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VERITAS Storage Foundation™ 4.1 *for UNIX*—Maintenance Commands

DMP, DDL, AND TASK MANAGEMENT

Action	Command Line
Manage tasks	`vxtask list` `vxtask monitor`
Discover new devices	`vxdisk scandisks new`
List supported disk arrays	`vxddladm listsupport`
Exclude support for an array	`vxddladm excludearray libname=`*`library`* `vxddladm excludearray vid=`*`vid`* `pid=`*`pid`*
Reinclude support	`vxddladm includearray libname=`*`library`* `vxddladm includearray vid=`*`vid`* `pid=`*`pid`*
List excluded arrays	`vxddladm listexclude`
List supported JBODs	`vxddladm listjbod`
Add/remove JBOD support	`vxddladm addjbod vid=`*`vid`* `pid=`*`pid`* `vxddladm rmjbod vid=`*`vid`* `pid=`*`pid`*
Add a foreign device	`vxddladm addforeign blockdir=`*`path`* `chardir=`*`path`*
List controllers on system	`vxdmpadm listctlr all`
Display subpaths	`vxdmpadm getsubpaths ctlr=`*`ctlr`*
Display DMP nodes	`vxdmpadm getdmpnode nodename=`*`nodename`*
Enable/disable I/O to controller	`vxdmpadm enable ctlr=`*`ctlr`* `vxdmpadm disable ctlr=`*`ctlr`*
Display enclosure attributes	`vxdmpadm listenclosure all`
Rename an enclosure	`vxdmpadm setattr enclosure `*`orig_name`* `name=`*`new_name`*
Enable statistics gathering	`vxdmpadm iostat start`
Reset statistics counters	`vxdmpadm iostat reset`
Display stats for all paths	`vxdmpadm iostat show all`
Change the I/O policy	`vxdmpadm setattr enclosure `*`enc_name`* `iopolicy=`*`policy`*
Set path attributes	`vxdmpadm setattr path `*`path_name`* `pathtype=`*`type`*

SUBDISK OPERATIONS

Action	Command Line
Create a subdisk	`vxmake -g `*`diskgroup`* `sd `*`subdisk_name`* *`diskname offset length`*
Remove a subdisk	`vxedit -g `*`diskgroup`* `rm `*`subdisk_name`*
Display subdisk information	`vxprint –st` `vxprint -l `*`subdisk_name`*
Associate a subdisk to a plex	`vxsd assoc `*`plex_name subdisk_name`*
Dissociate a subdisk	`vxsd dis `*`subdisk_name`*

PLEX AND VOLUME OPERATIONS

Action	Command Line
Create a plex	`vxmake -g `*`diskgroup`* `plex `*`plex_name`* `sd=`*`subdisk_name`*`,…`
Associate a plex (to a volume)	`vxplex –g `*`diskgroup`* `att `*`vol_name`* *`plex_name`*
Unmirror a volume (remove a plex)	`vxplex –o rm dis `*`plex_name`*
Start/stop volumes	`vxvol {start|stop} `*`vol_name`*
Start/stop all volumes	`vxvol {startall|stopall}`
Recover a volume	`vxrecover -sn `*`vol_name`*
Detach a plex	`vxplex –g `*`diskgroup`* `det `*`plex_name`*
Attach a plex	`vxplex –g `*`diskgroup`* `att `*`vol_name`* *`plex_name`*
Change state flags on plex	`vxmend fix {active|clean|stale}` *`plex_name`*
Turn plex online/offline	`vxmend {on|off} `*`plex_name`*
Set FastResync flag on a volume	`vxvol set fastresync=on `*`vol_name`*

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BENCHMARKING OPERATIONS

Action	Command Line
Count and size of VxVM disk I/Os completed per sample time slice to a volume	`vxstat -g diskgroup [-i interval] [-c count] –d vol_name`
VxVM I/O trace information—dump to file and read from file	`vxtrace -g diskgroup [–t duration] –d [filename] –o dev,disk vol_name; vxtrace –l –f /tmp/tracedata | pg`
Sample I/O load with statistics—sequential	`vxbench –w {read|write} –i iosize=size,iocount=count filename`
Sample I/O load with statistics—random	`vxbench –w {rand_read|rand_write} –i iosize=size,iocount=count, maxfilesize=size filename`

TUNING OPERATIONS

Action	Command Line

View currently set VxVM kernel parameters	Example: View the current setting for the kernel parameter `vol_max_vol`:
	`# echo 'vol_max_vol/D' | mdb –k`
	`# echo 'vol_max_vol/E' | mdb –k`

Change VxVM kernel parameters	Example: Change the VxVM kernel parameter `vol_max_vol` from the current value to a new value of 5000 by adding the parameter to the `/kernel/drv/vxio.conf` file:
	`name="vxio" parent="pseudo" instance=0`
	`vol_max_vol=5000;`
	Save the file, and reboot the system.

VOLUME MAINTENANCE OPERATIONS

Action	Command Line
Relayout a volume	`vxassist -g diskgroup relayout vol_name layout=new_layout [attributes...]`
Run a Storage Expert rule	`rule_name -g diskgroup run`
Display rule description	`rule_name info`
Display rule attributes	`rule_name list`
Display default attributes	`rule_name check`
Convert to or from a layered layout	`vxassist -g diskgroup convert vol_name layout=new_layout [attributes...]`

POINT-IN-TIME COPIES: ENTERPRISE VOLUME LEVEL

Action	Command Line
Enable FastResync for an instant snapshot	`vxassist -g diskgroup [-b] prepare origvol`
Create a full-sized instant snapshot using a plex	`vxsnap -g diskgroup make source=origvol/newvol=snapvol/plex=plex`
Create a space-optimized instant snapshot using a new cache object	`vxsnap -g diskgroup make source=orig/newvol=snapvol/cachesize=size`

Create a shared cache object for a space-optimized instant snapshot	`vxassist -g diskgroup make cachevolname size layout=mirror init=active`
	`vxmake -g diskgroup cache cacheobjectname cachevolname=cachevol regionsize=size`
	`vxcache -g diskgroup start cacheobjectname`

Display information about instant volume snapshots	`vxsnap –g diskgroup print [origvol]`
Refresh an instant snapshot	`vxsnap –g diskgroup refresh snapvol source=origvol`
Restore an instant snapshot	`vxsnap –g diskgroup restore origvol source=snapvol`
Reattach a full-sized instant snapshot	`vxsnap –g diskgroup reattach snapvol source=origvol`
Dissociate a full-sized instant snapshot	`vxsnap –g diskgroup dis snapvol`

POINT-IN-TIME COPIES: ENTERPRISE FILE SYSTEM LEVEL

Action	Command Line
Create a storage checkpoint	`fsckptadm [-nruv] create ckpt_name mount_point`
Display information about storage checkpoints	`fsckptadm [-cv] list mount_point`
Mount a storage checkpoint	`mount -F vxfs -o ckpt=ckpt_name /dev/vx/dsk/diskgroup/vol:ckpt_name mount_point`
Set quotas for storage checkpoints	`fsckptadm [-fm] setquotalimit mount_point hard_limit soft_limit`
Restore a file system from a storage checkpoint	`fsckpt_restore [-l] device_name ckpt_name`
Remove a storage checkpoint	`fsckptadm [-sv] remove ckpt_name mount_point`
Print snapshot information	`vxassist -g diskgroup snapprint vol_name`

CROSS-PLATFORM DATA SHARING

Action	Command Line
Converting a Non-CDS Disk to a CDS Disk	`vxcdsconvert [-A] [-d defaultsfile] -g diskgroup [-o novolstop] alldisks|disk name`
Converting a Non-CDS Disk Group to a CDS Disk Group	`vxcdsconvert [-A] [-d defaultsfile] -g diskgroup [-o novolstop] alignment|alldisks|disk name|group [attribute]`