Windows PowerShell Get-Help on Cmdlet 'Set-AzVMOSDisk'

PS:\>Get-HELP Set-AzVMOSDisk -Full

NAME

Set-AzVMOSDisk

SYNOPSIS

Sets the operating system disk properties on a virtual machine.

SYNTAX

Set-AzVMOSDisk [-VM] <Microsoft.Azure.Commands.Compute.Models.PSVirtualMachine> [[-Name] <System.String>] [[-KeyEncryptionKeyVaultId] <System.String>] [[-VhdUri] <System.String>] [[-Caching] {None | ReadOnly | ReadWrite}] [[-SourceImageUri] <System.String>] [[-CreateOption] <System.String>] [[-Windows]] [-DiskEncryptionKeyUrl] <System.String> [-DiskEncryptionKeyVaultId] <System.String> [[-KeyEncryptionKeyUrl] <System.String>] [-DefaultProfile <Microsoft.Azure.Commands.Common.Authentication.Abstractions.Core.IAzureContextContainer>] [-DeleteOption <System.String>] [-DiffDiskPlacement <System.String>] [-DiffDiskSetting <System.String>] [-DiskEncryptionSetId <System.String>] [-DiskSizeInGB <System.Nullable`1[System.Int32]>] [-ManagedDiskId <System.String>] [-SecureVMDiskEncryptionSet <System.String>] [-SecurityEncryptionType <System.String>] [-StorageAccountType <System.String>] [-WriteAccelerator] [<CommonParameters>]

Set-AzVMOSDisk [-VM] <Microsoft.Azure.Commands.Compute.Models.PSVirtualMachine> [[-Name] <System.String>] [[-KeyEncryptionKeyVaultId] <System.String>] [[-VhdUri] <System.String>] [[-Caching] {None | ReadOnly | ReadWrite}] [[-SourceImageUri] <System.String>] [[-CreateOption] <System.String>] [[-Linux]] [-DiskEncryptionKeyUrl] <System.String> [-DiskEncryptionKeyVaultId] <System.String> [[-KeyEncryptionKeyUrl] <System.String>] [-DefaultProfile <Microsoft.Azure.Commands.Common.Authentication.Abstractions.Core.IAzureContextContainer>] [-DeleteOption <System.String>] [-DiffDiskPlacement <System.String>] [-DiffDiskSetting <System.String>] [-DiskEncryptionSetId <System.String>] [-DiskSizeInGB <System.Nullable`1[System.Int32]>] [-ManagedDiskId <System.String>] [-SecureVMDiskEncryptionSet <System.String>] [-SecurityEncryptionType <System.String>] [-StorageAccountType <System.String>] [-WriteAccelerator] [<CommonParameters>]

Set-AzVMOSDisk [-VM] <Microsoft.Azure.Commands.Compute.Models.PSVirtualMachine> [[-Name] <System.String>] [[-VhdUri] <System.String>] [[-Caching] {None | ReadOnly | ReadWrite}] [[-SourceImageUri] <System.String>] [[-CreateOption] <System.String>] [[-Linux]] [-DefaultProfile <Microsoft.Azure.Commands.Common.Authentication.Abstractions.Core.IAzureContextContainer>] [-DeleteOption <System.String>] [-DiffDiskPlacement <System.String>] [-DiffDiskSetting <System.String>] [-DiskEncryptionSetId <System.String>] [-DiskSizeInGB <System.Nullable`1[System.Int32]>] [-ManagedDiskId <System.String>] [-SecureVMDiskEncryptionSet <System.String>] [-SecurityEncryptionType <System.String>] [-StorageAccountType <System.String>] [-WriteAccelerator] [<CommonParameters>]

Set-AzVMOSDisk [-VM] <Microsoft.Azure.Commands.Compute.Models.PSVirtualMachine> [[-Name] <System.String>] [[-VhdUri] <System.String>] [[-Caching] {None | ReadOnly | ReadWrite}] [[-SourceImageUri] <System.String>] [[-CreateOption] <System.String>] [[-Windows]] [-DefaultProfile <Microsoft.Azure.Commands.Common.Authentication.Abstractions.Core.IAzureContextContainer>] [-DeleteOption <System.String>] [-DiffDiskPlacement <System.String>] [-DiffDiskSetting <System.String>] [-DiskEncryptionSetId <System.String>] [-DiskSizeInGB <System.Nullable`1[System.Int32]>] [-ManagedDiskId <System.String>] [-SecureVMDiskEncryptionSet <System.String>] [-SecurityEncryptionType <System.String>] [-StorageAccountType <System.String>] [-WriteAccelerator] [<CommonParameters>]

DESCRIPTION

The Set-AzVMOSDisk cmdlet sets the operating system disk properties on a virtual machine.

PARAMETERS

-Caching <System.Nullable`1[Microsoft.Azure.Management.Compute.Models.CachingTypes]>

Specifies the caching mode of the operating system disk. Valid values are: - ReadOnly

- ReadWrite

The default value is ReadWrite. Changing the caching value causes the virtual machine to restart. This setting affects the performance of the disk.

Required? false

Position? 3

Default value None

Accept pipeline input? False

Accept wildcard characters? false

-CreateOption <System.String>

Specifies whether this cmdlet creates a disk in the virtual machine from a platform or user image, or attaches an existing disk. Valid values are: - Attach.

Specify this option to create a virtual machine from a specialized disk. When you specify this option, do not specify the SourceImageUri parameter. Instead, use

the Set-AzVMSourceImage cmdlet. You must also use the use the Windows or Linux parameters to tell the azure platform the type of the operating system on the VHD.

The VhdUri parameter is enough to tell the azure platform the location of the disk to attach. - FromImage. Specify this option to create a virtual machine from a

platform image or a generalized user image. In the case of a generalized user image, you also need to specify the SourceImageUri parameter and either the Windows

or Linux parameters to tell the Azure platform the location and type of the operating system disk VHD instead of using the Set-AzVMSourceImage cmdlet. In the case

of a platform image, the VhdUri parameter is sufficient. - Empty.

Required? false

Position? 5

Default value None

Accept pipeline input? False

Accept wildcard characters? false

-DefaultProfile <Microsoft.Azure.Commands.Common.Authentication.Abstractions.Core.IAzureContextContainer>

The credentials, account, tenant, and subscription used for communication with azure.

Required? false

Position? named

Default value None

Accept pipeline input? False

Accept wildcard characters? false

-DeleteOption <System.String>

Specifies OS Disk delete option after VM deletion. Options are Detach, Delete

Required? false

Position? named

Default value None

Accept pipeline input? True (ByPropertyName)

Accept wildcard characters? false

-DiffDiskPlacement <System.String>

Specifies the ephemeral disk placement for operating system disk. This property can be used by user in the request to choose the location i.e. cache disk or

resource disk space for Ephemeral OS disk provisioning. For more information on Ephemeral OS disk size requirements, please refer Ephemeral OS disk size

requirements for Windows VM at https://learn.microsoft.com/azure/virtual-machines/windows/ephemeral-os-disks#size-requirements and Linux VM at

https://learn.microsoft.com/azure/virtual-machines/linux/ephemeral-os-disks#size-requirements. This parameter can

only be used if the parameter DiffDiskSetting is

set to 'Local'.

Required? false

Position? named

Default value None

Accept pipeline input? True (ByPropertyName)

Accept wildcard characters? false

-DiffDiskSetting <System.String>

Specifies the differencing disk settings for operating system disk.

Required? false

Position? named

Default value None

Accept pipeline input? True (ByPropertyName)

Accept wildcard characters? false

-DiskEncryptionKeyUrl <System.String>

Specifies the location of the disk encryption key.

Required? true

Position? 7

Default value None

Accept pipeline input? False

Accept wildcard characters? false

-DiskEncryptionKeyVaultId <System.String>

Specifies the resource ID of the Key Vault containing the disk encryption key.

Required? true

Position? 8

Default value None

Accept pipeline input? False

Accept wildcard characters? false

-DiskEncryptionSetId <System.String>

Specifies the resource Id of customer managed disk encryption set. This can only be specified for managed disk.

Required? false

Position? named

Default value None

Accept pipeline input? False

Accept wildcard characters? false

-DiskSizeInGB <System.Nullable`1[System.Int32]>

Specifies the size, in GB, of the operating system disk.

Required? false

Position? named

Default value None

Accept pipeline input? False

Accept wildcard characters? false

-KeyEncryptionKeyUrl <System.String>

Specifies the location of the key encryption key.

Required? false

Position? 9

Default value None

Accept pipeline input? False

Accept wildcard characters? false

-KeyEncryptionKeyVaultId <System.String>

Specifies the resource ID of the Key Vault containing the key encryption key.

Required? false

Position? 10

Default value None

Accept pipeline input? False

Accept wildcard characters? false

-Linux <System.Management.Automation.SwitchParameter>

Indicates that the operating system on the user image is Linux. Specify this parameter for user image based virtual machine deployment.

Required? false

Position? 6

Default value False

Accept pipeline input? False

Accept wildcard characters? false

-ManagedDiskId <System.String>

Specifies the ID of a managed disk.

Required? false

Position? named

Default value None

Accept pipeline input? False

Accept wildcard characters? false

-Name <System.String>

Specifies the name of the operating system disk.

Required? false

Position? 1

Default value None

Accept pipeline input? False

Accept wildcard characters? false

-SecureVMDiskEncryptionSet <System.String>

ARM Resource ID for Disk Encryption Set. Allows customer to provide ARM ID for Disk Encryption Set created with ConfidentialVmEncryptedWithCustomerKey encryption

type. This will allow customer to use Customer Managed Key (CMK) encryption with Confidential VM. Parameter SecurityEncryptionType value should be

DiskwithVMGuestState.

Required? false

Position? named

Default value None

Accept pipeline input? True (ByPropertyName)

Accept wildcard characters? false

-SecurityEncryptionType <System.String>

Sets the SecurityEncryptionType value on the managed disk of the VM. possible values include: TrustedLaunch, ConfidentialVM_DiskEncryptedWithCustomerKey,

ConfidentialVM_VMGuestStateOnlyEncryptedWithPlatformKey, ConfidentialVM_DiskEncryptedWithPlatformKey

Required? false

Position? named

Default value None

Accept pipeline input? True (ByPropertyName)

Accept wildcard characters? false

-SourceImageUri <System.String>

Specifies the URI of the VHD for user image scenarios.

Required? false

Position? 4

Default value None

Accept pipeline input? False

Accept wildcard characters? false

-StorageAccountType <System.String>

Specifies the storage account type of managed disk.

Required? false

Position? named

Default value None

Accept pipeline input? False

Accept wildcard characters? false

-VhdUri <System.String>

Specifies the Uniform Resource Identifier (URI) of a virtual hard disk (VHD). For an image based virtual machine, this parameter specifies the VHD file to create

when a platform image or user image is specified. This is the location from which the image binary large object (BLOB) is copied to start the virtual machine. For

a disk based virtual machine boot scenario, this parameter specifies the VHD file that the virtual machine uses directly for starting up.

Required? false

Position? 2

Default value None

Accept pipeline input? False

Accept wildcard characters? false

-VM <Microsoft.Azure.Commands.Compute.Models.PSVirtualMachine>

Specifies the local virtual machine object on which to set operating system disk properties. To obtain a virtual machine object, use the Get-AzVM cmdlet.

Required? true

Position? 0

Default value None

Accept pipeline input? True (ByValue)

Accept wildcard characters? false

-Windows <System.Management.Automation.SwitchParameter>

Indicates that the operating system on the user image is Windows.

Required? false

Position? 6

Default value False

Accept pipeline input? False

Accept wildcard characters? false

-WriteAccelerator <System.Management.Automation.SwitchParameter>

Specifies whether WriteAccelerator should be enabled or disabled on the OS disk.

Required? false

Position? named

Default value False

Accept pipeline input? False

Accept wildcard characters? false

<CommonParameters>

This cmdlet supports the common parameters: Verbose, Debug,

ErrorAction, ErrorVariable, WarningAction, WarningVariable,

OutBuffer, PipelineVariable, and OutVariable. For more information, see

about_CommonParameters (https:/go.microsoft.com/fwlink/?LinkID=113216).

INPUTS

Microsoft.Azure.Commands.Compute.Models.PSVirtualMachine

System.String

OUTPUTS

Microsoft.Azure.Commands.Compute.Models.PSVirtualMachine

NOTES

Example 1: Set properties on a virtual machine from platform image

```
$AvailabilitySet = Get-AzAvailabilitySet -ResourceGroupName "ResourceGroup11" -Name "AvailabilitySet13"
$VirtualMachine = New-AzVMConfig -VMName "VirtualMachine17" -VMSize "Standard_A1" -AvailabilitySetID $AvailabilitySet.Id
Set-AzVMOSDisk -VM $VirtualMachine -Name "OsDisk12" -VhdUri "os.vhd" -Caching ReadWrite
$VirtualMachine = Set-AzVMOperatingSystem -VM $VirtualMachine -Linux -ComputerName "MainComputer" -Credential (Get-Credential)
$VirtualMachine = Set-AzVMSourceImage -VM $VirtualMachine -PublisherName "Canonical" -Offer "UbuntuServer" -Skus "15.10" -Version "latest"
$VirtualMachine = Set-AzVMOSDisk -VM $VirtualMachine -Name "osDisk.vhd" -VhdUri "https://mystorageaccount.blob.core.windows.net/disks/" -CreateOption FromImage
New-AzVM -VM $VirtualMachine -ResourceGroupName "ResourceGroup11"
```

The first command gets the availability set named AvailabilitySet13 in the resource group named ResourceGroup11, and then stores that object in the $AvailabilitySet variable. The second command creates a virtual machine object, and then stores it in the $VirtualMachine variable. The command assigns a name and size to the virtual machine. The virtual machine belongs to the availability set stored in $AvailabilitySet. The final command sets the properties on the virtual machine in $VirtualMachine.

Example 2: Sets properties on a virtual machine from generalized user image

```
$AvailabilitySet = Get-AzAvailabilitySet -ResourceGroupName "ResourceGroup11" -Name "AvailabilitySet13"
$VirtualMachine = New-AzVMConfig -VMName "VirtualMachine17" -VMSize "Standard_A1"
$VirtualMachine = Set-AzVMOperatingSystem -VM $VirtualMachine -Linux -ComputerName "MainComputer" -Credential (Get-Credential)
$VirtualMachine = Set-AzVMOSDisk -VM $VirtualMachine -Name "osDisk.vhd" -SourceImageUri "https://mystorageaccount.blob.core.windows.net/vhds/myOSImage.vhd" -VhdUri
"https://mystorageaccount.blob.core.windows.net/disks/" -CreateOption fromImage -Linux
New-AzVM -VM $VirtualMachine -ResourceGroupName "ResourceGroup11"
```

The first command gets the availability set named AvailabilitySet13 in the resource group named ResourceGroup11 and stores that object in the $AvailabilitySet
variable. The second command creates a virtual machine object and stores it in the $VirtualMachine variable. The command assigns a name and size to the virtual
machine. The virtual machine belongs to the availability set stored in $AvailabilitySet. The final command sets the properties on the virtual machine in
$VirtualMachine.

Example 3: Sets properties on a virtual machine from specialized user image

```
$AvailabilitySet = Get-AzAvailabilitySet -ResourceGroupName "ResourceGroup11" -Name "AvailabilitySet13"
$VirtualMachine = New-AzVMConfig -VMName "VirtualMachine17" -VMSize "Standard_A1"
$VirtualMachine = Set-AzVMOSDisk -VM $VirtualMachine -Name "osDisk.vhd" -VhdUri "https://mystorageaccount.blob.core.windows.net/disks/" -CreateOption Attach -Linux
New-AzVM -VM $VirtualMachine -ResourceGroupName "ResourceGroup11"
```

The first command gets the availability set named AvailabilitySet13 in the resource group named ResourceGroup11 and stores that object in the $AvailabilitySet
variable. The second command creates a virtual machine object and stores it in the $VirtualMachine variable. The command assigns a name and size to the virtual
machine. The virtual machine belongs to the availability set stored in $AvailabilitySet. The final command sets the

properties on the virtual machine in

$VirtualMachine.

Example 4: Set the disk encryption settings on a virtual machine operating system disk

$VirtualMachine = New-AzVMConfig -VMName "VirtualMachine17" -VMSize "Standard_A1"

$VirtualMachine = Set-AzVMOSDisk -VM $VirtualMachine -Name "OsDisk12" -VhdUri "os.vhd" -Caching ReadWrite -Windows -CreateOption "Attach" -DiskEncryptionKeyUrl

"https://mytestvault.vault.azure.net/secrets/Test1/514ceb769c984379a7e0230bddaaaaaa" -DiskEncryptionKeyVaultId

"/subscriptions/00000000-0000-0000-0000-000000000000/resourceGroups/myresourcegroup/providers/Microsoft.KeyVault/vaults/mytestvault"

New-AzVM -VM $VirtualMachine -ResourceGroupName " ResourceGroup11"

This example sets the disk encryption settings on a virtual machine operating system disk.

Example 5: Create a ConfidentialVM virtual machine with VM OS Disk encryption of DiskWithVMGuestState, and Disk Encryption Set encryption of

ConfidentialVmEncryptedWithCustomerKey.

```
# Create Resource Group
$Location = 'northeurope';
New-AzResourceGroup -Name $ResourceGroupName -Location $Location;

$vmSize = "Standard_DC2as_v5";
$identityType = "SystemAssigned";
$secureEncryptGuestState = "DiskWithVMGuestState";
$vmSecurityType = "ConfidentialVM";
$securePassword = "Password" | ConvertTo-SecureString -AsPlainText -Force;
$cred = New-Object System.Management.Automation.PSCredential ($user, $securePassword);
```

```
# Create Key Vault
New-AzKeyVault -Name $keyVaultName -Location $Location -ResourceGroupName $ResourceGroupName -Sku Premium -EnablePurgeProtection -EnabledForDiskEncryption;

$cvmAgent = Get-AzADServicePrincipal -ApplicationId 'bf7b6499-ff71-4aa2-97a4-f372087be7f0';
Set-AzKeyVaultAccessPolicy -VaultName $keyVaultName -ResourceGroupName $ResourceGroupName -ObjectId $cvmAgent.id -PermissionsToKeys get,release;

# Add Key vault Key
$KeyName = "keyname";
$KeySize = 3072;

Add-AzKeyVaultKey -VaultName $kvname -Name $KeyName -Size $KeySize -KeyOps wrapKey,unwrapKey -KeyType RSA -Destination HSM -Exportable -UseDefaultCVMPolicy;

# Capture Key Vault and Key details
$encryptionKeyVaultId = (Get-AzKeyVault -VaultName $keyVaultName -ResourceGroupName $ResourceGroupName).ResourceId;
$encryptionKeyURL = (Get-AzKeyVaultKey -VaultName $keyVaultName -KeyName $keyName).Key.Kid;

# Create new DES Config and Disk Encryption Set
$diskEncryptionType = "ConfidentialVmEncryptedWithCustomerKey";
$desConfig = New-AzDiskEncryptionSetConfig -Location $loc -SourceVaultId $encryptionKeyVaultId -KeyUrl $encryptionKeyURL -IdentityType SystemAssigned -EncryptionType
$diskEncryptionType;
New-AzDiskEncryptionSet -ResourceGroupName $ResourceGroupName -Name $desName -DiskEncryptionSet $desConfig;

$diskencset = Get-AzDiskEncryptionSet -ResourceGroupName $rgname -Name $desName;

# Assign DES Access Policy to key vault
$desIdentity = (Get-AzDiskEncryptionSet -Name $desName -ResourceGroupName $ResourceGroupName).Identity.PrincipalId;
```

```
    Set-AzKeyVaultAccessPolicy -VaultName $keyVaultName -ResourceGroupName $ResourceGroupName -ObjectId
$desIdentity -PermissionsToKeys wrapKey,unwrapKey,get
  -BypassObjectIdValidation;

  $VirtualMachine = New-AzVMConfig -VMName $VMName -VMSize $vmSize;
    $VirtualMachine = Set-AzVMOperatingSystem -VM $VirtualMachine -Windows -ComputerName $computerName
-Credential $cred -ProvisionVMAgent -EnableAutoUpdate;
    $VirtualMachine = Set-AzVMSourceImage -VM $VirtualMachine -PublisherName 'MicrosoftWindowsServer' -Offer
'windowsserver' -Skus '2022-datacenter-smalldisk-g2' -Version
  "latest";

    $subnet = New-AzVirtualNetworkSubnetConfig -Name ($subnetPrefix + $ResourceGroupName) -AddressPrefix
"10.0.0.0/24";
    $vnet = New-AzVirtualNetwork -Force -Name ($vnetPrefix + $ResourceGroupName) -ResourceGroupName
$ResourceGroupName -Location $loc -AddressPrefix "10.0.0.0/16" -Subnet
  $subnet;
      $vnet = Get-AzVirtualNetwork -Name ($vnetPrefix + $ResourceGroupName) -ResourceGroupName
$ResourceGroupName;
  $subnetId = $vnet.Subnets[0].Id;
    $pubip = New-AzPublicIpAddress -Force -Name ($pubIpPrefix + $ResourceGroupName) -ResourceGroupName
$ResourceGroupName -Location $loc -AllocationMethod Dynamic
  -DomainNameLabel $domainNameLabel2;
      $pubip = Get-AzPublicIpAddress -Name ($pubIpPrefix + $ResourceGroupName) -ResourceGroupName
$ResourceGroupName;
  $pubipId = $pubip.Id;
    $nic = New-AzNetworkInterface -Force -Name ($nicPrefix + $ResourceGroupName) -ResourceGroupName
$ResourceGroupName -Location $loc -SubnetId $subnetId
  -PublicIpAddressId $pubip.Id;
      $nic = Get-AzNetworkInterface -Name ($nicPrefix + $ResourceGroupName) -ResourceGroupName
$ResourceGroupName;
  $nicId = $nic.Id;
```

```
$VirtualMachine = Add-AzVMNetworkInterface -VM $VirtualMachine -Id $nicId;

# Set VM SecurityType and connect to DES
$VirtualMachine = Set-AzVMOSDisk -VM $VirtualMachine -StorageAccountType "StandardSSD_LRS" -CreateOption
"FromImage" -SecurityEncryptionType $secureEncryptGuestState
-SecureVMDiskEncryptionSet $diskencset.Id;
$VirtualMachine = Set-AzVmSecurityProfile -VM $VirtualMachine -SecurityType $vmSecurityType;
$VirtualMachine = Set-AzVmUefi -VM $VirtualMachine -EnableVtpm $true -EnableSecureBoot $true;

New-AzVM -ResourceGroupName $ResourceGroupName -Location $loc -Vm $VirtualMachine;
$vm = Get-AzVm -ResourceGroupName $ResourceGroupName -Name $vmname;

# Verify the SecurityEncryptionType value on the disk.
# $vm.StorageProfile.OsDisk.ManagedDisk.SecurityProfile.SecurityEncryptionType == 'DiskWithVMGuestState';
```

RELATED LINKS

Online Version: https://learn.microsoft.com/powershell/module/az.compute/set-azvmosdisk

Get-AzVM

Get-AzAvailabilitySet

New-AzVMConfig