VMware PowerCLI 6.5 Release 1 Reference Poster

vmware

PowerCLI Settings
- Get-PowerCLIConfiguration
- Set-PowerCLIConfiguration
- Get-PowerCLIDocumentation
- Get-PowerCLIVersion
- Get-PowerCLICommunity
- Get-PowerCLIHelp

Cluster Operations
- Move-Cluster
- New-Cluster
- Remove-Cluster
- Set-Cluster
- Get-DrsInfo
- Apply-DrsRecommendation
- Get-DrsRecommendation
- Invoke-DrsRecommendation
- Get-DrsRule
- New-DrsRule
- Remove-DrsRule
- Set-DrsRule
- Get-ResourcePool
- Move-ResourcePool
- New-ResourcePool
- Remove-ResourcePool
- Set-ResourcePool

vSphere
- Get-AdvancedSetting
- New-AdvancedSetting
- Remove-AdvancedSetting
- Set-AdvancedSetting
- Get-AlarmAction
- New-AlarmAction
- Remove-AlarmAction
- Get-AlarmActionTrigger
- New-AlarmActionTrigger
- Remove-AlarmActionTrigger
- Get-AlarmDefinition
- Set-AlarmDefinition
- Get-Annotation
- New-Annotation
- Connect-CisServer
- Disconnect-CisServer
- Get-CisService
- Get-ContentLibraryItem
- Get-CustomAttribute
- New-CustomAttribute
- Remove-CustomAttribute
- Set-CustomAttribute
- Get-Datacenter
- Move-Datacenter
- New-Datacenter
- Remove-Datacenter
- Move-Datastore
- New-Datastore
- Remove-Datastore
- Set-Datastore
- Get-DatastoreCluster
- New-DatastoreCluster
- Remove-DatastoreCluster
- Set-DatastoreCluster
- New-DatastoreDrive
- Copy-DatastoreItem
- Get-Folder
- Move-Folder
- New-Folder
- Remove-Folder
- Set-Folder
- Get-Inventory
- Move-Inventory
- Remove-Inventory
- Get-LicenseDataManager
- Get-OSCustomizationNicMapping
- New-OSCustomizationNicMapping
- Remove-OSCustomizationNicMapping
- Set-OSCustomizationNicMapping
- Get-OSCustomizationSpec
- New-OSCustomizationSpec
- Remove-OSCustomizationSpec
- Set-OSCustomizationSpec
- Get-OvfConfiguration
- Remove-Datacenter
- Move-Datacenter
- New-Datacenter
- Remove-Datacenter
- Set-Datacenter
- Get-DatastoreCluster
- New-DatastoreCluster
- Remove-DatastoreCluster
- Set-DatastoreCluster
- Get-ESX
- Get-EsxTop
- Get-HAPrimaryVMHost
- Get-iScsiHbaTarget
- New-iScsiHbaTarget
- Remove-iScsiHbaTarget
- Set-iScsiHbaTarget
- Get-NicTeamingPolicy
- Set-NicTeamingPolicy
- Add-PassthroughDevice
- Get-PassthroughDevice
- Remove-PassthroughDevice
- Get-ScsiController
- New-ScsiController
- Set-ScsiController
- Get-ScsiLun
- Set-ScsiLun
- Get-ScsiLunPath
- Set-ScsiLunPath
- Get-Task
- Stop-Task
- Wait-Task
- Get-VIAccount
- Get-VICommand
- Get-VICredentialStoreItem
- New-VICredentialStoreItem
- Remove-VICredentialStoreItem
- Get-View
- New-VIInventoryDrive
- Get-VIObjectByVIView
- Get-VIPermission
- New-VIPermission
- Remove-VIPermission
- Set-VIPermission
- Get-VIPrivilege
- Get-VIProperty
- New-VIProperty
- Remove-VIProperty
- Get-VIRole
- New-VIRole
- Remove-VIRole
- Set-VIRole
- Connect-VIServer
- Disconnect-VIServer

ESXi Host Operations
- Get-Datastore
- Move-Datastore
- New-Datastore
- Remove-Datastore
- Set-Datastore
- Get-ESX
- Get-EsxTop
- Get-HAPrimaryVMHost
- Get-iScsiHbaTarget
- New-iScsiHbaTarget
- Remove-iScsiHbaTarget
- Set-iScsiHbaTarget
- Get-NicTeamingPolicy
- Set-NicTeamingPolicy
- Add-PassthroughDevice
- Get-PassthroughDevice
- Remove-PassthroughDevice
- Get-ScsiController
- New-ScsiController
- Set-ScsiController
- Get-ScsiLun
- Set-ScsiLun
- Get-ScsiLunPath
- Set-ScsiLunPath
- Add-VMHost
- Get-VMHost
- Move-VMHost
- Remove-VMHost
- Restart-VMHost
- Set-VMHost
- Start-VMHost
- Stop-VMHost
- Suspend-VMHost
- Get-VMHostAccount
- New-VMHostAccount
- Remove-VMHostAccount
- Set-VMHostAccount
- Get-VMHostAdvancedConfiguration
- Set-VMHostAdvancedConfiguration
- Get-VMHostAuthentication
- Set-VMHostAuthentication
- Get-VMHostAvailableTimeZone
- Get-VMHostDiagnosticPartition
- Set-VMHostDiagnosticPartition
- Get-VMHostDisk
- Get-VMHostDiskPartition
- Format-VMHostDiskPartition
- New-VMHostDiskPartition
- Add-VirtualSwitchPhysicalNetworkAdapter
- Remove-VirtualSwitchPhysicalNetworkAdapter
- Get-VMHostFirewallDefaultPolicy
- Set-VMHostFirewallDefaultPolicy
- Get-VMHostFirewallException
- Set-VMHostFirewallException
- Get-VMHostFirmware
- Set-VMHostFirmware
- Get-VMHostHardware
- Get-VMHostHba
- Set-VMHostHba
- Get-VMHostModule
- Set-VMHostModule
- Get-VMHostNetwork
- Set-VMHostNetwork
- Get-VMHostNetworkAdapter
- New-VMHostNetworkAdapter
- Remove-VMHostNetworkAdapter
- Set-VMHostNetworkAdapter
- Get-VMHostNtpServer
- Add-VMHostNtpServer
- Remove-VMHostNtpServer
- Get-VMHostPatch
- Install-VMHostPatch
- Get-VMHostPciDevice
- Get-VMHostRoute
- New-VMHostRoute
- Remove-VMHostRoute
- Set-VMHostRoute
- Get-VMHostService
- Restart-VMHostService
- Set-VMHostService
- Start-VMHostService
- Stop-VMHostService
- Get-VMHostSnmp
- Set-VMHostSnmp
- Test-VMHostSnmp
- Get-VMHostStartPolicy
- Set-VMHostStartPolicy
- Get-VMHostStorage
- Set-VMHostStorage
- Get-VMHostSysLogServer
- Set-VMHostSysLogServer
- Get-VMStartPolicy
- Set-VMStartPolicy

VM Operations
- Get-CDDrive
- New-CDDrive
- Remove-CDDrive
- Set-CDDrive
- Get-FloppyDrive
- New-FloppyDrive
- Remove-FloppyDrive
- Set-FloppyDrive
- Copy-HardDisk
- Get-HardDisk
- Move-HardDisk
- New-HardDisk
- Remove-HardDisk
- Set-HardDisk
- Get-NetworkAdapter
- New-NetworkAdapter
- Remove-NetworkAdapter
- Set-NetworkAdapter
- Add-PassthroughDevice
- Get-PassthroughDevice
- Remove-PassthroughDevice
- Get-Snapshot
- New-Snapshot
- Remove-Snapshot
- Set-Snapshot
- Get-Template
- Move-Template
- New-Template
- Remove-Template
- Set-Template
- Get-UsbDevice
- Remove-UsbDevice
- Export-VM
- Get-VM
- Move-VM
- New-VM
- Remove-VM
- Restart-VM
- Set-VM
- Start-VM
- Stop-VM
- Suspend-VM
- Open-VMConsoleWindow
- Answer-VMQuestion
- Get-VMQuestion
- Set-VMQuestion
- Get-VMResourceConfiguration
- Set-VMResourceConfiguration

VMware PowerCLI
- vSphere Core
- Auto Deploy
- Image Builder
- vCloud
- High Availability
- Horizon View
- License Manager
- Storage
- Distributed Switch
- Mirage
- vRealize Operations
- Update Manager
- vCloud Air
- Cloud Infrastructure
- UEM

Network
- Get-VDBlockedPolicy
- Set-VDBlockedPolicy
- Get-VDPort
- Set-VDPort
- Export-VDPortgroup
- Get-VDPortgroup
- New-VDPortgroup
- Remove-VDPortgroup
- Set-VDPortgroup
- Get-VDPortgroupOverridePolicy
- Set-VDPortgroupOverridePolicy
- Get-VDSecurityPolicy
- Set-VDSecurityPolicy
- Export-VDSwitch
- Get-VDSwitch
- New-VDSwitch
- Remove-VDSwitch
- Set-VDSwitch
- Add-VDSwitchPhysicalNetworkAdapter
- Remove-VDSwitchPhysicalNetworkAdapter
- Get-VDSwitchPrivateVlan
- New-VDSwitchPrivateVlan
- Remove-VDSwitchPrivateVlan
- Add-VDSwitchVMHost
- Remove-VDSwitchVMHost
- Get-VDTrafficShapingPolicy
- Set-VDTrafficShapingPolicy
- Get-VDUplinkLacpPolicy
- Set-VDUplinkLacpPolicy
- Get-VDUplinkTeamingPolicy
- Set-VDUplinkTeamingPolicy
- Get-VDVirtualPortGroup
- New-VirtualPortGroup
- Remove-VirtualPortGroup
- Set-VirtualPortGroup
- Get-VirtualSwitch
- New-VirtualSwitch
- Remove-VirtualSwitch
- Set-VirtualSwitch
- Set-SecurityPolicy
- Get-SecurityPolicy
- Add-VirtualSwitchPhysicalNetworkAdapter
- Remove-VirtualSwitchPhysicalNetworkAdapter

Guest OS
- Dismount-Tools
- Mount-Tools
- Update-Tools
- Wait-Tools
- Get-VMGuest
- Restart-VMGuest
- Shutdown-VMGuest
- Stop-VMGuest
- Suspend-VMGuest
- Copy-VMGuestFile
- Get-VMGuestNetworkInterface
- Set-VMGuestNetworkInterface
- Get-VMGuestRoute
- New-VMGuestRoute
- Remove-VMGuestRoute
- Invoke-VMScript

Host Profiles
- Apply-VMHostProfile
- Export-VMHostProfile
- Get-VMHostProfile
- Import-VMHostProfile
- Invoke-VMHostProfile
- New-VMHostProfile
- Remove-VMHostProfile
- Set-VMHostProfile
- Test-VMHostProfileCompliance
- Get-VMHostProfileRequiredInput

Tag Operations
- Get-Tag
- New-Tag
- Remove-Tag
- Set-Tag
- Get-TagAssignment
- New-TagAssignment
- Remove-TagAssignment
- Get-TagCategory
- New-TagCategory
- Remove-TagCategory
- Set-TagCategory

Storage Operations
- Get-NfsUser
- New-NfsUser
- Remove-NfsUser
- Set-NfsUser
- Get-SpbmCapability
- Get-SpbmCompatibleStorage
- Get-SpbmEntityConfiguration
- Set-SpbmEntityConfiguration
- Get-SpbmFaultDomain
- Start-SpbmReplicationFailover
- Get-SpbmReplicationGroup
- Sync-SpbmReplicationGroup
- Get-SpbmReplicationPair
- Start-SpbmReplicationPrepareFailover
- Start-SpbmReplicationReverse
- New-SpbmRule
- New-SpbmRuleSet
- Export-SpbmStoragePolicy
- Get-SpbmStoragePolicy
- Import-SpbmStoragePolicy
- New-SpbmStoragePolicy
- Remove-SpbmStoragePolicy
- Set-SpbmStoragePolicy

Update Manager
- Attach-Baseline
- Detach-Baseline
- Get-Baseline
- New-Baseline
- Remove-Baseline
- Set-Baseline
- Get-Compliance
- Test-Compliance
- Update-Entity
- Add-EntityBaseline
- Remove-EntityBaseline
- Remediate-Inventory
- Scan-Inventory
- Copy-Patch
- Download-Patch
- Get-Patch
- Stage-Patch
- Sync-Patch
- Get-PatchBaseline
- New-PatchBaseline
- Set-PatchBaseline

AutoDeploy
- Switch-ActiveDeployRuleSet
- Get-AutoDeployCommand
- Export-AutoDeployState
- Import-AutoDeployState
- Repair-DeployImageCache
- Get-DeployOption
- Set-DeployOption
- Add-DeployRule
- Copy-DeployRule
- Get-DeployRule
- New-DeployRule
- Remove-DeployRule
- Set-DeployRule
- Get-DeployRuleSet
- Set-DeployRuleSet
- Repair-DeployRuleSetCompliance
- Test-DeployRuleSetCompliance
- Apply-ESXImageProfile
- Set-ESXImageProfileAssociation
- Add-ProxyServer
- Get-ProxyServer
- Remove-ProxyServer
- Add-ScriptBundle
- Get-ScriptBundle
- Get-VMHostAttributes
- Test-VMHostImageProfile
- Get-VMHostMatchingRules

Logging and Statistics
- Get-Log
- Get-LogType
- Get-Stat
- Get-StatInterval
- New-StatInterval
- Set-StatInterval
- Get-StatType
- Get-ErrorReport
- Get-VIEvent

VApp
- Export-VApp
- Get-VApp
- Import-VApp
- Move-VApp
- New-VApp
- Remove-VApp
- Set-VApp
- Start-VApp
- Stop-VApp

vSAN Operations
- Get-VsanClusterConfiguration
- Set-VsanClusterConfiguration
- Test-VsanClusterHealth
- Get-VsanDisk
- New-VsanDisk
- Remove-VsanDisk
- Get-VsanDiskGroup
- New-VsanDiskGroup
- Remove-VsanDiskGroup
- Get-VsanFaultDomain
- New-VsanFaultDomain
- Remove-VsanFaultDomain
- Set-VsanFaultDomain
- Update-VsanHclDatabase
- Test-VsanNetworkPerformance
- Get-VsanResyncingComponent
- Get-VsanSpaceUsage
- Test-VsanStoragePerformance
- Test-VsanVMCreation

Cloud
- Get-Catalog
- Get-CIAccessControlRule
- New-CIAccessControlRule
- Remove-CIAccessControlRule
- Set-CIAccessControlRule
- Add-CIDatastore
- Get-CIDatastore
- Get-CINetworkAdapter
- Set-CINetworkAdapter
- Get-CIRole
- Connect-CIServer
- Disconnect-CIServer
- Get-CIUser
- Get-CIVApp
- Import-CIVApp
- New-CIVApp
- Remove-CIVApp
- Restart-CIVApp
- Set-CIVApp
- Start-CIVApp
- Stop-CIVApp
- Suspend-CIVApp
- Restart-CIVAppGuest
- Stop-CIVAppGuest
- Suspend-CIVAppGuest
- Get-CIVAppNetwork
- New-CIVAppNetwork
- Remove-CIVAppNetwork
- Set-CIVAppNetwork
- Get-CIVAppStartRule
- Set-CIVAppStartRule
- Get-CIVAppTemplate
- Import-CIVAppTemplate
- New-CIVAppTemplate
- Remove-CIVAppTemplate
- Set-CIVAppTemplate
- Get-CIView
- New-CIVM
- Restart-CIVM
- Start-CIVM
- Stop-CIVM
- Suspend-CIVM
- Restart-CIVMGuest
- Stop-CIVMGuest
- Get-CIVMTemplate
- Search-Cloud
- Get-CloudCommand
- Get-ExternalNetwork
- Get-Media
- Get-NetworkPool
- Get-Org
- New-Org
- Remove-Org
- Set-Org
- Get-OrgNetwork
- New-OrgNetwork
- Remove-OrgNetwork
- Set-OrgNetwork
- Get-OrgVdc
- New-OrgVdc
- Remove-OrgVdc
- Set-OrgVdc
- Get-OrgVdcNetwork

vR Ops
- Get-OMAlert
- Set-OMAlert
- Get-OMAlertDefinition
- Get-OMAlertSubType
- Get-OMAlertType
- Get-OMRecommendation
- Get-OMResource
- Connect-OMServer
- Disconnect-OMServer
- Get-OMStat
- Get-OMStatKey
- Get-OMUser

SRM
- Connect-SrmServer
- Disconnect-SrmServer

Horizon View
- Connect-HVServer
- Disconnect-HVServer

Image Builder
- Compare-EsxImageProfile
- Export-EsxImageProfile
- Get-EsxImageProfile
- New-EsxImageProfile
- Remove-EsxImageProfile
- Set-EsxImageProfile
- Add-EsxSoftwareDepot
- Get-EsxSoftwareDepot
- Remove-EsxSoftwareDepot
- Add-EsxSoftwarePackage
- Get-EsxSoftwarePackage
- Remove-EsxSoftwarePackage
- Get-ImageBuilderCommand

PowerCLI Info

What is PowerCLI?

VMware PowerCLI is a powerful, easy-to-use scripting interface to manage the vSphere platform. Administrators can leverage more than 360 cmdlets to simplify everyday tasks.

Getting Started

VMware PowerCLI frequently asked questions (FAQs) link:
http://communities.vmware.com/docs/DOC-13700
To find out what cmdlets are available: **Get-VICommand**
To show documentation for all available cmdlets: **Get-PowerCLIDocumentation**
For help with a cmdlet: **Get-Help** *cmdlet-name* -Full

How to Connect to vCenter Server or ESXi

To connect to a VMware vSphere server. Start a new session or reestablish a previous session with a VMware vSphere server:
$srv = **Connect-VIServer** -Server 192.168.0.10 -User Admin -Password Pass01
To disconnect from the connected vSphere server:
Disconnect-VIServer -Server $srv -Confirm:$false

How to Store vCenter Credentials

Method to not have to input credentials every time you connect to vCenter:
New-VICredentialStoreItem -Host vCSA.lab.local -User Root -Password "Pass"
To remove credentials: **Remove-VICredentialStoreItem** -Host vCSA.lab.local -Confirm

Virtual Switch Operations

To list all virtual switches attached to a VM and some of their properties, use:
Get-VirtualSwitch -VM (Get-VM -Name "Lync-Edge-03")
To create a new virtual switch:
New-VirtualSwitch -VMHost (Get-VMHost -Name 192.168.0.10) -Name Switch02
To remove a virtual switch:
$vs = **Get-VirtualSwitch** -VMHost 192.168.0.10 -Name VS23
Remove-VirtualSwitch -VirtualSwitch $vs
To change the configuration of a virtual switch:
$vs = **New-VirtualSwitch** -Host 192.168.0.10 -Name VirtSwitch
Set-VirtualSwitch -VirtualSwitch $vs -MTU 500

Events and Alarms

Get-AlarmDefinition # Returns all the defined alarms on the servers you're connected to.
Get-AlarmDefinition -Name "virtual machine*" -Enabled $false
Returns all the disabled alarm definitions with names starting with "virtual machine."
Get-VMHost hostname | **Get-AlarmDefinition** # Returns all alarms that apply to the host "hostname". Includes alarms defined on this host and alarms inherited from the parent entity, or from any ancestors in the inventory hierarchy.
Modify an alarm definition: **Get-AlarmDefinition** -Name "Host memory status" |
Set-AlarmDefinition -Name "Host memory" -Enabled $false
This will rename the alarm to "Host memory" and disable it.

Quick Helpful Commands

Top 5 VM memory allocation:
Get-VM | **Sort-Object** -Property MemoryGB -Descending | **Select** -First 5
Total memory available on all ESXi:
Get-VMHost | **Measure-Object** -Property MemoryTotalGB -Sum | **Select** -ExpandProperty Sum
Report on NumCPU and number of VM:
Get-VM | **Group-Object** -Property NumCpu |
Select @{N="Num"Cpu";E=($_.Name)};@{N="Number of VM";E=($_.Count)}
Most API methods require parameters.
You create those with **New-Object**.
$vm = **Get-VM** -Name MyVM
$spec = **New-Object** VMware.Vim.VirtualMachineConfigSpec
$spec.latencySensitivity = **New-Object**
VMware.Vim.LatencySensitivity
$spec.LatencySensitivity.Level =
[VMware.Vim.LatencySensitivitySensitivityLevel]::high
$vm.ExtensionData.reConfigVM($spec)

Resource Pool Operations

To list all resource pools on the connected VMware vSphere server and some of their properties: **Get-ResourcePool**
To create a new resource pool:
$clusterRootRP = **Get-ResourcePool** -Location
(**Get-Cluster** ResearchAndDevelopmentCluster) -Name Resources
New-ResourcePool -Location $clusterRootRP -Name DevelopmentResources
-CpuExpandableReservation $true -CpuReservationMhz 500 -CpuSharesLevel high
-MemExpandableReservation $true -MemReservationMB 500 -MemSharesLevel high

Task Information

To list all tasks for a VMware vSphere server and some of their properties:
Get-Task
To stop a task (example: stops the task of removing the VM):
Stop-Task -Task (**Remove-VM** -VM "Lync-Edge-03" -Confirm -RunAsync)
To wait until a task is completed before continuing:
Wait-Task -Task (**Remove-VM** -VM "Lync-Edge-03" -Confirm -RunAsync)

vSAN Operations

To list all of the VSAN disks groups for an ESXi host:
Get-VsanDiskGroup -VMHost (Get-VMHost | select -first 1)
To list all of the disks within a VSAN disk group for an ESXi host:
$vmhost = **Get-VMHost** | select -First 1
$vsanDiskGroup = **Get-VsanDiskGroup** -VMHost $vmhost
Get-VsanDisk -VsanDiskGroup $vsanDiskGroup
To create a new VSAN disk group for an ESXi host
$vmhost = **Get-VMHost** | select -First 1
$ssd = **Get-ScsiLun** -VmHost $vmhost | where ($_.extensiondata.ssd -eq $true -and $_.ExtensionData.LocalDisk -eq $true)
$datadisk = **Get-ScsiLun** -VmHost $vmhost | where ($_.extensiondata.ssd -eq $false -and $_.ExtensionData.LocalDisk -eq $true)
New-VsanDiskGroup -VMHost $vmhost -SsdCanonicalName $ssd.CanonicalName - DataDiskCanonicalName $datadisk.CanonicalName
To remove a disk from a VSAN disk group:
$vmhost = **Get-VMHost** | select -First 1
$vsanDisk = **Get-VsanDisk** -VsanDiskGroup $vsanDiskGroup -VMHost $vmhost
$vsanDisk = **Get-VsanDisk** -VsanDiskGroup $vsanDiskGroup | select -first 1
Remove-VsanDisk -VsanDisk $vsanDisk

Port Group Operations

To list all the port groups and some of their properties:
$vs = **Get-VirtualSwitch** -VMHost 192.168.0.10 -Name Switch02
Get-VirtualPortGroup -VirtualSwitch $vs
To add a new port group to a virtual switch:
$vs = **Get-VirtualSwitch** -VMHost 192.168.0.10 -Name Switch02
$vpg = **New-VirtualPortGroup** -VirtualSwitch $vs -Name VPG1
Other cmdlets include:
Remove-VirtualPortGroup
Set-VirtualPortGroup

Horizon View Operations

Connect to the Horizon View Server:
$hvserver = **Connect-HVServer** -Server view connection.fqdn -User administrator -Password VMware!! -Domain domain.local
Access the Horizon View API:
$hvapi = $global:defaultHVservers[0].ExtensionData
View the health of the Horizon View Connection Servers:
$hvapi.connectionserverhealth.connectionserverhealth_list()
View the Horizon View Session Data:
$hvapi.connectionserverhealth.connectionserverhealth_list().ConnectionData
View connected vCenter Servers:
$hvapi.VirtualCenterHealth.VirtualCenter_List()
Horizon View API Reference:
http://developercenter.vmware.com/web/dp/explorer-apis/4595/view

OVF Configuration

Using OVFConfiguration to deploy vApps:
$ovfconfig = **get-OvfConfiguration** "myOVFTemplate.ovf"
$ovfconfig.ToHashtable()
Use a hashtable:
$ovfconfig = @{(
"vami.DNS.VMware_vCenter_Log_Insight" = "10.144.99.5";
"vami.gatewayVMware_vCenter_Log_Insight" = "10.144.99.1";
"vami.ip0.VMware_vCenter_Log_Insight" = "10.144.99.30";
"vami.netmask0.VMware_vCenter_Log_Insight" = "255.255.255.0";
"vm.rootpw" = "VMware!!";)
On populate an object:
(**Get-View** (**Get-VMHost** "ESX1") getview).
ConfigManager.VmotionSystem).SelectVnc("vmk0")
On populate an object:
$ovfconfig.NetworkMapping.Network.Value = "Network 1"
$ovfconfig.vami.VM_1.ip0.Value = "10.144.99.30"
$ovfPath = "c:\temp\myOvfTemplate.ovf"
Import-Vapp $ovfPath -OvfConfiguration $ovfConfig -VMHost $vmHost -Name "VM_OVF"

Tag Operations

Create a tag category:
New-TagCategory -Name "Owner" -Cardinality Single -EntityType VirtualMachine
$vm = **Get-VM** -ID $vm.Runtime.Host
$hostView.Summary.Runtime
$hostView.Summary.Runtime
Create a tag:
$myTag = **New-Tag** -Name "jSmith" -Category "Owner"
Assign a tag:
Get-VM -Name "Lync-Edge-*" | **New-TagAssignment** -Tag $myTag
Get-VM -Tag "jSmith"

API Operations

Returns a VMware vSphere.Net view object by specified search criteria.
$vm = **Get-View** -ViewType VirtualMachine -Filter @{"Name" = "MS Win XP SP2"}
$hostView = **Get-View** -ID $vm.Runtime.Host
$hostView.Summary.Runtime
Another example:
(**Get-View** (**Get-VMHost** "ESX1" | getview))
API Reference: https://www.vmware.com/support/developer/vc-sdk/

Copy Files To/From VM

Files can be copied between user's local machine and a VM Copy from a VM to the Local Machine:
Copy-VMGuestFile -VM LABTEST1 -GuestUser Administrator -GuestPassword "VMware!!" -GuestToLocal -Source c:\temp\logfile.txt -Destination c:\temp\.

Invoke Commands in Virtual Machines

Invoke-VMScript allows you BIN, BASH, and Powershell Commands to be invoked remotely
Invoke-VMScript -VM LABTEST1 -ScriptText "dir" -GU Administrator -GP "VMware!!"

Snapshot Operations

To list all the snapshots for all virtual machines:
Get-VM | **Get-Snapshot**
To snapshot a VM: **New-Snapshot** -VM "XP SP2" -Name BeforePatch1
To remove a snapshot: **Remove-Snapshot** -Snapshot $snapshot1 -RemoveChildren

ESXTOP through PowerCLI

Get-EsxTop -Counter
View the fields available for vCPU counter:
(**Get-EsxTop** -Counter -CounterName VCPU).Fields
Get-EsxTop -TopologyInfo
View the entries of a specific topology:
(**Get-EsxTop** -TopologyInfo -Topology SchedGroup).Entries | FT
Retrieve the counter values for "VCPU" and "SchedGroup" counters:
Get-EsxTop -CounterName VCPU | FT * -AutoSize
Get-EsxTop -CounterName SchedGroup | FT * -AutoSize

How to Connect to SRM

Connect to vCenter Server first
Connect-SrmServer -SrmServerAddress 10.144.99.6 -User "administrator" -Password "myPassword"
Disconnect-SrmServer -Server 10.144.99.6

ESXCLI V2 Operations

Utilizing the Get-ESXCLI cmdlet with new -V2 parameter to perform two pings from an ESXi host:
$esxcli2 = **Get-ESXCLI** -VMHost (**Get-VMHost** | Select -first 1) -V2
$arguments = $esxcli2.network.diag.ping.CreateArgs()
$arguments.count = 2
$arguments.host = "10.0.0.8"
$esxcli2.network.diag.ping.Invoke($arguments)
Utilizing the Get-ESXCLI cmdlet with new -v2 parameter to perform two pings from an ESXi host:
$esxcli2 = **Get-ESXCLI** -VMHost (**Get-VMHost** | Select -first 1) -V2
$arguments = $esxcli2.storage.vmfs.unmap.CreateArgs()
$arguments.volumelabel = "Datastore1"
$esxcli2.storage.vmfs.unmap.Invoke($arguments)

PowerCLI Community Repository

The VMware PowerCLI Community Repository is a central location where anyone can contribute their own resources. The repository features a Principles of Operations document to help guide contributors along the process of using, creating, and updating resources which are contained within the repository.
Link: https://github.com/vmware/PowerCLI-Example-Scripts

Featured Modules:
- Horizon View Helper
- VM Encryption
- vCenter High Availability

Featured Scripts:
- Home Lab Deployment
- Affinity Rule Creation
- LUN Path Report

PowerCLI Based Flings

VMware Flings featuring PowerCLI - http://labs.vmware.com/flings/?product=PowerCLI
PowerCLI Core - Enable users of Linux, Mac and Docker to now use the same cmdlets which were previously only available on Windows.
PowerActions for vSphere Web Client - PowerActions integrates the vSphere Web Client and PowerCLI to provide complex automation solutions from within the standard vSphere management client.
Onyx for the Web Client - Onyx for the Web Client is a Fling that translates actions taken in the vSphere Web Client to PowerCLI.Net code.
PowerCLI Extensions - PowerCLI Extensions gives PowerCLI users early access to functionality by extending the core PowerCLI cmdlets to include new experimental features and gives PowerCLI users the ability to provide early feedback.

PowerCLI Sites

Official PowerCLI Blog - http://blogs.vmware.com/PowerCLI/
Documentation - http://www.vmware.com/support/developer/PowerCLI/index.html
VMware PowerCLI Community - http://vmware.com/go/powercli
Twitter - http://twitter.com/PowerCLI
LinkedIn - http://www.linkedin.com/groups/PowerCLI-Users-162324
Facebook - http://www.facebook.com/vmwarepowercli
Slack - http://code.vmware.com/web/code/join
VMware Education Course: Data Center Automation with vRealize Orchestrator and vSphere PowerCLI -
https://mylearn.vmware.com/mgrreg/courses.cfm?a=one&id_subject=71972
Third-Party PowerCLI training from Pluralsight - http://www.pluralsight.com

PowerCLI Community