

Quick Command Reference: FCP HP-UX Host Utilities 4.0.1 and Data ONTAP

Commands for discovering or identifying LUNs	
ioscan -fnC disk	Discovers new disks. A reboot is not required.
ioinit -i	Creates device entries for new devices that are found after an ioscan
insf -e	Installs files in the /dev directory for new devices.
tdlist	Lists target devices including hardware paths and block device nodes.
fcclist	For HBAs that support the fcd driver, lists target devices, including hardware paths and block device nodes
ls -l /dev/*/group	Lists contents of a directory. Helps determine which minor numbers are in use.
Commands for using HP-UX Logical Volume Manager	
pvccreate /dev/rdisk/primary_path_disk_device	Initializes a raw disk device for use as a physical volume in a volume group. <i>primary_path_disk_device</i> is the primary path to the disk device with the LUN.
mknod /dev/vg_name/group 64 minor_number	Create a device node on the host for the physical volume group
vgcreate vg_name /dev/dsk/<primary_path>	Creates a new volume group.
vgextend [-f] [-A autobackup] [-g pvg_name] [-x extensibility] [-z sparepv] vg_name pv_path ...	Assigns additional physical volumes to a volume group. The volume group must be active.
vgreduce [-A autobackup] vg_name pv_path ...	Removes each physical volume specified by a <i>pv_path</i> argument from volume group <i>vg_name</i> .
vgdisplay -v vg_name ...	Displays information about volume groups.
vgchange -a y/n vg_name/dev/vol_group	Activates or deactivates a volume group.
vgscan	Scans physical volumes for LVM volume groups.
vgimport	Imports an LVM volume group onto the system.
vgexport	Exports an LVM volume group and its associated logical volumes.
lvcreate -L size volume_group	Creates logical volume(s) in LVM volume group with <i>size</i> specifying the total size of the logical volume. The <i>size</i> value can't be larger than the NetApp LUN.
lvextend -L size vg_name	Increase space, increase mirrors for LVM logical volume.
ntap_config_paths	Checks paths available paths to LUNs and reorders those paths if necessary.
newfs -F {hfs vxfs} /dev/vg_name/lv_name	Create a new file system on a logical volume.
mkdir -m 777 /dir_name	Make a directory for a mount point.
mount /dev/vg_name/lv_name /dir_name	Mounts a file system.
VERITAS Volume Manager (VxVM) Commands	
vxctl enable	Detects new LUNs on NetApp storage.
vxdisk list	Displays information about disks, including name, disk group, and status.
vxctl stop vxconfigd	Stops the VxVM configuration daemon. Restarts the VxVM configuration daemon Note: These commands ensure that VxVM 3.5 does not treat each path to each new LUN as a separate DMP device.
vxdisksetup -i device_name	Initializes the disk for VxVM <i>device_name</i> is the name listed for the LUN in the DEVICE column of the vxdisk list command output.
vx dg init dg_name dg_name=device_name	Creates a disk group for the LUN. <i>dg_name</i> is the name you assign to the disk group. <i>device_name</i> is the name listed for the LUN in the DEVICE column of the vxdisk list command output.
/opt/VRTS/bin/vxpfto -g dg_name -t <seconds>	Increases the Powerfail Timeout interval on a disk group containing NetApp LUNs to the specified seconds.
vx dg -g dg_name adddisk dg_name=device_name	Adds a disk to a diskgroup
vx dg import dg_name	Imports a disk group to make the specified disk group available on the local machine.
vx dg deport dg_name	Disables access to the specified disk group.
vx dg destroy dg_name	Removes a disk group from the system.
vxprint	Displays records from the Veritas Volume Manager configuration.
vx dmpadm listenclosure all	Displays storage enclosure information
vxddladm listversion	Lists the version number of numbers of ASLs and minimum VxVM release that is required for each library
vx dmpadm stat restored	Displays the current values of the Veritas DMP restore daemon.
vx dmpadm stop restore	Stops the Veritas DMP restore daemon.
vx dmpadm start restore interval=<seconds> policy=<policy>	Starts the Veritas DMP restore daemon with the specified values.
vxassist -g dg_name make vol_name size	Creates a logical volume.
mkfs -F vxfs /dev/vx/rdisk/dg_name/vol_name	Creates a file system on the logical volume.
mkdir -m 777 /dir_name	Make a directory for a mount point.
mount /dev/vx/dsk/dg_name/vol_name /mnt/dir_name	Mounts a file system.

LUN and igroup information Commands		
sanlun fcp show adapter -c		Displays the ONTAP igroup create command with the host's WWPNs. You can copy and past this command to the storage appliance command line to create an igroup with the host's WWPNs.
sanlun lun show -p		Shows which block device nodes correspond to LUNs on NetApp storage. Also shows which paths to the LUN are primary and secondary, and provides information about the multipathing policy.
Fibre Channel protocol service and adapter management commands		
fcp start stop		Starts or stops the FCP service.
fcp config [adapter [up down]] [partner {adapter None} -partner] [mediatype {ptp auto loop}]		Configures the FCP target adapter up or down. Leave off up or down to display configurable information. Omit adapter to display all.
fcp show adapter [adapter...]		Displays target adapter information for specified logical adapters.
fcp show initiator [adapter...]		Displays information about initiators connected to specified adapters.
FCP target status, performance, and troubleshooting commands		
fcp status		Displays current status of the FCP service.
fcp stats [-z] -i interval [-a adapter]		Displays device-level statistics for the specified FCP adapter over the specified reporting interval in integer seconds. Use -z to clear statistics. Use -a to display statistics for all adapters.
sysstat -f [interval]		Displays performance statistics. interval is integer reporting interval in seconds; default is 15 seconds.
lun stats [-z] -i interval [-o] [-a lun_path]		Displays block access statistics for the specified LUN. Use -z to clear statistics. Use -o for extended stats, -a to display stats for all LUNs.
cf status		Displays the status of the cfmode.
fcp show cfmode		Displays the current cfmode.
sysconfig -v		Displays system configuration information.
vol status		Displays the status of the volume.
LUN and igroup management commands		
vol options vol_name nosnap on		Turns off schedule snapshots for a volume containing LUNs. Strongly recommend to enable use of space reservations.
vol create vol_name		Creates a volume.
lun setup		Interactive LUN creation. Combines the functions of the lun create, igroup create, igroup add, and lun map commands.
lun create -s size [-t aix hpux image netware linux solaris vld vmware windows] lun_path		Manual LUN creation. Enter size as integer bytes with one of the following suffixes: m (megabytes), g (gigabytes), or t (terabytes).
igroup create -f [-t aix hpux default linux netware solaris vmware windows] initiator_group [node...]		Creates a new FCP initiator group. Optionally specify the initiator node names (node...), or add them using the igroup add command.
igroup show [initiator_group]		Displays the initiator nodes in the specified initiator group. Omit initiator_group to see all igroups.
igroup add initiator_group node...		Adds initiator nodes to the specified igroup.
lun map lun_path initiator_group [lun_id]		Makes the specified LUN accessible to initiators in the specified igroup. Specify optional LUN ID, or take default of lowest available value.
lun show [-v -m -c] [all mapped offline online unmapped lun_path -g initiator_group]		Displays general (-v), mapping (-m), or clone (-c) information about the specified set of LUNs.
lun online offline lun_path...		Enables or disables block-protocol access to the specified LUNs
lun move lun_path to_lun_path		Moves a LUN to a new path in the same volume.
lun destroy [-f] lun_path...		Destroys the specified LUNs and all their data. Use -f if LUN is in use.
General FCP Notes		
The FilerView™ GUI can also be used for the above commands (http://filer_ip_address/na_admin)		More information at the NetApp NOW site: http://now.netapp.com
Resources		
http://now.netapp.com		All NetApp documentation and software downloads.
http://now.netapp.com/NOW/knowledge/docs/san/fcp_iscsi_config/		FCP and iSCSI support matrix. Includes information about supported HBAs, switch firmware, host operating systems, volume manager software, and the version of Data ONTAP supported with your host.