Netapp to VNX Migrations

VNX Provisioining

1. On VNX Stop IP Table – sbin/service iptables stop
2. Create Passphrase between prod and cob, Viceversa for interconnect. #Nas\_cel create
3. Create interconnect between prod and cob and vice versa datamovers. #Nas\_cel interconnect create
4. Create Interface on VDM #server\_ifconfig create
5. Create VDM and attach interface to VDM #nas\_server vdm create
6. Replicate VDM to COB. #Nas\_replicate creaate max\_time\_out
7. Create filesystem on prod #nas\_fs create
8. Mount the filesystem server\_mount
9. Create qtree under physical Data mover and filesystem. Create directory under DM and FS.
10. cd /nasmcd/quota/DM/VDM/FS >> mkdir qtree
11. Create CIFS Server with password prompt #server\_cifs add compname
12. Join CIFS server to domain and specific OU #server\_cifs -join
13. Create default export per filesystem #server\_export -P cifs, #server\_export -P nfs
14. Enable FS dedup, and FS as RO. #fs\_dedup on, server\_mount ro FS
15. Repeat FS creation, Interface creation, mount FS on COB
16. If replication is enabled Add SPNs (Service Principle Name) to Computer object.
17. For kerberos authentication to success computer object should have all SPN for all names to map
18. If other names (CNAME) in DNS point to computer object that name must be SPN attached to computer object in AD.
19. Load balancing helps failover from prod to cob.Multiple names point to same computer object in Active Directory.
20. CNAME Record and WLB Name need to be added as SPNs on VDMs Computer object in Active Directory
21. CNAME Record is main network name that clients use. WLB Name is name created on Load Balancer. #CNAME.wlb.Domain
22. Once CNAME and WLB names are defined, we can add SPNs to Computer object in Active Directory.
23. Setspn needs to run with privilaged setspn binary installed
24. Reset the local administrator password for the VDM and can be accessible by FIDs
25. Reserver QIPs for all VDMs. Submit 3DNS requests for all replicated VDMs

QA After Provisioning

1. Interface check to ensure interface names on prod and cob are same. #server\_ifconfig
2. Check interface IP was reserved in QIP with related name and not used. Check aliases with nslookup
3. VDM Configuration check about loaded or mounted status, data mover and interface #nas\_server info. For MP access Interface attached to CIFS and VDM
4. FS config check with proper type, data mover, size and pool #nas\_fs -info
5. Check the FS mounted to VDM with RW/RO state #server\_mount VDM
6. Qtree created under FS, VDM and DM
7. Check if CIFS is created with proper name, interface and OU. #server\_cifs VDM
8. Manually modify net new CIFS object password from default to standard. Performed by windows security snap-in in Windows
9. Check CIFS Share created with valid share name and mount path under resp VDM #server\_export VDM -p cifs
10. Check NFS exports created with valid share name and mount path under resp VDM. #server\_export VDM -p nfs
11. Check VDM replication with max timeout sync 10min
12. Check FS replication with max timeout sync 10min
13. Check FS dedupe is ON
14. Check for daily and backup checkpoint schedules #nas\_ckpt\_schedule -info
15. Check SetSPN is configured on CIFS Server setspn -L
16. Check LDAP is configured at VDM level with correct OU details #ldap.conf file
17. Check LDAP is configured at DM level with correct OU #server\_ldap -info
18. Duplicate VDMs check on COB #nas\_server -l
19. Check if domain admins and everyone are not part of local admin group for new CIFS server
20. Admin group and accounts provided by requestor to be part of local admin group of new CIFS server
21. Check nsdomain config for MP at VDM level #server\_nsdomains
22. Check for worm configuration on file level retention volumes and replication check. #nas\_fs -info
23. FS with no replication can exceed upto 1TB. Vols greater that 500G should use 10Gig ports #nas\_fs size
24. COB failover and failback test for Prod-Cob setup only for new VDM and validate exports and permissions
25. After failover validate COB IP is resolving to CIFS Server/VDM name.
26. Break commands-On Prod side: #server\_ifconfig if name down; nas\_replicate -swtichover. On COB side: #server\_ifconfig ifname up
27. Resync commands-On Prod Side: #server\_ifconfig if name down. On COB side: nas\_replicate -start -reverse;nas\_replicate -reverse <REP name>;On Prod Side: #server\_ifconfig ifname up, On COB Side: #server\_ifconfig ifname up
28. Failover commands- On COB side: nas\_replicate -failover
29. Resync Commands- On COB Side: #nas\_replicate -start -reverse -overwritten\_destination;#nas\_replicate -reverse -FS\_REP
30. NDMP Backup policy creation
31. Check if filercensus is added to all new VDM level admin groups
32. Check nfsv4 service started and domain name configured #server\_nfs -v4
33. Domain is configured to nfsdomain on DM #server\_param -nfsv4
34. Check if NFSv4 is configured with access policy as mixed
35. Log type on FS can be Split or common
36. Check SMB signing on CIFS server: Options enablesecurtiysignature and requiresecuritysignature

Basecopies

1. Basecopy is single full copy of FS
2. For EMC: Method-Native replication, Tool- VNX replicator
3. For Netapp: Method-Host based replication, Tool-Rsync/Emcopy
4. Common Database to maintain all volumes info
5. During basecopy Source and Target volumes shouldn’t be 70% utilized.Not more than 4 concurrent copies.
6. If single copy cause more than 70% utilization add bwlimit option to copy command and reduce number of threads to CIFS copies
7. Copy is between source and target qtrees.If more than one qtree exists for volume, copy is from volume to qtree
8. For CIFS configuration LGDUP from source to target VDM through EMCOPY
9. For NFS configuration Migration host is added to export list of source and target VDM
10. Add migration host to export list with RO permissions on source side. Add migration host to export list with Root permissions on Target side
11. On migration host create directories and mount the volumes #pbrun mount
12. Execute Basecopy with #pbrun rsync <source path> <Target Path>
13. Unmount FS, remove directories and delete log files
14. Fill the migration checklist and check the backup policies.
15. Replication configuration between New Target Prod and Target COB. #nas\_replicate -info
16. Check COB interface is configured for each VDM. #Server\_ifconfig. If interface is configured it returns IP information
17. Duplicate local users/groups to target CIFS server during basecopy.#lgdup
18. Duplicate share definitions from source to target CIFS server.#sharedup
19. Monitor system stats before copying. #sysstat (Netapp), #server\_stats (EMC)
20. Move the target VDM object in AD to specific OU
21. For Alias based migrations only- Create and execute Setspn commands before migrartion begins.

Migration Execution:

1. Email notification about change implementation
2. Stop all shares except root volume share
3. Once vol name COB system are matched to the policy, copy the policy names to migration checklist
4. Validate replication is configured and completed between new target and COB volume
5. Replication configured at volume level and backups to be run
6. Check if COB Interface is configured for each VDM #server\_ifconfig
7. Do LGDUP and Sharedup
8. Run nightly inc copies
9. Complete final data copy
10. Review log files for any error or missed files