

Sans Digital ACM vs Async vs Folder Replication

	ACM – Active Cluster Mirror (Synchronized Volume Mirroring & Failover Clustering)	Async (Real-Time Asynchronized remote Volume Replication)	Folder-to-Folder Replication
Licensing	Extra/Additional License per Node	Extra/Additional License per Node	Free, included in the OS
Automatic -Failover	yes	No	No
Real-Time or Scheduled	Real-Time Synchronized volume Replication. A Write to the Master Node is not completed until the Standby Node is also giving a Write-Complete signal. The next Write is not started until the first Write is done on both nodes.	Real-Time Asynchronized volume Replication. A Write to the source node is not associated with the status of the remote target node. The source will <i>continuously</i> calculate the new changes and update the remote target node. In other words: CDP it is. CDP – continuous data protection	Not Real-Time, Not Continuously. Either scheduled or On-Demand Only. Also a Write to the source node is not associated with the status of the remote target node.
Volume Type	SMB/CIFS share, gNFS share, and iSCSI Target.	SMB/CIFS share and gNFS share only.	SMB/CIFS share and NFS share only.
NFS Service Type	gNFS only	gNFS or NFS , but not both	NFS only
NFS Mounting Method	mount –t nfs x.x.x.x:/share /mnt	mount –t nfs x.x.x.x:/exports/share /mnt	mount –t nfs x.x.x.x:/exports/share /mnt
Volume Size	Volumes on both Nodes must have the exact same size	As long as target's size is equal or bigger than the source's size	As long as target's size is equal or bigger than the source's size
Volume Base or Folder Base	Volume Base. Replicates the entire volume	Volume Base. Replicates the entire volume	Folder/Subfolder base. Replicate the selected Folder.
For LAN or WAN	LAN Only	LAN or WAN	LAN or WAN
File Versioning	N/A Whatever happens on the source will happen on the target	N/A Whatever happens on the source will happen on the target	Available as a setup option. As long as enough space/capacity on the target node, user can define to keep multiple versions.
File Deletion	If a file is deleted on the source, it will be deleted on the target as well.	If a file is deleted on the source, it will be deleted on the target as well	Option to keep or delete.

Remarks: Differences Between gNFS and NFS

NFS – provide NFS service using the kernel native NFS service.

gNFS – provide NFS service using the gluster NFS service.

#1: To NFS clients, it is always using NFS protocol regardless what service is selected on the NAS, gNFS or NFS.

#2: In AAMC mode, gNFS is far more stable and efficient for performance than NFS.

#3: When using gNFS, any and all shares in the NAS will be accessible to NFS clients, no choice of selecting certain shares to be visible to NFS clients and other shares not to be. Also, gNFS has no “export” options.

#4: When using NFS, admin can select which share to be enabled for the NFS service and which share is not. And Each NFS share can define with export options.

ESX (VMware) – supports both NFS and gNFS from NAS in clustering mode (Mirror & Failover or Async)

XenServer (Citrix) – supports gNFS only from NAS in clustering mode (Mirror & Failover or Async). If use NFS, after NAS reboot, XenServer can't find the NFS share.