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7MTT – Multi-Protocol 7-Mode to CDOT Work Instructions

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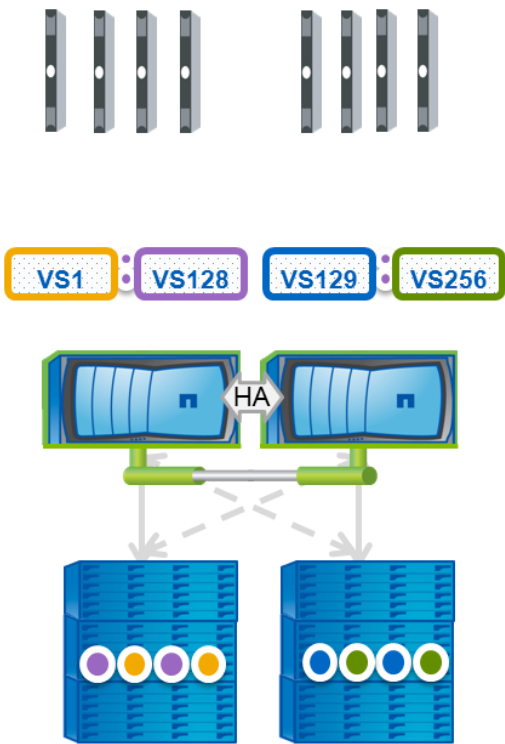
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1 Introduction

1.1 Management Summary

This document details the process used to migrate a Multi-Protocol vfiler from 7mode to CDOT with 7MTT.

- Servers connected via NFS or SMB
- One Vserver per application
- Up to 128 Vservers per node
- One LIF per Vserver with NFS or SMB
- FAS80xx or FAS32xx cluster with 2 to 8 nodes
- Single node cluster for SnapVault backup systems
- DS2246 or DS4246 SAS attached disk shelves
- Multiple volumes per Vserver
- LIFs and Volumes on same node for direct path I/O



1.2 Change History

Ver	Date	Author	Key Changes
1	May 2016	Ian Daniel	Initial Version
1.1	March 2017	Ian Daniel	Added AV settings

1.3 Distribution List

Name	Role
Storage Support	
Storage Delivery	

1.4 References

No.	Title	Location
1	cDOT Naming Standards	Link
2	cDOT AV	Link
3	cDOT Vserver Creation	Link
4	cDOT Consolidated Build Standards	Link
5	cDOT Replication Deployment Guidelines	Link
6		
7		

1.5 Glossary

Term	Definition
cDOT	clustered Data ONTAP
Vserver	A logical storage virtual server, also known as a Storage Virtual Machine (SVM), which contains LIFs, Volumes, and configuration information such as access control details.
LIF	Logical Interface – a cDOT logical network interface with an IP address, assigned to a single Vserver.
7MTT	7mode Transition Tool – A tool used to migrate from 7mode to cDOT
WFA	OnCommand Workflow Automater – An automation framework application from NetApp, used for storage provisioning.

2 Additional 7-Mode Multi-Protocol Configuration To Migrate To cDOT

2.1 Domain Users and Groups

There are often Domain users and Groups configured on a 7-Mode CIFS vfiler, these can be displayed as shown on a group-by-group basis and are transferred as part of the 7MTT migration process. To check members of a group you can use the following command. It is recommended to check all the groups.

Example

```
eag-laborf-nas6210ht-1> vfiler run si-nastest-01 useradmin domainuser list -g administrators
```

```
===== si-nastest-01
```

```
List of SIDS in administrators
```

```
S-1-5-21-1789992843-188582088-1440544181-131073
```

```
S-1-5-21-1789992843-188582088-1440544181-500
```

```
S-1-5-21-1042883198-748202677-1346798384-512
```

```
S-1-5-21-2012327785-2259879848-3711903672-512
```

```
S-1-5-21-2012327785-2259879848-3711903672-56518
```

```
S-1-5-21-2012327785-2259879848-3711903672-55774
```

```
For more information about a user, use the 'cifs lookup' and 'useradmin user list' commands.
```

You can determine the actual names of the displayed SIDs as follows. This can be useful when checking what was migrated across to cDOT as it will not display SIDs.

Example

```
eag-laborf-nas6210ht-1> vfiler run si-nastest-01 cifs lookup S-1-5-21-2012327785-2259879848-3711903672-55774
```

```
===== si-nastest-01
```

```
name = TEN\M-Storage-admins.G
```

```
eag-laborf-nas6210ht-1> vfiler run si-nastest-01 cifs lookup S-1-5-21-2012327785-2259879848-3711903672-56518
```

```
===== si-nastest-01
```

```
name = TEN\M-EaganServerAdmins
```

```
eag-laborf-nas6210ht-1> vfiler run si-nastest-01 cifs lookup S-1-5-21-2012327785-2259879848-3711903672-512
```

```
===== si-nastest-01
```

```
name = TEN\Domain Admins
```

```
eag-laborf-nas6210ht-1> vfiler run si-nastest-01 cifs lookup S-1-5-21-1042883198-748202677-1346798384-512
```

```
===== si-nastest-01
```

```
name = TLR\Domain Admins
```

```
eag-laborf-nas6210ht-1> vfiler run si-nastest-01 cifs lookup S-1-5-21-1789992843-188582088-1440544181-500
```

```
===== si-nastest-01
```

```
name = SI-NASTEST-01\administrator
```

```
eag-laborf-nas6210ht-1> vfiler run si-nastest-01 cifs lookup S-1-5-21-1789992843-188582088-1440544181-131073
```

```
===== si-nastest-01
```

```
name = SI-NASTEST-01\root
```

2.2 Share Permissions

There are often Domain users and Groups configured on a 7-Mode CIFS share, these can be displayed as shown and will be transferred by 7MTT at migration time.

```
eag-laborf-nas6210ht-1> vfiler run si-nastest-01 cifs shares
```

```
===== si-nastest-01
Name      Mount Point      Description
-----
ETC$      /vol/si_nastest_01_root/etc      Remote Administration

          BUILTIN\Administrators / Full Control
HOME      /vol/si_nastest_01_root/home      Default Share
          everyone / Full Control
C$        /                          Remote Administration
          BUILTIN\Administrators / Full Control
TESTSHARE01 /vol/cifsmig01/share01
          everyone / Full Control
          TEN\M-Storage-admins.G / Full Control
          TEN\uc136758 / Change
          TLR\Domain Admins / Full Control
```

3 7-Mode to CDOT Multi-Protocol Migration

3.1 High Level Migration Steps

Task	Owner
Create SVM and volume	Storage
Initialize snapmirror replication	Storage
Stop application during maintenance window	Application
Unmount source volumes during maintenance window	Platform
Final snapmirror sync/break during maintenance window	Storage
Update server mount info, e.g. change is server \\server\path	Platform
Mount new share(s) during maintenance window	Platform
Start application	Application
Verify	Application/Platform

3.2 Pre-requisites

- **Ensure version of 7MTT is 2.3 or higher**
- **Ensure vfiler being migrated is not currently exceeding the 6K IOPS threshold unless it is moving to a dedicated controller.**
- **Ensure snapshot autodelete is disabled during the migration process for both source and destination.**
- Add the CDOT vservers name (not IP) to the source systems /etc/snapmirror.allow file
- Add the cDOT cluster ICL IP Addresses to the snapmirror.access option or the snapmirror.allow file on the source 7-Mode system prior to migration.
- Confirm the target aggregate has sufficient capacity
- Confirm the source volume is 64 bit
- Register the target vservers hostname in DNS
- Ensure the target vservers is in the required AD domain
- Ensure the target vservers has NFS enabled
- Ensure the target vservers lif is enabled for CIFS and NFS (if not delete and re-create)
- Ensure the target vservers allows both CIFS and NFS
- Ensure the destination cluster has AV enabled and the destination vservers has scanning turned on
- Make note of service accounts on the source so they can be created in destination

- Confirm there is network connectivity between the source and target
- Make note of qtree quotas sizes so they can be applied in destination
- Make note of the source volume language
- Make note of the backup volume size

3.3 Vserver and LIF creation

3.3.1 Create Vserver (replace hyphen with underscore in vsname rootvolume name)

```
vserver create -vsname <vsname> -rootvolume <vsname>_root -aggregate
<aggrname> -ns-switch file -nm-switch file -rootvolume-security-style unix -
language <language>
```

```
vserver show
```

3.3.2 Create LIF with default route and failover group

```
network interface create -vsname <vsname> -lif <vsname>-lif<lif#> -role data -
data-protocol <protocols> -home-node <node> -home-port <port> -address <ip> -
netmask <netmask> -status-admin up -firewall-policy mgmt -failover-group
<group>
```

```
network routing-groups route create -vsname <vsname> -routing-group
d<network>/<mask> -destination 0.0.0.0/0 -gateway <gateway>
```

```
vserver show
```

```
network interface show
```

```
network interface show -failover
```

```
network routing-groups route show -vsname <vsname>
```

3.4 DNS configuration

3.4.1 Setup DNS on a Vserver

```
vserver services dns create -vsname <vsname> -domains <domainname> -name-
servers <comma_separate_name_server_list>
```

```
vserver services dns show
```

3.4.2 Setup DNS on Cluster Admin Vserver

For ONTAP 8.2.x you need to make sure that whatever DNS domains are on your data vservers also get added to the admin vserver as DNS lookups can also be done via that vserver.

```
vserver services dns modify -vsname <admin_vsname> -domains <domainnames>
```

```
vserver services dns show
```

3.5 Create service account if required

```
security login role create -role <ROLE_NAME> -cmddirname "<COMMAND>" -access
<ACCESS_TYPE> -vsname <vserver> #Repeat this command for each required cDOT command
```

```
security login create -username <USER_NAME> -application ontapi -authmethod
<AUTHENTICATION_METHOD> -role <ROLE_NAME> -vsname <vserver>
```


3.6 Enable CIFS Protocol

3.6.1 Enable CIFS

```
cifs create -cifs-server <vsname> -domain <ad_domain> -ou CN=Computers -status-admin up -vserver <vserver>
```

```
cifs show
```

3.7 Enable Anti-Virus Scanner Pool

3.7.1 Set Primary Pool

```
vscan scanner-pool apply-policy -scanner-pool SCANNER_POOL -vserver VSERVER_NAME -scanner-policy primary
```

3.7.2 Enable vscan

```
vscan enable -vserver VSERVER_NAME
```

3.8 Enable NFS Protocol

3.8.1 Enable NFS

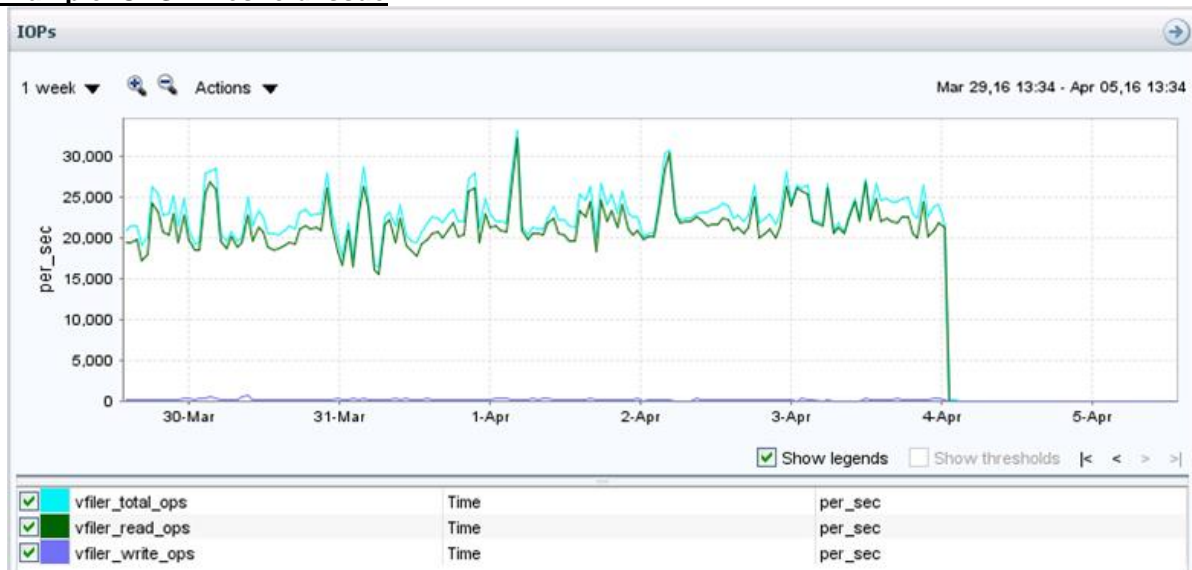
```
vserver nfs create -vserver <vsname> -access true -v3 enabled
```

```
vserver nfs show
```

3.9 Check Current IOPS In Use Prior To Migration – Shared Migrations ONLY

If the volume is seeing large periods of time over 6000 IOPs/sec please raise the flag that it needs to be looked at as 6000IOPs/sec will be the most they can use on cDOT due to QOS. So there is a high probability that the customer will feel the effect from this.

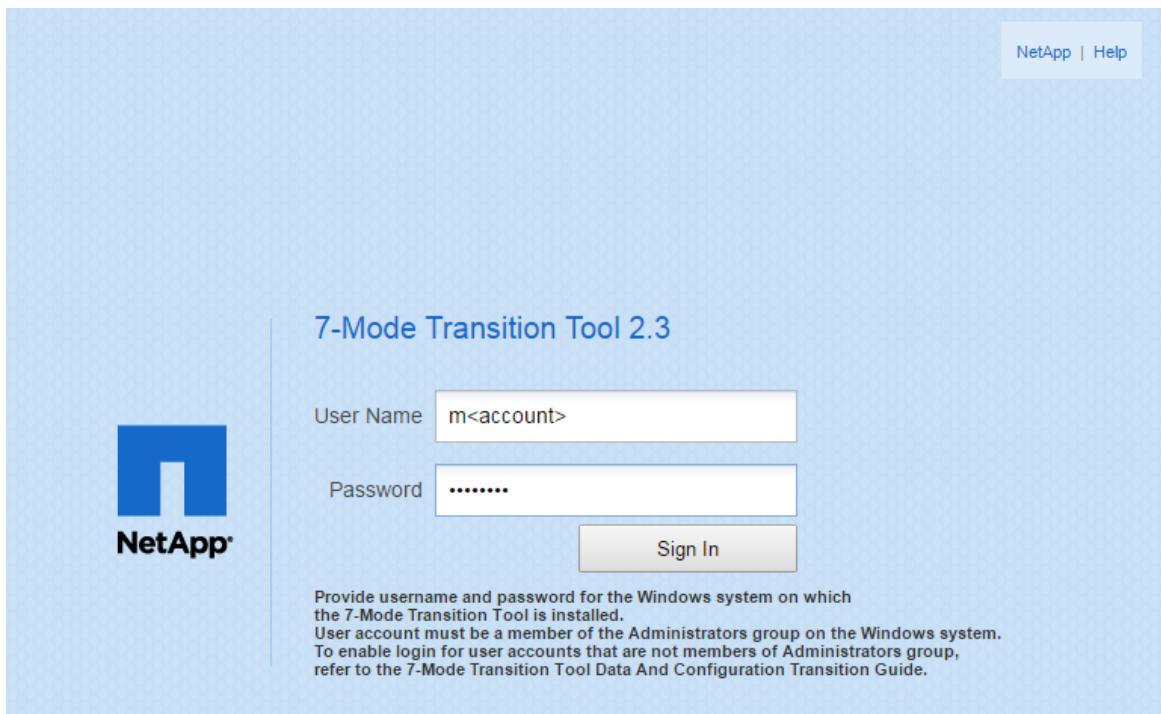
Example IOPS Threshold Issue



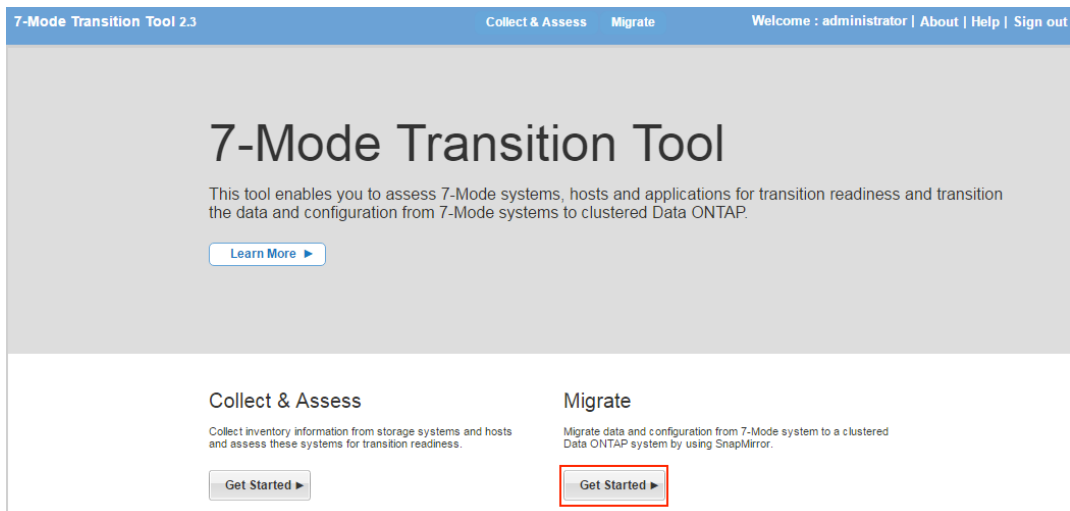
3.10 Start the Migration

3.10.1 Login to 7MTT

Connect the 7MTT (https://<7MTT_Server>:8443/transition) tool via web browser



Once logged in CLICK Get Started under Migrate'



CLICK on the 'Storage System' button in the left pane:

7-Mode Transition Tool 2.3

Collect & AssessMigrate

Welcome : administrator | About | Help | Sign out

Home

Dashboard

Storage Systems

New Transition Project

Logs

Welcome to 7-Mode Transition Tool

The 7-Mode Transition Tool helps you transition the data stored on NetApp systems running 7-Mode to NetApp systems running Clustered Data ONTAP 8.2.0, 8.2.1, 8.2.2, 8.2.3, 8.2.4, 8.3.0, 8.3.1 or 8.3.2.

The tool will guide you through the steps involved in transitioning your NAS/SAN data stored on 7-Mode systems to Clustered Data ONTAP 8.2.0, 8.2.1, 8.2.2, 8.2.3, 8.2.4, 8.3.0, 8.3.1 or 8.3.2 systems.

Manuals

Use the following link to access the [7-Mode Transition Tool Guide](#).

Clustered Data ONTAP

For more information about Clustered Data ONTAP please use the following links: [Cfor7 web portal](#).

Select Volumes

Configure Project

Run Precheck

Start Baseline

Apply Configuration

Complete Transition

Create a new Transition project by clicking the Get Started button below.

Get Started ▶

ADD storage systems to 7MTT (execute this step for the source and target storage systems):

ENTER the FQDN of the filer

CLICK ADD

7-Mode Transition Tool 2.3

Collect & AssessMigrate

Welcome : administrator | About | Help | Sign out

HomeStorage Systems

Enter Device Credentials

Hostname: <FILER_FQDN>

Username: <FILER_ADMIN_USER>

Password:

Add

Instructions:

Enter FQDN or IP address and administrator credentials for a 7-Mode controller or Clustered Data ONTAP system. Clustered Data ONTAP system can be added using the cluster management IP.

After adding the 7-Mode system or clustered Data ONTAP system, go to the Home tab to start a new transition project.

7-Mode Controllers					
IP Address	Host Name	Model	Data ONTAP Version	Edit/Remove	Status
10.220.194.14	eag-labof-nas6	FAS6210	NetApp Release 8.2....		
10.220.194.15	eag-labof-nas6	FAS6210	NetApp Release 8.2....		
10.220.194.12	eag-labof-nas6	FAS6210	NetApp Release 8.2....		
10.220.194.13	eag-labof-nas6	FAS6210	NetApp Release 8.2....		
10.220.30.57	eg-natest-e09	FAS6080	NetApp Release 8.1....		

Clustered Data ONTAP Systems				
IP Address	Cluster Name	Data ONTAP Version	Edit/Remove	Status
10.220.194.42	eg-si-clsn-e01	NetApp Release 8.2....		

Assess Controller

CLICK the 'HOME' tab -> CLICK 'Get Started'

7-Mode Transition Tool 2.3

Collect & AssessMigrate

Welcome : administrator | About | Help | Sign out

Home

Dashboard

Storage Systems

New Transition Project

Logs

Welcome to 7-Mode Transition Tool

The 7-Mode Transition Tool helps you transition the data stored on NetApp systems running 7-Mode to NetApp systems running Clustered Data ONTAP 8.2.0, 8.2.1, 8.2.2, 8.2.3, 8.2.4, 8.3.0, 8.3.1 or 8.3.2.

The tool will guide you through the steps involved in transitioning your NAS/SAN data stored on 7-Mode systems to Clustered Data ONTAP 8.2.0, 8.2.1, 8.2.2, 8.2.3, 8.2.4, 8.3.0, 8.3.1 or 8.3.2 systems.

Manuals

Use the following link to access the [7-Mode Transition Tool Guide](#).

Clustered Data ONTAP

For more information about Clustered Data ONTAP please use the following links: [Cfor7 web portal](#).

Select Volumes

Configure Project

Run Precheck

Start Baseline

Apply Configuration

Complete Transition

Create a new Transition project by clicking the Get Started button below.

Get Started ▶

CONFIRM that the source and destination storage systems are listed

7-Mode Transition Tool 2.3

Collect & AssessMigrate

Welcome : administrator | About | Help | Sign out

HomeStorage SystemsDashboardUntitled Project

Enter Device Credentials

Hostname:

Username:

Password:

Add

Instructions:

Enter FQDN or IP address and administrator credentials for a 7-Mode controller or Clustered Data ONTAP system. Clustered Data ONTAP system can be added using the cluster management IP.

7-Mode Controllers

IP Address	Host Name	Model	Data ONTAP Version	Edit/Remove	Status
10.220.194.14	eag-labof-nas6	FAS6210	NetApp Release 8.2....		
10.220.194.15	eag-labof-nas6	FAS6210	NetApp Release 8.2....		
10.220.194.12	eag-labof-nas6	FAS6210	NetApp Release 8.2....		
10.220.194.13	eag-labof-nas6	FAS6210	NetApp Release 8.2....		
10.220.30.57	eg-nastest-e09	FAS6080	NetApp Release 8.1....		

Clustered Data ONTAP Systems

IP Address	Cluster Name	Data ONTAP Version	Edit/Remove	Status
10.220.194.42	eg-si-clsn-e01	NetApp Release 8.2....		

Note: Add at least one 7-Mode controller and a clustered Data ONTAP system with valid credentials to proceed.

Refresh

BackNext

CLICK 'Next'

ENTER a name for the project

CLICK 'Continue'

The screenshot shows the '7-Mode Transition Tool 2.3' interface. The top navigation bar includes 'Collect & Assess' and 'Migrate' tabs, along with a user welcome message. The main area is titled 'Choose Origin Volumes to Transition'. On the left, a tree view shows a list of storage controllers. The central 'Volume Information' table is currently empty. A modal dialog box titled 'New Transition Project Name' is open, prompting the user to 'Please provide a name for your new transition project.' with a text input field containing 'CR123456' and a 'Continue' button. At the bottom, there are 'Back' and 'Create Project and Continue' buttons.

SELECT the source vfiler and volume(s):

CLICK 'Create Project and Continue'

This screenshot shows the same '7-Mode Transition Tool 2.3' interface, but with selections made. In the 'Select 7-Mode Controller' tree on the left, 'esg-labof-nas6210ht-2' is selected. The 'Volume Information' table now contains two rows of data:

Name	Used Size (GB)	Total Size (GB)	SnapMirror Relationship	Other SnapMirror Relationship	SnapMirror Source or Destination	Volume Type	Transition as stand-alone	Transition with SnapMirror Relationship
nas6210ht01	0.000	50.000	Standalone	No		NAS	<input type="checkbox"/>	<input type="checkbox"/>
u_nas6210ht_01_root	0.000	1.000	Standalone	No		NAS	<input type="checkbox"/>	<input type="checkbox"/>

The 'Volume(s) Selected for Transition Project' table at the bottom remains empty. The 'Back' and 'Create Project and Continue' buttons are still visible at the bottom of the interface.

ENTER an IP to be used for replication traffic on the source filer
CLICK 'Next'

7-Mode Transition Tool 2.3 Collect & Assess Migrate Welcome : administrator | About | Help | Sign out

Home Storage Systems CR123456

IP Configuration > Precheck > SVM Mapping > Volume Mapping > Interface Mapping > Data Copy Schedule > Final Precheck > Plan Configuration > Subproject Summary Configuring Subproject: 1/1

Subproject Information

Project Name:	CR123456 Edit	Origin Controller:	eag-labof-nas6210ht-1	Target Cluster:	-
Subproject Name:	CR123456_standalone Edit	Origin vFiler Unit:	si-nasest-01	Target S/M:	-
Subproject Type:	STANDALONE	Data Copy IP:	10.220.194.14	Multipath IP:	-

Data Copy and Multipath IP Configuration

Enter the Data Copy and Multipath IPs

Data Copy IP (Mandatory Field): 10.220.194.14

Multipath IP (Optional Field):

Data copy IP is pre-populated with the management IP of chosen 7-Mode system. You can change it by providing a valid IPv4 address with data copy permissions.

Specifying another IP address of the 7-Mode system enables data copy to proceed over more than one physical path at the same time, therefore, load balancing the data transfers.

Edit Volume Selection Next

The next window will ask if you want to run pre-check.

CLICK 'Run Prechecks'

7-Mode Transition Tool 2.3 Collect & Assess Migrate Welcome : administrator | About | Help | Sign out

Home Storage Systems CR123456

IP Configuration > Precheck > SVM Mapping > Volume Mapping > Interface Mapping > Data Copy Schedule > Final Precheck > Plan Configuration > Subproject Summary Configuring Subproject: 1/1

Subproject Information

Project Name:	CR123456 Edit	Origin Controller:	eag-labof-nas6210ht-1	Target Cluster:	-
Subproject Name:	CR123456_standalone Edit	Origin vFiler Unit:	si-nasest-01	Target S/M:	-
Subproject Type:	STANDALONE	Data Copy IP:	10.220.194.14	Multipath IP:	-

7-Mode Precheck

Prechecks identify the issues with a transition. This precheck verifies that the 7-Mode source meets the prerequisites for your transition.

Back Run Prechecks Skip

Note: This may take a while, you can choose to skip for now and run the prechecks at a later point.

Review the Report. You can ignore the warnings listed below. Resolve errors if they appear.

CLICK 'Close' and then click Next'

7-Mode Transition Tool 2.3 Collect & Assess Migrate Welcome : administrator | About | Help | Sign out

Home Storage Systems CR123456

IP Configuration > Precheck > SVM Mapping > Volume Mapping > Interface Mapping > Data Copy Schedule > Final Precheck > Plan Configuration > Subproject Summary Configuring Subproject: 1/1

Subproject Information

Project Name:	CR123456 Edit	Origin Controller:	eag-labof-nas6210ht-1	Target Cluster:	-
Subproject Name:	CR123456_standalone Edit	Origin vFiler Unit:	si-nasest-01	Target S/M:	-
Subproject Type:	STANDALONE	Data Copy IP:	10.220.194.14	Multipath IP:	-

Precheck Summary

Area	Type(Tags)	Message
Session status checks		
Validating 7-Mode system information		
Validating 7-Mode volumes information		
SNMP prechecks		
RBAC prechecks		
MetroCluster prechecks		
Total:		

7-Mode Precheck

ID	Type(Tags)	Message
94101	Warning	Checking whether SNMP is enabled Mode storage system 10.220.194.14 configuration.
94001	Warning	Checking whether any roles are defined following roles are defined on the 7-Mode Transition Tool does not support the

Operation Progress

Subproject Name: CR123456_standalone Operation: 7-Mode prechecks

Sl. No.	Message Type	Status
1	Session status checks	Ok
2	Validating 7-Mode system information	Ok
3	Validating 7-Mode volumes information	Ok
4	WAPL prechecks	Ok
5	SNMP prechecks	Warnings
6	RBAC prechecks	Warnings
7	MetroCluster prechecks	Ok
8	UNIX users and groups prechecks	Ok
9	Snapshot prechecks	Warnings
10	NFS prechecks	Warnings
11	Networking prechecks	Warnings
12	CIFS prechecks	Warnings
13	Name services prechecks	Warnings

Operation Summary

The 7-Mode prechecks operation on the session CR123456_standalone has finished successfully

Errors = 0, Warnings = 24, Informational Messages = 0

Close

Back Run Prechecks again Next Save As CSV

SELECT a target vserver

CLICK 'Next'

7-Mode Transition Tool 2.3

Collect & Assess Migrate

Welcome : administrator | About | Help | Sign out

Home CB123456

IP Configuration > Precheck > SVM Mapping > Volume Mapping > Interface Mapping > Data Copy Schedule > Final Precheck > Plan Configuration > Subproject Summary Configuring Subproject: 1/1

Subproject Information

Project Name: CB123456 Edit Origin Controller: eag-labof-nas6210ht-1 Target Cluster: -

Subproject Name: CB123456_standalone Edit Origin vFiler Unit: si-nastest-01 Target SVM: -

Subproject Type: STANDALONE Data Copy IP: 10.220.194.14 Multipath IP: -

Select a Clustered Data ONTAP System

Cluster	Version	SVM Name	Status	Allowed Protocols
eg-si-clsn-e01	Nas6pp Release 8.2.3P5 Cluster-M	si-040-test-02	running	nfs, cifs
		<input checked="" type="checkbox"/> si-mptest-01	running	nfs, cifs
		si-040-test-01	running	nfs, cifs
		csi01ms-e0001	running	local
		si-globalstorage-test02	running	nfs, cifs, ftp, iscsi, ndmp
		dma_test_vsm	running	local
		si-globalstorage-test01	running	local
		mtl_test_server	running	nfs, cifs, ftp, iscsi, ndmp
		IntDev_vserver0011	running	
		svm750vz	running	
		IntDev_vserver0012	running	
		si-si-e0001	running	nfs

Refresh

Note: SVM is not selectable for one of the reasons:
--> 01 is a repository SVM or 01 is a sym-destination

Back Next

IMPORTANT: Make sure you enter the correct information in the next section! This version of 7MTT allows you to set junction path = volume name, this is the DCO standard. But, you need to modify the junction-path after the cut-over manually in older versions of 7MTT.

ENTER the destination aggregate

ENTER the destination volume name

SELECT 'Use Clustered OTAP volume name' from 'Target Volume Mount Policy'

CLICK 'Next'

7-Mode

Collect & Assess Migrate

Home CB123456

IP Configuration > Precheck > SVM Mapping > Volume Mapping > Interface Mapping > Data Copy Schedule > Final Precheck > Plan Configuration > Subproject Summary Configuring Subproject: 1/1

Subproject Information

Project Name: CB123456 Edit Origin Controller: eag-labof-nas6210ht-1 Target Cluster: eg-si-clsn-e01

Subproject Name: CB123456_standalone Edit Origin vFiler Unit: si-nastest-01 Target SVM: si-mptest-01

Subproject Type: STANDALONE Data Copy IP: 10.220.194.14 Multipath IP: -

Target Volume mount policy

Select Target Volume mount policy: Use clustered Data ONTAP volume name ?

Map Origin Volumes to Aggregates on Target Cluster

Origin Volume	Volume Size (G...)	Target Aggregate	Target Volume	Target Volume Path
mptestvol01	50.000	aggr1_data_h01	cb123_mptestvol01	/cb123_mptestvol01

Estimated Capacity Available

Node	Aggregate	Estimated Space Availability (GB)
eg-si-clsn-e01...	aggr1_data_l03	54931.547
eg-si-clsn-e01...	aggr1_data_l04	55063.302
eg-si-clsn-e01...	aggr1_data_h02	29030.861
eg-si-clsn-e01...	aggr1_data_h01	28864.910

Note: Any changes to the volume name will be saved to the subproject upon clicking the next button

Refresh

Back Next

NOTE: We are not migrating IP addresses

CLICK 'Next'

7-Mode Collect & Assess Migrate

Home CR123456

IP Configuration > Precheck > SVM Mapping > Volume Mapping > **Interface Mapping** > Data Copy Schedule > Final Precheck > Plan Configuration > Subproject Summary Configuring Subproject: 1/1

Subproject Information

Project Name: CR123456 Edit Origin Controller: eag-laborf-nas6210ht-1 Target Cluster: eg-si-clan-e01
Subproject Name: CR123456_standalone Edit Origin vFiler Unit: si-nastest-01 Target SVM: si-mpstest-01
Subproject Type: STANDALONE Data Copy IP: 10.220.194.14 Multipath IP: -

Note:
-> Migrating IP addresses is an optional step. If you do not plan to migrate any 7-Mode IP addresses, you can skip this step by clicking on Next button.
-> Transitioning of iSCSI and FCIP interfaces is not supported

Map 7-Mode IP Addresses to Cluster LIFs

	Origin IP Address	Target Default Gateway	Target Netmask	Target Interface	Target Node	Target Port	Target Port...	Node Port Chooser	Remove
<input type="checkbox"/>	10.220.181.76	10.220.181.126	255.255.255.128					Choose Node and Port	

New LIF Refresh

Back Next

CLICK 'Create Schedule', a popup box will appear

ENTER a replication schedule (run off hours)

CLICK CREATE

7-Mode Collect & Assess Migrate

Home CR123456

IP Configuration > Precheck > SVM Mapping > Volume Mapping > Interface Mapping > **Data Copy Schedule** > Final Precheck > Plan Configuration > Subproject Summary Configuring Subproject: 1/1

Subproject Information

Project Name: CR123456 Edit Origin Controller: eag-laborf-nas6210ht-1 Target Cluster: eg-si-clan-e01
Subproject Name: CR123456_standalone Edit Origin vFiler Unit: si-nastest-01 Target SVM: si-mpstest-01
Subproject Type: STANDALONE Data Copy IP: 10.220.194.14 Multipath IP: -

Note: 7-Mode Transition Tool maintains and enforces the schedules sub-project. For example, you can create customized schedules for v As a part each schedule, you can provide the date and time when the SnapMirror transfers that are allowed during a schedule. 7-Mode Tra

Data Copy Schedule

Provide Schedule(s) for Data Transfers

Name	Recurring Days	Start Time (HH:MM)
There are		

Create Data Copy Schedule for Baseline and Incremental Updates

The 7-Mode Transition Tool service must be running for the schedules to take effect.

Name: CR123456

Recurring Days

☒ Daily
☐ Select Days ☐ Sunday ☐ Monday ☐ Tuesday ☐ Wednesday ☐ Thursday ☐ Friday ☐ Saturday

Time Interval

7-Mode Controller Time Zone: GMT
Start Time: 22 Hrs 00 Mins
Duration: 24 Hrs 00 Mins End Time: Next Day, till 22:00
Update Frequency: 00 Hrs 30 Mins ☐ Continuous Updates

Parameters for Transition Data Copy Operations

Maximum number of concurrent volume SnapMirror (VSM) transfers supported by 7-Mode controller: 150
Maximum Number of Concurrent VSM Transfers: ☒ 75
to be used by the tool during this schedule ☒ 50 % of available VSM transfers
Note: If both options are selected, the lowest value is used for the number of concurrent VSM transfers.
Throttle Limit (Maximum Bandwidth in MB/s): ☒ Maximum ☐ Not Exceeding

Create Schedule Refresh

Create Cancel

The newly created schedule will appear

CLICK 'Next'

The screenshot shows the '7-Mode' interface with the 'Subproject Summary' page. The breadcrumb trail is: IP Configuration > Precheck > SVM Mapping > Volume Mapping > Interface Mapping > Data Copy Schedule > Final Precheck > Plan Configuration > Subproject Summary. The 'Subproject Information' section displays fields for Project Name (CR123456), Subproject Name (CR123456_standalone), Subproject Type (STANDALONE), Origin Controller (eag-labofr-nas6210ht-1), Origin vFiler Unit (si-nastest-01), Data Copy IP (10.220.194.14), Target Cluster (eg-si-clsn-e01), Target SVM (si-mptest-01), and Multipath IP (-). A note explains that the 7-Mode Transition Tool maintains schedules for SnapMirror baseline copy and incremental update operations. Below this is the 'Data Copy Schedule' section with a table titled 'Provide Schedule(s) for Data Transfers'. The table has columns: Name, Recurring Days, Start Time (HH:MM), Duration (HH:MM), End Time, Update Frequency (HH:MM), Number of Concurrent SnapMirror Transfers (% of available, Not Exceedi...), Throttle Limit (MB/s), and Edit/Remove. One schedule is listed: CR123456, Daily, 22:00, 24:00, Next Day, till 22:00, 00:30, 50% , 75, Maximum. At the bottom are buttons for 'Create Schedule', 'Refresh', 'Back', and 'Next' (highlighted with a red box).

Name	Recurring Days	Start Time (HH:MM)	Duration (HH:MM)	End Time	Update Frequency (HH:MM)	Number of Concurrent SnapMirror Transfers (% of available, Not Exceedi...	Throttle Limit (MB/s)	Edit/Remove
CR123456	Daily	22:00	24:00	Next Day, till 22:00	00:30	50% , 75	Maximum	

RUN PreCheck and make sure there are no errors

CLICK 'Run Precheck'; REVIEW the output

CLICK 'Close'

CLICK 'Next'

The screenshot shows the '7-Mode' interface with the 'Final Precheck' page. The breadcrumb trail is: IP Configuration > Precheck > SVM Mapping > Volume Mapping > Interface Mapping > Data Copy Schedule > Final Precheck > Plan Configuration > Subproject Summary. The 'Subproject Information' section is visible. A 'Precheck Summary' section shows a list of checks: Session status checks, Validating 7-Mode system information, Validating 7-Mode volumes information, Validating clustered Data ONTAP storage system information, Validating clustered Data ONTAP volumes information, Validating LIF information, WAFL prechecks, SNMP prechecks, RBAC prechecks, MetroCluster prechecks, UNIX users and groups prechecks, SnapMirror prechecks, and NFS prechecks. The 'NFS prechecks' row is highlighted in red. An 'Operation Summary' section states: 'The Final prechecks operation on the session CR123456_standalone has failed. Errors = 1, Warnings = 33, Informational Messages = 1'. A 'Close' button is highlighted with a red box. At the bottom are buttons for 'Back', 'Run Prechecks again', 'Next' (highlighted with a red box), and 'Save As CSV'.

Sl. No.	Message Type	Status
1	Session status checks	Ok
2	Validating 7-Mode system information	Ok
3	Validating 7-Mode volumes information	Ok
4	Validating clustered Data ONTAP storage system information	Ok
5	Validating clustered Data ONTAP volumes information	Ok
6	Validating LIF information	Ok
7	WAFL prechecks	Warnings
8	SNMP prechecks	Warnings
9	RBAC prechecks	Warnings
10	MetroCluster prechecks	Ok
11	UNIX users and groups prechecks	Warnings
12	SnapMirror prechecks	Warnings
13	NFS prechecks	Errors

Modify the options to ensure all correct data is transferred to the destination vserver.

7-Mode Collect & Assess Migrate

Home

IP Configuration > Precheck > SVM Mapping > Volume Mapping > Interface Mapping > Data Copy Schedule > Final Precheck > **Plan Configuration** > Subproject Summary Configuring Subproject: 1/1

Subproject Information

Project Name:	<input type="text" value="CR123456"/> Edit	Origin Controller:	eag-lab01f-nas6210ht-1	Target Cluster:	eg-si-clsn-e01
Subproject Name:	<input type="text" value="CR123456_standalone"/> Edit	Origin vFiler Unit:	si-nas6210ht-01	Target SVM:	si-mptest-01
Subproject Type:	STANDALONE	Data Copy IP:	10.220.194.14	Multipath IP:	-

Note: Configuration Planning enables you to customize the way 7-Mode Transition Tool transitions the configurations. For more information, click the [? icon](#).

SVM Configuration

☐ Select All

☒ CIFS (6 Items)

- ☒ CIFS Options [?](#)
- ☒ CIFS User Mapping Configuration
- ☒ Widelinks
- ☒ CIFS Local Users and Groups
- ☒ Preferred Domain Controllers List
- ☒ Audit Configuration [?](#)

☒ NFS (1 Item)

- ☒ NFS Options [?](#)

☐ Name Services (8 Items)

- ☒ UNIX Users and Groups
- ☐ Name Service Switch Configuration (/etc/nsswitch.conf)
- ☐ Hosts Configuration (/etc/hosts)
- ☒ Netgroups [?](#)
- ☐ NIS Configuration [?](#)
- ☐ DNS Configuration
- ☐ LDAP Configuration [?](#)
- ☐ Name Mapping Switch Configuration [?](#)

Volume Configuration

☐ Select All

☒ CIFS (3 Items)

- ☒ Shares and ACLs
- ☒ Home Directory Paths
- ☒ Symlinks

☐ NFS (3 Items)

- ☐ NFS Exports
- ☐ Consolidate 7-Mode NFS Export Rules [?](#)
- ☐ Reuse Export Policies of SVM [?](#)

☐ SAN (1 Item)

- ☐ Igroups and LUN Mapping

☐ Snapshot Schedules Configuration (3 Items)

- ☐ Snapshot Schedules [?](#)
- ☐ Reuse Snapshot Policies of SVM [?](#)
- ☐ Consolidate 7-Mode Snapshot Policies [?](#)

[Back](#) [Select All](#) [Next](#)

Relevant Options Description

Option	Description	Set
CIFS Options	If the CIFS options are not selected for transition, the following 7-Mode CIFS options are not transitioned to the clustered Data ONTAP: cifs.gpo.enable, cifs.smb2.enable, cifs.smb2.signing.required, cifs.wins_servers, cifs.grant_implicit_exe_perms, cifs.restrict_anonymous.	Yes
CIFS User Mapping Configuration	Copies over usermap.cfg entries	Yes
Widelinks	Copies any widelinks that may be in use	Yes
CIFS Local Users and Groups	Copies local users and groups across	Yes
Preferred Domain Controller List	Copies the preferred DC list across	Yes
Audit Configuration	If the CIFS audit configuration is not selected for transition, the audit configuration is not transitioned even if the audit path was specified.	Yes
Shares and ACLs	Copies all share and ACL information across	Yes
Home Directory Paths	Copies home directory paths across	Yes
Symlinks	Copies any symlink configuration across	Yes
NFS Options	If the NFS options are not selected for transition, the following 7-Mode NFS options are not transitioned to the clustered Data ONTAP: nfs.udp.xfersize, nfs.v4.id.domain, nfs.v4.acl.max.aces, nfs.tcp.xfersize, nfs.rpcsec.ctx.high, nfs.rpcsec.ctx.idle, nfs.response.trigger, wafl.default_nt_user, nfs.mount_rootonly, nfs.tcp.enable, nfs.udp.enable, nfs.response.trace, nfs.v4.read_delegation, nfs.v4.write_delegation, nfs.v4.acl.enable, nfs.vstorage.enable, nfs.v3.enable, nfs.v4.enable.	Yes
UNIX Users and Groups	Copies local user/group information	Yes
Name Service Switch Configuration (/etc/nsswitch.conf)	Copies nsswitch.conf across	No
Host Configuration (/etc/hosts)	Copies host entries over	No
Netgroups	If Netgroups are selected for transition, all the existing	Yes

	Netgroups on the target SVM are replaced with the Netgroups transitioned from the 7-Mode. If there are no Netgroups configured in the '/etc/netgroups' file of the 7-Mode system, then existing Netgroups on the target SVM are retained	
NIS Configuration	If NIS configuration is not selected for transition, NIS is not added to the name service switch on the target SVM.	No
DNS Configuration	Copies DNS configuration over	No
LDAP Configuration	If LDAP configuration is not selected for transition, LDAP is not added to the name service switch and Name mapping switch on the target SVM.	No
Name Mapping Switch Configuration	If LDAP configuration is not selected for transition, LDAP is not added to the name mapping switch on the target SVM even if 7-Mode has the option 'ldap.usermap.enable' set to on. You must manually add LDAP to the name mapping switch after LDAP is configured on the target SVM.	No
NFS Exports	Create export policies on destination	No
Consolidate Export Rules	If this option is selected, only one NFS export policy is created on the target SVM for all the volumes and qtrees with matching 7-Mode export rules. And the created NFS export policy is used to export all those volumes/qtrees on the target SVM. If the 'Reuse the export policies of SVM' option is selected, and if there is a matching NFS export policy existing on the target SVM, the pre-existing policy is reused rather than creating a new export policy.	No
Re-Use Export Policies	If this option is selected, and if there is a pre-existing NFS export policy that matches with 7-Mode export policy, the pre-existing export policy is reused rather than creating a new export policy.	No
Snapshot Schedules	If the Snapshot schedules are not selected for transition, Snapshot schedules of 7-Mode volumes are not transitioned to clustered Data ONTAP and the 'default' Snapshot policy of the target SVM is assigned to the transitioned volumes.	No
Reuse Snapshot Policies of SVM	If this option is selected, and if there is a pre-existing Snapshot policy that matches with 7-Mode Snapshot policy, the pre-existing policy is reused rather than creating a new policy.	No
Consolidate 7-Mode Snapshot Policies	If this option is selected, only one Snapshot policy (with all the required schedules) is created on the target SVM for all the 7-Mode volumes with matching 7-Mode Snapshot schedules. And the created Snapshot policy is used for all those volumes on the target SVM. If the 'Reuse Snapshot Policies of SVM' option is selected, and if there is a matching Snapshot policy existing on the target SVM, the pre-existing policy is reused rather than creating a new policy.	No

Click Next

CLICK 'Save and go to Dashboard'

7-Mode Collect & Assess Migrate

Home CB123456

IP Configuration > Precheck > SVM Mapping > Volume Mapping > Interface Mapping > Data Copy Schedule > Final Precheck > Plan Configuration > **Subproject Summary** Configuring Subproject: 1/1

Subproject Information

Project Name:	CB123456 Edit	Origin Controller:	eag-labof-nas6210ht-1	Target Cluster:	eg-si-clsn-e01
Subproject Name:	CB123456_standalone Edit	Origin vFiler Unit:	si-nastest-01	Target S/M:	si-mpstest-01
Subproject Type:	STANDALONE	Data Copy IP:	10.220.194.14	Multipath IP:	-

Target Volume

Target Volume	Origin Volume	Volume Size (GB)	Target Aggregate
cb123_mptestvol01	mptestvol01	50.000	aggr1_data_h01

Total Volume(s): 1 Total Size of Transition (GB): 0.0GB View Volumes

Network Address to be Migrated

Network Address	Default Gateway	Netmask	Destination Node	Destination Port
-----------------	-----------------	---------	------------------	------------------

Data Copy Schedule

Name	Recurring Days	Start Time (HH:MM)	Duration (HH:MM)	End Time	Update Freq... (HH:MM)	Number of Concurrent SnapMirror Transfers % of available, Not Exceeding	Throttle Limit (MB/s)
CR123456	Daily	22:00	24:00	Next Day, till 22:00	00:30	50% , 75	Maximum

Precheck Status

Errors:

Warnings:

Informational:

Back Save and go to Dashboard

A data transfer workflow will be displayed in the top of the page. The circle above 'Baseline Data Copy' will have a white fill color before your first transfer. It will have an orange fill color while the first transfer is running. Then a green fill color after your first successful transfer.

CLICK 'Run Pre-Check'; REVIEW output

7-Mode Collect & Assess Migrate

Home Dashboard

CR123456_standalone standalone 0.0GB Total Size of Transition Subproject information

Preparation → Baseline Data Copy → Precutover → Storage Cutover

Run Precheck Start Baseline Apply Configuration Finish Testing Complete Transition

☐ Test Mode ?

Pause Resume Update Now Edit Subproject Abort Refresh ☒ Auto Refresh (every 5 minutes)

Volumes Data Copy Schedule Networking Configuration Planning Operation History

Select Target Volume mount policy: Use clustered Data ONTAP volume name ?

Origin Volume	Target Volume	Data Copy Schedule	Operation Status	Mirror State	SM Status	Data Pending	Transition Details	Volume T...
mptestvol01	mptestvol01	Current	Last				View Transition Details	NAS

Subproject status

- Configuration Completed
- Configuration Incomplete/Operation In Progress
- Transition Completed
- Transition Aborted

Delete Project

CLICK 'Start Baseline'

The screenshot shows the 7-Mode dashboard with the 'CB123456_standalone' project selected. The project status is 'standalone' and the total size of transition is '0.0GB'. The workflow diagram shows four steps: Preparation (green circle), Baseline Data Copy (white circle), Precutover (white circle), and Storage Cutover (white circle). The 'Start Baseline' button is highlighted with a red rectangle. Below the workflow, there are buttons for 'Run Precheck', 'Apply Configuration', 'Finish Testing', and 'Complete Transition'. The 'Apply Configuration' button has a 'Test Mode' checkbox. Below these buttons are 'Pause', 'Resume', 'Update Now', 'Edit Subproject', 'Abort', and 'Refresh' buttons. A 'Subproject status' legend is on the left, and a 'Delete Project' button is at the bottom left. A table below the buttons shows the 'Volumes' section with columns for 'Origin Volume', 'Target Volume', 'Data Copy Schedule', 'Operation Status', 'Mirror State', 'SM Status', 'Data Pending', 'Transition Details', and 'Volume T...'. The table has one row with 'mptestvol01' as the origin and 'cb123_mptestvol01' as the target.

A popup window will appear, CLICK 'yes'

The screenshot shows the 7-Mode dashboard with the 'CR123456_standalone' project selected. A 'Warning' popup window is displayed in the center, with the text: 'It is recommended that you address all warnings in precheck results before starting the transition. Do you want to continue?'. The 'Yes' button in the popup is highlighted with a red rectangle. The background dashboard shows the same workflow diagram and buttons as the previous screenshot, but the 'Start Baseline' button is no longer highlighted.

Execute an update transfer before the cutover window so that you have minimal changes to transfer during the cutover window:

CLICK 'Update Now'

The screenshot shows the 7-Mode dashboard for a migration project named 'CB123456_standalone'. The interface includes a sidebar with project navigation, a main dashboard with a progress bar and buttons, and a detailed table of migration data.

Progress Bar: Preparation (green) → Baseline Data Copy (green) → Precutover (orange) → Storage Cutover (white). Buttons: Run Precheck, Start Baseline, Apply Configuration (highlighted), Finish Testing, Complete Transition.

Buttons: Pause, Resume, Update Now (highlighted), Edit Subproject, Abort, Refresh, Auto Refresh (every 5 minutes).

Table:

Origin Volume	Target Volume	Data Copy Schedule Operation Status		SnapMirror Details				Volume T...
		Current	Last	Mirror State	SM Status	Data Pending	Transition Details	
mpstestvol01	cb123_mptestvol01	Update Waiting	Baseline Success	snapirored	idle	0 GB pending	View Transition Details	NAS

Ensure the steps below are completed during the downtime window:

The application/database has been shut down on all hosts

Source shares have been unmounted on all hosts

Start the cutover process:

CLICK 'Apply Configuration'

The screenshot shows the 7-Mode dashboard for a migration project named 'CB123456_standalone'. The interface includes a sidebar with project navigation, a main dashboard with a progress bar and buttons, and a detailed table of migration data.

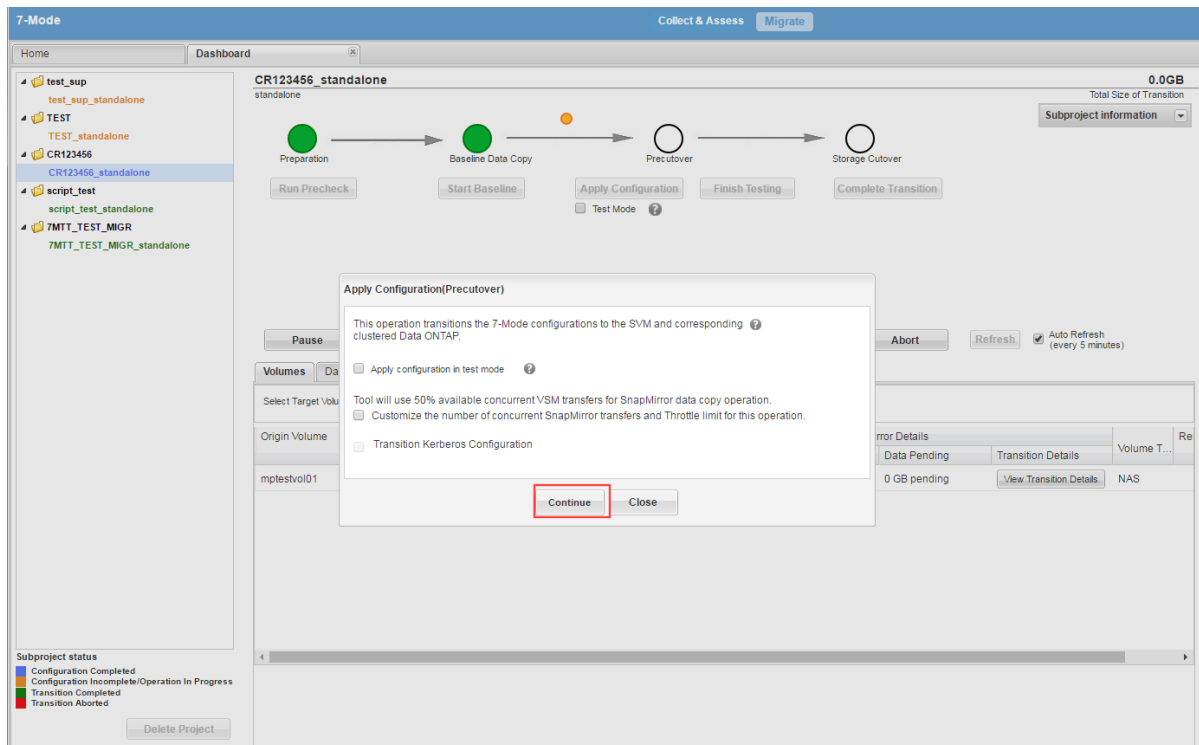
Progress Bar: Preparation (green) → Baseline Data Copy (green) → Precutover (orange) → Storage Cutover (white). Buttons: Run Precheck, Start Baseline, Apply Configuration (highlighted), Finish Testing, Complete Transition.

Buttons: Pause, Resume, Update Now, Edit Subproject, Abort, Refresh, Auto Refresh (every 5 minutes).

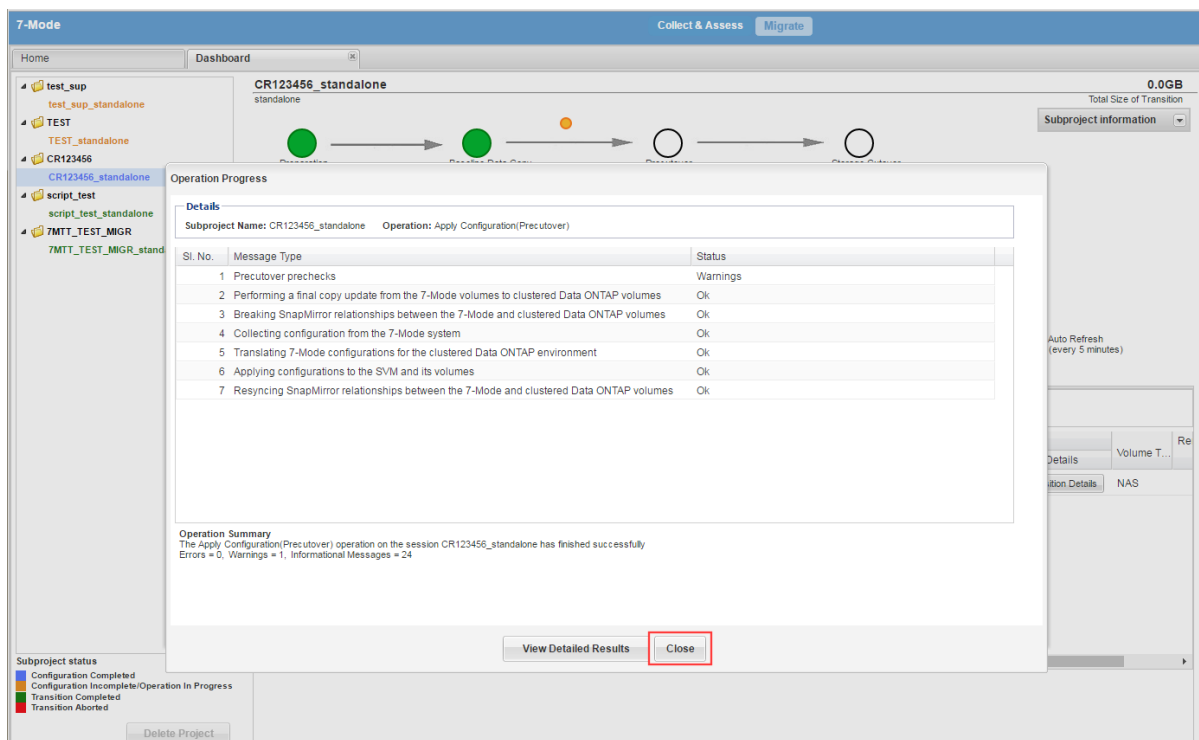
Table:

Origin Volume	Target Volume	Data Copy Schedule Operation Status		SnapMirror Details				Volume T...
		Current	Last	Mirror State	SM Status	Data Pending	Transition Details	
mpstestvol01	cb123_mptestvol01	Update Waiting	Baseline Success	snapirored	idle	0 GB pending	View Transition Details	NAS

A popup box will appear, CLICK 'Continue'



REVIEW log for errors and CLICK 'Close'



CLICK 'Complete Transition'

The screenshot shows the 7-Mode dashboard with a sidebar on the left containing a list of subprojects. The main area displays the migration progress for 'CB123456_standalone'. A progress bar at the top shows four stages: Preparation, Baseline Data Copy, Precutover, and Storage Cutover. Below the progress bar, there are buttons for 'Run Precheck', 'Start Baseline', 'Apply Configuration', 'Finish Testing', and 'Complete Transition'. The 'Complete Transition' button is highlighted with a red box. Below the buttons, there are tabs for 'Volumes', 'Data Copy Schedule', 'Networking', 'Configuration Planning', and 'Operation History'. The 'Volumes' tab is selected, showing a table with columns for Origin Volume, Target Volume, Data Copy Schedule, Operation Status, Mirror State, SM Status, Data Pending, Transition Details, and Volume T... The table has one row with the following data: mp1estvol01, cb123_mptestvol01, Update Waiting, snapmirrored, idle, 0 GB pending, View Transition Details, and NAS. Below the table, there is a 'Subproject status' section with a legend for Configuration Completed, Configuration Incomplete/Operation In Progress, Transition Completed, and Transition Aborted. A 'Delete Project' button is also present.

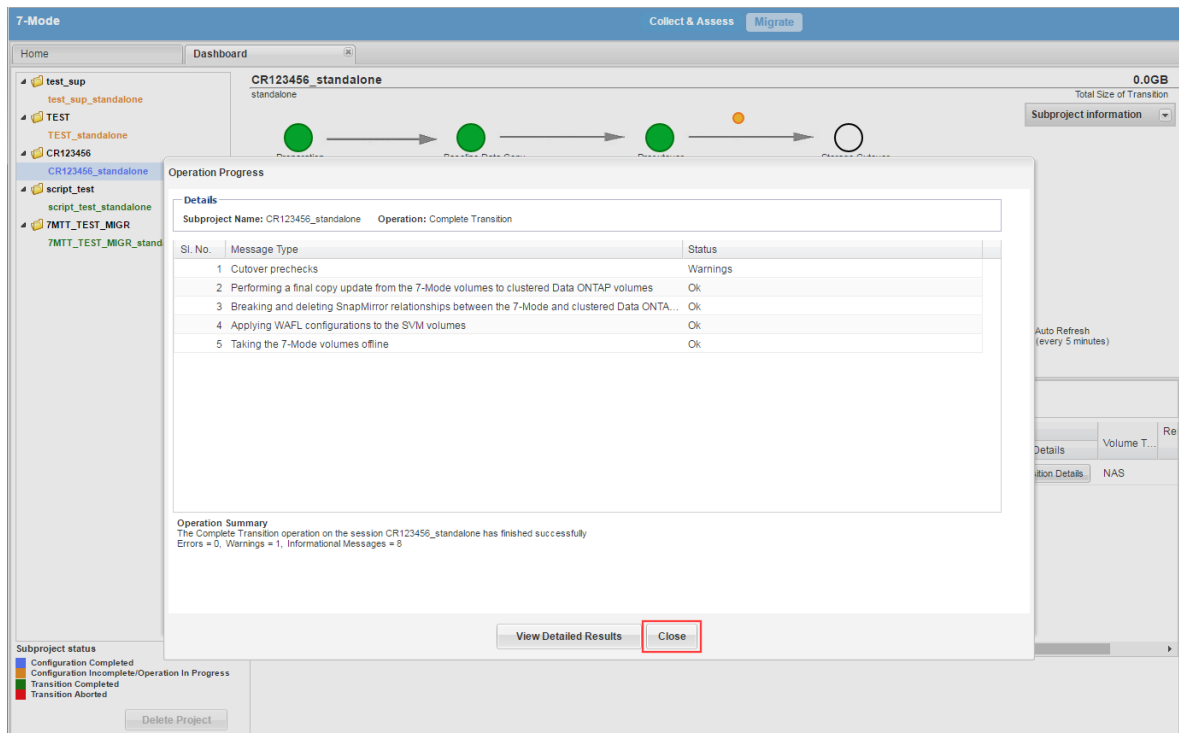
A popup box will appear, CLICK 'yes'

A warning popup box with a yellow warning icon. The text inside reads: 'It is recommended that you address all warnings in transition start results before performing cutover operation. Do you want to continue?'. There are two buttons at the bottom: 'Yes' and 'No'. The 'Yes' button is highlighted with a red box.

A popup box will appear stating that the source volume will be made offline, CLICK 'Continue'

The screenshot shows the 7-Mode dashboard with a sidebar on the left containing a list of subprojects. The main area displays the migration progress for 'CR123456_standalone'. A progress bar at the top shows four stages: Preparation, Baseline Data Copy, Precutover, and Storage Cutover. Below the progress bar, there are buttons for 'Run Precheck', 'Start Baseline', 'Apply Configuration', 'Finish Testing', and 'Complete Transition'. The 'Complete Transition' button is highlighted with a red box. Below the buttons, there are tabs for 'Volumes', 'Data Copy Schedule', 'Networking', 'Configuration Planning', and 'Operation History'. The 'Volumes' tab is selected, showing a table with columns for Origin Volume, Target Volume, Data Copy Schedule, Operation Status, Mirror State, SM Status, Data Pending, Transition Details, and Volume T... The table has one row with the following data: mp1estvol01, cb123_mptestvol01, Update Waiting, snapmirrored, idle, 0 GB pending, View Transition Details, and NAS. Below the table, there is a 'Subproject status' section with a legend for Configuration Completed, Configuration Incomplete/Operation In Progress, Transition Completed, and Transition Aborted. A 'Delete Project' button is also present. A 'Complete Transition' popup box is displayed in the center of the screen. The text inside reads: 'This is a disruptive operation. Ensure that client access is disconnected from the volumes being transitioned. This operation might take several minutes to complete.' There are two checkboxes: 'Take source volumes offline after transition' (checked) and 'Customize the number of concurrent SnapMirror transfers and Throttle limit for this operation.' There are two buttons at the bottom: 'Continue' and 'Cancel'. The 'Continue' button is highlighted with a red box.

REVIEW the log output for a successful transition
CLICK 'Close'



3.11 Post cut-over activities

3.11.1 Create job schedule and snapshot policy for SNAP volume(s)

```
job schedule cron create -name <volume_name> -minute <min> -hour <hour>

volume snapshot policy create -vserver <vsname> -policy <volume_name> -enabled true -
schedule1 <volume_name> -count1 7 -snapmirror-label1 snapvault -prefix1 sv_<volume_name>

job schedule cron show -name <vol_name>

volume snapshot policy show -vserver <vsname>
```

3.11.2 Post Checks

- Check CIFS options were correctly copied across
- Check local users and groups were copied across
- Check shares were correctly created with same permissions
- Check preferred DC list was copied if it existed
- Check widelink configuration was copied if it existed (converted to symlinks)
- Check symlink config was copied over if it existed

3.11.3 Check Symlinks

```
cifs symlinks show -vserver <vserver>
```

3.11.4 Check Options (set advanced)

```
cifs options show -vserver <vserver>
```

3.11.5 Check Group Policy

```
cifs group-policy show -vserver <vserver>
```

3.11.6 Check Preferred DC List

```
cifs domain preferred-dc show -vserver <vserver>
```

3.11.7 Check Group Membership

```
local-group show-members -vserver <vserver>
```

Example

```
eg-si-clsn-e01::> local-group show-members -vserver si-mpctest-01
(vserver cifs users-and-groups local-group show-members)
```

Vserver	Group Name	Members
si-mpctest-01	BUILTIN\administrators	SI-MPTEST-01\administrator SI-MPTEST-01\root TLR\Domain Admins TEN\Domain Admins TEN\M-Storage-admins.G TEN\M-EaganServerAdmins
	BUILTIN\users	TLR\Domain Users
	SI-MPTEST-01\monitor	SI-MPTEST-01\monitoruser TLR\M-West-SiteScope_ServiceAccounts

9 entries were displayed.

3.11.8 Check Local Groups

```
local-group show -vserver <vserver>
```

Example

```
eg-si-clsn-e01::> local-group show -vserver si-mpctest-01
(vserver cifs users-and-groups local-group show)
```

Vserver	Group Name	Description
si-mpctest-01	BUILTIN\administrators	Members can fully administer the filer
si-mpctest-01	BUILTIN\backup operators	Members can bypass file security to backup files
si-mpctest-01	BUILTIN\power users	Members that can share directories
si-mpctest-01	BUILTIN\users	Ordinary Users
si-mpctest-01	SI-MPTEST-01\compliance administrators	Members can perform compliance operations
si-mpctest-01	SI-MPTEST-01\monitor	use powershell to alert users

6 entries were displayed.

3.11.9 Check Local Users

```
local-user show -vserver <vserver>
```

Example

```
eg-si-clsn-e01::> local-user show -vserver si-mpctest-01
(vserver cifs users-and-groups local-user show)
```

Vserver	User Name	Full Name	Description
si-mpctest-01	SI-MPTEST-01\administrator		Built-in account for administering the filer
si-mpctest-01	SI-MPTEST-01\monitoruser		powershell user to monitor vfilers
si-mpctest-01	SI-MPTEST-01\root		Default vfiler root

3 entries were displayed.

3.11.10 Check Share Permissions and Path To Volume/Qtree

```
cifs share show -vserver <vserver>
```

Example

```
eg-si-clsn-e01::> cifs share show -vserver si-mpctest-01
Vserver      Share      Path      Properties Comment  ACL
-----
si-mpctest-01 admin$      /          browsable -        -
si-mpctest-01 c$          /          oplocks  -        BUILTIN\Administrators / Full Control

si-mpctest-01 ipc$          /          browsable changenotify browsable -        -
si-mpctest-01 mpqt01      /cb123_   mpctestvol01/ oplocks  changenotify everyone / Full Control
                                     mpqt01      TEN\uc136758 / Full Control
si-mpctest-01 mpshare01  /cb123_   mpctestvol01 oplocks  changenotify everyone / Full Control
                                     mpqt01      TEN\uc136758 / Full Control
                                     mpqt01      changenotify

5 entries were displayed. TLR\Domain Admins / Full Control
```

3.11.11 Export Policy Script

There is a script which can be run post migration to create volume export policies and also populate the default and volume export policy rules. The script arguments are shown below.

```
7-c_nfsexports.pl
```

```
Usage: ./7-c_nfsexports.pl --file <file name> --cb <CBEntry> --vserver <vserver name> --type <DB or STD> --user <user name> --cluster <C-DOT clustername>
```

Example

The following example will create volume export policies and populate the rules in both the default policy and volume export policies. The 7-Mode exports file used is below:

```
#Auto-generated by setup Tue Aug 25 23:10:21 GMT 2015
/vol/si_nastest_01_root -sec=sys,rw,anon=0,nosuid
#/vol/si_nas_test01 -sec=sys,rw,nosuid
#/vol/Image1 -sec=sys,rw,nosuid
#/vol/nfstest01 -sec=sys,rw,nosuid
#/vol/nfstest02 -sec=sys,rw,nosuid
#/vol/test_7mtt_02 -sec=sys,rw,nosuid
#/vol/test_7mtt_01 -sec=sys,rw,nosuid
/vol/mpctestvol01 -sec=sys,rw,nosuid
/vol/mpctestvol01/mpqt01 -sec=sys,rw=10.220.177.29,root=10.220.177.29
```

You provide the cluster admin name/IP and the admin user. It is assumed you have SSH public key access.

```
./7-c_nfsexports.pl --file ./expfile --cb cb123 --vserver si-mpctest-01 --type STD --user admin --cluster 10.220.194.42
```

```
Extracting the data from supplied exports file.....
Extracting the hosts list by options(ro,rw,root).....
Bringing up the qtree hosts to volume.....
Eliminating the duplicate hosts at vol level.....
generating volume export policies.....
Collect default and volume based exports: OUT .....
```

The script creates all of the objects on the cluster as shown below (note the CIFS rule added due to MP access):

Default Export Policy Rules

```
eg-si-clsn-e01::> export-policy rule show -vserver si-mpctest-01 -policyname default
(vserver export-policy rule show)
Vserver      Policy      Rule      Access      Client      RO
Vserver      Name        Index     Protocol    Match       Rule
-----
si-mpctest-01 default      1         any         10.220.177.29 sys
si-mpctest-01 default      2         cifs        0.0.0.0/0   any
2 entries were displayed.
```

Volume Export Policy Rules

```
eg-si-clsn-e01:> export-policy rule show -vserver si-mptest-01 -policyname cb123_mptestvol01
(vserver export-policy rule show)

```

Vserver	Policy Name	Rule Index	Access Protocol	Client Match	RO Rule
si-mptest-01	cb123_mptestvol01	1	any	10.220.177.29	sys

```
1 entries were displayed.
```

Volume Export Policies

```
eg-si-clsn-e01:> vol show -vserver si-mptest-01 -fields policy
(volume show)

```

vserver	volume	policy
si-mptest-01	cb123_mptestvol01	cb123_mptestvol01
si-mptest-01	si_mptest_01_root	default

```
2 entries were displayed.
```

3.11.12 Volume UNIX Permissions

```
eg-si-clsn-e01:> vol modify -vserver si-mptest-01 -volume cb123_mptestvol01 -unix-permissions
rwxrwxrwx
```

```
(volume modify)
```

3.11.13 Setup snap autodelete on volumes (run for each SNAP volume)

```
volume modify -vserver <vsname> -volume <volname> -space-mgmt-try-first snap_delete
volume snapshot autodelete modify -vserver <vsname> -volume <vol_name> -enabled true
volume snapshot autodelete modify -vserver <vsname> -volume <vol_name> -trigger
snap_reserve
volume snapshot autodelete show -vserver <vsname>
volume show -vserver <vsname> -fields space-mgmt-try-first
volume snapshot autodelete show -vserve <vsname>
```

3.12 QoS Policy Group Creation for Shared Filers

All shared filer volumes have a QoS policy set at 6000iops as shown below. Exceptions to this policy must be agreed by D&E management on a case by case basis.

3.12.1 Create QoS policy group and apply it at the volume level (create one QOS policy for each volume)

```
qos policy-group create -policy-group <volname> -vserver <vsname> -max-throughput
6000iops
volume modify -vserver <vsname> -volume <volume> -qos-policy-group <volname>
qos policy-group show
volume show -vserver <vsname> -fields qos-policy-group
```

3.13 QoS Policy Group Creation For Dedicated Filers

All dedicated filer volumes have a QoS policy set at **INF** as shown below. This enables statistics to be collected but no limits are placed on the volume with regard to IOPS.

3.13.1 Create QoS policy group and apply it at the volume level (create one QOS policy for each volume)

```
qos policy-group create -policy-group <volname> -vserver <vsname> -max-throughput INF
volume modify -vserver <vsname> -volume <volume> -qos-policy-group <volname>
qos policy-group show
volume show -vserver <vsname> -fields qos-policy-group
```

4 Snapvault Configuration

4.1 Cluster and Vserver Peering

4.1.1 Confirm that cluster peering has been enabled

```
cluster peer show
```

4.1.2 Create the cluster peer (skip this step if cluster peering has been configured)

```
cluster peer create -peer-addr <remote_ICL_IP1,remote_ICL_IP2> -username admin  
cluster peer show
```

4.1.3 Confirm if vsver peer has been configured

```
vserver peer show
```

4.1.4 Create vsver peer on the destination system (skip this step if vsver peer has been configured)

```
vserver peer create -vserver <destination_vserver> -peer-cluster <source_cluster> -peer-  
vserver <source_vserver> -applications snapmirror  
vserver peer show
```

4.1.5 Accept the vsver peer on the source system

```
vserver peer accept -vserver <source_vserver> -peer-vserver <destination_vserver>  
vserver peer show
```

4.2 SnapVault configuration

Volumes names in TR have ‘SNAP’ or ‘NOSNAP’ incorporated into them. SNAP volumes must have snapvault configured for disk based backups. NOSNAP volumes do NOT require backups.

4.2.1 Create secondary volumes for SnapVault as type “DP” on the destination cluster

```
volume create -vserver <vserver> -volume <volume_name> -aggregate <aggr_name> -size  
<size> -security-style unix -space-guarantee none -percent-snapshot-space 0 -language  
<vol_language> -type DP  
volume show
```

4.2.2 Create a cron job schedule if it does not exist in the destination

```
job schedule cron create -name xdp_<hour> -minute 00 -hour <hour>  
job schedule show
```

4.2.3 Configure a snapmirror policy on the destination

```
snapmirror policy create -vserver <vserver> -policy <volume>  
snapmirror policy add-rule -vserver <vserver> -policy <volume> -snapmirror-label  
snapvault -keep <retention#>  
snapmirror show -destination-path * -fields Schedule  
snapmirror policy show
```

4.2.1 Initialize SnapVault relationship on the destination

```
snapmirror create -source-path <source_vserver>:<source_volume> -destination-path  
<destination_vserver>:<destination_volume> -type XDP -schedule <schedule_name> -policy  
<policy_name>
```

```
snapmirror initialize -destination-path <destination_vserver>:<destination_volume>
```

```
snapmirror show
```