplocks NT AUTHORITY\Authenticated Users / Read

~ %w browsable -

changenotify

homedirectory

NASProsSiteCLU\_svm2drTEST browsable NT AUTHORITY\Authenticated Users / Read

~%w$ %w changenotify

homedirectory

oplocks -

NASProsSiteCLU\_svm2drTEST oplocks NT AUTHORITY\Authenticated Users / Read

~CIFS.HOMEDIR %w browsable -

changenotify

homedirectory

NASProsSiteCLU\_svm3drTEST admin$ / browsable - -

NASProsSiteCLU\_svm3drTEST c$ / oplocks - BUILTIN\Administrators / Full Control

browsable

changenotify

show-previous-versions

NASProsSiteCLU\_svm3drTEST CorpSecurityScans /CorpSecurity\_vol1/ browsable Share XYZCo\CorpSecurityGrp1 / Full Control

Shared/ oplocks for XYZCo\CorpSecurityGrp1 / Full Control

Consultants/ changenotify XYZCo\Domain Admins / Full Control

Cyberplex XYZCo\NetApp Admins / Full Control

NASProsSiteCLU\_svm3drTEST D$ /CorpSecurity\_vol1 browsable - XYZCo\File Servers Access / Read

oplocks XYZCo\File Servers Admins / Full Control

changenotify XYZCo\NetApp Admins / Full Control

NASProsSiteCLU\_svm3drTEST InternalAudit /CorpSecurity\_vol1/ browsable - XYZCo\IAUsers / Full Control

oplocks

changenotify

NASProsSiteCLU\_svm3drTEST ExternalAudit$ /CorpSecurity\_vol1/ browsable - XYZCo\IAUsers / Full Control

oplocks

changenotify

Vserver Share Path Properties Comment ACL

-------------- ------------- ----------------- ---------- -------- -----------

NASProsSiteCLU\_svm3drTEST ipc$ / browsable - -

NASProsSiteCLU\_svm3drTEST EmailAudits /CorpSecurity\_vol1/ browsable - XYZCo\IAUsers / Full Control

Shared/ISO oplocks

changenotify

NASProsSiteCLU\_svm3drTEST SecurityOps /CorpSecurity\_vol1/ browsable - NT AUTHORITY\Authenticated Users / Change

Shared/Software/ oplocks XYZCo\Domain Admins / Full Control

Java changenotify XYZCo\NetApp Admins / Full Control

XYZCo\IAUsers / Read

XYZCo\SecOpsTeam / Change

'x'entries were displayed.

==============

4.

volume show -vserver NASProsSiteCLU\_svm1dr

volume show -vserver NASProsSiteCLU\_svm1drTEST

Sample output:

Vserver Volume Aggregate State Type Size Available Used%

--------- ------------ ------------ ---------- ---- ---------- ---------- -----

NASProsSiteCLU\_svm1drTEST

NASProsSiteCLU\_svm1drTEST\_root

aggr1\_NASDRSiteCLU\_02

online RW 1GB 970.7MB 5%

NASProsSiteCLU\_svm1drTEST

FinanceShare\_vol1 aggr1\_NASDRSiteCLU\_02

online RW 7TB 1.79TB 74%

5.

volume offline -vserver NASProsSiteCLU\_svm1drTEST FinanceShare\_vol1

Sample warning and expected response;

Warning: Volume "FinanceShare\_vol1" on Vserver "NASProsSiteCLU\_svm1drTEST" must be unmounted before being taken offline or restricted. Clients will not be able to access the affected volume and related junction paths after that. Do you still want to

unmount the volume and continue? {y|n}: y

Volume "NASProsSiteCLU\_svm1drTEST:FinanceShare\_vol1" is now offline.

6.

volume show -vserver NASProsSiteCLU\_svm1drTEST

Sample output

Vserver Volume Aggregate State Type Size Available Used%

--------- ------------ ------------ ---------- ---- ---------- ---------- -----

NASProsSiteCLU\_svm1drTEST

NASProsSiteCLU\_svm1drTEST\_root

aggr1\_NASDRSiteCLU\_02

online RW 1GB 970.7MB 5%

NASProsSiteCLU\_svm1drTEST

FinanceShare\_vol1 aggr1\_NASDRSiteCLU\_02

offline RW 7TB - -

7.

volume delete -vserver NASProsSiteCLU\_svm1drTEST -volume FinanceShare\_vol1

Sample warning and expected response -

arning: Are you sure you want to delete volume "FinanceShare\_vol1" in Vserver "NASProsSiteCLU\_svm1drTEST" ? {y|n}: y

[Job 4048] Job is queued: Delete FinanceShare\_vol1.

[Job 4048] Job succeeded: Successful

8.

volume show -vserver NASProsSiteCLU\_svm1drTEST

Sample Output -

Vserver Volume Aggregate State Type Size Available Used%

--------- ------------ ------------ ---------- ---- ---------- ---------- -----

NASProsSiteCLU\_svm1drTEST

NASProsSiteCLU\_svm1drTEST\_root

aggr1\_NASDRSiteCLU\_02

online RW 1GB 970.7MB 5%

9.

volume snapshot show -vserver NASProsSiteCLU\_svm1dr -volume FinanceShare\_vol1

Sampkle output -

NAS5650C2(2014735671)\_FinanceShare\_vol1.485861

SP\_2\_1411155\_1501027221

SP\_2\_1412380\_1501113631

SP\_2\_1413352\_1501192850

nightly.1

SP\_2\_1414887\_1501286424

nightly.0

FinanceShare(0536984422)\_FinanceShare\_vol1.8246

FinanceShare(0536984422)\_FinanceShare\_vol1.8247

transition\_snapshot\_schedule\_24.2017-07-29\_2000

transition\_snapshot\_schedule\_23.2017-07-30\_0000

transition\_snapshot\_schedule\_24.2017-07-30\_0800

transition\_snapshot\_schedule\_24.2017-07-30\_1200

transition\_snapshot\_schedule\_24.2017-07-30\_1600

transition\_snapshot\_schedule\_24.2017-07-30\_2000

transition\_snapshot\_schedule\_23.2017-07-31\_0000

transition\_snapshot\_schedule\_24.2017-07-31\_0800

daily.2017-08-01\_0010

daily.2017-08-02\_0010

daily.2017-08-03\_0010

daily.2017-08-04\_0010

daily.2017-08-05\_0010

daily.2017-08-06\_0010

weekly.2017-08-06\_0015

daily.2017-08-07\_0010

daily.2017-08-08\_0010

daily.2017-08-09\_0010

daily.2017-08-10\_0010

daily.2017-08-11\_0010

daily.2017-08-12\_0010

daily.2017-08-13\_0010

weekly.2017-08-13\_0015

daily.2017-08-14\_0010

daily.2017-08-15\_0010

daily.2017-08-16\_0010

daily.2017-08-17\_0010

daily.2017-08-18\_0010

daily.2017-08-19\_0010

daily.2017-08-20\_0010

weekly.2017-08-20\_0015

daily.2017-08-21\_0010

daily.2017-08-22\_0010

daily.2017-08-23\_0010

daily.2017-08-24\_0010

hourly.2017-08-24\_1505

daily.2017-08-25\_0010

daily.2017-08-26\_0010

daily.2017-08-27\_0010

weekly.2017-08-27\_0015

daily.2017-08-28\_0010

hourly.2017-08-28\_0605

hourly.2017-08-28\_0705

hourly.2017-08-28\_0805

hourly.2017-08-28\_0905

hourly.2017-08-28\_1005

hourly.2017-08-28\_1105

vserverdr.1.73283fc3-7d40-11e7-a903456

Note: choose the latest 'vserverdr.\*' snapshot to use in the next command.

set priv adv

10.

volume clone create -vserver NASProsSiteCLU\_svm1drTEST -flexclone FinanceShare\_vol1 -type RW -parent-vserver NASProsSiteCLU\_svm1dr -parent-volume FinanceShare\_vol1 -junction-active true -foreground true -parent-snapshot vvserverdr.1.73283fc3-7d40-11e7-a903456

Sample output -

[Job 4049] Job is queued: Create FinanceShare\_SVMDR\_vol1. Info: The default policies of the Vserver "NASProsSiteCLU\_svm1drTEST" will be assigned to the clone volume. Use the "volume modify" command to change the policies associated with the clone volume.

[Job 4049] Job succeeded: Successful

11.

volume show -vserver NASProsSiteCLU\_svm1drTEST

Sample output -

Vserver Volume Aggregate State Type Size Available Used%

--------- ------------ ------------ ---------- ---- ---------- ---------- -----

NASProsSiteCLU\_svm1drTEST

NASProsSiteCLU\_svm1drTEST\_root

aggr1\_NASDRSiteCLU\_02

online RW 1GB 970.7MB 5%

NASProsSiteCLU\_svm1drTEST

FinanceShare\_vol1

aggr1\_NASDRSiteCLU\_02

online RW 7TB 1.61TB 76%

NASProsSiteCLU\_svm3:

volume show -vserver NASProsSiteCLU\_svm3dr

volume show -vserver NASProsSiteCLU\_svm3drTEST

Sample output:

NASDRSiteCLU::\*> volume show -vserver NASProsSiteCLU\_svm3drTEST

Vserver Volume Aggregate State Type Size Available Used%

--------- ------------ ------------ ---------- ---- ---------- ---------- -----

NASProsSiteCLU\_svm3drTEST

NASProsSiteCLU\_svm3drTEST\_root

aggr1\_NASDRSiteCLU\_02

online RW 1GB 971.8MB 5%

NASProsSiteCLU\_svm3drTEST

CorpSecurity\_vol1 aggr1\_NASDRSiteCLU\_01

online RW 3.50TB 630.3GB 82%

volume offline -vserver NASProsSiteCLU\_svm3drTEST CorpSecurity\_vol1

Sample warning and expected response;

Warning: Volume "CorpSecurity\_vol1" on Vserver "NASProsSiteCLU\_svm3drTEST" must be unmounted before being taken offline or restricted. Clients will not be able to access the affected volume and related junction paths after that. Do you still want to

unmount the volume and continue? {y|n}: y

Volume "NASProsSiteCLU\_svm3drTEST:CorpSecurity\_vol1" is now offline.

volume show -vserver NASProsSiteCLU\_svm3drTEST

Sample output -

Vserver Volume Aggregate State Type Size Available Used%

--------- ------------ ------------ ---------- ---- ---------- ---------- -----

NASProsSiteCLU\_svm3drTEST

NASProsSiteCLU\_svm3drTEST\_root

aggr1\_NASDRSiteCLU\_02

online RW 1GB 971.8MB 5%

NASProsSiteCLU\_svm3drTEST

CorpSecurity\_vol1 aggr1\_NASDRSiteCLU\_01

offline RW 3.50TB 630.3GB 82%

volume delete -vserver NASProsSiteCLU\_svm3drTEST -volume CorpSecurity\_vol1

Sample warning and expected response -

arning: Are you sure you want to delete volume "CorpSecurity\_vol1" in Vserver "NASProsSiteCLU\_svm3drTEST" ? {y|n}: y

volume show -vserver NASProsSiteCLU\_svm3drTEST

Sample Output -

Vserver Volume Aggregate State Type Size Available Used%

--------- ------------ ------------ ---------- ---- ---------- ---------- -----

NASProsSiteCLU\_svm3drTEST

NASProsSiteCLU\_svm3drTEST\_root

aggr1\_NASDRSiteCLU\_02

online RW 1GB 971.8MB 5%

volume snapshot show -vserver NASProsSiteCLU\_svm3dr -volume CorpSecurity\_vol1

Sampkle output -

Vserver Volume Snapshot Size Total% Used%

-------- -------- ------------------------------------- -------- ------ -----

NASProsSiteCLU\_svm3dr CorpSecurity\_vol1

NAS5650C2(2014735671)\_CorpSecurity\_vol1.498445 5.55GB 0% 0%

weekly.0 311.0MB 0% 0%

SP\_2\_1401221\_1500328820 609.4MB 0% 0%

SP\_2\_1402706\_1500422431 1.91GB 0% 0%

SP\_2\_1403853\_1500508836 325.5MB 0% 0%

SP\_2\_1405061\_1500593424 270.3MB 0% 0%

nightly.1 432.0MB 0% 0%

SP\_2\_1406327\_1500681619 5.91MB 0% 0%

nightly.0 2.61MB 0% 0%

NASProsSiteCLU\_svm3(0536984422)\_CorpSecurity\_vol1.8003 2.10MB 0% 0%

NASProsSiteCLU\_svm3(0536984422)\_CorpSecurity\_vol1.8004 26.51GB 1% 1%

transition\_snapshot\_schedule\_18.2017-07-23\_0000

327.3MB 0% 0%

transition\_snapshot\_schedule\_19.2017-07-26\_0000

55.18MB 0% 0%

transition\_snapshot\_schedule\_20.2017-07-26\_0600

1.67GB 0% 0%

transition\_snapshot\_schedule\_20.2017-07-26\_1200

53.12MB 0% 0%

transition\_snapshot\_schedule\_20.2017-07-26\_1800

4.14MB 0% 0%

transition\_snapshot\_schedule\_19.2017-07-27\_0000

164KB 0% 0%

transition\_snapshot\_schedule\_20.2017-07-27\_0000

736KB 0% 0%

transition\_snapshot\_schedule\_20.2017-07-27\_0600

341.1MB 0% 0%

transition\_snapshot\_schedule\_20.2017-07-27\_1200

5.97GB 0% 0%

daily.2017-07-30\_0010 100KB 0% 0%

weekly.2017-07-30\_0015 67.35MB 0% 0%

daily.2017-07-31\_0010 805.7MB 0% 0%

daily.2017-08-01\_0010 303MB 0% 0%

daily.2017-08-02\_0010 46.38MB 0% 0%

daily.2017-08-03\_0010 589.5MB 0% 0%

daily.2017-08-04\_0010 355.1MB 0% 0%

daily.2017-08-05\_0010 1.96GB 0% 0%

daily.2017-08-06\_0010 100KB 0% 0%

weekly.2017-08-06\_0015 23.32MB 0% 0%

---Blocks---

Vserver Volume Snapshot Size Total% Used%

-------- -------- ------------------------------------- -------- ------ -----

NASProsSiteCLU\_svm3dr CorpSecurity\_vol1

daily.2017-08-07\_0010 774.7MB 0% 0%

daily.2017-08-08\_0010 56.91MB 0% 0%

daily.2017-08-09\_0010 56.56MB 0% 0%

daily.2017-08-10\_0010 483.4MB 0% 0%

daily.2017-08-11\_0010 61.55MB 0% 0%

daily.2017-08-12\_0010 1.34GB 0% 0%

daily.2017-08-13\_0010 104KB 0% 0%

weekly.2017-08-13\_0015 3.13MB 0% 0%

daily.2017-08-14\_0010 130.5MB 0% 0%

daily.2017-08-15\_0010 79.41MB 0% 0%

daily.2017-08-16\_0010 52.25MB 0% 0%

daily.2017-08-17\_0010 85.16MB 0% 0%

daily.2017-08-18\_0010 152.6MB 0% 0%

daily.2017-08-19\_0010 2.65GB 0% 0%

daily.2017-08-20\_0010 104KB 0% 0%

weekly.2017-08-20\_0015 4.02MB 0% 0%

daily.2017-08-21\_0010 76.77MB 0% 0%

daily.2017-08-22\_0010 49.12MB 0% 0%

daily.2017-08-23\_0010 57.53MB 0% 0%

daily.2017-08-24\_0010 59.87MB 0% 0%

hourly.2017-08-24\_1505 35.88MB 0% 0%

daily.2017-08-25\_0010 9.22GB 0% 0%

daily.2017-08-26\_0010 5.00GB 0% 0%

daily.2017-08-27\_0010 192KB 0% 0%

weekly.2017-08-27\_0015 79.09MB 0% 0%

daily.2017-08-28\_0010 63.19MB 0% 0%

daily.2017-08-29\_0010 570.3MB 0% 0%

daily.2017-08-30\_0010 63.05MB 0% 0%

hourly.2017-08-30\_1605 14.49MB 0% 0%

hourly.2017-08-30\_1705 12.93MB 0% 0%

hourly.2017-08-30\_1805 10.28MB 0% 0%

hourly.2017-08-30\_1905 348KB 0% 0%

hourly.2017-08-30\_2005 636KB 0% 0%

vserverdr.2.c2a27c5b-7d40-11e7-a903

668KB 0% 0%

hourly.2017-08-30\_2105 644KB 0% 0%

vserverdr.0.c2a27c5b-7d40

0B 0% 0%

Note: choose the latest 'vserverdr.\*' snapshot to use in the next command.

volume clone create -vserver NASProsSiteCLU\_svm3drTEST -flexclone CorpSecurity\_vol1 -type RW -parent-vserver NASProsSiteCLU\_svm3dr -parent-volume CorpSecurity\_vol1 -junction-active true -foreground true -parent-snapshot vserverdr.0.c2a27c5b-7d40

Sample output -

[Job 4049] Job is queued: Create NASProsSiteCLU\_svm3\_SVMDR\_vol1. Info: The default policies of the Vserver "NASProsSiteCLU\_svm3drTEST" will be assigned to the clone volume. Use the "volume modify" command to change the policies associated with the clone volume.

[Job 4049] Job succeeded: Successful

volume show -vserver NASProsSiteCLU\_svm3drTEST

Sample output -

Vserver Volume Aggregate State Type Size Available Used%

--------- ------------ ------------ ---------- ---- ---------- ---------- -----

NASProsSiteCLU\_svm3drTEST

NASProsSiteCLU\_svm3drTEST\_root

aggr1\_NASDRSiteCLU\_02

online RW 1GB 970.7MB 5%

NASProsSiteCLU\_svm3drTEST

NASProsSiteCLU\_svm3\_SVMDR\_vol1

aggr1\_NASDRSiteCLU\_02

online RW 7TB 1.61TB 76%

NASProsSiteCLU\_svm2dr:

volume show -vserver NASProsSiteCLU\_svm2dr

volume show -vserver NASProsSiteCLU\_svm2drTEST

Sample output:

NASDRSiteCLU::\*> volume show -vserver NASProsSiteCLU\_svm2drTEST

Vserver Volume Aggregate State Type Size Available Used%

--------- ------------ ------------ ---------- ---- ---------- ---------- -----

NASProsSiteCLU\_svm2drTEST

NASProsSiteCLU\_svm2drTEST\_root

aggr1\_NASDRSiteCLU\_02

online RW 1GB 972.0MB 5%

NASProsSiteCLU\_svm2drTEST

NASProsSiteCLU\_svm2dr\_vol1

aggr1\_NASDRSiteCLU\_01

online RW 8.39TB 874.6GB 89%

volume offline -vserver NASProsSiteCLU\_svm2drTEST NASProsSiteCLU\_svm2dr\_vol1

Sample warning and expected response;

Warning: Volume "NASProsSiteCLU\_svm2dr\_vol1" on Vserver "NASProsSiteCLU\_svm2drTEST" must be unmounted before being taken offline or restricted. Clients will not be able to access the affected volume and related junction paths after that. Do you still want to

unmount the volume and continue? {y|n}: y

Volume "NASProsSiteCLU\_svm2drTEST:NASProsSiteCLU\_svm2dr\_vol1" is now offline.

volume show -vserver NASProsSiteCLU\_svm2drTEST

Sample output -

Vserver Volume Aggregate State Type Size Available Used%

--------- ------------ ------------ ---------- ---- ---------- ---------- -----

NASProsSiteCLU\_svm2drTEST

NASProsSiteCLU\_svm2drTEST\_root

aggr1\_NASDRSiteCLU\_02

online RW 1GB 972.0MB 5%

NASProsSiteCLU\_svm2drTEST

NASProsSiteCLU\_svm2dr\_vol1

aggr1\_NASDRSiteCLU\_01

offline RW 8.39TB 874.6GB 89%

volume delete -vserver NASProsSiteCLU\_svm2drTEST -volume NASProsSiteCLU\_svm2dr\_vol1

Sample warning and expected response -

arning: Are you sure you want to delete volume "NASProsSiteCLU\_svm2dr\_vol1" in Vserver "NASProsSiteCLU\_svm2drTEST" ? {y|n}: y

volume show -vserver NASProsSiteCLU\_svm2drTEST

Sample Output -

Vserver Volume Aggregate State Type Size Available Used%

--------- ------------ ------------ ---------- ---- ---------- ---------- -----

NASProsSiteCLU\_svm2drTEST

NASProsSiteCLU\_svm2drTEST\_root

aggr1\_NASDRSiteCLU\_02

online RW 1GB 972.0MB 5%

volume snapshot show -vserver NASProsSiteCLU\_svm2dr -volume NASProsSiteCLU\_svm2dr\_vol1

Sampkle output -

Vserver Volume Snapshot Size Total% Used%

-------- -------- ------------------------------------- -------- ------ -----

NASProsSiteCLU\_svm2dr NASProsSiteCLU\_svm2dr\_vol1

NAS5650C2(2014735671)\_NASProsSiteCLU\_svm2dr\_vol1.498445 5.55GB 0% 0%

weekly.0 311.0MB 0% 0%

SP\_2\_1401221\_1500328820 609.4MB 0% 0%

SP\_2\_1402706\_1500422431 1.91GB 0% 0%

SP\_2\_1403853\_1500508836 325.5MB 0% 0%

SP\_2\_1405061\_1500593424 270.3MB 0% 0%

nightly.1 432.0MB 0% 0%

SP\_2\_1406327\_1500681619 5.91MB 0% 0%

nightly.0 2.61MB 0% 0%

NASProsSiteCLU\_svm2dr(0536984422)\_NASProsSiteCLU\_svm2dr\_vol1.8003 2.10MB 0% 0%

NASProsSiteCLU\_svm2dr(0536984422)\_NASProsSiteCLU\_svm2dr\_vol1.8004 26.51GB 1% 1%

transition\_snapshot\_schedule\_18.2017-07-23\_0000

327.3MB 0% 0%

transition\_snapshot\_schedule\_19.2017-07-26\_0000

55.18MB 0% 0%

transition\_snapshot\_schedule\_20.2017-07-26\_0600

1.67GB 0% 0%

transition\_snapshot\_schedule\_20.2017-07-26\_1200

53.12MB 0% 0%

transition\_snapshot\_schedule\_20.2017-07-26\_1800

4.14MB 0% 0%

transition\_snapshot\_schedule\_19.2017-07-27\_0000

164KB 0% 0%

transition\_snapshot\_schedule\_20.2017-07-27\_0000

736KB 0% 0%

transition\_snapshot\_schedule\_20.2017-07-27\_0600

341.1MB 0% 0%

transition\_snapshot\_schedule\_20.2017-07-27\_1200

5.97GB 0% 0%

daily.2017-07-30\_0010 100KB 0% 0%

weekly.2017-07-30\_0015 67.35MB 0% 0%

daily.2017-07-31\_0010 805.7MB 0% 0%

daily.2017-08-01\_0010 303MB 0% 0%

daily.2017-08-02\_0010 46.38MB 0% 0%

daily.2017-08-03\_0010 589.5MB 0% 0%

daily.2017-08-04\_0010 355.1MB 0% 0%

daily.2017-08-05\_0010 1.96GB 0% 0%

daily.2017-08-06\_0010 100KB 0% 0%

weekly.2017-08-06\_0015 23.32MB 0% 0%

---Blocks---

Vserver Volume Snapshot Size Total% Used%

-------- -------- ------------------------------------- -------- ------ -----

NASProsSiteCLU\_svm2dr NASProsSiteCLU\_svm2dr\_vol1

daily.2017-08-07\_0010 774.7MB 0% 0%

daily.2017-08-08\_0010 56.91MB 0% 0%

daily.2017-08-09\_0010 56.56MB 0% 0%

daily.2017-08-10\_0010 483.4MB 0% 0%

daily.2017-08-11\_0010 61.55MB 0% 0%

daily.2017-08-12\_0010 1.34GB 0% 0%

daily.2017-08-13\_0010 104KB 0% 0%

weekly.2017-08-13\_0015 3.13MB 0% 0%

daily.2017-08-14\_0010 130.5MB 0% 0%

daily.2017-08-15\_0010 79.41MB 0% 0%

daily.2017-08-16\_0010 52.25MB 0% 0%

daily.2017-08-17\_0010 85.16MB 0% 0%

daily.2017-08-18\_0010 152.6MB 0% 0%

daily.2017-08-19\_0010 2.65GB 0% 0%

daily.2017-08-20\_0010 104KB 0% 0%

weekly.2017-08-20\_0015 4.02MB 0% 0%

daily.2017-08-21\_0010 76.77MB 0% 0%

daily.2017-08-22\_0010 49.12MB 0% 0%

daily.2017-08-23\_0010 57.53MB 0% 0%

daily.2017-08-24\_0010 59.87MB 0% 0%

hourly.2017-08-24\_1505 35.88MB 0% 0%

daily.2017-08-25\_0010 9.22GB 0% 0%

daily.2017-08-26\_0010 5.00GB 0% 0%

daily.2017-08-27\_0010 192KB 0% 0%

weekly.2017-08-27\_0015 79.09MB 0% 0%

daily.2017-08-28\_0010 63.19MB 0% 0%

daily.2017-08-29\_0010 570.3MB 0% 0%

daily.2017-08-30\_0010 63.05MB 0% 0%

hourly.2017-08-30\_1605 14.49MB 0% 0%

hourly.2017-08-30\_1705 12.93MB 0% 0%

hourly.2017-08-30\_1805 10.28MB 0% 0%

hourly.2017-08-30\_1905 348KB 0% 0%

hourly.2017-08-30\_2005 636KB 0% 0%

vserverdr.2.c2a27c5b-7d40-11e7-a903

668KB 0% 0%

hourly.2017-08-30\_2105 644KB 0% 0%

vserverdr.0.c2a27c5b.2017-08-30\_214500

0B 0% 0%

Note: choose the latest 'vserverdr.\*' snapshot to use in the next command.

volume clone create -vserver NASProsSiteCLU\_svm2drTEST -flexclone NASProsSiteCLU\_svm2dr\_vol1 -type RW -parent-vserver NASProsSiteCLU\_svm2dr -parent-volume NASProsSiteCLU\_svm2dr\_vol1 -junction-active true -foreground true -parent-snapshot vserverdr.0.c2a27c

Sample output -

[Job 4049] Job is queued: Create NASProsSiteCLU\_svm2dr\_vol1. Info: The default policies of the Vserver "NASProsSiteCLU\_svm2drTEST" will be assigned to the clone volume. Use the "volume modify" command to change the policies associated with the clone volume.

[Job 4049] Job succeeded: Successful

volume show -vserver NASProsSiteCLU\_svm2drTEST

Sample output -

Vserver Volume Aggregate State Type Size Available Used%

--------- ------------ ------------ ---------- ---- ---------- ---------- -----

NASProsSiteCLU\_svm2drTEST

NASProsSiteCLU\_svm2drTEST\_root

aggr1\_NASDRSiteCLU\_02

online RW 1GB 970.7MB 5%

NASProsSiteCLU\_svm2drTEST

NASProsSiteCLU\_svm2dr\_SVMDR\_vol1

aggr1\_NASDRSiteCLU\_01

online RW 8.39TB 874.6GB 89%

========================================================================================

network interface show -vserver \*drTEST

Sample output -

Logical Status Network Current Current Is

Vserver Interface Admin/Oper Address/Mask Node Port Home

----------- ---------- ---------- ------------------ ------------- ------- ----

NASProsSiteCLU\_svm1drTEST

NASProsSiteCLU\_svm1drTEST\_cifs\_lif1

up/up 192.168.1.10/16 NASDRSiteCLU-02 e0k true

NASProsSiteCLU\_svm2drTEST

NASProsSiteCLU\_svm2drTEST\_cifs\_lif1

up/up 192.168.1.11/16 NASDRSiteCLU-02 e0k true

NASProsSiteCLU\_svm3drTEST

NASProsSiteCLU\_svm3drTEST\_cifs\_lif1

up/up 192.168.1.12/16 NASDRSiteCLU-02 e0k true

5 entries were displayed.

vserver services name-service dns show -vserver \*drTEST

Sample output -

Name

Vserver State Domains Servers

--------------- --------- ----------------------------------- ----------------

FSAPPQ9\_drTEST enabled XYZCo.com 192.168.3.1

NASProsSiteCLU\_svm1drTEST enabled XYZCo.com 192.168.3.1

NASProsSiteCLU\_svm2drTEST enabled XYZCo.com 192.168.3.1

NASProsSiteCLU\_svm3drTEST enabled XYZCo.com 192.168.3.1

5 entries were displayed.

vserver show -vserver \*drTEST -fields ipspace

vserver ipspace

-------------- -------

NASProsSiteCLU\_svm1drTEST DR

NASProsSiteCLU\_svm2drTEST DR

NASProsSiteCLU\_svm3drTEST DR

3 entries were displayed.

vserver cifs show -vserver \*drTEST

Server Status Domain/Workgroup Authentication

Vserver Name Admin Name Style

----------- --------------- --------- ---------------- --------------

NASProsSiteCLU\_svm1drTEST

FinanceShare up XYZCo domain

NASProsSiteCLU\_svm2drTEST

NASProsSiteCLU\_svm2dr up XYZCo domain

NASProsSiteCLU\_svm3drTEST

NASProsSiteCLU\_svm3 up XYZCo domain

3 entries were displayed.

+++++NEW STEP as remediation from Technical ONLY DR Test+++++

Verify that XYZCoDCPrd1 is the set as the "Preferred DC" for each root DR vServer:

NASDRSiteCLU::\*> vserver cifs domain preferred-dc show

Vserver Domain Name Preferred Domain Controllers

-------------- ----------------------------- ----------------------------------

NASProsSiteCLU\_svm1drTEST XYZCo.com 192.168.3.1

NASProsSiteCLU\_svm2drTEST XYZCo.com 192.168.3.1

NASProsSiteCLU\_svm3drTEST XYZCo.com 192.168.3.1

+++++If the list above is blank run the following command FOR EACH vServer you want to make available for DR, i.e. FinanceShare, NASProsSiteCLU\_svm3 :

vserver cifs domain preferred-dc add -vserver NASProsSiteCLU\_svm1dr -domain XYZCo.com -preferred-dc 192.168.3.1 (XYZCoDCPrd1.XYZCo.com = 192.168.3.1)

++++ Technical ONLY DR Test+++++

Have Windows Administrator delete the computer accounts from FinanceShare, NASProsSiteCLU\_svm3, and NASProsSiteCLU\_svm2dr from XYZCoDCPrd1 once it is up, but NO DO HAVE the (Windows) Server team add the computer accounts back manually. The Commands below are meant to take care of re-adding the Computer Accounts to the Domain\*\*\*\*

Then issue the following commands (one per vserver , one at a time from the NASDRSiteCLU command line)

vserver cifs delete -vserver NASProsSiteCLU\_svm1drTEST -cifs-server FinanceShare -domain XYZCo.com (WAIT two minutes BEFORE executing the create command below)

vserver cifs create -vserver NASProsSiteCLU\_svm1drTEST -cifs-server FinanceShare -domain XYZCo.com

Enter ADMIN Credentials (NetApp Admin team or Domain Admin)

vserver cifs delete -vserver NASProsSiteCLU\_svm3drTEST -cifs-server NASProsSiteCLU\_svm3 -domain XYZCo.com (WAIT two minutes BEFORE executing the create command below)

vserver cifs create -vserver NASProsSiteCLU\_svm3drTEST -cifs-server NASProsSiteCLU\_svm3 -domain XYZCo.com

Enter ADMIN Credentials (NetApp Admin team or Domain Admin)

vserver cifs delete -vserver NASProsSiteCLU\_svm2drTEST -cifs-server NASProsSiteCLU\_svm2dr -domain XYZCo.com (WAIT two minutes BEFORE executing the create command below)

vserver cifs create -vserver NASProsSiteCLU\_svm2drTEST -cifs-server NASProsSiteCLU\_svm2dr -domain XYZCo.com

Enter ADMIN Credentials (NetApp Admin team or Domain Admin)

(Repeat for ones that don't work or replicate in AD within 20 minutes)

+++++NEW STEPSas remediation from Technical ONLY DR Test+++++

Mount te DR Volumes to the drTEST vservers:

vol mount -vserver NASProsSiteCLU\_svm1drTEST -volume FinanceShare\_vol1 -junction-path /FinanceShare\_vol1

vol mount -vserver NASProsSiteCLU\_svm2drTEST -volume NASProsSiteCLU\_svm2dr\_vol1 -junction-path /NASProsSiteCLU\_svm2dr\_vol1

vol mount -vserver NASProsSiteCLU\_svm3drTEST -volume CorpSecurity\_vol1 -junction-path /CorpSecurity\_vol1

# Do NOT use System Manager steps below, replaced with CLI commands which will quicker and we won't have to wait for the GUI to respond, especially for NASProsSiteCLU\_svm2dr which

#has 1350 folders to populate before the System Manager GUI responds

#\*\*\*\*

Login to System Manager for NASDRSiteCLU and go to SVM > NASProsSiteCLU\_svm1drTEST, then namespaces button and 'Mount' FinanceShare\_vol1\*\*\*\*

#\*\*\*\*login to System Manager for NASDRSiteCLU and go to SVM > NASProsSiteCLU\_svm3drTEST, then namespaces button and 'Mount' CorpSecurity\_vol1\*\*\*\*

#\*\*\*\*login to System Manager for NASDRSiteCLU and go to SVM > NASProsSiteCLU\_svm2drTEST, then namespaces button and 'Mount' NASProsSiteCLU\_svm2dr\_vol1\*\*\*\*

\*\* Verify shares show up for CIFS associated to vservers \*drTEST \*\*\*

cifs share show -vserver \*drTEST

RDP to nas7mttsvr

Open Windows Explorer - Browse to : X:\PowerShell\

Make sure files are present:

02/25/2019 12:08 PM 3,567 backupSharesAcls.ps1

08/24/2019 02:27 PM 44,238 FinanceShare.xml

08/24/2019 02:27 PM 44,260 FinanceShareacl.xml

08/24/2019 02:43 PM 48,970 NASNASProsSiteCLU\_svm2dr.xml

08/24/2019 02:43 PM 41,062 NASNASProsSiteCLU\_svm2dracl.xml

08/24/2019 02:44 PM 59,958 NASProsSiteCLU\_svm3.xml

08/24/2019 02:44 PM 95,556 NASProsSiteCLU\_svm3acl.xml

08/24/2019 04:38 PM 125,884 PS\_Share\_Script\_logs.txt

02/25/2019 12:08 PM 7,322 restoreSharesAcls.ps1

Open Powershell as 'Administrator"

Change directory to D:\PS\

BACKUP The Current Shares on the replicated volumes for the Parent DR vservers:

Run the follow PS script command lines and make sure to log the output and review for errors

and remediate errors on share before moving on to the next vserver script

.\backupSharesAcls.ps1 -server 192.168.5.2 -user ocumadmin -password <password> -vserver NASProsSiteCLU\_svm1dr -share \* -shareFile D:\PS\FinanceShare.xml -aclfile D:\PS\FinanceShareacl.xml -spit less

.\backupSharesAcls.ps1 -server 192.168.5.2 -user ocumadmin -password <password> -vserver NASProsSiteCLU\_svm2dr -share \* -shareFile D:\PS\NASProsSiteCLU\_svm2dr.xml -aclfile D:\PS\NASProsSiteCLU\_svm2dracl.xml -spit less

.\backupSharesAcls.ps1 -server 192.168.5.2 -user ocumadmin -password <password> -vserver NASProsSiteCLU\_svm3dr -share \* -shareFile D:\PS\NASProsSiteCLU\_svm3.xml -aclfile D:\PS\NASProsSiteCLU\_svm3acl.xml -spit less

RESTORE the Shares to the drTEST vServers:

.\restoreSharesAcls.ps1 -server 192.168.5.2 -user ocumadmin -password <password> -vserver NASProsSiteCLU\_svm1drTEST -shareFile D:\PS\FinanceShare.xml -aclfile d:\PS\FinanceShareacl.xml -spit less

Look at log and remediate any errors

.\restoreSharesAcls.ps1 -server 192.168.5.2 -user ocumadmin -password <password> -vserver NASProsSiteCLU\_svm3drTEST -shareFile D:\PS\NASProsSiteCLU\_svm3.xml -aclfile d:\PS\NASProsSiteCLU\_svm3acl.xml -spit less

Look at log and remediate any errors

.\restoreSharesAcls.ps1 -server 192.168.5.2 -user ocumadmin -password <password> -vserver NASProsSiteCLU\_svm2drTEST -shareFile D:\PS\NASProsSiteCLU\_svm2dr.xml -aclfile d:\PS\NASProsSiteCLU\_svm2dracl.xml -spit less

Look at log and remediate any errors

Check for the home directory paths for NASProsSiteCLU\_svm2dr if its ok:

vserver cifs home-directory search-path show

NASDRSiteCLU::\*> vserver cifs home-directory search-path show

Vserver Position Path

----------- -------- -----------------

NASProsSiteCLU\_svm1dr 1 /NASProsSiteCLU\_svm1dr\_vol1

NASProsSiteCLU\_svm1drTEST

1 /NASProsSiteCLU\_svm1dr\_vol1

NASProsSiteCLU\_svm2dr 1 /NASProsSiteCLU\_svm2dr\_vol1

NASProsSiteCLU\_svm2drTEST

1 /NASProsSiteCLU\_svm2dr\_vol1

NASProsSiteCLU\_svm3dr 1 /NASProsSiteCLU\_svm3dr\_vol1

NASProsSiteCLU\_svm3drTEST

1 /NASProsSiteCLU\_svm3dr\_vol1

6 entries were displayed.

if output is like

NASDRSiteCLU::\*> vserver cifs home-directory search-path show

Vserver Position Path

----------- -------- -----------------

NASProsSiteCLU\_svm1dr 1 /NASProsSiteCLU\_svm2dr\_vol1

NASProsSiteCLU\_svm2dr 1 /NASProsSiteCLU\_svm2dr\_vol1

NASProsSiteCLU\_svm3dr 1 /NASProsSiteCLU\_svm2dr\_vol1

3 entries was displayed.

run below command

cifs home-directory search-path add -vserver NASProsSiteCLU\_svm2drTEST -path /NASProsSiteCLU\_svm1dr\_vol1

cifs home-directory search-path add -vserver NASProsSiteCLU\_svm2drTEST -path /NASProsSiteCLU\_svm2dr\_vol1

cifs home-directory search-path add -vserver NASProsSiteCLU\_svm2drTEST -path /NASProsSiteCLU\_svm3dr\_vol1

DR TESTING FOR XYZCo Application Owners:

19. Do CIFS share / NFS Mounts accessibility tests (Clients)

CLEANUP:

SEE VOLUME DELETE AT TOP of Instructions

vserver cifs show -vserver \*drTEST

volume show -vserver NASProsSiteCLU\_svm1drTEST

volume offline -vserver NASProsSiteCLU\_svm1drTEST FinanceShare\_vol1

volume delete -vserver NASProsSiteCLU\_svm1drTEST -volume FinanceShare\_vol1

volume show -vserver NASProsSiteCLU\_svm1drTEST

volume show -vserver NASProsSiteCLU\_svm3drTEST

volume offline -vserver NASProsSiteCLU\_svm3drTEST CorpSecurity\_vol1

volume delete -vserver NASProsSiteCLU\_svm3drTEST -volume CorpSecurity\_vol1

volume show -vserver NASProsSiteCLU\_svm3drTEST

volume show -vserver NASProsSiteCLU\_svm2drTEST

volume offline -vserver NASProsSiteCLU\_svm2drTEST NASProsSiteCLU\_svm2dr\_vol1

volume delete -vserver NASProsSiteCLU\_svm2drTEST -volume NASProsSiteCLU\_svm2dr\_vol1

volume show -vserver NASProsSiteCLU\_svm2drTEST

25. vserver show NASProsSiteCLU\_svm1drTEST

vserver show NASProsSiteCLU\_svm2drTEST

vserver show NASProsSiteCLU\_svm3drTEST

Logon to NASProsSiteCLU:

32. vol show -vserver NASProsSiteCLU\_svm1dr

vol show -vserver NASProsSiteCLU\_svm2dr

vol show -vserver NASProsSiteCLU\_svm3dr

33. vserver cifs share show -vserver NASProsSiteCLU\_svm1dr

vserver cifs share show -vserver NASProsSiteCLU\_svm2dr

vserver cifs share show -vserver NASProsSiteCLU\_svm3dr

34. vserver export-policy rule show -vserver NASProsSiteCLU\_svm1dr

vserver export-policy rule show -vserver NASProsSiteCLU\_svm2dr

vserver export-policy rule show -vserver NASProsSiteCLU\_svm3dr

==============================================================================================================================================================

EXTRA NOTES on TEST DR summarize above Procedure versus a a real DR and extra steps in an extended DR Test or Real DR Recovery where New Data is added to the original

DR Destination / Files are updated on the original DR Destination and a data sync needs to be done to the original DR Source so DR data health is on both sides

returns to normal (A one time 'reverse' snapmirror resync):

1. If DR test involves the ability to take an outage on the Production DR side during off-business hours

instead of using an isolated, network at -like XYZCo does currently you would add the following steps between Steps 8. and 9. above:

Logon to NASProsSiteCLU:

vserver stop -vserver FinanceShare

vserver stop -vserver NASProsSiteCLU\_svm2dr

vserver stop -vserver NASProsSiteCLU\_svm3

vserver show -vserver FinanceShare

vserver show -vserver NASProsSiteCLU\_svm2dr

vserver show -vserver NASProsSiteCLU\_svm3

2. In an extended DR Test or Real DR Recovery where New Data is added to the original DR Destination / Files are updated on the original DR Destination

and a data sync needs to be done to the original DR Source so DR data health on both sides returns to normal (A one time 'reverse' snapmirror resync):

Login to Original DR Source (NASProsSiteCLU):

snapmirror create -source-vserver <vserver>\_DR -destination-vserver <vserver>

snapmirror resync -source-vserver <vserver>\_DR -destination-vserver <vserver>

snapmirror show

snapmirror break -destination-vserver <vserver>

vserver start -vserver <vserver>

vserver show -vserver <vserver>

\* DO NOT RUN THIS FOR OUR CURRENT DR TEST, only use if the DR test involves the ability to take an outage on the Production DR side (Q9) during off-business hours

\*\* DO NOT RUN THIS FOR DR CURRENT DR TEST, only use in extended REAL DR situation. We do not want to overwrite any 'test' changes to files in Isolated DR to Production.

NOTE: check with NetApp on Commands

\*\*\*\*Re-host Flexclone volume in REAL DR extended situation. \*\*\*\*\*\*\*\*\*\*\*\*\*\*8

1.

snapmirror show -destination-vserver NASProsSiteCLU\_svm1dr

snapmirror show -destination-vserver NASProsSiteCLU\_svm2dr

snapmirror show -destination-vserver NASProsSiteCLU\_svm3dr

snapmirror quiesce -destination-vserver NASProsSiteCLU\_svm1dr

snapmirror quiesce -destination-vserver NASProsSiteCLU\_svm2dr

snapmirror quiesce -destination-vserver NASProsSiteCLU\_svm3dr

snapmirror show -destination-vserver NASProsSiteCLU\_svm1dr

snapmirror show -destination-vserver NASProsSiteCLU\_svm2dr

snapmirror show -destination-vserver NASProsSiteCLU\_svm3dr

snapmirror break -destination-vserver NASProsSiteCLU\_svm1dr

snapmirror break -destination-vserver NASProsSiteCLU\_svm2dr

snapmirror break -destination-vserver NASProsSiteCLU\_svm3dr

snapmirror show -destination-vserver NASProsSiteCLU\_svm1dr

snapmirror show -destination-vserver NASProsSiteCLU\_svm2dr

snapmirror show -destination-vserver NASProsSiteCLU\_svm3dr

2.

volume rehost -vserver NASProsSiteCLU\_svm1drTEST -volume FinanceShare\_\_vol1 -destination-vserver NASProsSiteCLU\_svm1dr -force-unmap-luns false