

AIX Command Crib Sheet

OS LEVEL : AIX
DATE : 29/01/2001
VERSION : 1.8

Latest version can be found at <http://mort.level5.net/johnr/index.html>
http://www.rs6000.ibm.com/cgi-bin/ds_form Web based man pages

MISCELLANEOUS

<i>oslevel</i>	<i>Returns operating system level</i>
<i>whence (program)</i>	<i>Returns full path of program</i>
<i>whereis (program)</i>	<i>Returns full path of program</i>
<i>what (program)</i>	<i>Displays identifying info from the executable like version number, when compiled.</i>
<i>lslpp -L all</i>	<i>list all installed software</i>
<i>lslpp -L (program set name)</i>	<i>Check if software installed</i>
<i>lslpp -f</i>	<i>Lists filesets vs packages</i>
<i>lslpp -ha</i>	<i>Lists installation history of filesets</i>
<i>instfix -ik (fix number eg IX66617)</i>	<i>Checks id fix is installed</i> <ul style="list-style-type: none"><i>Examples :</i> <i>instfix -ik 4330-02_AIX_ML</i>
<i>compress -c file.txt > file.Z</i>	<i>Create a compressed file.</i>

<i>uuencode (infile) (extract-file-name) > (output file)</i>	<p><i>Converts a binary file to an ASCII file for transfer by modem or email</i></p> <ul style="list-style-type: none"> <i>Examples :</i> <i>uuencode maymap maymap > maymap.enc</i>
<i>uudecode (encoded file)</i>	<p><i>Extracts a binary file from encoded file and calls it the extract-file-name</i></p> <ul style="list-style-type: none"> <i>examples :</i> <i>uuencode maymap.enc</i>
<i>od -c /tmp</i>	<i>Displays contents of the /tmp directory file</i>
<i>ls -li</i>	<i>Lists files with their inode numbers</i>
<i>echo *</i>	<i>Lists files, can be used if ls is corrupt/missing</i>
<i>alog -o -t boot</i>	<i>View the boot log</i>
<i>chtz (timezone eg GMT0BST)</i>	<i>Changes the timezone in /etc/environment file</i>
<i>chlang (language eg En_GB)</i>	<i>Changes the language in /etc/environment file</i>
<i>ar -v -t (archive file)</i>	<i>List contents of an archive</i>
<i>ar -v -x (archive file)</i>	<i>Extracts the archive</i>
<i>ar -v -t /usr/lib/libC-r.a</i>	<i>Lists contents of the libC_r.a library</i>
<i>find /source -print cpio -pdm /target</i>	<i>Copying directories using cpio, creates /target/source directory.</i>
<i>dump -nTv (binary executable)</i>	<i>Displays the contents of an executable file</i>
<i>dump -c</i>	<i>Displays string information</i>

<i>dump -o</i>	<i>Displays object file headers</i>
<i>dump -l</i>	<i>Displays line numbers</i>
<i>dump -s</i>	<i>Displays the text section</i>
<i>snap -ao /dev/rmt0</i>	<i>Create a snapshot onto tape</i>
<i>snap -ad (directory)</i>	<i>Create a snapshot into a named directory other than the default (/tmp/ibmsupt)</i>
<i>/usr/dt/bin/dtconfig -d</i>	<i>Disables desktop logins</i>
<i>/usr/dt/bin/dtconfig -e</i>	<i>Enables desktop logins</i>
<i>/var/dt/Xpid</i>	<i>PID of the dtlogin process</i>

TERMINALS

<i>tty</i>	<i>Displays what the tty/pty number of the terminal is.</i>
<i>termdef</i>	<i>reports the termtypes setup in smit for the tty port that termdef is run on.</i>
<i>chdev -l (device eg tty1) -a term=vt100</i>	<i>Sets tty to a vt100 terminal type</i>
<i>penable tty0</i>	<i>adds getty line into /etc/inittab for tty0 and starts getty</i>
<i>pdisable tty0</i>	<i>disables the getty line and disables getty</i>
<i>penable / pdisable -a option is for all</i>	
<i>stty erase ^?</i>	<i>Set backspace key for vt100 terminals</i>
<i>stty erase ^H</i>	<i>Set backspace key for wyse50 terminals</i>

<i>lscons</i>	<i>Displays the console device</i>
<i>chcons -a login=enable (device eg /dev/tty1) Changes the console device</i>	
<i>for i in 0 1 2 3 4 5 6 7 do mkdev -c tty1 -t tty -s rs232 -p sa2 -w\$i -a login=enable -a term=vt100 done</i>	<i>Create ttys on ports 0 to 7 on adapter sa2 :-</i>
<i>portmir -t /dev/tty0</i>	<i>Mirror current terminal onto /dev/tty0</i>
<i>portmir -o</i>	<i>Turns off port mirroring</i>

NETWORK

<i>host (ip or hostname)</i>	<i>Resolves a hostname / ip address</i>
<i>hostname</i>	<i>Displays hostname</i>
<i>hostname (hostname)</i>	<i>Sets the hostname until next reboot</i>
<i>chdev -l (device name) -a hostname=(hostname)</i>	<i>Changes hostname permanently Examples :chdev -l inet0 -a hostname=thomas</i>
<i>ifconfig (device name)</i>	<i>Displays network card settings</i>
<i>ifconfig (device name) up</i>	<i>Turns on network card</i> <ul style="list-style-type: none"> • <i>Examples :</i> <i>ifconfig en0 inet 194.35.52.1 netmask 255.255.255.0 up</i>
<i>ifconfig (device name) down</i>	<i>Turns off network card</i>
<i>ifconfig (device name) detach</i>	<i>Removes the network card from the network interface list</i>

<i>ifconfig lo0 alias 195.60.60.1</i>	<i>Create alias ip address for loopback</i>
<i>route (add/delete) (-net/-host) (destination) (gateway)</i>	<p><i>Adds or deletes routes to other networks or hosts, does not update the ODM database and will be lost at reboot.</i></p> <ul style="list-style-type: none"> <i>Exemple :</i> <i>route add -net 194.60.89.0 194.60.90.4</i>
<i>lsattr -EHl inet0</i>	<i>Displays routes set in ODM and hostname</i>
<i>odmget -q "name=inet0" CuAt</i>	<i>Displays routes set in ODM and hostname</i>
<i>refresh -s inetd</i>	<i>Refresh inetd after changes to inetd.conf</i>
<i>kill -1 (inetd PID)</i>	<i>Refresh inetd after changes to inted.conf</i>
<i>netstat -i</i>	<i>Displays interface statistics</i>
<i>entstat -d (ethernet adapter eg en0)</i>	<i>Displays ethernet statistics</i>
<i>arp -a</i>	<i>Displays ip to mac address table from arp cache</i>
<i>no -a</i>	<p><i>Displays network options use -o to set individual options or</i></p> <ul style="list-style-type: none"> <i>-d to set individual options to default</i> <i>examples : to reset the maximum size of the mbuf pool to its default size, enter:</i> <i>no -d thewall</i> <i>no -o option=value (this value is reset at reboot)</i> <i>Examples : to change the maximum size of the mbuf pool to 3MB, enter:</i> <i>no -o thewall=3072</i> <i>no -o "ipforwarding=1"</i>

<i>traceroute (name or ipaddress)</i>	<i>Displays all the hops from source to destination supplied.</i>
<i>ping -R (name or ipaddress)</i>	<i>Same as traceroute except repeats.</i>

N.F.S.

<i>Exportfs</i>	<i>Lists all exported filesystems</i>
<i>exportfs -a</i>	<i>Exports all fs's in /etc/exports file</i>
<i>exportfs -u (filesystem)</i>	<i>Un-exports a filesystem</i>
<i>mknfs</i>	<i>Configures and starts NFS services</i>
<i>rmnfs</i>	<i>Stops and un-configures NFS services</i>
<i>mknfsexp -d /directory</i>	<i>Creates an NFS export directory</i>
<i>mknfsmnt</i>	<i>Creates an NFS mount directory</i>
<i>mount hostname:/filesystem /mount-point</i>	<i>Mount an NFS filesystem</i>
<i>nfs -a</i>	<i>Display NFS Options</i>
<i>nfs -o option=value</i>	<i>Set an NFS Option</i> <ul style="list-style-type: none"> • <i>Examples :</i> <i>nfs -o nfs_use_reserved_port=1</i>

BACKUPS

<u>MKSYSB</u>	
<i>mkszfile -f</i>	<i>Creates /image.data file (4.x onwards)</i>
<i>mkszfile -X</i>	<i>Creates /fs.size file (3.x)</i>
<i>mksysb (device eg /dev/rmt0)</i>	
<u>CPIO ARCHIVE</u>	
<i>find (filesystem) -print cpio -ocv > (filename or device)</i>	
<i>eg find /usr/ -print cpio -ocv > /dev/rmt0</i>	
<u>CPIO RESTORE</u>	
<i>cpio -ict < (filename or device) more</i>	<i>Lists archive</i>
<i>cpio -icdv < (filename or device)</i> <i>cpio -icdv < (filename or device) ("files or directories to restore")</i>	<i>Examples :</i> <ul style="list-style-type: none">• <i>Restore directory and contents</i> <i>cpio -icdv < /dev/rmt0 "tcpip/*"</i><ul style="list-style-type: none">• <i>Restore a named file</i> <i>cpio -icdv < /dev/rmt0 "**resolve.conf"</i>
<u>TAR ARCHIVE</u>	
<i>tar -cvf (filename or device) ("files or directories to archive")</i>	<i>tar -cvf /dev/rmt0 "/usr/*"</i>
<u>TAR RESTORE</u>	
<i>tar -tvf (filename or device)</i>	<i>Lists archive</i>

<i>tar -xvf (filename or device)</i>	<i>Restore all</i>
<i>tar -xvf (filename or device) ("files or directories to restore")</i>	<p><i>use -p option for restoring with original permissions</i> <i>examples:</i></p> <ul style="list-style-type: none"> • <i>Restore directory and contents</i> <i>tar -xvf /dev/rmt0 "tcpip"</i> • <i>Restore a named file</i> <i>tar -xvf /dev/rmt0 "tcpip/resolve.conf"</i>
<u><i>AIX ARCHIVE</i></u>	
<i>find (filesystem) -print backup -iqvf (filename or device)</i>	<p><i>Backup by filename. (-u option updates /etc/dumpdates file)</i> <i>Example :</i> <i>find /usr/ -print backup -iqvf /dev/rmt0</i></p>
<i>backup -(backup level 0 to 9) -f (filename or device) ("filesystem")</i>	<p><i>Backup by inode. (-u option updates /etc/dumpdates file)</i> <i>Example :</i> <i>backup -0 -f /dev/rmt0 "/usr"</i></p>
<u><i>AIX RESTORE</i></u>	
<i>restore -qTvf (filename or device)</i>	<i>Lists archiv</i>
<i>restore -qvxf (filename or device)</i>	<i>Restores all</i>
<i>restore -qvxf (filename or device) ("files or directories to restore")</i>	<p><i>use -d for restore directories)</i></p> <ul style="list-style-type: none"> • <i>Restore /etc/passwd file</i> <i>restore -qvxf /dev/rmt0.1 ".etc/passwd"</i> • <i>Lists contents of a mksysb tape</i> <i>restore -s4 -qTvf /dev/rmt0.1</i>

<u>BACKUPS ACROSS A NETWORK</u>	
<i>find /data -print cpio -ocv dd obs=32k rsh remhost "dd ibs=32k obs=64k of=/dev/rmt0"</i>	<i>To run the backup on a local machine (cpio) and backup on the remote machine's (remhost) tape drive (/dev/rmt0)</i>
<i>dd ibs=64k if=/dev/rmt0 cpio -icvt</i>	<i>To restore/read the backup (cpio) on the remote machine</i>
<i>rsh remhost "dd ibs=64k obs=32k if=/dev/rmt0" dd ibs=32k cpio -icvt</i>	<i>To restore/read the backup (cpio) on the local machine from the remote machine's (remhost) tape drive (/dev/rmt0)</i>
<i>rsh remhost "find /data -print cpio -icv dd ibs=32k" dd ibs=32k obs=64k of=/dev/rmt0</i>	<i>To run the backup (cpio) on a remote machine (remhost) and backup to the local machines tape drive (/dev/rmt0)</i>

Copying diskettes and tape

<u>COPYING DISKETTES</u>	
<i>dd if=/dev/fd0 of=(filename) bs=36b</i>	
<i>dd if=(filename) of=/dev/fd0 bs=36b conv=sync</i>	<i>or flcopy</i>
<u>COPYING TAPES</u>	
<i>dd if=/dev/rmt0 of=(filename)</i>	
<i>dd if=(filename) of=/dev/rmt0</i>	<i>tcopy</i>

Editor

<u>editor Commands</u>	
<i>:g/xxx/s//yyy/</i>	<i>VI global change where xxx is to be changed by yyy (ctrl V to enter any character)</i>

sed 's(ctrl v ctrl m)g//g' old.filename > new.filename

Strips out ^M characters from ascii files that have been transferred as binary. To enter control characters type ctrl v then ctrl ? where ? is whatever ctrl character you need.

DEVICES

<i>lscfg</i>	<i>lists all installed devices</i>
<i>lscfg -v</i>	<i>lists all installed devices in detail</i>
<i>lscfg -vl (device name)</i>	<i>lists device details</i>
<i>bootinfo -b</i>	<i>reports last device the system booted from</i>
<i>bootinfo -k</i>	<i>reports keyswitch position 1=secure, 2=service, 3=normal</i>
<i>bootinfo -r</i>	<i>reports amount of memory (/ by 1024)</i>
<i>bootinfo -s (disk device)</i>	<i>reports size of disk drive</i>
<i>bootinfo -T</i>	<i>reports type of machine ie rspc</i>
<i>lsattr -El sys0 -a realmem</i>	<i>reports amount of useable memory</i>
<i>mknod (device) c (major no) (minor no)</i>	<i>Creates a /dev/ device file.</i>
<i>mknod /dev/null1 c 2 3</i>	
<i>lsdev -C</i>	<i>lists all customised devices ie installed</i>
<i>lsdev -P</i>	<i>lists all pre-defined devices ie supported</i>
<i>lsdev -(C or P) -c (class) -t (type) -s (subtype)</i>	

<i>chdev -l (device) -a (attribute)=(new value)</i>	<i>Change a device attribute</i>
<i>chdev -l sys0 -a maxuproc=80</i>	
<i>lsattr -EH -l (device) -D</i>	<i>Lists the defaults in the pre-defined db</i>
<i>lsattr -EH -l sys0 -a modelname</i>	
<i>rmdev -l (device)</i>	<i>Change device state from available to defined</i>
<i>rmdev -l (device) -d</i>	<i>Delete the device</i>
<i>rmdev -l (device) -SR</i>	<i>S stops device, R unconfigures child devices</i>
<i>lsresource -l (device)</i>	<i>Displays bus resource attributes of a device.</i>

Power Management (PCI machines)

<i>pmctrl -a</i>	<i>Displays the Power Management state</i>
<i>rmdev -l pmc0</i>	<i>Unconfigure Power Management</i>
<i>mkdev -l pmc0</i>	<i>Configure Power Management</i>

TAPE DRIVES

<i>rmt0.x where x = A + B + C</i>	<i>A = density 0 = high 4 = low</i> <i>B = retension 0 = no 2 = yes</i> <i>C = rewind 0 = no 1 = yes</i>
<i>tctl -f (tape device) fsf (No)</i>	<i>Skips forward (No) tape markers</i>

<i>tctl -f (tape device) bsf (No)</i>	<i>Skips back (No) tape markers</i>
<i>tctl -f (tape device) rewind</i>	<i>Rewind the tape</i>
<i>tctl -f (tape device) offline</i>	<i>Eject the tape</i>
<i>tctl -f (tape device) status</i>	<i>Show status of tape drive</i>
<i>chdev -l rmt0 -a block_size=512</i>	<i>changes block size to 512 bytes (4mm = 1024, 8mm = variable but 1024 recommended)</i>
<i>bootinfo -e</i>	<i>answer of 1 = machine can boot from a tape drive answer of 0 = machine CANNOT boot from tape drive</i>
<i>diag -c -d (tape device)</i>	<i>Hardware reset a tape drive.</i>
<i>tapechk (No of files)</i>	<i>Checks Number of files on tape.</i>
<i>< /dev/rmt0</i>	<i>Rewinds the tape !!!</i>

PRINTERS / PRINT QUEUES

<i>splp (device)</i>	<i>Displays/changes printer driver settings</i> • <i>example:</i> <i>splp /dev/lp0</i>
<i>export \$LPDEST='pqname'</i>	<i>Set default printer queue for login session</i>
<i>lsvirprt</i>	<i>Lists/changes virtual printer attributes.</i>
<i>rmvirprt -q queuename -d queuedevice</i>	<i>Removes a virtual printer</i>
<i>qpri -#(job No) -a(new priority)</i>	<i>Change a queue job priority.</i>

<i>qhld -#(job No)</i>	<i>Put a hold on hold</i>
<i>qhld -r #(job No)</i>	<i>Release a held job</i>
<i>qchk -A</i>	<i>Status of jobs in queues</i>
<i>lpstat</i>	
<i>lpstat -p(queue)</i>	<i>Status of jobs in a named queue</i>
<i>qcan -x (job No)</i>	<i>Cancel a job from a queue</i>
<i>cancel (job No)</i>	
<i>enq -U -P(queue)</i>	<i>Enable a queue</i>
<i>enable (queue)</i>	
<i>enq -D -P(queue)</i>	<i>Disable a queue</i>
<i>disable (queue)</i>	
<i>qmov -m(new queue) -#(job No)</i>	<i>Move a job to another queue</i>
<i>startsrc -s qdaemon</i>	<i>Start qdaemon sub-system</i>
<i>lssrc -s qdaemon</i>	<i>List status of qdaemon sub-system</i>
<i>stop -s qdaemon</i>	<i>Stop qdaemon sub-system</i>

FILE SYSTEMS

<u>Physical Volumes (PV's)</u>	
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<i>root / /home /tmp /usr /var</i>	<i>/dev/hd4 /dev/hd1 /dev/hd3 /dev/hd2 /dev/hd9var</i>
<i>Lspv</i>	<i>Lists all physical volumes (hard disks)</i>
<i>lspv (pv)</i>	<i>Lists the physical volume details</i>
<i>lspv -l (pv)</i>	<i>Lists the logical volumes on the physical volume</i>
<i>lspv -p (pv)</i>	<i>Lists the physical partition usage for that PV</i>
<i>chdev -l (pv) -a pv=yes</i>	<i>Makes a new hdisk a physical volume.</i>
<i>chpv -v r (pv)</i>	<i>Removes a disk from the system.</i>
<i>chpv -v a (pv)</i>	<i>Adds the removed disk back into the system.</i>
<i>chpv -a y (pv)</i>	<i>Changes pv allocatable state to YES</i>
<i>chpv -a n (pv)</i>	<i>Changes pv allocatable state to NO</i>
<i>migratepv (old pv) (new pv)</i>	<i>Moves all LV's from one PV to another PV, both PV's must be in the same volume group.</i>
<u>Volume Groups (VG's)</u>	
<i>Lsvg</i>	<i>Lists all volume groups</i>
<i>lsvg (vg)</i>	<i>Lists the volume group details</i>
<i>lsvg -l (vg)</i>	<i>Lists all logical volumes in the volume group</i>

<i>lsvg -p (vg)</i>	<i>Lists all physical volumes in the volume group</i>
<i>lsvg -o</i>	<i>Lists all varied on volume groups</i>
<i>varyonvg (vg)</i>	<i>Vary On a volume group</i>
<i>varyonvg -f (vg)</i>	<i>Forces the varyon process</i>
<i>varyonvg -s (vg)</i>	<i>Vary on a VG in maintenance mode. LV commands can be used on VG, but LV,s cannot be opened for I/O.</i>
<i>varyoffvg (vg)</i>	<i>Vary Off a volume group</i>
<i>synclvodm (vg)</i>	<i>Tries to resync VGDA, LV control blocks and ODM.</i>
<i>mkvg -y(vg) -s(PP size) (pv)</i>	<i>Create a volume group example:mkvg -y datavg -s 4 hdisk1</i>
<i>reducevg -d (vg) (pv)</i>	<i>Removes a volume group</i>
<i>reducevg (vg) (PVID)</i>	<i>Removes the PVID disk reference from the VGDA when a disk has vanished without the reducevg (vg) (pv) command being run first.</i>
<i>extendvg (vg) (new pv)</i>	<i>Adds another PV into a VG.</i>
<i>exportvg (vg)</i>	<p><i>Exports the volume group eg deletes it!</i></p> <p><u>Note:</u></p> <ul style="list-style-type: none"> <i>Cannot export a VG if it has active paging space, turn off paging, reboot before exporting VG.</i> <i>Exporting removes entries from filesystems file but does not remove the mount points.</i>
<i>chvg -a y (vg)</i>	<i>Auto Vary On a volume group at system start.</i>
<i>lqueryvg -Atp (pv)</i>	<i>Details volume group info for the hard disk.</i>

<i>importvg -y (vg name) (pv)</i>	<i>Import a volume group from a disk.</i>
<i>importvg (pv)</i>	<i>Same as above but VG will be called vg00 etc.</i>
<i>chvg -Q (y/n) (vg name)</i>	<i>Turns on/off Quorum checking on a vg.</i>
<u><i>Logical Volumes (LV's)</i></u>	
<i>lslv (lv)</i>	<i>Lists the logical volume details</i>
<i>lslv -l (lv)</i>	<i>Lists the physical volume which the LV is on</i>
<i>mklv (vg) (No of PP's) (pv Name optional)</i>	<i>Create a logical volume</i>
<i>mklv -y (lv) (PP's) (pv name optional)</i>	<i>Creates a named logical volume</i>
<i>chlv -n (new lv) (old lv)</i>	<i>Rename a logical volume</i>
<i>extendlv (lv) (extra No of PP's)</i>	<i>Increase the size of an LV</i>
<i>rmlv (lv)</i>	<i>Remove a logical volume</i>
	<i>mklv/extendlv -a = PP allocation policy :</i> <ul style="list-style-type: none"> • <i>-am = middle</i> • <i>-ac = center</i> • <i>-ae = edge</i> • <i>-aie = inner edge</i> • <i>-aim = inner middle</i>
<i>migratepv -l (lv) (old pv) (new pv)</i>	<i>Move a logical volume between physical volumes.</i> <i>Both physical volumes must be in the same volume group !</i>

<i>mklv -y (lv) -t jfslog (vg) (No of PP's) (pv Name optional)</i>	<i>Creates a JFSlog logical volume.</i>
<i>logform (/dev/lv)</i>	<i>Initialises an LV for use as an JFSlog</i>
<i>getlvcb -AT (lv)</i>	<i>Displays Logical Volume Control Block information</i>
<u>File Systems (FS's)</u>	
<i>Lsfs</i>	<i>Lists all filesystems</i>
<i>lsfs -q (fs)</i>	<i>Lists the file system details</i>
<i>mount</i>	<i>Lists all the mounted filesystems</i>
<i>mount (fs or lv)</i>	<i>Mounts a named filesystem</i>
<i>mount -a</i>	<i>Mounts all filesystems</i>
<i>mount all</i>	
<i>mount -r -v cdrfs /dev/cd0 /cdrom</i>	<i>mounts cd0 drive over /cdrom</i>
<i>crfs -v jfs -d(lv) -m(mount point) -A yes</i>	<i>Will create a file system on the whole of the logical volume, adds entry into /etc/filesystems and will create mount point directory if it does not exist.</i>
<i>crfs -v jfs -g(vg) -m(mount point) -a size=(size of fs) -A yes</i>	<i>Will create a logical volume on the volume group and create the file system on the logical volume. All at the size stated. Will add entry into /etc/filesystems and will create the mount point directory if it does not exist.</i>
<i>chfs -A yes (fs)</i>	<i>Change file system to Auto mount in /etc/filesystems</i>
<i>chfs -a size=(new fs size)(fs)</i>	<i>Change file system size</i>

<i>rmfs (fs)</i>	<i>Removes the file system and will also remove the LV if there are no onther file systems on it.</i>
<i>defrag -q (fs)</i>	<i>Reports the fragment status of the file system.</i>
<i>defragfs -r (fs)</i>	<i>Runs in report only defrag mode (no action).</i>
<i>defragfs (fs)</i>	<i>Defragments a file system.</i>
<i>fsck (fs)</i>	<i>Verify a file system, the file system must be unmounted!</i>
<i>fsck (-y or -n) (fs)</i>	<i>Pre-answer questions either yes or no !</i>
<i>fsck -p (fs)</i>	<i>Will restore primary superblock from backup copy if the superblock is corrupt.</i>
<u><i>Mirroring</i></u>	
<i>mklv -y (lv) -c(copies 2 or 3) (vg) (No of PP's) (PV Name optional)</i>	<i>Creates a mirrored named logical volume.</i>
<i>mklvcopy -s n (lv) (copies 2 or 3) (pv)</i>	<i>Creates a copy of a logical volume onto another physical volume. The physical volume MUST be in the same volume group as the original logical volume !</i>
<i>rmlvcopy (lv) (copies 1 or 2)</i>	<i>Removes logical volume copies.</i>
<i>rmlvcopy (lv) (copies 1 or 2) (pv)</i>	<i>From this pv only!</i>
<i>syncvg -p (pv)</i>	<i>Synchronize logical partion copies</i>
<i>syncvg -l (lv)</i>	
<i>syncvg -v (vg)</i>	
<i>mirrorvg (vg) (pv)</i>	<i>Mirrors the all the logical volumes in a volume group onto a new physical</i>

volume. New physical volume must already be part of the volume group.

BOOT LOGICAL VOLUME (BLV)

<i>bootlist -m (normal or service) -o</i>	<i>displays bootlist</i>
<i>bootlist -m (normal or service) (list of devices)</i>	<i>change bootlist</i>
<i>bootinfo -b</i>	<i>Identifies the bootable disk</i>
<i>bootinfo -t</i>	<i>Specifies type of boot</i>
<i>bosboot -a -d (/dev/pv)</i>	<i>Creates a complete boot image on a physical volume.</i>
<i>mkboot -c -d (/dev/pv)</i>	<i>Zero's out the boot records on the physical volume.</i>
<i>savebase -d (/dev/pv)</i>	<i>Saves customised ODM info onto the boot device.</i>

SYSTEM DUMP

<i>sysdumpdev -l</i>	<i>Lists current dump destination.</i>
<i>sysdumpdev -e</i>	<i>Estimates dumpsize of the current system in bytes.</i>
<i>sysdumpdev -L</i>	<i>Displays information about the previous dump.</i>
<i>sysdumpstart -p</i>	<i>Starts a dump and writes to the primary dump device.</i>
<i>sysdumpstart -s</i>	<i>Starts a dump and writes to the secondary dump device.</i>
	<i><u>Note :</u> (MCA machine can also dump if key is in service position and the reset button is</i>

	<i>pressed)</i>
<i>sysdumpdev -p (dump device) -P</i>	<i>Sets the default dump device, permanently</i>
<u>Analyse dump file</u>	<i>echo "stat\n status\n t -m" crash \ /var/adm/ras/vmcore.0</i>

PAGING SPACE (PS's)

<i>lsps -a</i>	<i>Lists out all paging space</i>
<i>lsps -s</i>	<i>Displays total paging and total useage</i>
<i>lsps (ps)</i>	
<i>mkps -s(No of 4M blocks) -n -a (vg)</i>	
<i>mkps -s(No of 4M blocks) -n -a (vg) (pv)</i>	<i>-n = don't activate/swap on now -a = activate/swap on at reboot</i>
<i>chps -a n (ps)</i>	<i>Turns off paging space.</i>
<i>chps -s(No of 4M blocks) (ps)</i>	<i>Increases paging space.</i>
<i>chlv -n (new name) (old name)</i>	<i>Change paging space name</i>
<i>rmpps (ps)</i>	<i>Remove paging space. PS must have been turned off and then the system rebooted before it can be removed.</i>
	<p><u>Note:</u></p> <ul style="list-style-type: none"> • <i>Need to change the swapon entry in /sbin/rc.boot script if you are changing the default paging space from /dev/hd6.</i> • <i>You also need to do a "bosboot -a -d /dev/hdiskx" before the reboot.</i>
<i>/etc/swapspace</i>	<i>File that lists all paging space devices that are activated/swap on during reboot.</i>

SCHEDULING

<i>crontab -l</i>	<i>List out crontab entrys</i>
<i>crontab -e</i>	<i>Edit crontab entrys</i>
<i>crontab -l > (filename)</i>	<i>Output crontab entrys to a file</i>
<i>crontab (filename)</i>	<i>Enter a crontab from a file</i>
<i>crontab -r</i>	<i>Removes all crontab entrys</i>
<i>crontab -v</i>	<i>Displays crontab submission time.</i>
<i>/var/adm/cron/cron.allow</i>	<i>File containing users allowed crontab use.</i>
<i>/var/adm/cron/cron.deny</i>	<i>File containing users denied crontab use.</i>
<i>/var/adm/cron/crontab</i>	<i>Directory containing users crontab entries.</i>
<i>at (now + 2 minutes, 13:05, etc) {return}</i>	<i>Schedule a job using at Command or schell script {return} {CTRL D}</i>
<i>at -l</i>	
<i>atq</i>	<i>Lists out jobs scheduled to run via at command</i>
<i>at -r (at job No)</i>	
<i>atrm (at job No)</i>	<i>Removes an at job scheduled to run.</i>

<i>/var/adm/cron/at.allow</i>	<i>File containing users allowed at use.</i>
<i>/var/adm/cron/at.deny</i>	<i>File containing users denied at use.</i>
<i>/var/adm/cron/atjobs</i>	<i>Directory containing users at entries.</i>

SECURITY

<i>Groups</i>	<i>Lists out the groups that the user is a member of</i>
<i>Setgroups</i>	<i>Shows user and process groups</i>
<i>chmod abcd (filename)</i>	<p><i>Changes files/directory permissions</i> <i>Where :</i></p> <ul style="list-style-type: none"> • <i>a is (4 SUID) + (2 SGID) + (1 SVTX)</i> • <i>b is (4 read) + (2 write) + (1 execute) permissions for owner</i> • <i>c is (4 read) + (2 write) + (1 execute) permissions for group</i> • <i>d is (4 read) + (2 write) + (1 execute) permissions for others</i> <p><i>rwSrwxrwx = SUID -rwxrwSrwx = SGID drwxrwxrwt = SVTX</i></p>
<i>chown (new owner) (filename)</i>	<i>Changes file/directory owners</i>
<i>chgrp (new group) (filename)</i>	<i>Changes file/directory groups</i>
<i>chown (new owner).(new group) (filename)</i>	<i>Do both !!!</i>
<i>umask</i>	<i>Displays umask settings</i>
<i>umask abc</i>	<i>Changes users umask settings</i>
	<p><i>Where :</i></p> <ul style="list-style-type: none"> • <i>(7 - a = new file read permissions)</i> • <i>(7 - b = new file write permissions)</i>

	<ul style="list-style-type: none"> (7 - c = new file execute permissions) <p><i>examples :</i></p> <p><i>umask 022 =</i></p> <ul style="list-style-type: none"> <i>new file permissions of 755</i> <i>read write and execute for owner</i> <i>read and execute for group</i> <i>read and execute for other</i>
<i>mrgpwd > file.txt</i>	<i>Creates a standard password file in file.txt</i>
<i>passwd</i>	<i>Change current user password</i>
<i>pwdadm (username)</i>	<i>Change a users password</i>
<i>pwdck -t ALL</i>	<i>Verifies the correctness of local authentication</i>
<i>lsgroup ALL</i>	<i>Lists all groups on the system</i>
<i>mkgroup (new group)</i>	<i>Creates a group</i>
<i>chgroup (attribute) (group)</i>	<i>Change a group attribute</i>
<i>rmgroup (group)</i>	<i>Removes a group</i>

USERS

<i>passwd -f</i>	<i>Change current users gecoc (user description)</i>
<i>passwd -s</i>	<i>Change current users shell</i>
<i>chfn (username)</i>	<i>Changes users gecoc</i>

<i>chsh (username) (shell)</i>	<i>Changes users shell</i>
<i>env</i>	<i>Displays values of environment variables</i>
<i>printenv</i>	
<i>id</i>	<i>Displays current user's uid and gid details</i>
<i>id (user)</i>	<i>Displays user uid and gid details</i>
<i>whoami</i>	<i>Displays current user details</i>
<i>who am i</i>	<i>(or who -m)</i>
<i>who</i>	<i>Displays details of all users currently logged in.</i>
<i>w</i>	
<i>who -b</i>	<i>Displays system reboot time</i>
<i>uptime</i>	<i>Displays number of users logged in, time since last reboot, and the machine load averages.</i>
<i>lslicense</i>	<i>Displays number of current user licenses</i>
<i>chlicense -u (number)</i>	<i>changes the number of user licenses</i>
<i>lsuser ALL</i>	<i>Lists all users details</i>
<i>lsuser (username)</i>	<i>Lists details for user</i>
<i>lsuser -a(attribute) (username or ALL)</i>	<i>Lists user attributes</i>
<i>lsuser -a home ALL</i>	

<i>mkuser -a(attributes) (newuser)</i>	<i>Add a new user</i>
<i>chuser (attributes) (user)</i>	<i>Change a user</i>
<i>chuser login=false (user)</i>	<i>Lock a user account</i>
<i>rmuser -p (user)</i>	<i>Removes a user and all entries in security files</i>
<i>usrck -t ALL</i>	<i>Checks all the user entires are okay.</i>
<i>fuser -u (logical volume)</i>	<i>Displays processes using the files in that LV</i>
<i>lsattr -D -l sys0 -a maxuproc</i>	<i>Displays max number of processes per user</i>
<i>chdev -l sys0 -a maxuproc=(number)</i>	<i>Changes max number of processes per user</i>

REMOTE USERS

<i>ruser -a -f (user)</i>	<i>Adds entry into /etc/ftpusers file</i>
<i>ruser -a -p (host)</i>	<i>Adds entry into /etc/host.lpd file</i>
<i>ruser -a -r (host)</i>	<i>Adds entry into /etc/hosts.equiv file</i>
<i>ruser -d -f (user)</i>	<i>Deletes entry in /etc/ftpusers file</i>
<i>ruser -d -p (host)</i>	<i>Deletes entry in /etc/host.lpd file</i>
<i>ruser -d -r (host)</i>	<i>Deletes entry in /etc/hosts.equiv file</i>
<i>ruser -s -F</i>	<i>Shows all entries in /etc/ftpusers file</i>

<i>ruser -s -P</i>	<i>Shows all entries in /etc/host.lpd file</i>
<i>ruser -s -R</i>	<i>Shows all entries in /etc/hosts.equiv file</i>
<i>ruser -X -F</i>	<i>Deletes all entries in /etc/ftpusers file</i>
<i>ruser -X -P</i>	<i>Deletes all entries in /etc/host.lpd file</i>
<i>ruser -X -R</i>	<i>Deletes all entries in /etc/hosts.equiv file</i>

INITTAB

<i>telinit S</i>	<i>Switches to single user mode.</i>
<i>telinit 2</i>	<i>Switches to multi user mode.</i>
<i>telinit q</i>	<i>Re-examines /etc/inittab</i>
<i>lsitab -a</i>	<i>Lists all entries in inittab</i>
<i>lsitab (ident eg tty1)</i>	<i>Lists the tty1 entry in inittab</i>
<i>mkitab ("details")</i>	<i>Creates a new inittab entry</i>
<i>chitab ("details")</i>	<i>Amends an existing inittab entry</i> <ul style="list-style-type: none"> • <i>Example :</i> <i>chitab "tty1:2:respawn:./usr/bin/getty /dev/tty1"</i>
<i>rmitab (ident eg tty1)</i>	<i>Removes an inittab entry.</i>

ODM

<i>odmget -q "name=lp1" CuDv /more</i>	<i>Gets lp1 info from pre-defined database.</i>
<i>odmget -q "name=lp1" CuAt /more</i>	<i>Gets lp1 info from customised database.</i>
<i>odmdelete -o CuAt -q "name=lp1"</i>	<i>Deletes lp1 info from customised db.</i>
<i>odmget -q "name=lp1" CuAt > lp1.CuAt</i>	<i>Export ODM info to text file.</i>
<i>odmadd < lp1.CuAt</i>	<i>Import ODM info from text file.</i>

ERROR LOGGING

<i>/usr/lib/errdemon -l</i>	<i>Displays errorlog attributes.</i>
<i>/usr/lib/errdemon</i>	<i>Starts error logging.</i>
<i>/usr/lib/errstop</i>	<i>Stops error logging.</i>
<i>Errpt</i>	<i>Displays summary errorlog report.</i>
<i>errpt -a</i>	<i>Displays detailed errorlog report.</i>
<i>errpt -j (identifier)</i>	<i>Displays single errorlog report.</i>
	<i>Note : errorlog classes are</i> <ul style="list-style-type: none"><i>• H=Hardware</i><i>• S=Software</i><i>• O=Information</i><i>• V=Undetermined</i>
<i>errclear (days)</i>	<i>Deletes all error classes in the errorlog.</i>

<i>errclear -d (class) (days)</i>	<i>Deletes all error class entries in errlog.</i>
	<i>Note :</i> <ul style="list-style-type: none"> <i>The errclear command will delete all entries older than the numbers of days specified in the days parameter.</i> <i>To delete ALL entries used 0.</i>
<i>errlogger "message up to 1024 chrs"</i>	<i>Enters an operator notification message into the errorlog.</i>

PERFORMANCE MONITORING

<i>vmstat (drive) (interval) (count)</i>	<i>Reports virtual memory statistics.example: vmstat hdisk0 5 20</i>
<i>vmstat -s</i>	<i>Displays number of paging events since system start.</i>
<i>vmstat -f</i>	<i>Displays number of forks since system start.</i>
<i>vmstat -i</i>	<i>Displays number of interrupts by device since system start.</i>
<i>iostat (drive) (interval) (count)</i>	<i>Reports i/o and cpu statistics.</i> <ul style="list-style-type: none"> <i>Example :</i> <i>iostat hdisk0 5 20</i>
<i>iostat -d (drive) (interval) (count)</i>	<i>Limits report to drive statistics.</i>
<i>iostat -t (interval) (count)</i>	<i>Limits report to tty statistics.</i>
<i>sar -u -P ALL 10 10</i>	<i>Displays %usr %sys %wio %idle for all processors</i>

DOS DISKETTES

<i>Dosdir</i>	<i>Reads directory listing of a diskette</i>
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<i>dosdir (directory)</i>	<i>Reads directory listing of a named directory</i>
<i>dosread -D/dev/fd0 C41.TXT c41.txt</i>	<i>Gets C41.TXT from diskette drive fd0</i>
<i>dosread -D/dev/fd0 DIRECTORY/C41.TXT c41.txt</i>	<i>(-D option can be dropped if using fd0)</i>
<i>doswrite -D/dev/fd0 (unixfile) (dosfile)</i>	<i>Writes a file to diskette</i>
<i>dosdel (dosfile)</i>	<i>Deletes a dos file on diskette</i>
<i>dosformat</i>	<i>Formats the diskette</i>

SENDMAIL

sendmail -bi	Creates new aliase db from /etc/aliase file.newaliases
sendmail -bp	Displays the contents of the mail queue mailq
sendmail -q	Processe the sendmail queue NOW
sendmail -bt -d0.4 < /dev/null	
refresh -s sendmail	Prints out sendmail version, compile defines and system information
kill -l (sendmail PID)	Restart sendmail