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## Add_PortGroup_at_Cluster_Level.ps1
## build 1.03
## Eric Krejci
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## on error stop the script
$erroractionpreference = "Stop"
$Username = "DOMAIN\USERNAME"
$Password = read-host "Enter Password" -assecurestring

### declare your vcenter

$VCenterServer = "vcenter.fqdn"

### declare the name of the DataCenter

$TargetDataCenter = "DataCenterName"

### general variables

$isnewportpresent = $false

### the vSwitch in which the new portgroup will be created

$DefaultVSwitchName = "vSwitch0"

### Functions Start

function call-listbox {
    Param( $DataCenter ## This is the DataCenter
    )

[void]
[System.Reflection.Assembly]::LoadWithPartialName("System.Windows.Forms")
[void] [System.Reflection.Assembly]::LoadWithPartialName("System.Drawing")

$objForm = New-Object System.Windows.Forms.Form
$objForm.Text = "Select a Cluster"
$objForm.Size = New-Object System.Drawing.Size(300,200)
$objForm.StartPosition = "CenterScreen"

$objForm.KeyPreview = $True
$objForm.Add_KeyDown({if ($_.KeyCode -eq "Enter")
    {$x=$objListBox.SelectedItem;$objForm.Close()}})
$objForm.Add_KeyDown({if ($_.KeyCode -eq "Escape")
    {$objForm.Close()}})

$OKButton = New-Object System.Windows.Forms.Button
$OKButton.Location = New-Object System.Drawing.Size(75,120)
$OKButton.Size = New-Object System.Drawing.Size(75,23)
$OKButton.Text = "OK"
$OKButton.Add_Click({$x=$objListBox.SelectedItem;$objForm.Close()})
$objForm.Controls.Add($OKButton)

$CancelButton = New-Object System.Windows.Forms.Button
$CancelButton.Location = New-Object System.Drawing.Size(150,120)
$CancelButton.Size = New-Object System.Drawing.Size(75,23)
$CancelButton.Text = "Cancel"
$CancelButton.Add_Click({$objForm.Close()})

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$ObjForm.Controls.Add($CancelButton)

$ObjLabel = New-Object System.Windows.Forms.Label
$ObjLabel.Location = New-Object System.Drawing.Size(10,20)
$ObjLabel.Size = New-Object System.Drawing.Size(280,20)
$ObjLabel.Text = "Please select a Cluster:"
$ObjForm.Controls.Add($ObjLabel)

$ObjListBox = New-Object System.Windows.Forms.ListBox
$ObjListBox.Location = New-Object System.Drawing.Size(10,40)
$ObjListBox.Size = New-Object System.Drawing.Size(260,20)
$ObjListBox.Height = 80
$ObjListBox.Sorted = $True

$clusters = Get-Cluster -Location (Get-Datacenter -name $DataCenter)

foreach ($cluster in $clusters) {

[void] $ObjListBox.Items.Add($cluster)
}

$ObjForm.Controls.Add($ObjListBox)

$ObjForm.Topmost = $True

$ObjForm.Add_Shown({$ObjForm.Activate()})
[void] $ObjForm.ShowDialog()

$x

}

### Functions End

### connect to the vCenter
Connect-VIServer -Server $vCenterserver -user $Username -Password
([Runtime.InteropServices.Marshal]::PtrToStringAuto([Runtime.InteropServices.Marshal]::SecureStringToBSTR($password)))

### call the list of the clusters within the specified DataCenter

$Cluster = call-listbox -DataCenter $TargetDataCenter

## testing if $Cluster not $null

if ($Cluster -eq $null ) {

Write-Host "cannot be empty"
exit
}

### manually enter the portgroup name you want to add

$NewPortGroupName = Read-Host "Enter PortGroup name"

## testing if $NewPortGroupName not $null

if ($NewPortGroupName -eq $null ) {

Write-Host "cannot be empty"
exit
}

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}

$NewPortGroupVlanID = Read-Host "Enter PortGroup Vlan ID"

## testing if $NewPortGroupVlanID is a number

[reflection.assembly]::LoadWithPartialName("Microsoft.VisualBasic") | Out-Null

if ([Microsoft.VisualBasic.Information]::IsNumeric($NewPortGroupVlanID) -eq $TRUE) {
}else{
Write-Host "input must be a number"
Disconnect-VIServer -Confirm:$false
exit
}

### list vswitch for each esx under the cluster to see if the portgroup is present

$esxs = Get-VMHost -Location (get-cluster -name $Cluster)

if ($esxs -ne $null) {
foreach ($esx in $esxs) {

    ### get every vSwitch of the current ESX

    $VMSwitches = get-VirtualSwitch -VMHost $esx

    foreach ($VMSwitch in $VMSwitches) {

        if ($VMSwitch -like $DefaultVSwitchName) {

            ### get every PortGroup of the current vSwitch

            $LocalPortGroups = Get-VirtualPortGroup -VirtualSwitch $VMSwitch

            foreach ($LocalPortGroup in $LocalPortGroups) {

                ### for each portgroup check if it has the same name than the
                one you want to add

                if ($LocalPortGroup -like $NewPortGroupName) {

                    Write-Host "the portgroup ""$NewPortGroupName"" is already
                    present in the $esx "

                    ### set the variable $isnewportpresent to $true

                    $isnewportpresent = $true

                }

            }

        }

    }

}
}

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    }
}
} else {

Write-Host "No ESX present in the cluster ""$Cluster""!"

Disconnect-VIServer -Confirm:$false

exit
}
### now we if a portgroup with the same name already exist on a ESX, we
simply warn and end the script.

if ($isNewportpresent -eq $true) {

Write-Host "Please check on the ESX listed above why this port already
exist!"

Disconnect-VIServer -Confirm:$false

exit

} else {

### now we add the PortGroup for each ESX

    foreach ($esx in $esxs) {

        ### get every vSwitch of the current ESX

        $VMSwitchs = get-VirtualSwitch -VMHost $esx

        foreach ($VMSwitch in $VMSwitchs) {

            ### we choose the vSwitch specified in the variable
$DefaultVSwitchName and add the portgroup

            if ($VMSwitch -like $DefaultVSwitchName) {

                "adding ""$NewPortGroupName"" to $esx"

                $AddNewPortGroup=New-VirtualPortGroup -Name $NewPortGroupName -
VlanID $NewPortGroupVlanID -VirtualSwitch $VMSwitch -ErrorAction Inquire

            }

        }

    }

}

}

"Finished"

Disconnect-VIServer -Confirm:$false

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