

Build CDOT Vservers

**Building CDOT Vservers: ISCSI, CIFS, NFS**

**Synopsis:** This document provides instructions for building a CDOT vserver

**Segment:** DCO - Storage

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**Document Version:** V8

**Date:** 25-October-2017

Document Status: Issued

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# Introduction

## Management Summary

This document was created so that one instruction set is used to create vservers. It can also be used to automate the process via WFA.

## Document Scope

This document does NOT going into detail about provision a cluster.

## Assumptions

It is assumed that the reader of this document is well versed in Netapp Cluster Mode administration.

## References

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  | **Document** | **Version** | **Date** | **Author** |
| 1 |  |  |  |  |

## Change History

|  |  |  |  |
| --- | --- | --- | --- |
| **Ver** | **Date** | **Author** | **Key Changes** |
| 1 | 06/01/2015 | David Ng | Initial |
| 2 | 06/15/2015 | Ian Daniel | Add instructions for CIFS |
| 3 | 06/26/2015 | Bipul Gopoi | Add ISCSI instructions |
| 4 | 12-Feb-2016 | Ian Daniel | Added DNS on admin vserver |
| 5 | 17-Aug-16 | Ian Daniel | Added MP vserver. Modified default language for vservers. Updated generic NFS/CIFS LIF creation to support both NFS and CIFS in case they ever need to be converted to MP. |
| 5 | 18-Aug-16 | Ian Daniel | Removed additional protocol on NFS and CIFS vservers per Support. Updated ISCSI section to try and clarify interfaces created. Removed extraneous roles from showmount sections. Added qtree option where requested. Modified lang to en\_US for ISCSI vservers. Added UNIX as security style to ISCSI vservers. |
| 6 | 03-Nov-16 | Mahesha Karigowda | Added instructions for ISCSI vserver to create vsadmin privilege |
| 7 | 20-Dec-2016 | Ian Daniel | Added CIFS winadmin account for share management |
| 8 | 25-October-2017 | Ian Daniel | Modified shareadmin role to be CIFsadmin |

## Distribution List

|  |  |
| --- | --- |
| **Name** | **Role** |
| Storage Delivery | Provision Cluster and vservers |

## Glossary

|  |  |
| --- | --- |
| **Term** | **Definition** |
| SVM | Vserver |
| CDOT | Clustered Data Ontap |

# LION VSERVER

## **Vserver and LIF creation**

### Create Vserver (replace hyphen with underscore in vserver rootvolume name)

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

vserver show

Disable validate-qtree-export to enable certain operation like mv between different qtree’s in same volume.

vserver nfs modify -vserver vserver\_name -validate-qtree-export disabled

vserver nfs show -fields validate-qtree-export

Both commands are in advanced privilege mode

### Create LIF with default route and failover group

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

network routing-groups route create -vserver <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 –vserver <vsname>

## **DNS configuration**

### Setup DNS on a Data Vserver

vserver services dns create -vserver <vsname> -domains <domainname> -name-servers <comma\_separate\_name\_server\_list>

vserver services dns show

### 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 -vserver <admin\_vsname> -domains <domainnames>

vserver services dns show

## Showmount script user:

security login role create -role showmount -cmddirname "vserver export-policy" -access readonly -vserver <vserver>

security login role create -role showmount -cmddirname volume -access readonly -vserver <vserver>

security login role create -role showmount -cmddirname "version" -access all -vserver <vsname>

security login create -username shwmnt -application ontapi -authmethod password -role showmount -vserver <vserver>

## **Oracle account setup**

### Oracle role, user, and SSH publickey configuration (ssh keys are located in DFM server ‘/filers/admin/source/logical’)

security login role create -role oracle -cmddirname "volume snapshot" -access all -vserver <vsname>

security login role create -role oracle -cmddirname "set" -access all -vserver <vsname>

security login role create -role oracle -cmddirname "version" -access all -vserver <vsname>

security login role create -role oracle -cmddirname "job show" -access readonly -vserver <vsname>

security login role create -role oracle -cmddirname "df" -access readonly -vserver <vsname>

security login role create -role oracle -cmddirname "snapmirror list-destinations" -access readonly –vserver <vsname>

security login create -username oracle -application ssh -authmethod publickey -role oracle -vserver <vsname>

security login publickey create -username oracle -vserver <vsname> -publickey "<ssh-dss pub\_key\_string>"

## **NFS and CIFS configuration**

### Enable NFSv3

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

vserver nfs show

# MYSQL VSERVER

## Create Vserver (replace hyphen with underscore in vserver rootvolume name)

vserver create -vserver <vserver> -rootvolume <vserver>\_root -aggregate <aggregate> -ns-switch file -nm-switch file -rootvolume-security-style unix -language en\_US

vserver show

Disable validate-qtree-export to enable certain operation like mv between different qtree’s in same volume.

vserver nfs modify -vserver vserver\_name -validate-qtree-export disabled

vserver nfs show -fields validate-qtree-export

Both commands are in advanced privilege mode

## 5.1.2 Create LIF with default route and failover group

network interface create -vserver <vserver> -lif <vserver>-lif-<lif#> -role data -data-protocol nfs -home-node <home\_node> -home-port <home\_port> -address <vserver\_IP> -netmask <vserver\_netmask> -status-admin up -firewall-policy mgmt -failover-group <failover\_group>

network routing-groups route create -vserver <vserver> -routing-group d<routing\_group> -destination 0.0.0.0/0 -gateway <gateway>

vserver show

network interface show

network interface show –failover

network routing-groups route show –vserver <vsname>

## Setup DNS on a Vserver

vserver services dns create -vserver <vserver> -domains <domain> -name-servers <nameserver1, nameserver2, etc.>

vserver services dns show

## Backup user role, user, and SSH publickey configuration

security login role create -role db\_backup\_user -cmddirname "volume snapshot" -access all -vserver <vserver>

security login role create -role db\_backup\_user -cmddirname "set" -access all -vserver <vserver>

security login role create -role db\_backup\_user -cmddirname "job show" -access readonly -vserver <vserver>

security login role create -role db\_backup\_user -cmddirname "version" -access readonly -vserver <vserver>

security login role create -role db\_backup\_user -cmddirname "df" -access readonly -vserver <vsname>

security login role create -role db\_backup\_user -cmddirname "snapmirror list-destinations" -access readonly -vserver <vserver>

security login create -username db\_backup\_user -application ssh -authmethod publickey -role db\_backup\_user -vserver <vserver>

security login publickey create -username db\_backup\_user -vserver <vserver> -publickey "ssh-dss  Snapvault backup key for Netapp db\_backup\_user account"

## Showmount script user:

security login role create -role showmount -cmddirname "vserver export-policy" -access readonly -vserver <vserver>

security login role create -role showmount -cmddirname volume -access readonly -vserver <vserver>

security login role create -role showmount -cmddirname "version" -access all -vserver <vsname>

security login create -username shwmnt -application ontapi -authmethod password -role showmount -vserver <vserver>

## Enable NFSv3

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

vserver nfs show

# Generic NFS VSERVER

## **Vserver and LIF creation**

### Create Vserver (replace hyphen with underscore in vserver rootvolume name)

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

vserver show

Disable validate-qtree-export to enable certain operation like mv between different qtree’s in same volume.

vserver nfs modify -vserver *vserver\_name* -validate-qtree-export disabled

vserver nfs show -fields validate-qtree-export

Both commands are in advanced privilege mode

### Create LIF with default route and failover group and NFS enabled.

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

**Let’s leave Generic NFS as nfs only and Generic CIFS as cifs only. If customer needs both after ordering one or the other, then they request a new solution for MP. Otherwise, Matt has to update “hundreds” of workflows, which isn’t worth the effort at this point. And other reasons I won’t go into.**

network routing-groups route create -vserver <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 –vserver <vsname>

## **DNS configuration**

### Setup DNS on a Vserver

vserver services dns create -vserver <vsname> -domains <domainname> -name-servers <comma\_separate\_name\_server\_list>

vserver services dns show

## Showmount script user:

security login role create -role showmount -cmddirname "vserver export-policy" -access readonly -vserver <vserver>

security login role create -role showmount -cmddirname volume -access readonly -vserver <vserver>

security login role create -role showmount -cmddirname "version" -access all -vserver <vsname>

security login create -username shwmnt -application ontapi -authmethod password -role showmount -vserver <vserver>

## **NFS and CIFS configuration**

### Enable NFSv3

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

vserver nfs show

# Generic CIFS VSERVER

## **Vserver and LIF creation**

### Create Vserver (replace hyphen with underscore in vserver rootvolume name)

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

vserver show

### Create LIF with default route and failover group and CIFS protocol enabled.

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

**Let’s leave Generic NFS as nfs only and Generic CIFS as cifs only. If customer needs both after ordering one or the other, then they request a new solution for MP. Otherwise, Matt has to update “hundreds” of workflows, which isn’t worth the effort at this point. And other reasons I won’t go into.**

network routing-groups route create -vserver <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 –vserver <vsname>

## winadmin powershell user:

## security login role create -role CIFsadmin -cmddirname version -access readonly -vserver <VSERVER>

security login role create -role CIFsadmin-cmddirname vserver  -access readonly -vserver <VSERVER>

security login role create -role CIFsadmin-cmddirname "vserver cifs share" -access all -vserver <VSERVER>

security login role create -role CIFsadmin-cmddirname "vserver cifs users-and-groups" -access all -vserver <VSERVER>

sec login create -username winadmin -application ontapi -authmethod password -role CIFsadmin-vserver <VSERVER>

## **DNS configuration**

### Setup DNS on a Vserver

vserver services dns create -vserver <vsname> -domains <domainname> -name-servers <comma\_separate\_name\_server\_list>

vserver services dns show

## **CIFS configuration**

### Enable CIFS

cifs server create -vserver <vsname> -cifs-server <CIFS\_Name> -domain <Domain\_Name> -ou ou=<OU\_NAME>,ou=<OU\_NAME>,ou=<OU\_NAME>

cifs server show

# Generic MP VSERVER

## **Vserver and LIF creation**

### Create Vserver (replace hyphen with underscore in vserver rootvolume name)

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

vserver show

Disable validate-qtree-export to enable certain operation like mv between different qtree’s in same volume.

vserver nfs modify -vserver *vserver\_name* -validate-qtree-export disabled

vserver nfs show -fields validate-qtree-export

Both commands are in advanced privilege mode

### Create LIF with default route and failover group and CIFS/NFS protocol enabled.

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

network routing-groups route create -vserver <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 –vserver <vsname>

## **DNS configuration**

### Setup DNS on a Vserver

vserver services dns create -vserver <vsname> -domains <domainname> -name-servers <comma\_separate\_name\_server\_list>

vserver services dns show

## Showmount script user:

security login role create -role showmount -cmddirname "vserver export-policy" -access readonly -vserver <vserver>

security login role create -role showmount -cmddirname volume -access readonly -vserver <vserver>

security login role create -role showmount -cmddirname "version" -access all -vserver <vsname>

security login create -username shwmnt -application ontapi -authmethod password -role showmount -vserver <vserver>

## winadmin powershell user:

security login role create -role CIFsadmin-cmddirname version -access readonly -vserver <VSERVER>

security login role create -role CIFsadmin-cmddirname vserver  -access readonly -vserver <VSERVER>

security login role create -role CIFsadmin-cmddirname "vserver cifs share" -access all -vserver <VSERVER>

security login role create -role CIFsadmin-cmddirname "vserver cifs users-and-groups" -access all -vserver <VSERVER>

sec login create -username winadmin -application ontapi -authmethod password -role CIFsadmin-vserver <VSERVER>

## **CIFS configuration**

### Enable CIFS

cifs server create -vserver <vsname> -cifs-server <CIFS\_Name> -domain <Domain\_Name> -ou ou=<OU\_NAME>,ou=<OU\_NAME>,ou=<OU\_NAME>

cifs server show

## **NFS and CIFS configuration**

### Enable NFSv3

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

vserver nfs show

# NFS/CIFS Backup VSERVER in Backup Cluster

## **Vserver and LIF creation**

### Create Vserver (replace hyphen with underscore in vserver rootvolume name)

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

vserver show

Disable validate-qtree-export to enable certain operation like mv between different qtree’s in same volume.

vserver nfs modify -vserver *vserver\_name* -validate-qtree-export disabled

vserver nfs show -fields validate-qtree-export

Both commands are in advanced privilege mode

### Create LIF with default route and failover group

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

network routing-groups route create -vserver <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 –vserver <vsname>

## **DNS configuration**

### Setup DNS on a Vserver

vserver services dns create -vserver <vsname> -domains <domainname> -name-servers <comma\_separate\_name\_server\_list>

vserver services dns show

## Showmount script user:

security login role create -role showmount -cmddirname "vserver export-policy" -access readonly -vserver <vserver>

security login role create -role showmount -cmddirname volume -access readonly -vserver <vserver>

security login role create -role showmount -cmddirname "version" -access all -vserver <vsname>

security login create -username shwmnt -application ontapi -authmethod password -role showmount -vserver <vserver>

## **Oracle/MySQL account setup**

### Oracle/MySQL role, user, and SSH publickey configuration

Create oracle user in backup vserver:

security login role create -role oracle -cmddirname "version" -access all -vserver <vsname>

security login role create -role oracle -cmddirname "snapmirror show" -access readonly -vserver <vsname>

security login role create -role oracle -cmddirname "df" -access readonly -vserver <vsname>

security login create -username oracle -application ssh -authmethod publickey -role oracle -vserver <vsname>

security login publickey create -username oracle -vserver cisoracle-e0029 -publickey "ssh-dss  NSS DBA snapvault snap create infrastructure"

Create MySQL backup user in backup vserver

security login role create -role db\_backup\_user -cmddirname "version" -access all -vserver cismysql-e0003

security login role create -role db\_backup\_user -cmddirname "snapmirror show" -access readonly -vserver <vsname>

security login role create -role db\_backup\_user -cmddirname "df" -access readonly -vserver <vsname>

security login create -username db\_backup\_user -application ssh -authmethod publickey -role db\_backup\_user -vserver <vsname>

security login publickey create -username db\_backup\_user -vserver <vsname> -publickey "ssh-dss  Snapvault backup key for Netapp db\_backup\_user account"

## **NFS and CIFS configuration**

### Enable NFSv3

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

vserver nfs show

### Enable CIFS

cifs server create -vserver <vsname> -cifs-server <CIFS\_Name> -domain <Domain\_Name> -ou ou=<OU\_NAME>,ou=<OU\_NAME>,ou=<OU\_NAME>

cifs server show

# iSCSI primary/Backup VSERVER

## **Primary Vserver creation**

vserver create -vserver iscsi-vm-01 -rootvolume iscsi-vm-01\_rootvol -aggregate aggr1\_data\_sas600\_flash\_n01 -ns-switch file -rootvolume-security-style **UNIX –language en\_US**

There will be dedicated bkp vserver for iscsi setup, it will **NOT** have an identical setup to the primary (one mgmt LIF and two data LIF with iSCSI protocol only). The Backup vserver is on a single node cluster and so has a single data LIF and a mgmt LIF.

## Enable and allow iSCSI protocol

vserver iscsi create -vserver iscsi-vm-01 -target-alias iscsi-vm-01 -status up

Please note here that iSCSI service cannot co-exist with other protocols. Here we will only allow iSCSI protocol for this hosted vserver

vserver modify -vserver iscsi-vm-01 -allowed-protocols iscsi

## Create LIFs

### Primary Vserver Data LIFs

For a primary ISCSI vserver we create two data LIFs for redundancy. The following example explains the commands

network interface create -vserver iscsi-vm-01 -lif iscsi-vm-01-lif01 -role data -data-protocol iscsi -home-node eag-nasor-clus1-8040LT-03 -home-port a0a-2003 -address 10.220.181.34 -netmask 255.255.255.128 -status-admin up

network interface create -vserver iscsi-vm-01 -lif iscsi-vm-01-lif02 -role data -data-protocol iscsi -home-node eag-nasor-clus1-8040LT-04 -home-port a0a-2003 -address 10.220.181.35 -netmask 255.255.255.128 -status-admin up

**Note:** LIF-01 and LIF-02 are created on separate nodes of HA pair.

Enable iSCSI on the data LIF(s) using the following command:

iscsi interface enable -vserver iscsi-vm-01 -lif iscsi-vm-01-lif01

iscsi interface enable -vserver iscsi-vm-01 -lif iscsi-vm-01-lif01

### Backup Vserver Data LIFs

For a backup ISCSI vserver we create one data LIF. The following example explains the commands

network interface create -vserver iscsi-bkp-01 -lif iscsi-bkp-01-lif01 -role data -data-protocol iscsi -home-node eag-nasor-clus1-8040BKP-01 -home-port a0a-2003 -address 10.220.181.34 -netmask 255.255.255.128 -status-admin up

**Note:** LIF-01 is the only required LIF given it is a single node.

Enable iSCSI on the data LIF using the following command:

iscsi interface enable -vserver iscsi-bkp-01 -lif iscsi-bkp-01-lif01

### Vserver Management LIF (Required on Primary and Backup Vservers)

Create a vserver management LIF. Please note here

1. To add the firewall policy to mgmt
2. To set the LIF data protocol set to “none”:
3. To ensure the management LIF is named the same as the vServer in DNS. The data management LIF resolving the vserver name is important for other tool recognition like the Snap Manager(s).
4. To ensure the vserver is properly added to either DNS or local hosts file (in all the constituents of the service, in case of a host file).

network interface create -vserver <vserver\_name> -lif <lif\_name> -role data -data-protocol none -home-node <node\_name> -home-port <port\_name> -address xx.xx.xx.xx -netmask xx.xx.xx.xx -status-admin up -firewall-policy mgmt

**Example**

network interface create -vserver iscsi-vm-01 -lif iscsi-vm-01-mgmt-lif01 -role data -data-protocol none -home-node eag-nasor-clus1-8040LT-04 -home-port a0a-2003 -address 10.220.181.35 -netmask 255.255.255.128 -status-admin up -firewall-policy mgmt

**Changed underscores to dashes in the lifname above.**

### Vserver management failover group for management

This is not the actual management failover group, but a group for managing iSCSI vserver. Create failover group for redundancy with the following command:

failover-groups create -failover-group iscsi-vm-01\_failover -node eag-nasor-clus1-8040LT-04 -port a0a-2003

failover-groups create -failover-group iscsi-vm-01\_failover -node eag-nasor-clus1-8040LT-03 -port a0a-2003

## Routing

In case you have separate routing for iSCSI, you can use the following command to facilitate the same

network routing-groups route create -vserver <vserver\_name> -routing-group d<iscsi\_network> -destination 0.0.0.0/0 -gateway <gateway\_IP>

**Example**

network routing-groups route create -vserver iscsi-vm-01 -routing-group d10.220.181.0/25 -destination 0.0.0.0/0 -gateway 10.220.181.126

## Create portsets

Please note that we are yet to create igroups and associate these to the igroup

lun portset create -vserver iscsi-vm-01 -portset iscsi-vm-01-port-01 -protocol iscsi -port-name iscsi-vm-01-lif

lun portset show -vserver iscsi-vm-01

Vserver Portset Protocol Port Names Igroups

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iscsi-vm-01

iscsi\_vm\_01\_port

iscsi iscsi-vm-01-lif ig-iscsi-vm-01-01

Use the following command to verify the default route for each SVM (vserver)

network routing-groups route show -vserver iscsi-vm-01

Use the following command to verify LIF connectivity

network interface show -vserver iscsi-vm-01

Logical Status Network Current Current Is

Vserver Interface Admin/Oper Address/Mask Node Port Home

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

iscsi-vm-01

iscsi-vm-01 up/up 10.220.181.35/25 eag-nasor-clus1-8040LT-04

a0a-2003

true

iscsi-vm-01-lif

up/up 10.220.181.34/25 eag-nasor-clus1-8040LT-04

a0a-2003

true

2 entries were displayed.

## User accounts

Snapdrive must have a local account on the vserver to execute various Ontap API commands and to retrieve system information. Snap drive requires two accounts

* One with admin level rights to the iSCSI vserver ( default account name is vsadmin)
* One with specific permissions to the admin vserver for cluster wide operations, such as SnapMirror and licenses

**Note:** Please note that Ontap API user should also have SSH access via public key to vserver and mgmt LIF

### Snapdrive account on Storage

Create “iscsi” and “iscsisv” accounts for backup and snapdrive integration

**On primary vserver, create the iscsi user**

sec login create -username iscsi -application ontapi -authmethod password -role iscsi -vserver orprod-iscsi-01

sec login create -username iscsi -application ssh -authmethod password -role iscsi -vserver orprod-iscsi-01

**On backup vserver, create the iscsisv user**

sec login create -username iscsisv -application ontapi -authmethod password -role iscsisv -vserver orprod-iscsi-01

sec login create -username iscsisv -application ssh -authmethod password -role iscsisv -vserver orprod-iscsi-01

**Note:** While installing snapdrive, please use the IP address of the management LIF on the clients/hosts where snapdrive is being installed.

### Clusterwide snapdrive role and user account

The admin veserver provides admin access to the cluster.

security login role show -vserver <admin vservername> -role <snapdrive role name>

### SMSQL integration

The SMSQL application must be assigned the admin role access to the Data ONTAP clusters at the primary and backup nodes, and the iscsi role to access the cluster vserver at the primary site for ONTAPI integration.

|  |  |  |
| --- | --- | --- |
| Credentials | vserver iscsi user password | vsm\_mt\_password |
| Customer ONTAPI (service account)user name | api\_user |
| Customer ONTAPI password (domain user) | api\_password |
| Customer ONTAPI account role | iscsi |

Further references available [here](#_WISP_requirements)

### Creating the user and roles and group

Create iscsi and iscsisv roles on both backup and primary nodes/vservers

**Syntax**

sec login role create –role iscsi -cmddirname <command\_directory> -access <access type> -query "" -vserver <vserver\_name>

The list of all commands that needs to be run for the role are included here



All vserver (Primary and secondary) should have their aggr add to their aggr list. It’s needed for restore and clone.

**Example**

vserver modify -vserver cisprod-e0041 -aggr-list aggr1\_data\_sas600\_flash\_n02

### Security login role create.

To restore the SMSQL backups successfully the vserver must have vsadmin privilege role.

Syntax to create a vsadmin role

security login create -username iscsi -application ontapi -authmethod password -role vsadmin -vserver orprod-iscsi-01