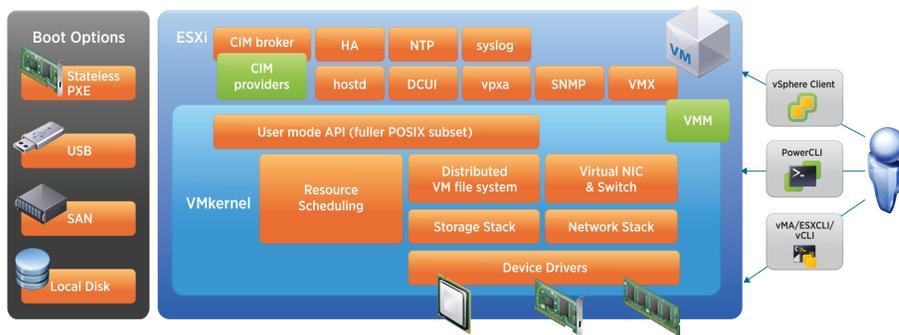


# VMware ESXi 5.0 Reference

ESXCFG/ VICFG Command	PowerCLI Cmdlet	ESXCLI 5.0
svmotion	Move-VM -Datastore	No equivalent
esxcfg-advcfg vicfg-advcfg	Get-VMHostAdvancedConfiguration Set-VMHostAdvancedConfiguration	esxcli system settings advanced
vicfg-cfgbackup	Get-VMHostFirmware Set-VMHostFirmware	No equivalent
vicfg-dns	Get-VMHostNetwork Set-VMHostNetwork	esxcli network ip dns server
esxcfg-dumpart vicfg-dumpart	Get-ESXCLI	esxcli system coreddump
esxcfg-firewall	Get-VMHostFirewallDefaultPolicy Get-VMHostFirewallException Set-VMHostFirewallDefaultPolicy Set-VMHostFirewallException	esxcli network firewall
vicfg-hostops	Get-VMHost Set-VMHost Restart-VMHost	No equivalent
esxcfg-ipsec vicfg-ipsec	No equivalent	No equivalent
esxcfg-swiscsi esxcfg-hwiscsi vicfg-iscsi	Get-iscsiHBATarget New-iscsiHBATarget Set-iscsiHBATarget Remove-iscsiHBATarget	esxcli iscsi
esxcfg-module vicfg-module	Get-ESXCLI	esxcli system module
esxcfg-mpath vicfg-mpath	Get-ScsiLun Set-ScsiLun	esxcli storage core path
vicfg-mpath35	Get-ScsiLun Set-ScsiLun	No equivalent
esxcfg-nas vicfg-nas	Get-Datastore New-Datastore Set-Datastore	esxcli storage nfs
esxcfg-nics vicfg-nics	Get-VMHostNetworkAdapter Set-VMHostNetworkAdapter	esxcli network nic
vicfg-ntp	Get-VMHostNTPServer Set-VMHostNTPServer	No equivalent
esxcfg-rescan vicfg-rescan	Get-VMHostStorage -RescanAllHBA	esxcli storage core
esxcfg-route vicfg-route	Set-VMHostNetwork	No equivalent
esxcfg-scsidevs vicfg-scsidevs	Get-ScsiLun Set-ScsiLun	esxcli storage core filesystem
vicfg-snmpp	Get-VMHostSNMP Set-VMHostSNMP	No equivalent
vicfg-syslog	Get-VMHostSysLogServer Set-VMHostSysLogServer	esxcli system syslog
vicfg-user	Get-VMHostAccount Set-VMHostAccount New-VMHostAccount Remove-VMHostAccount	No equivalent
esxcfg-vmknic vicfg-vmknic	Get-VMHostNetworkAdapter Set-VMHostNetworkAdapter	esxcli network interface
esxcfg-volume vicfg-volume	Get-View needed to call APIs	esxcli storage filesystem
esxcfg-vswitch vicfg-vswitch	Get-VirtualSwitch Set-VirtualSwitch Get-VirtualPortGroup Set-VirtualPortGroup	esxcli network vswitch
vifs.pl	Copy-DatastoreItem PSDrives	No equivalent
vhostupdate	Install-VMHostPatch	esxcli software
vhostupdate35	Install-VMHostPatch	No equivalent
vmkfstools	Get-HardDisk Copy-HardDisk Set-HardDisk	No equivalent
vmware-cmd	Various cmdlets including: Get-VM Set-VM Get-Snapshot Set-Snapshot Get-VMGuestInfo Start-VM Stop-VM Restart-VM	No equivalent
esxtop resxtop	Get-ESXTOP	No equivalent
esxupdate	Get-VMHostPatch Install-VMHostPatch	esxcli software vib
vmkfstools	No equivalent	No equivalent
vmkping	No equivalent	No equivalent
vmware-cmd	Multiple VM cmdlets available	No equivalent
vm-support	Get-Log	No equivalent

## vMA Deployment Tips

vMA Docs: <https://www.vmware.com/support/developer/vima/>  
 vMA Downloads: <http://www.vmware.com/downloads/login.do>  
 vMA Community: <http://communities.vmware.com/community/vmtn/server/vsphere/automationtools/vima>  
 vSphere SDK and Perl Documentation: <https://www.vmware.com/support/developer/viper/toolkit/>  
 vSphere Knowledge Base: <http://kb.vmware.com/selfservice/microsites/microsite.do>



## Performance and Troubleshooting

**SCSI Performance Statistics** (ESXi Shell only)  
**# vscsiStats (options)**

**Show Open Ports** (ESXi Shell only)  
**# no -s <vcenter ip> <port range>**

**Capture Network Traffic** (ESXi Shell only)  
**# tcpdump -w -c 5 -n -i vmk0 host <vcenter ip> and port 123**

**Test Network Connectivity** (ESXi Shell only)  
**# vmkping [-s 9000] <ip address>**

**Memory/CPU Utilization**  
**# esxtop** (ESXi Shell)  
**# resxtop** (vCLI)

## Host Commands

**Display host ESXi version**  
**# esxcli <conn\_options> system version get**

**Set the system time**  
**# esxcli <conn\_options> system time set --hour <H> --min <M> --sec <S>**

**Set the banner message**  
**# esxcli <conn\_options> system welcomemsg set --message <message string>**

**Configure a remote log host**  
**# esxcli <conn\_options> system syslog config set --loghost=<ip address>**  
**# esxcli <conn\_options> system syslog reload**

**Configure a remote dump host**  
**# esxcli <conn\_options> system coreddump network set --interface-name <vmk#> --server-ip4 <ip address> --server-port <portnumber> 6500**  
**# esxcli <conn\_options> system coreddump network set --enable true**

**Join host to Active Directory**  
**Join host to AD domain (vCLI only)**  
**# vicfg-authconfig --server=<ip address> --username=<user> --password=<password> --authscheme AD --joindomain <domainname> --aduser=<user> --adpassword=<password>**

**Verify AD domain (vCLI only)**  
**# vicfg-authconfig --server <ip address> --authscheme AD -c**

**Host Operations**  
**Enter/Exit Maintenance Mode (vCLI only)**  
**# vicfg-hostops <conn\_options> --operation [ enter | info | exit ]**

**Shutdown/reboot a single host (vCLI only)**  
**# vicfg-hostops <conn\_options> --operation [ shutdown | reboot ]**

**Host Backup/Restore**  
**Backup host configuration (vCLI only)**  
**# vicfg-cfgbackup <conn\_options> -s </path/filename>**

**Restore host configuration (vCLI only)**  
**# vicfg-cfgbackup <conn\_options> -l </path/filename>**

**Managing Modules**  
**List all modules**  
**# esxcli <conn\_options> system module list [--enabled=true]**

**List all loaded modules**  
**# esxcli <conn\_options> system module list --loaded=true**

**Enable/Disable modules**  
**# esxcli <conn\_options> system module list --enabled = [ true | false ]**

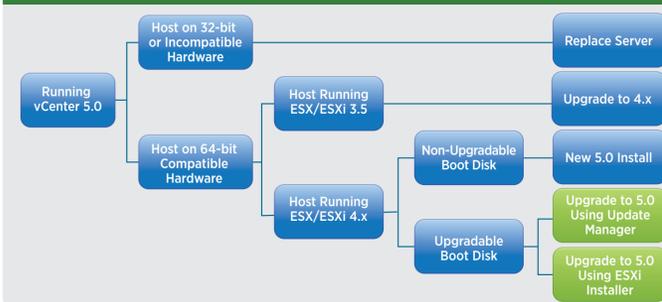
## vCLI Supported Platforms

**vMA**  
 Linux-based appliance that includes the vCLI and vSphere SDK for Perl

**Linux**  
 - RHEL 5.5 Server (32-bit and 64-bit)  
 - SLES 10 SPI (32-bit and 64-bit)  
 - SLES 11 (32-bit and 64-bit)  
 - Ubuntu 10.04 (32-bit and 64-bit)

**Windows**  
 - Windows Vista Enterprise SPI (32-bit and 64-bit)  
 - Windows 2008 64-bit  
 - Windows 7 32-bit and 64-bit

## ESXi Upgrade Path



## Other Commands

**Configure NTP**  
**Add NTP Server (vCLI only)**  
**# vicfg-ntp <conn\_options> --add <ip address>**

**Remove NTP Server (vCLI only)**  
**# vicfg-ntp <conn\_options> --delete <ip address>**

**Start NTP Service (vCLI only)**  
**# vicfg-ntp <conn\_options> --start**

**List NTP Service (vCLI only)**  
**# vicfg-ntp <conn\_options> --start**

**Stop NTP Service (vCLI only)**  
**# vicfg-ntp <conn\_options> --stop**

**Users**  
**List Users (vCLI only)**  
**# vicfg-user <conn\_options> -e user -o list**

**Add User (vCLI only)**  
**# vicfg-user <conn\_options> -e user -o add -l <user> -p <password>**

**Change User Password (vCLI only)**  
**# vicfg-user <conn\_options> -e user -o modify -l <user> -p <password>**

**Assign User Read Only Role (vCLI only)**  
**# vicfg-user <conn\_options> -e user -o modify -l <user> --role read-only**

**Remove User (vCLI only)**  
**# vicfg-user <conn\_options> -e user -o delete -l <user> -g <group>**

**Groups**  
**List Groups (vCLI only)**  
**# vicfg-user <conn\_options> -e group -o list**

**Add Group (vCLI only)**  
**# vicfg-user <conn\_options> -e group -o add -d <groupname>**

**Add User to Group (vCLI only)**  
**# vicfg-user <conn\_options> -e group -o modify -d <groupname> --adduser <user1>,<user2>,<user3>**

**Remove User from Group (vCLI only)**  
**# vicfg-user <conn\_options> -e group -o modify -d <groupname> --removeuser <username>**

**Remove Group (vCLI only)**  
**# vicfg-user <conn\_options> -e group -o delete -d <groupname>**

**Configure ESXi Dump Collector**  
**# esxcli <conn\_options> system coreddump network set --interface-name <vmk0> --server-ip4 <ip address> --port <port name>**  
**# esxcli <conn\_options> system coreddump network set --enable=true**  
**# esxcli <conn\_options> system coreddump network get**

**Configure ESXi Syslog Collector**  
**# esxcli <conn\_options> system syslog config set --loghost=<ip address>**

**Attaching Devices**  
**Connect CDROM (vCLI only)**  
**# vmware-cmd --server <vcenter ip> --vhost <ESXi host ip> /vmfs/volumes/<volume name>/<vm>/<vm>.vmx connectdevice <CD Drive>**

**Disconnect CDROM (vCLI only)**  
**# vmware-cmd --server <vcenter ip> --vhost <ESXi host ip> /vmfs/volumes/<volume name>/<vm>/<vm>.vmx disconnectdevice <CD Drive>**

**Manage Routes**  
**Set Gateway (vCLI only)**  
**# vicfg-route <conn\_options> <gateway>**

**Add Route (vCLI only)**  
**# vicfg-route <conn\_options> --add <ip address> <netmask> <gateway>**

**List Routes (vCLI only)**  
**# vicfg-route <conn\_options>**

**Configure DNS**  
**Set Fully Qualified Hostname**  
**# esxcli <conn\_options> system hostname set --fdm=<hostname>**

**Display DNS Servers**  
**# esxcli <conn\_options> network ip dns server list**

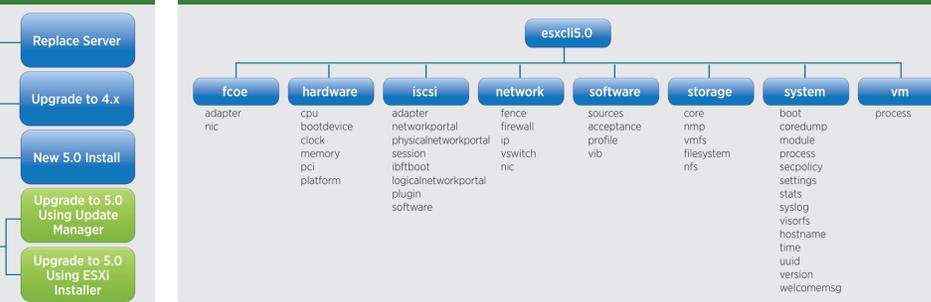
**Add/Remove DNS Server**  
**# esxcli <conn\_options> network ip dns server [add|remove] --server=<ip address>**

**Display DNS Search Domain**  
**# esxcli <conn\_options> network ip dns search list**

**Enable DHCP**  
**# esxcli <conn\_options> network ip interface ipv4 set --interface-name=<vmk#> --type=dhcp**

**Set Static IP**  
**# esxcli <conn\_options> network ip interface ipv4 set --interface-name=<vmk#> --ip4=<ip address> --netmask=<subnetmask> --type=static**

## ESXCLI Name Spaces



## Network Commands

**vSwitches**  
**List Defined Standard Virtual Switches**  
**# esxcli <conn\_options> network vswitch standard list**

**Add/Remove a vSwitch**  
**# esxcli <conn\_options> network vswitch standard [add|remove] --vswitch-name <name>**

**Set MTU for a vSwitch**  
**# esxcli <conn\_options> network vswitch standard set --mtu=9000 --vswitch-name <name>**

**List Network Policy Settings**  
**# esxcli <conn\_options> network vswitch standard policy [ failover | security | shaping ] get**

**Port Groups**  
**List Defined Port Groups**  
**# esxcli <conn\_options> network vswitch standard portgroup list**

**Add a Port Group**  
**# esxcli <conn\_options> network vswitch standard portgroup [add|remove] --portgroup-name <portgroup> --vswitch-name <name>**

**Add Active Uplink to Port Group**  
**# vicfg-user <conn\_options> network vswitch standard portgroup policy failover set --active-uplinks=<uplink1, uplink2>**

**Set a Port Group vlan ID**  
**# esxcli <conn\_options> network vswitch standard portgroup set --portgroup-name <portgroup> --vlan-id=<vlanid>**

**Add User to Group (vCLI only)**  
**# vicfg-user <conn\_options> -e group -o modify -d <groupname> --adduser <user1>,<user2>,<user3>**

**Remove User from Group (vCLI only)**  
**# vicfg-user <conn\_options> -e group -o modify -d <groupname> --removeuser <username>**

**Remove Group (vCLI only)**  
**# vicfg-user <conn\_options> -e group -o delete -d <groupname>**

**Configure ESXi Dump Collector**  
**# esxcli <conn\_options> system coreddump network set --interface-name <vmk0> --server-ip4 <ip address> --port <port name>**  
**# esxcli <conn\_options> system coreddump network set --enable=true**  
**# esxcli <conn\_options> system coreddump network get**

**Configure ESXi Syslog Collector**  
**# esxcli <conn\_options> system syslog config set --loghost=<ip address>**

**Attaching Devices**  
**Connect CDROM (vCLI only)**  
**# vmware-cmd --server <vcenter ip> --vhost <ESXi host ip> /vmfs/volumes/<volume name>/<vm>/<vm>.vmx connectdevice <CD Drive>**

**Disconnect CDROM (vCLI only)**  
**# vmware-cmd --server <vcenter ip> --vhost <ESXi host ip> /vmfs/volumes/<volume name>/<vm>/<vm>.vmx disconnectdevice <CD Drive>**

## ESXi Resources and Quick Links

Download ESXi: <http://downloads.vmware.com/d/>  
 ESXi Documentation: <http://www.vmware.com/support/pubs/>  
 ESXi Frequently Asked Questions: <http://www.vmware.com/products/vsphere/esxi-and-esx/faqs.html#17114>  
 vSphere Install and Upgrade Community: <http://communities.vmware.com/community/vmtn/server/vsphere/upgradecenter>  
 ESXi 5 Community: <http://communities.vmware.com/community/vmtn/server/vsphere/esxi5>  
 ESXi 4 Community: <http://communities.vmware.com/community/vmtn/server/vsphere/esxi4>  
 vSphere Official Blog: <http://blogs.vmware.com/esxi/>  
 Twitter: @VMwareSphere, @VMwareESXi  
 vSphere Automation Tools Community: <http://communities.vmware.com/community/vmtn/server/vsphere/automationtools/view=overview>  
 Training: vSphere Transition to ESXi Essentials: [http://mylearn.vmware.com/mgreg/courses.cfm?ui=www\\_edu&a=one&id\\_subject=23970](http://mylearn.vmware.com/mgreg/courses.cfm?ui=www_edu&a=one&id_subject=23970)  
 Training: What Is New in ESXi 5.0: [http://mylearn.vmware.com/mgreg/courses.cfm?ui=www\\_edu&a=one&id\\_subject=2447](http://mylearn.vmware.com/mgreg/courses.cfm?ui=www_edu&a=one&id_subject=2447)

## Storage Commands

**Scan Storage Devices**  
**# esxcli <conn\_options> storage core adapter rescan**

**VMFS**  
**Show all VMFS Volumes**  
**# esxcli <conn\_options> storage filesystem list**

**Attach a Datastore**  
**# esxcli <conn\_options> storage core device detached list**  
**# esxcli <conn\_options> storage core device set -d naa.XXX -state=on**

**Mount a Datastore**  
**# esxcli <conn\_options> storage filesystem list**  
**# esxcli <conn\_options> storage filesystem volume mount --volume-label=label**

**NAS**  
**List NAS Filesystems**  
**# esxcli <conn\_options> storage nfs list**

**Add NAS Filesystem**  
**# esxcli <conn\_options> storage nfs add --host=<FQDN> --share=<path/To/share> --volume-name=<share name>**

**Remove NAS Filesystem**  
**# esxcli <conn\_options> storage nfs remove --volume-name=<share name>**

**ISCSI**  
**Enable Software ISCSI**  
**# esxcli <conn\_options> iscsi software set --enabled=true**

**List ISCSI Adapters**  
**# esxcli <conn\_options> iscsi adapter list**

**Add ISCSI Adapters**  
**# esxcli <conn\_options> iscsi networkportal add -n <portal\_name> -A <vmba>**

**Show ISCSI Status**  
**# esxcli <conn\_options> iscsi software get**

**Set the ISCSI Name and Alias**  
**# esxcli <conn\_options> iscsi adapter set --adapter=<iscsi adapter> --name=<name>**  
**# esxcli <conn\_options> iscsi adapter set --adapter=<iscsi adapter> --alias=<alias>**

**Set ISCSI CHAP Authentication**  
**# esxcli <conn\_options> iscsi adapter auth chap set --direction=<mutual | chap\_username=<name> --mchap\_password=<pwd> --level=<required | secret> --secret=<string> --adapter=<vmba>**

**Discover ISCSI Storage Devices**  
**# esxcli <conn\_options> iscsi adapter discovery rediscover**

## Authentication

**Setting up vMA FastPass**  
**# vicfg addserver <hostname> --username <user> --password <password>**  
**# vicfg target --set <hostname>**

**ESXCLI Command-Line Authentication**  
**# esxcli --server=<vcenter ip> --vhost=<hostname> --user <user> --password <password> <command>**

**ESXCLI Creating a Session File**  
**# save\_session --save-sessionfile <file> --server <vcenter ip> --username <user> --password <pass>**

**ESXCLI Using Windows Pass-Through Authentication**  
**C:\esxcli --server <vcenter ip> --passthroughauth --passthroughauthpackage "Kerberos" --vhost <hostname> network ip interface list**

**ESXCLI Using Environment Variables**  
**# VI\_USERNAME=eroot <username>**  
**# VI\_PASSWORD=vmware123 <password>**  
**# VI\_SERVER=<IP of vCenter Server or ESXi host>**

Summary of all ESXCLI commands: **# esxcli <conn\_options> esxcli command list** • ESXCLI connection options when connecting through vCenter Server: **--server <vcenter ip> --vhost <ESXi host ip>** • ESXCLI connection options when connecting directly to ESXi host: **--server <ESXi host ip>**