VNX CheatSheet

To extend a Filesystem
nas_fs -xtend testnfs size=500M pool=poolname

Check/set speed and duplex
server_sysconfig server_2 -pci cge0 -o duplex=full,speed=100

Configure server_3 to be a standby for server_2 (presuming server_3 is currently a primary data mover):
server_standby server_2 -c mover=server_3 -policy=auto

Confgure server_3 to be a primary data mover (presuming server_3 is currently a standby for server_2):
server_standby server_2 -d mover
server_setup server_3 -type nas

Create a logical interface named cge0-1 on physical interface cge0
server_ifconfig server_2 -c -D cge0 -n cge0-1 -p IP 10.127.52.112 255.255.255.224 10.127.52.127

Display the data movers
nas_server -list (type 1 = primary; type 4 = standby)

Delete a logical interface
server_ifconfig server_2 -d cge0-1

Create a default route
server_route server_2 -a default 10.127.52.126

List all routes
server_route server_2 -l

Delete a default route
server_route server_2 -d default 10.127.52.126

Configure DNS
server_dns server_2 hmarine.com 10.127.52.161

Check to see if dns is running
server_dns server_2

Stop/Start DNS
server_dns server_2 -o stop | server_dns server_2 -o start

Configre NIS:
server_nis server_2 hmarine.com 10.127.52.163

Start & stop certain services
server_setup server_2 -P cifs -o start (or -o stop) (or -o delete)

Set the date on the date mover:
server_date server_2 YYMMDDHHMM

Make the data mover a time services client to an NTP server at 10.127.52.161
server_date server_2 timesvc start ntp 10.127.52.161

Create a 10 Gb system using AVM:
nas_fs -n fsx -create size=10G pool=symm_std

Get information about file systems:
nas_fs -list for a list of file systems
nas_fs -info fsx
nas_fs -size fsx

Create a mountpoint on the data mover for a file system:
server_mountpoint server_2 -c /yourmountpoint

Mount a filesystem
server_mount server_2 fsx /mpx

Unmount a filesystem
server_umount server_2 -p /mpx

See what file systems are mounted
server_mount server_2

Export a file system mounted on /mpx for NFS
server_export server_2 -o root=10.127.52.12 /mpx (will allow root access to file system)

Unexport a file system for NFS:
server_export server_2 - u -p /mpx

Export (share) a file system for CIFS (global)
server_export server_2 -P cifs -n sharename /mpx

Export (share) a file system for CIFS (local)
server_export server_2 -P cifs -n sharename -o netbios=CifsSvr1 /mpx

Unexport (stop sharing) a filesystem for CIFS (global share)
server_export server_2 -P cifs -u -n sharename

Unexport (stop sharing) a filesystem for CIFS (local share)
server_export server_2 -P cifs -u -n sharename -o netbios=CifsSvr1

Create a CIFS server
server_cifs server_2 -a compname=CifsSvr1,domain=corp.hmarine.com,interface=cge0-1

Delete a CIFS server
server_cifs server_2 -d compname=CifsSvr1

Join a CIFS server to the domain
server_cifs server_2 -J compname=CifsSvr1,domain=corp.hmarine.com,admin=administrator

Unjoin a CIFS server from the domain
server_cifs server_2 -U
compname=CifsSvr1,domain=corp.hmarine.com,admin=administrator

Create a file system (using AVM)
nas_fs -n fsx -c size=100G pool=symm_std -o slice=y

Delete a file system
nas_fs -d fsx

To create virtual data mover vdm1 on server_2 (Datamover 2)
nas_server -name vdm1 -type vdm -create server_2

To list data mover vdm1 information
nas_server -info -vdm vdm1

To list all virtual datamovers
nas_server -list –vdm

Replication

Establish Control station Connectivity (both sides)
Establish DataMover Connectivity (both sides)

Control station connectivity
The systems are up and running and IP network connectivity exists between the Control Stations of both VNX systems. Verify whether a relationship exists by using the
nas_cel -list command

The source and destination Control Station system times must be within 10 minutes of each other. Take into account time zones and daylight savings time, if applicable.
Source site : cs100 192.168.168.114
Destination site : cs110 192.168.168.102

Source :
To add an entry for the Control Station of the destination VNX system, cs100, from the source VNX system cs100, type:
$ nas_cel -create cs110 -ip 192.168.168.10 -passphrase nasadmin

Destination :
To add the Control Station entry of a source VNX system, cs100, from the destination VNX system cs110, type:
$ nas_cel -create cs100 -ip 192.168.168.12 -passphrase nasadmin

type
nas_cel -list

DataMover Connectivity
If there are no other networking problems, create a static host route entry to the Data Mover routing table.
Source cs100 server_2 (local) 192.168.52.136 cs100-20 cge0
Destination cs110 server_3 (peer) 192.168.52.146 cs110-30 cge0

To verify that 192.168.52.146 is accessible through interface cs100-20 on source Data Mover server_2, type:
server_ping server_2 -interface cs100-20 192.168.52.146

$ nas_cel -interconnect -create <name> -source_server <movername>
-destination_system {<cel_name>]|id=<cel_id>} -destination_server
<movername>
-source_interfaces {<name_service_interface_name>|ip=<ipaddr>}
[,{<name_service_interface_name>|ip=<ipaddr>},...]
-destination_interfaces {<name_service_interface_name>|ip=<ipaddr>}
[,{<name_service_interface_name>|ip=<ipaddr>},...] [-bandwidth
<bandwidthSched>]

nas_cel -interconnect -create cs100_s2s3 -source_server server_2
-destination_system cs110 -destination_server server_3 -source_interfaces
ip=192.168.52.136,ip=192.168.53.137,ip=192.168.168.138
-destination_interfaces
ip=192.168.52.146,ip=192.168.53.147, ip=192.168.168.148 -bandwidth
MoTuWe07:00-14:00/8000

nas_cel -interconnect -create cs110_s3s2 -source_server server_3
-destination_system cs100 -destination_server server_2 -source_interfaces
ip=192.168.52.146,ip=192.168.53.147,ip=192.168.168.148
-destination_interfaces
ip=192.168.52.136,ip=192.168.53.137,ip=192.168.168.138 -bandwidth
MoTuWeThFr07:00
-16:00/2000

Validation fails if the peer interconnect is not set up, or for any interconnect that does nothave interfaces from the same protocol in both source and destination lists. For example, if the
source interface list includes an IPv6 address, the destination interface list must also include an
IPv6 address.

$ nas_replicate -create <name> -source -fs {<fsName>|id=<fsId>}
-destination -pool {id=<dstStoragePoolId>|<dstStoragePool>}
-interconnect {<name>|id=<interConnectId>} -max_time_out_of_sync
<maxTimeOutOfSync>

$ nas_replicate -create rep1 -source -fs src_ufs1 -destination -pool clar_r1
-interconnect cs100_s2s3 -max_time_out_of_sync 15

nas_replicate -list
nas_replicate -info

To modify the list of source interfaces available on interconnect s2_s3, type:
$ nas_cel -interconnect -modify s2_s3 -source_interfaces ip=172.24.102.0,
ip=172.24.103,ip=172.24.104

Change the interfaces associated with an interconnect
Before you change the interface that is being used by an existing Data Mover interconnect,

you must first stop the replication session, make the modification to the interconnect, and
then start the session again.
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Configuring VDM
1.The source and destination side interface names must be the same for CIFS servers transition.You may need to change the interface name created by using Unisphere (by default it uses IP address) by creating a new interface name with the server_ifconfig command.

2.The source and destination side mount points must be the same for the share names to resolve correctly. This will ensure the CIFS share can recognize the full path to the share directory and users will be able to access the replicated data after failover.
3.When the source replicated file system is mounted on a VDM, the destination file system should also be mounted on the VDM that is replicated from the same source VDM.

4.For the NFS endpoint of a replicated VDM to work correctly on the destination side, the Operating Environments of the source and destination sides must be version 7.0.50.0 or later.

5.The local groups in the source VDM are replicated to the destination side in order to have complete access control lists (ACLs) on the destination file system.

Steps
1.The source VDM to be replicated must be in the loaded read/write or mounted read-only state.
nas_server -list -vdm

2.The destination VDM will be created automatically, the same size as the source and read-only as long as the specified storage is available.
nas_pool -size name

3.verify that authentication is configured properly between the Data Mover pair and validate all the combinations between source and destination IP addresses/interface names.
nas_cel -interconnect -validate id=

4.Create VDM replication session
The VDM replication session replicates information contained in the root file system of a VDM. It produces a point-in-time copy of a VDM that re-creates the CIFS environment at a destination. It does not replicate the file systems mounted to the VDM.

nas_replicate -create <name> -source -vdm <vdmName> -destination -vdm <existing_dstVdmName> -interconnect {<name>|id=<interConnectId>} [{-max_time_out_of_sync <maxTimeOutOfSync>|-manual_refresh}]

5.Replicate the file system mounted to the VDM
After you have created the session to replicate the VDM, create a session to replicate the file system mounted to the VDM.

nas_replicate -create <name> -source -fs {<fsName>|id=<fsid>}-destination -pool {id=<dstStoragePoolId>|<dstStoragePool>} -vdm {<existing_dstVdmName>|id=<dstVdmId>} -interconnect {<name>|id=<interConnectId>}[{-max_time_out_of_sync <maxTimeOutOfSync>|-manual_refresh}]