NetworkProGuide

VMware ESXi Command Line Cheat Sheet

General

Get ESXi build and version numbers
esxcli system version get

Get host hostname, domain, and FQDN
esxcli system hostname get

Get date and time ESXi was installed
esxcli system stats installtime get

List local users on ESXi host
esxcli system account list

Create local ESXi user
esxcli system account add -d="Description" -i="username" -p="password" -c="password"

List available commands with descriptions
esxcli command getdetails

List all available namespaces with corresponding commands
esxcli esxcli command list

Check maintenance mode
esxcli system maintenanceMode get

Enable/Disable maintenance mode
esxcli system maintenanceMode set –enable true

Reboot/Restart ESXi host
esxcli system shutdown reboot -r "message"

Reboot/Restart ESXi maintenance mode host with countdown timer
esxcli system shutdown reboot -d 10 -r "Patch Updates"

Get CPU information of host (family, model, and cache)
esxcli hardware cpu list

Get memory information (available and non-uniform memory access)
esxcli hardware memory get

Configuration of and information about syslog
esxcli system syslog

Generate support and log information bundle from host
vm-support

Install Software

Lists currently installed software and drivers (VIBs) on ESXi
esxcli software vib list

Install package (VIB)
esxcli software vib install -v file:/tmp/[NewVIB].vib

Uninstall VIB
esxcli software vib remove -n VIBname

Update installed VIB on ESXi
esxcli software vib update -d "/tmp/update.zip"

Install patch
esxcli software vib install /tmp/[patchName].zip

Storage

List current storage devices
esxcli storage core device list

List all storage devices accessible by host
esxcli storage filesystem list

Rename datastore
vim-cmd hostsvc/datastore/rename <name> <new_name>

List all storage paths
esxcli storage core path list

List storage pathes for specific drive
esxcli storage core path list -d <driveid>

Generate list of all LUN paths currently connected to host
esxcli storage vmfs extent list

List all storage devices
esxcli storage nmp device list

Get hypervisor filesystem information
vdf

Get usage of hypervisor filesystem
vdu

List all HBAs
esxcfg-scsidevs -a

List all HBAs with WWNN and WWPN
esxcli storage san fc list

Reset HBA and force fabirc logon
esxcli storage san fc reset -A <hbaid>

Check if attached storage LUN supports VAAI
esxcli storage core device vaai status get

Management

Restart Management, HA Services
/sbin/services restart

List Virtual Machines (VMIDs)
vim-cmd vmsvc/getallvms

List running VMs with world ID
esxcli vm process list

Terminate VM process (forcibly powers off VM)
esxcli vm process kill

Power On
vim-cmd vmsvc/power.on <vmid>

Power Off (Soft)
vim-cmd vmsvc/power.off <vmid>

Power Off (Hard)
esxcli vm process kill -w [worldID] -t [soft,hard,force]

Reboot VM
vim-cmd vmsvc/power.reboot <vmid>

Suspend VM
vim-cmd vmsvc/power.suspend <vmid>

Resume VM
vim-cmd vmsvc/power.suspendResume <vmid>

Reset VM
vim-cmd vmsvc/power.reset <vmid>

Shutdown VM
vim-cmd vmsvc/power.shutdown <vmid>

Show VM info summary
vim-cmd vmsvc/get.summary <vmid>

Check Host Performance
esxtop

Check storage I/O performance
vscsiStats

Host Services

Enable ESXi shell
vim-cmd hostsvc/enable_esx_shell

Disable ESXi shell
vim-cmd hostsvc/disable_esx_shell

Start ESXi shell
vim-cmd hostsvc/start_esx_shell

Enable the SSH daemon
vim-cmd hostsvc/enable_ssh

Disable SSH daemon
vim-cmd hostsvc/disable_ssh

Start SSH daemon
vim-cmd hostsvc/start_ssh

Enter Maintenance mode
vim-cmd hostsvc/maintenance_mode_enter

Exit Maintenance Mode
vim-cmd hostsvc/maintenance_mode_exit

Virtual Disks

Extend virtual disk
vmkfstools -X 1500G /vmfs/volumes/exampledatastore/Example/Example.vmdk

Rename disk
mv Name.vmdk Name_changed.vmdk

Clone disk
vmkfstools -i Name_changed.vmdk -d zeroedthick Name_changed_clone.vmdk

Remove disk
rm Name.vmdk

Jump to directory of VM and monitor activity of delta, flat, and sesparse files
cd /vmfs/volumes/esxdatastore0/vm/vmfs/volumes/510a4e43-4bf56f05-5a34-0034791e8a3/vm # watch -d 'ls -luth | grep -E "delta|flat|sesparse"'

Delete all snapshots and power off VM. Convert thick provisioned disk to thin disk.
vmkfstools -i /vmfs/volumes/exampledatastore/vm/diskname.vmdk -d thin /vmfs/volumes/exampledatastore/vm/diskname-thin.vmdk

Delete VM thick disk
rm /vmfs/volumes/exampledatastore/vm/diskname-flat.vmdk.thick

Determine configured size of thin disk
ls -lh /vmfs/volumes/exampledatastore/vm/diskname-flat.vmdk

Determine used size of thin disk
du -h /vmfs/volumes/exampledatastore/vm/diskname-flat.vmdk

Snapshots

List all VM snapshots
vim-cmd vmsvc/snapshot.get <vmid>

Create snapshot for running VM
vmware-cmd vmsvc/snapshot createsnapshot "New Snaphot Name" "Snapshop Description" <vmid> <snapshotid>

Create snapshot for running VM, with RAM
vim-cmd vmsvc/snapshot.create <vmid> "New Snaphot Name" "Snapshop Description" includeMemory

Delete a snapshot
vim-cmd vmsvc/snapshot.remove <vmid> <snapshotid>

Retrieve Snapshot Removal Task ID
vim-cmd vimsvc/task_list (to get task ID)

Monitor Removal of Snapshot
vim-cmd vimsvc/task_info <task ID>

Remove all snapshots
vmware-cmd /vmfs/volumes/local0/Example/Example.vmx removesnapshots

Check if volume is native snaphot capable
vmkfstools -Ph /vmfs/volumes/exampledatastore/

ESXi Kernel modules

List loaded kernel modules
vmkload_mod -l

List kernel interfaces
esxcfg-vmknic -l

Utility for capturing VMkernel events
vmkeventd

Utility for logging VMkernel events
vmklogger

Display physical adapters with link state and MAC addresses
esxcfg-nics -l , esxcfg-vswitch -l, esxcfg-vmknic -l

Create Kernel interface with specfic MAC and IP Address and add it to portgroup
esxcfg-vmknic -a -i 10.10.1.2 -n 255.255.254.0 -M 00:11:22:aa:bb:cc -p <portgroupname>

Enable added portgroup
esxcfg-vmknic -p <portgroupname> -e true

Delete Kernel interface
esxcfg-vmknic -d -p <portgroupname>

List all enabled kernel modules
esxcfg-module -q

Get parameters of a kernel modul, i.e. an Emulex FC HBA module
esxcfg-module -g <kernelmodulename>

Set kernel module parameters
esxcfg-module -s "lpfc0_lun_queue_depth=8 lpfc1_lun_queue_depth=8 lpfc2_lun_queue_depth=8 lpfc3_lun_queue_depth=8" <kernelmodulename>

Show all kernel module information
esxcfg-module -i <kernelmodulename>

List Advanced Kernel Settings/Parameters
esxcli system settings advanced list -d

Set Advanced Kernel Parameter
esxcli system settings advanced set -o /UserVars/ExampleKernelParameter -i 0

Add Kernel interface to portgroup
esxcfg-vmknic –a -i <interfaceip> -n <interfacemask> "Portgroup_Name"

Network

List VM networking information
esxcli network vm list

Get IPv4 configuration for all interfaces on host
esxcli network ip interface ipv4 get

Get firewall state
esxcli network firewall get

Disable firewall
esxcli network firewall set –enabled true | false

Get firewall rules
esxcli network firewall ruleset list

Get firewall rules piped to awk
esxcli network firewall ruleset list | awk '$2 =="true"'

Activate ESXi Firewall Ruleset
esxcli network firewall ruleset set --ruleset-id=sshClient --enabled=true

Specify allowed IP Range for SSH
esxcli network firewall ruleset allowedip add --ruleset-id sshServer --ip-address 10.10.0.0/24

List Kernel Network Interfaces
esxcli network ip interface list

List physical Network Interfaces
esxcli network nic list

Shutdown physical network interface
esxcli network nic down -n <vmnicid>

List host routing table
esxcli network ip route ipv4 list

Add static route to esxi host
esxcli network ip route ipv4 add --gateway 10.10.1.1 --network 10.10.0.0/24

Set ESXi host default gateway
esxcfg-route -a default 192.168.254.1

Test ESXi host default gateway
vmkping -D

Send ICMP request
vmkping –I <vmninterfaceid> <ipaddress>

Test host connectivity to specific port
nc –z <ipaddress> <port>

List arp cache
esxcli network ip neighbor list

Clear arp cache entry
esxcli network ip neighbor remove -a <ipaddress> -v <IP version number>

List virtual switches
esxcli network vswitch standard list

Change physical uplink of vSwitch
esxcli network vswitch standard uplink remove/add -u <vmnicid> -v <vswitchid>

List portgroups
esxcli network vswitch standard portgroup list

Add new portgroup to vSwitch
esxcli network vswitch standard portgroup add -p "Portgroup_Name -v <vswitchid>

Set Management Network Interface
esxcli network ip interface tag add -i <vmnicid> -t Management

Set VLAN id
esxcli network vswitch standard portgroup set --vlan-id <vlanidnumber> -p "Portgroup_Name"

Set SNMP Community
esxcli system snmp set --communities "COMMUNITY_NAME"

Set SNMP Trap destintion
esxcli system snmp set --targets 10.10.1.150/COMMUNITY_NAME

Send test SNMP trap
esxcli system snmp test

Check SNMP State
esxcli system snmp get

Enable IPMI as SNMP source
esxcli system snmp set --hwsrc sensors

Enable CIM as SNMP source
esxcli system snmp set --hwsrc indications

Enable ESXi Host SNMP
esxcli system snmp set --enable true

Capture Network Packets on the a physical interface
pktcap-uw --uplink <vmnicid>

List all physical network interfaces
esxcli network nic list

Enable iSCSI software adapter
esxcli iscsi software set –enabled true

Verify iSCSI adapter is enabled
esxcli iscsi software get

List metrics for specific iSCSI adapter
esxcli iscsi adapter param get -A <vmhbaid>

List established iSCSI sessions
esxcli iscsi sessions