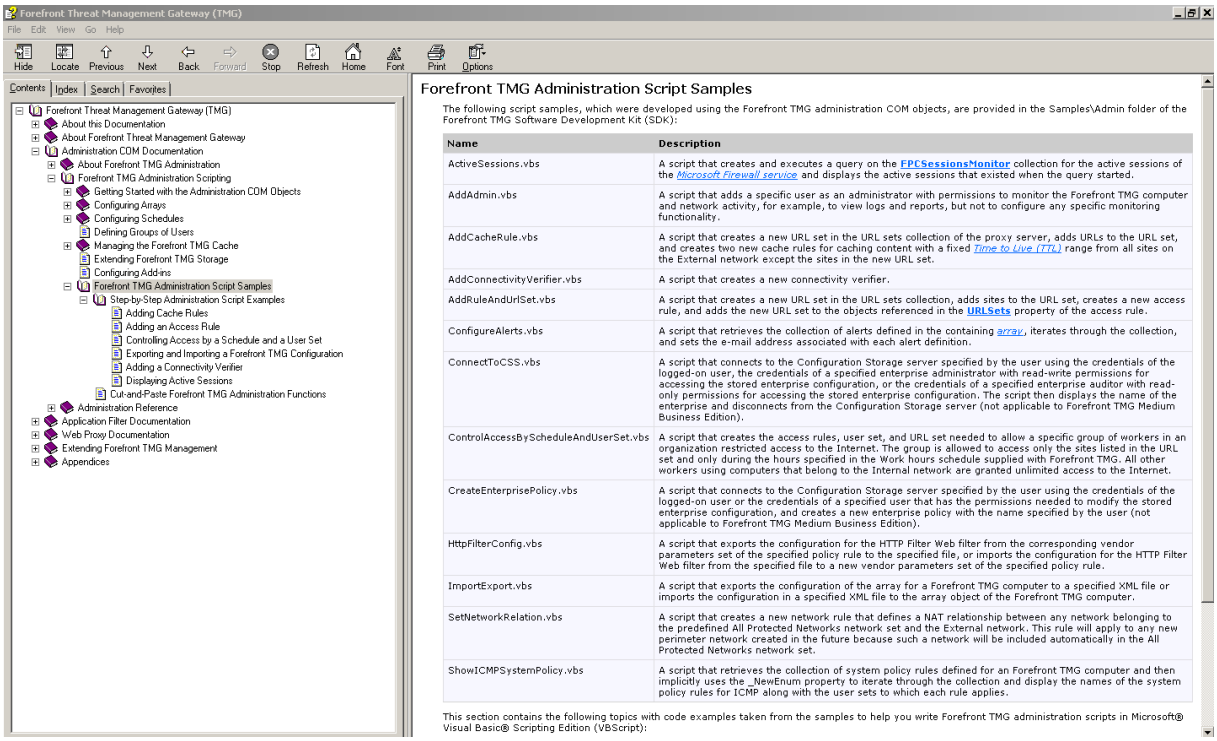
Forefront TMG – Scripting mit VBScript und Powershell

Forefront TMG kommt wird mit einer Read Only Powershell Unterstuetzung geliefert. Das folgende Bilderbuch zeigt einige Powershell-Befehle, sowie die Moeglichkeiten mit Hilfe von VBScript und Jscript TMG zu administrieren.

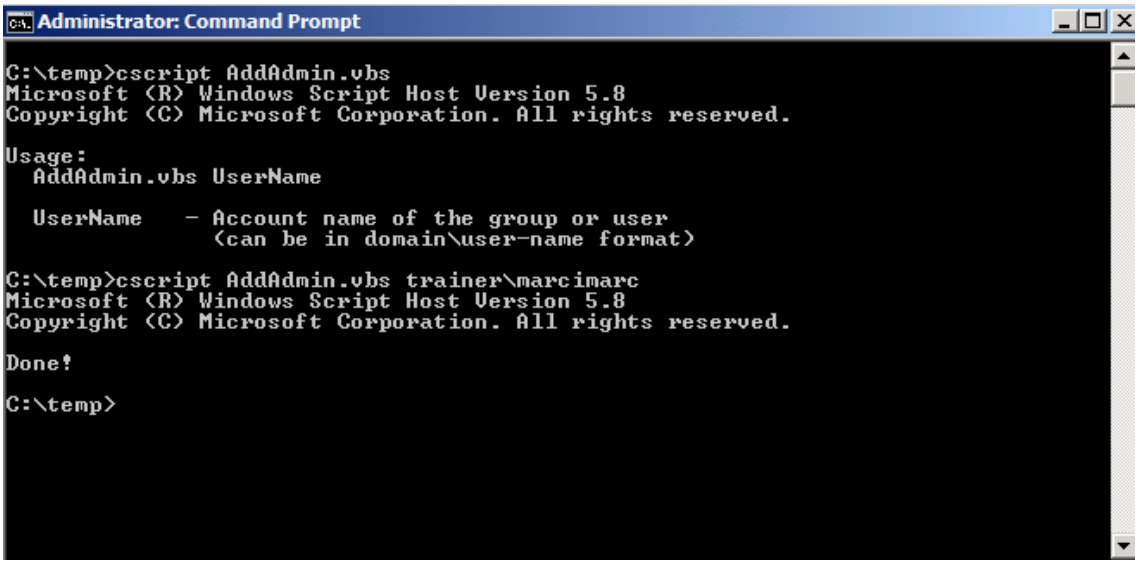
Quellen:
www.isascripts.org – einige VBScript und Jscript Beispiele
http://www.microsoft.com/downloads/en/details.aspx?FamilyID=8809cfda-2ee1-4e67-b993-6f9a20e08607&displaylang=en – Forefront TMG SDK

Anzeige aller neuen Forefront TMG COM Elemente
http://msdn.microsoft.com/en-us/library/dd447763.aspx

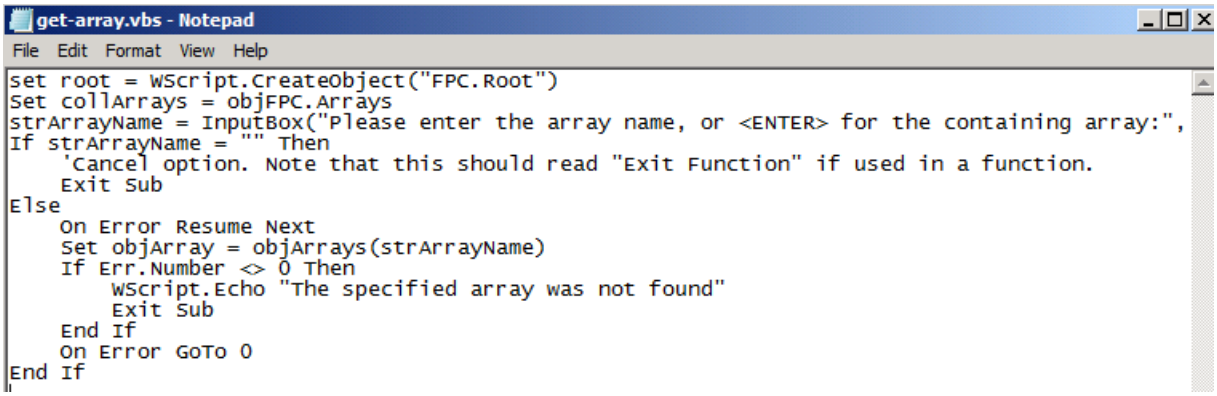
Forefront TMG SDK – Administration script examples



Einen User zu einer ISA/TMG Server Rolle hinzufuegen



Forefront TMG Array anzeigen



Der Klassiker - TMG Konfigurationsbackup

```
Dim fileName
Dim WSHNetwork
Dim shareName: shareName = WScript.Arguments(0)
Dim xmldom : set xmldom = CreateObject("Msxml2.DOMDocument")
Dim fpc : set fpc = WScript.CreateObject("Fpc.Root")
Dim array : set array = fpc.GetContainingArray
set WSHNetwork = CreateObject("WScript.Network")
fileName=shareName & "\" & WSHNetwork.ComputerName & "-" &
Month(Now) & "-" & Day(Now) & "-" & Year(Now) & ".xml"
array.Export xmldom, 0
xmldom.save(fileName)
```

Die Codezeilen in eine Textdatei mit der Extension .VBS speichern und dann per Cscript ausfuehren
Bsp.: Cscript TMGBACKUP.VBS \\ENTFERNTERSERVER\TMG-BACKUP

Beispiel: Auslesen der VPN Konfiguration und Import in Forefront TMG
Quelle: http://www.msisafaq.de/Anleitungen/TMG/VPN/VPNImport.htm (Author: Christian Groebner)

Mittels folgendem Skript können Sie die Einstellungen aus der Konfigurationssicherung von ISA Server 2006 auslesen und diese in die Konfiguration von Microsoft TMG übernehmen. Kopieren Sie hierzu das Skript in einen Texteditor, z.B. Notepad und speichern Sie es unter dem Dateinamen **vpnfix.vbs** ab.

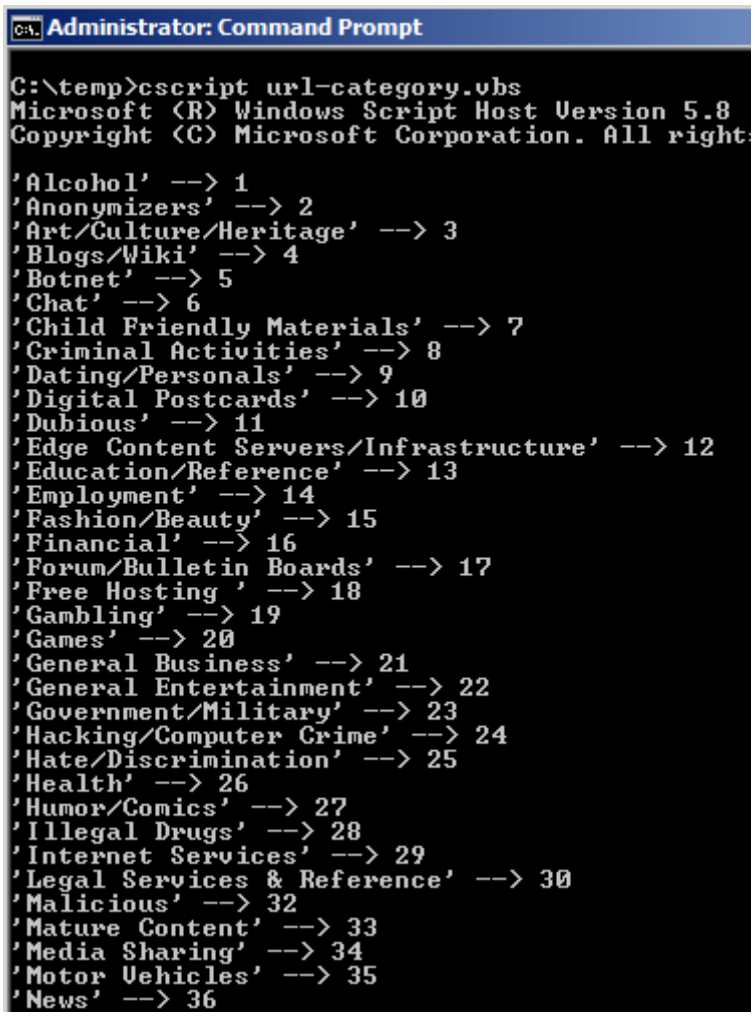
```
################################################################################
##############

Dieses Skript übernimmt die IPSec-Einstellungen für Phase I und II der IPSec-VPN-Tunnel
aus der ISA Server 2006-Konfiguration nach dem Import und wendet diese auf die
Konfiguration
von Microsoft TMG an.

Die Verwendung dieses Skripts erfolgt auf eigene Verantwortung.
Es wird keine Haftung für eventuelle Schäden übernommen!

Geschrieben von Christian Gröbner [MVP Forefront]
################################################################################
##############

' ----- Sub restore_ipsec_settings -----

Sub restore_ipsec_settings(fpcRoot, VPN_Name, Int_PhaseI, Enc_PhaseI, Int_PhaseII,
Enc_PhaseII)

 Dim Intproviders
 Dim Encproviders

 Intproviders = Array("SHA1","MD5")
 Encproviders = Array("DES","3DES")

 set objIPSec =
fpcRoot.GetContainingArray.NetworkConfiguration.Networks.Item(VPN_Name).VPNConfi
guration.IPSecSettings

 wscript.echo "Restoring IPSec-settings for network" & VPN_Name & vbCrLf
 wscript.echo "Phase I integrity : " & Intproviders(Int_PhaseI)
 objIPSec.Phase1Integrity = Int_PhaseI
 wscript.echo "Phase I encryption : " & Encproviders(Enc_PhaseI)
 objIPSec.Phase1Encryption = Enc_PhaseI
 wscript.echo "Phase II integrity : " & Intproviders(Int_PhaseII)
 objIPSec.Phase2Integrity = Int_PhaseII
 wscript.echo "Phase II encryption : " & Encproviders(Enc_PhaseII) & vbCrLf
 objIPSec.Phase2Encryption = Enc_PhaseII
 wscript.echo "Successfully applied the settings"
 wscript.echo "-----------------------------------------------------" & vbCrLf
```

```
End Sub


' ------ Sub Main -------

Sub Main()

 Dim PhaseI_Int
 Dim PhaseI_Enc
 Dim PhaseII_Int
 Dim PhaseII_Enc
 Dim config

 config = Inputbox("Please enter the complete path and filename with extension to the
existing configuration file of ISA 2006 : (Example: C:\Temp\config.xml)")

 Set xmlFile = CreateObject("Microsoft.XMLDOM")

 If xmlFile.load(config) then

  set objFPC = CreateObject("FPC.Root")

  Set networkNodes = xmlFile.getElementsByTagName("fpc4:Network")

  For each networkNode in networkNodes

   If (Not(networkNode.selectSingleNode("fpc4:NetworkConnectionType") is Nothing)) Then

    If (networkNode.selectSingleNode("fpc4:NetworkConnectionType").Text = 4) Then

     PhaseI_Int = 0
     PhaseI_Enc = 1
     PhaseII_Int = 0
     PhaseII_Enc = 1
     Name = networkNode.selectSingleNode("fpc4:Name").Text

     Set ipsecSettingsNode =
networkNode.selectSingleNode("fpc4:VpnNetworkConfiguration/fpc4:VpnNetworkIPSecSett
ings")

     If (Not(ipsecSettingsNode.selectSingleNode("fpc4:VpnNetworkPhase1Encryption") is
Nothing)) Then PhaseI_Enc =
ipsecSettingsNode.selectSingleNode("fpc4:VpnNetworkPhase1Encryption").Text
     If (Not(ipsecSettingsNode.selectSingleNode("fpc4:VpnNetworkPhase1Integrity") is
Nothing)) Then PhaseI_Int =
ipsecSettingsNode.selectSingleNode("fpc4:VpnNetworkPhase1Integrity").Text
     If (Not(ipsecSettingsNode.selectSingleNode("fpc4:VpnNetworkPhase2Encryption") is
Nothing)) Then PhaseII_Enc =
ipsecSettingsNode.selectSingleNode("fpc4:VpnNetworkPhase2Encryption").Text
     If (Not(ipsecSettingsNode.selectSingleNode("fpc4:VpnNetworkPhase2Integrity") is
```

```
Nothing)) Then PhaseII_Int =
ipsecSettingsNode.selectSingleNode("fpc4:VpnNetworkPhase2Integrity").Text

    restore_ipsec_settings objFPC, Name, PhaseI_Int, PhaseI_Enc, PhaseII_Int, PhaseII_Enc

   End If

  End If

 Next

objFPC.GetContainingArray.Save

Else

 wscript.echo("The file does not exist!")

End If

End Sub


'------ Start the script ------

Main
```

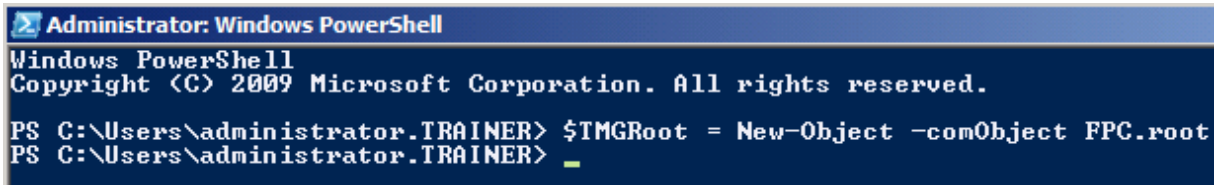
Anzeige der URL Categorien von Forefront TMG

```
set root=CreateObject("FPC.Root")
For Each cat in root.GetContainingArray().RuleElements.UrlCategories
    wscript.echo "'" & cat.Name & "' --> " & cat.CategoryID
Next
```

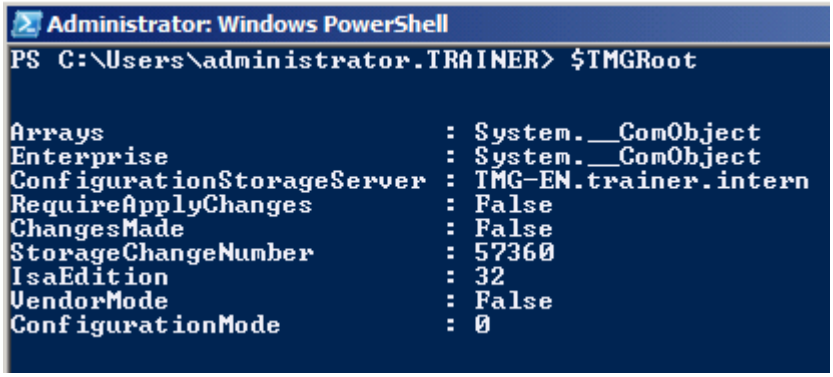


TMG und Powershell

TMG Root Object definieren (Root Object ist immer FPC.Root)



Anzeige des TMG Roots



Abfrage einzelner Elemente (Hinter $TMGRoot. mit TAB Taste alle Elemente anzeigen)

```
Administrator: Windows PowerShell
PS C:\Users\administrator.TRAINER> $TMGRoot.ConfigurationStorageServer
TMG-EN.trainer.intern
PS C:\Users\administrator.TRAINER> _
```

Anzeige der Eigenschaften von FPC.Root

```
Administrator: Windows PowerShell
PS C:\Users\administrator.TRAINER> $tmgroot | Get-Member -membertype *property


   TypeName: System.__ComObject#{8bf0aefa-b4fd-4d81-8046-a069d948d673}

Name                       MemberType Definition
----                       ---------- ----------
Arrays                     Property   IFPCArrays Arrays () {get}
ChangesMade                Property   bool ChangesMade () {get}
ConfigurationMode          Property   FpcConfigurationMode ConfigurationMode () {get}
ConfigurationStorageServer Property   string ConfigurationStorageServer () {get}
Enterprise                 Property   IFPCEEEnterprise Enterprise () {get}
IsaEdition                 Property   FpcIsaEditionType IsaEdition () {get}
RequireApplyChanges        Property   bool RequireApplyChanges () {get} {set}
StorageChangeNumber        Property   int64 StorageChangeNumber () {get}
VendorMode                 Property   bool VendorMode () {get} {set}


PS C:\Users\administrator.TRAINER>
```

Ermitteln des TMG Enterprise und dessen Arrays. Anschliessender Export der Konfiguration

Quelle: http://www.microsoft.com/learning/en/us/Book.aspx?ID=13148&locale=en-us

```
#-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-
#
#  This code is Copyright (c) 2009 Microsoft Corporation.
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#  THIS CODE AND INFORMATION IS PROVIDED "AS IS" WITHOUT WARRANTY OF
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#  WHETHER IN AN ACTION OF CONTRACT, NEGLIGENCE OR OTHER TORTIOUS
#  ACTION, ARISING OUT OF OR IN CONNECTION WITH THE USE OR PERFORMANCE
#  OF THIS CODE OR INFORMATION.
#
```

```
#-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-

# declare and define the TMG root object
$oFPC = New-Object -comObject FPC.root

# declare and define the value that expresses if array work was successful
$bFailed = $False

# declare and define the value that expresses whether any changes occurred
$bChanges = $False

# declare and define the TMG arrays collection
$cArrays = $oFPC.Arrays

# declare the Array object variable
$oArray

# enumerate (walk through) the array list looking for the ones of interest
$Result = "Outbound Proxy"

Foreach ($oArray in $cArrays)
{
write-host "Policy name:" $oArray.PolicyAssignment.EnterprisePolicyUsed.Name
  If ( $oArray.PolicyAssignment.EnterprisePolicyUsed.Name -eq $Result){
    write-host "Array Name:" $oArray.name
    # if we try to work an array and fail, we want to quit now
    If ( UpdateArray($oArray) -eq $false )
        {$bFailed = $True}
    # otherwise, we declare that we made changes to at least one array
        else {$bChanges = $True}
       }
 }
 # if we made any changes without failures, now is the time to save them
If ($bChanges -ne ( $bFailed ))
    {SaveChanges( $oArray )}
  {SaveChanges( $oArray )}

Function UpdateArray( $oArray )
{
  #define the default return value for this function
  $UpdateArray = $False

  #declare and define the TMG export file path
  $szOutFilePath = "C:\TmgExportFile.xml"

  #declare and define the optional data for the export method
  $iOptionalData = 0

  #declare and define the TMG export data password
  $szPassword = ""
```

```
  #declare and define the TMG export file comment section
  $szComment = "Exported by ExportArrays.ps1 at "

  #try to export the current configuration to a file
  write-host "Name:" $oArray.Name
  $oArray.ExportToFile($szOutFilePath, $iOptionalData, $szPassword, $szComment)

  #disable script error handling
  $bOverwrite= $False

  #declare and define the TMG import services reset flag
  $bReset = $False

  #declare and define the TMG import policy reload flag
  $bReload = $True

  #declare and define the TMG import file path
  $szInFilePath = "C:\TmgImportFile.xml"

  #try to import the configuration update from a file
  $oArray.ImportFromFile($szInFilePath, $iOptionalData, $szPassword, $bOverwrite,
$bReset, $bReload)
  $UpdateArray = $True
}

Function SaveChanges( $oArray )
{
        Trap [Exception]
  {
        write-host "Failed to save the array configuration changes; "
$_.Exception.GetType().FullName "; " $_.Exception.Message

        # if it fails, tell the user and bail out
        write-host "Failed to save the array configuration changes; "
$_.Exception.GetType().FullName "; " $_.Exception.Message
        Exit
        }

  # define the default value of this function
  $SaveChanges = $False
  $oArray.Save

  # no failures, return "true"
  $SaveChanges = $True
  write-host "Changes Saved"
}

--------------------------------------------------------------------------------
```