**System Center 2012 功能点整理**

**康讯通讯设备有限公司**

**华南区办事处**

1. 前提：

执行powerShell命令之前，必须执行一下命令：

* 1. 给执行脚本赋予权限：

Set-ExecutionPolicy Unrestricted

* 1. 执行导入命令包：

**Import-Module -Name virtualmachinemanager**

**或者**

**Import-Module "C:\Program Files\Microsoft System Center 2012\Virtual Machine Manager\bin\psModules\virtualmachinemanager\virtualmachinemanager.psd1"**

* 1. 注意：本文档标为红色字体的均为变量值。如果通过脚本执行，是需要传入的参数。

1. 物理机管理
   1. 常规
      1. 计算机名
      2. 域
      3. 位置
      4. SMBIOS ID
      5. 描述
   2. 系统信息
      1. 处理器
      2. 内存
      3. 存储
      4. 操作系统
      5. 虚拟化软件
      6. VMM代理
      7. 上次更新时间
   3. 状态
   4. 硬件
   5. 用户
   6. 角色
   7. 网络
2. 虚拟机管理
   1. 关机
   2. 重置
   3. 暂停
   4. 继续
   5. 保存状态
   6. 创建检查点(快照)
   7. 管理检查点
   8. 安装虚拟来宾服务

这个东西和VMware的VMtools和XenServer的XStools是一样的，作用就是虚拟一些硬件出来，让虚拟机和宿主机能够通信。可以实现关机、时间同步、数据备份、数据交换这一系列的功能。所以每装完一台虚拟机，安装来宾服务是一项必须的操作

1. VMM管理
   1. 添加虚拟机服务器到VMM

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| #权限验证  $uname="system\vmm"  $pwd=ConvertTo-SecureString "Abcd.123" -AsPlainText -Force;  $credential =New-Object System.Management.Automation.PSCredential($uname,$pwd);  $hostGroup = Get-SCVMHostGroup -ID "0e3ba228-a059-46be-aa41-2f5cf0f4b96e" -Name "所有主机"  Add-SCVMHost -ComputerName "systemcenter1.system.com" -RunAsynchronously -VMHostGroup $hostGroup -Credential $credential -LiveStorageMigrationMaximum "2"  Add-SCVMHost -ComputerName "systemcenter2.system.com" -RunAsynchronously -VMHostGroup $hostGroup -Credential $credential -LiveStorageMigrationMaximum "2" |

* 1. 创建VMM管理用户

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| #权限验证  $uname="system\vmm"  $pwd=ConvertTo-SecureString "Abcd.123" -AsPlainText -Force;  $credential =New-Object System.Management.Automation.PSCredential($uname,$pwd);  $runAsAccount = New-SCRunAsAccount -Credential $credential -Name "Administratiator" -Description "VMM" -JobGroup "1147f040-1156-48a5-8ba2-bd98838d4a17"  Write-Output $runAsAccount |

* 1. 添加虚拟机

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| #权限验证  $uname="system\vmm"  $pwd=ConvertTo-SecureString "Abcd.123" -AsPlainText -Force;  $credential =New-Object System.Management.Automation.PSCredential($uname,$pwd);  #添加Scs适配器  New-SCVirtualScsiAdapter -VMMServer localhost -JobGroup 8da819cc-e198-41de-9db4-569482b22c0b -AdapterID 7 -ShareVirtualScsiAdapter $false -ScsiControllerType DefaultTypeNoType  New-SCVirtualScsiAdapter -VMMServer localhost -JobGroup 8da819cc-e198-41de-9db4-569482b22c0b -AdapterID 7 -ShareVirtualScsiAdapter $false -ScsiControllerType DefaultTypeNoType  #添加光驱  New-SCVirtualDVDDrive -VMMServer localhost -JobGroup 8da819cc-e198-41de-9db4-569482b22c0b -Bus 1 -LUN 0  #添加网络适配器  New-SCVirtualNetworkAdapter -VMMServer localhost -JobGroup 8da819cc-e198-41de-9db4-569482b22c0b -MACAddressType Dynamic -Synthetic -EnableVMNetworkOptimization $false  #设置九针串口  Set-SCVirtualCOMPort -NoAttach -VMMServer localhost -GuestPort 1 -JobGroup 8da819cc-e198-41de-9db4-569482b22c0b  Set-SCVirtualCOMPort -NoAttach -VMMServer localhost -GuestPort 2 -JobGroup 8da819cc-e198-41de-9db4-569482b22c0b  #设置软盘驱动器  Set-SCVirtualFloppyDrive -RunAsynchronously -VMMServer localhost -NoMedia -JobGroup 8da819cc-e198-41de-9db4-569482b22c0b  #获取CPU类型  $CPUType = Get-SCCPUType -VMMServer localhost | where {$\_.Name -eq "3.60 GHz Xeon (2 MB L2 cache)"}  #systeCenter硬件配置文件  New-SCHardwareProfile -VMMServer localhost -CPUType $CPUType -Name "配置文件1f5ef84f-7de9-47a3-ae2b-f6023fa66de7" -Description "用于创建虚拟机/模板的临时硬件配置" -CPUCount 1 -MemoryMB 512 -DynamicMemoryEnabled $false -MemoryWeight 5000 -VirtualVideoAdapterEnabled $false -CPUExpectedUtilizationPercent 20 -DiskIops 0 -CPUMaximumPercent 100 -CPUReserve 0 -NumaIsolationRequired $false -NetworkUtilizationMbps 0 -CPURelativeWeight 100 -HighlyAvailable $false -DRProtectionRequired $false -NumLock $false -BootOrder "CD", "IdeHardDrive", "PxeBoot", "Floppy" -CPULimitFunctionality $false -CPULimitForMigration $false -JobGroup 8da819cc-e198-41de-9db4-569482b22c0b  #虚拟硬盘驱动器  New-SCVirtualDiskDrive -VMMServer localhost -IDE -Bus 0 -LUN 0 -JobGroup 8da819cc-e198-41de-9db4-569482b22c0b -VirtualHardDiskSizeMB 40960 -Dynamic -Filename "dddd\_disk\_1" -VolumeType BootAndSystem  New-SCVirtualDiskDrive -VMMServer localhost -IDE -Bus 0 -LUN 1 -JobGroup 8da819cc-e198-41de-9db4-569482b22c0b -VirtualHardDiskSizeMB 40960 -Dynamic -Filename "dddd\_disk\_2" -VolumeType None  New-SCVirtualDiskDrive -VMMServer localhost -IDE -Bus 1 -LUN 1 -JobGroup 8da819cc-e198-41de-9db4-569482b22c0b -VirtualHardDiskSizeMB 40960 -Dynamic -Filename "dddd\_disk\_3" -VolumeType None  #硬盘描述文件  $HardwareProfile = Get-SCHardwareProfile -VMMServer localhost | where {$\_.Name -eq "配置文件1f5ef84f-7de9-47a3-ae2b-f6023fa66de7"}  #添加虚拟机模板  New-SCVMTemplate -Name "Temporary Templatea53321d9-ab4b-4808-8868-7d6ef807866f" -HardwareProfile $HardwareProfile -JobGroup 8da819cc-e198-41de-9db4-569482b22c0b -NoCustomization  $template = Get-SCVMTemplate -All | where { $\_.Name -eq "Temporary Templatea53321d9-ab4b-4808-8868-7d6ef807866f" }  $virtualMachineConfiguration = New-SCVMConfiguration -VMTemplate $template -Name "dddd"  #输入虚拟机配置文件  Write-Output $virtualMachineConfiguration  #虚拟机主机  $vmHost = Get-SCVMHost -ID "da06f379-b126-40ad-9957-2f183a64b10d"  Set-SCVMConfiguration -VMConfiguration $virtualMachineConfiguration -VMHost $vmHost  #修改虚拟机配置文件  Update-SCVMConfiguration -VMConfiguration $virtualMachineConfiguration  Update-SCVMConfiguration -VMConfiguration $virtualMachineConfiguration  #操作系统  $operatingSystem = Get-SCOperatingSystem | where { $\_.Name -eq "64-bit edition of Windows Server 2012 Standard" }  #添加虚拟机  New-SCVirtualMachine -Name "dddd" -VMConfiguration $virtualMachineConfiguration -Description "" -BlockDynamicOptimization $false -JobGroup "8da819cc-e198-41de-9db4-569482b22c0b" -ReturnImmediately -StartAction "NeverAutoTurnOnVM" -StopAction "SaveVM" -OperatingSystem $operatingSystem |

* 1. 添加虚拟机服务器到VMM—具有实时迁移的功能

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| #权限验证  $uname="system\vmm"  $pwd=ConvertTo-SecureString "Abcd.123" -AsPlainText -Force;  $credential =New-Object System.Management.Automation.PSCredential($uname,$pwd);  $runAsAccount = Get-SCRunAsAccount -Name "Administrator" -ID "3e30b7be-302f-4de4-8eab-adf70c6a8cb6"  $hostGroup = Get-SCVMHostGroup -ID "0e3ba228-a059-46be-aa41-2f5cf0f4b96e" -Name "所有主机"  Add-SCVMHost -ComputerName "systemcenter2.system.com" -RunAsynchronously -VMHostGroup $hostGroup -Reassociate $true -Credential $runAsAccount -LiveStorageMigrationMaximum "7" -EnableLiveMigration $true -LiveMigrationMaximum "7" -MigrationAuthProtocol "CredSSP" -UseAnyMigrationSubnet $true  Add-SCVMHost -ComputerName "systemcenter3.system.com" -RunAsynchronously -VMHostGroup $hostGroup -Reassociate $true -Credential $runAsAccount -LiveStorageMigrationMaximum "7" -EnableLiveMigration $true -LiveMigrationMaximum "7" -MigrationAuthProtocol "CredSSP" -UseAnyMigrationSubnet $true  Add-SCVMHost -ComputerName "systemcenter1.system.com" -RunAsynchronously -VMHostGroup $hostGroup -Reassociate $true -Credential $runAsAccount -LiveStorageMigrationMaximum "7" -EnableLiveMigration $true -LiveMigrationMaximum "7" -MigrationAuthProtocol "CredSSP" -UseAnyMigrationSubnet $true |

* 1. 删除虚拟机服务器

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| #权限验证  $uname="system\vmm"  $pwd=ConvertTo-SecureString "Abcd.123" -AsPlainText -Force;  $credential =New-Object System.Management.Automation.PSCredential($uname,$pwd);  $credential = Get-SCRunAsAccount -Name "Administrator" -ID "3e30b7be-302f-4de4-8eab-adf70c6a8cb6"  $vmHost = Get-SCVMHost -ID "9bfbfb0f-1cfd-4782-9f6c-00379a4ab94e"  Remove-SCVMHost -VMHost $vmHost -RunAsynchronously -Credential $credential |

* 1. 创建单一模板

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| #权限验证  $uname="system\vmm"  $pwd=ConvertTo-SecureString "Abcd.123" -AsPlainText -Force;  $credential =New-Object System.Management.Automation.PSCredential($uname,$pwd);  $pattern = Get-SCServiceTemplate -All -Name "单一计算机" | where { $\_.Release -eq "v1.0" }  New-SCServiceTemplate -Name "新建服务模板 1" -Release "新建" -ServiceTemplate $pattern |

* 1. 创建空白模板

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| #权限验证  $uname="system\vmm"  $pwd=ConvertTo-SecureString "Abcd.123" -AsPlainText -Force;  $credential =New-Object System.Management.Automation.PSCredential($uname,$pwd);  New-SCServiceTemplate -Name "新建服务模板 1" -Release "新建" |

* 1. 创建第三层应用程序模板

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| #权限验证  $uname="system\vmm"  $pwd=ConvertTo-SecureString "Abcd.123" -AsPlainText -Force;  $credential =New-Object System.Management.Automation.PSCredential($uname,$pwd);  $pattern = Get-SCServiceTemplate -All -Name "三层应用程序" | where { $\_.Release -eq "v1.0" }  New-SCServiceTemplate -Name "新建服务模板 1" -Release "新建" -ServiceTemplate $pattern |

* 1. 创建双层应用程序模板

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| #权限验证  $uname="system\vmm"  $pwd=ConvertTo-SecureString "Abcd.123" -AsPlainText -Force;  $credential =New-Object System.Management.Automation.PSCredential($uname,$pwd);  $pattern = Get-SCServiceTemplate -All -Name "双层应用程序" | where { $\_.Release -eq "v1.0" }  New-SCServiceTemplate -Name "新建服务模板 1" -Release "新建" -ServiceTemplate $pattern |

1. System Center 2012实践
   1. 比较有用的信息我认为是计算机名、操作系统、内存需求、分配的内存、磁盘写入、网络发送吞吐量
   2. HyperV2012下的实时迁移有很多有趣也富含经济价值的特性，比如无共享迁移、比如SMB迁移