

Microsoft Forefront TMG - Forefront TMG SDK

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In this article, I will show you how to use the Forefront TMG SDK tools to expand Forefront TMG functions and some information that the SDK provides about Forefront TMG work. .

Forefront TMG 2010 SDK includes libraries, tools, templates, and documents to help developers and system administrators deploy, configure, customize, and expand their Forefront TMG environment . You can download Forefront TMG SDK for free from [here](#).

There are many tools that you can download but we will look through some important tools. Let's start with ADAM Sites for Forefront TMG Enterprise.

ADAM Sites tool for Forefront TMG Enterprise

The ADAM Sites tool is used to define AD-LDS (Active Directory Lightweight Directory Service) sites for the purpose of controlling traffic between Forefront TMG Enterprise Management Server (EMS). The Enterprise Management Server is the server used to manage the TMG Enterprise Array or it can even be a standalone server. The Forefront TMG uses EMS will receive the configuration from this EMS server. By default, the EMS server is not aware of the site, so if you have multiple EMS servers in multiple locations, there is no way to control the replication interval and the costs used by the federation. [This link](#). The ADAM Sites tool allows you to define AD-LDS site links, combining costs and replication time intervals between these links. Before you can use the ADAM Sites tool, you need to copy the *ADAMSITES.EXE* file to the Forefront TMG installation directory. The following figure shows the command line options of ADAM Sites.

```

Administrator: Command Prompt
C:\Program Files\Microsoft Forefront Threat Management Gateway>adansites /?
The command for AdamSites is unrecognized or missing.

Usage:
AdamSites.exe Site/SiteLink/Sites/SiteLinks/MoveServer/Backup/Restore
[Task Specific arguments]

where

Task      Task Arguments
Site      Create/View/Delete Name
SiteLink  View/Delete Name
SiteLink  Create Name count site<1>...site<count> cost
          replication-interval [description]
Sites
SiteLinks
MoveServer Server-Name From-site To-site
Backup     filename
Restore    filename

Examples:

AdamSites Site create MySite
          Create an empty site named "MySite"

AdamSites SiteLink create MyLink 3 site1 site2 site3 50 750
          "My SiteLink description"
          Creates a site link named "MyLink" that connects 3 sites:
          site1, site2, and site3.
          The cost of this site link is 50, and replication occurs
          every 750 minutes.
          Note: ADAM defaults <if configured using script> are:
          Cost = 100
          Replication Interval = 180 minutes

AdamSites Sites
          Display the list of sites with their associated servers.

```

Figure 1: ADAMSITES tool

Auto Discovery Configuration

Auto-Discovery Configuration can be used to configure Active Directory with a marker key that points to your Forefront TMG server. This marker key is used by the TMG client (formerly the Firewall client) to locate the Forefront TMG server and connect to it. This is a completely different and safer method than using DHCP / DNS in finding Forefront TMG servers. If no marker for the Active Directory key is found, the Forefront TMG client will return to using DHCP / DNS to find the Forefront TMG server.

```

Administrator: Command Prompt
C:\Program Files (x86)\Microsoft Forefront TMG Tools\AdConfig>TmgAdConfig.exe /?
Forefront TMG Auto-Discovery Configuration Tool
Usage:
TmgAdConfig.exe add -site <site-name> -type winsock -url <service-url> [-f]
TmgAdConfig.exe add -default -type winsock -url <service-url> [-f]
TmgAdConfig.exe del -site <site-name> -type winsock
TmgAdConfig.exe del -default -type winsock
TmgAdConfig.exe list [-default] [-site [<site-name>]]
TmgAdConfig.exe <any-command> -help

Example:
TmgAdConfig.exe add -site My-Site -type winsock -url http://contoso.com:8080/wsp
ad.dat Register the given URL as the winsock proxy service for site My-Site.
TmgAdConfig.exe list -site My-Site
          Print all service markers registered for site My-Site.

C:\Program Files (x86)\Microsoft Forefront TMG Tools\AdConfig>

```

Figure 2: TMG Auto-Discover Tool

Cache Directory

Using Cache Directory can view the cache contents in real time, save the current cache information to the file and mark the obsolete items that should not be stored in the cache. CACHEDIR utility in our opinion is the most desirable utility from the Forefront TMG SDK and is also available in the previous ISA Server version. Before you can use this CACHEDIR tool, you need to copy the CACHEDIR.EXE file to the Forefront TMG installation directory.

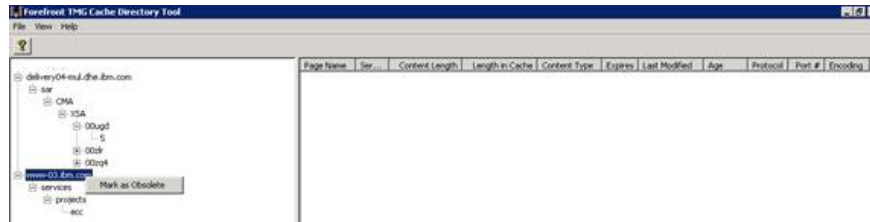


Figure 3: CacheDir Tool

CertTool

Certtool for TMG is only required when you use Forefront TMG Enterprise in a workgroup environment. In a workgroup environment, TMG servers communicate with each other using certificates. Certtool makes it easy to enforce installation or replace certificates in Forefront TMG. Before using Certtool for TMG, you need to copy the ISACERTTOOL.EXE file to the Forefront TMG installation directory.



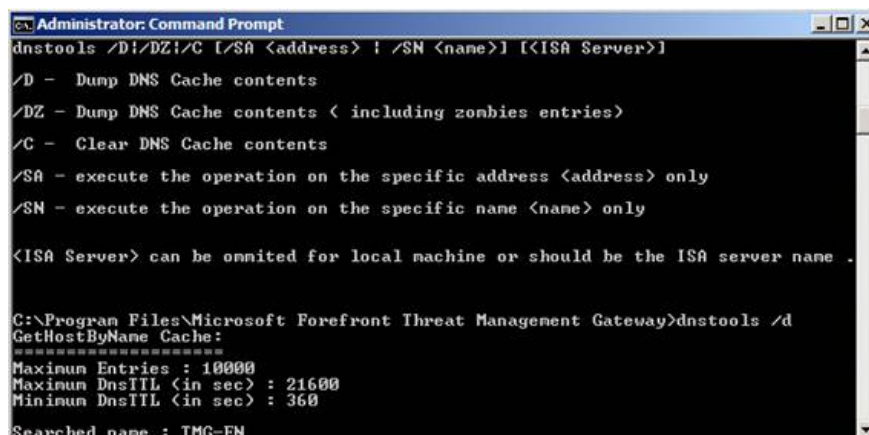
Figure 4: ISACerttool

DNS Cache

Using the DNS Cache on the Forefront TMG server can display the contents of the Domain Name System (DNS) cache and delete entries in the DNS cache. For example, Forefront TMG clients use Forefront TMG DNS settings for name resolution, and Secure NAT clients use local DNS settings to resolve names. In some cases it may be necessary to delete the DNS Cache settings on Forefront TMG.

Note : Deleting the DNS cache on the TMG server with the IPCONFIG / FLUSHDNS command will only delete the DNS Cache from the DNS client resolver.

To be able to use the DNS Cache tool, copy the DNSTOOLS.EXE file to the Forefront TMG installation directory.



```
Administrator: Command Prompt
dnstools /D!/DZ!/C [/SA <address> ! /SN <name>] [<ISA Server>]
/D - Dump DNS Cache contents
/DZ - Dump DNS Cache contents < including zombies entries>
/C - Clear DNS Cache contents
/SA - execute the operation on the specific address <address> only
/SN - execute the operation on the specific name <name> only

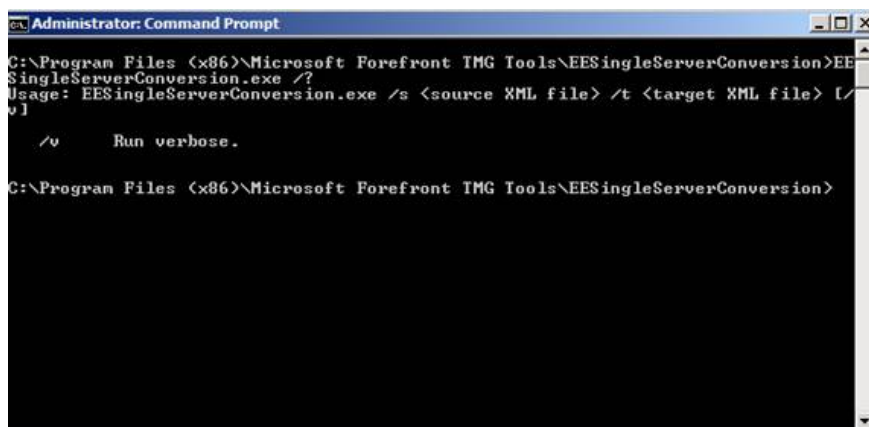
<ISA Server> can be omitted for local machine or should be the ISA server name .

C:\Program Files\Microsoft Forefront Threat Management Gateway>dnstools /d
GetHostByName Cache:
=====
Maximum Entries : 10000
Maximum DnsTTL <in sec> : 21600
Minimum DnsTTL <in sec> : 360
Searched name : TMG-FN
```

Figure 5: TMG DNSCache Tool

EE Single Server Conversion

Using this tool (EESingleServerConversion.exe) can help you switch from an independent server running ISA Server 2004 Enterprise Edition or ISA Server 2006 Enterprise Edition to Forefront TMG also in standalone mode. Before importing the configuration of ISA Server Enterprise into Forefront TMG Enterprise in standalone mode, Standalone Mode, you must convert other XML settings from the export format of the ISA Server into a readable format for importing the configuration into Forefront TMG Enterprise. After installing this converter and copying the ISA Enterprise configuration file to the Forefront TMG server, open the command prompt and enter the command with the source and target XML file as shown in the figure below.



```
Administrator: Command Prompt
C:\Program Files (x86)\Microsoft Forefront TMG Tools\EESingleServerConversion>EE
SingleServerConversion.exe /?
Usage: EESingleServerConversion.exe /s <source XML file> /t <target XML file> [/
v]

/v      Run verbose.

C:\Program Files (x86)\Microsoft Forefront TMG Tools\EESingleServerConversion>
```

Figure 6: ISA to TMG Single Server conversion tool

This command will convert the ISA Server Enterprise configuration file to the supported format on Forefront TMG Enterprise independently.

MSDEToText

The MSDEtoText tool can be used to convert Forefront TMG SQL Express Server logs into a text file, or to display their contents so the screen. You can use the MSDEtoText utility with ISA Server 200x and Forefront TMG. The following figure shows the syntax of the MSDEtoText tool.

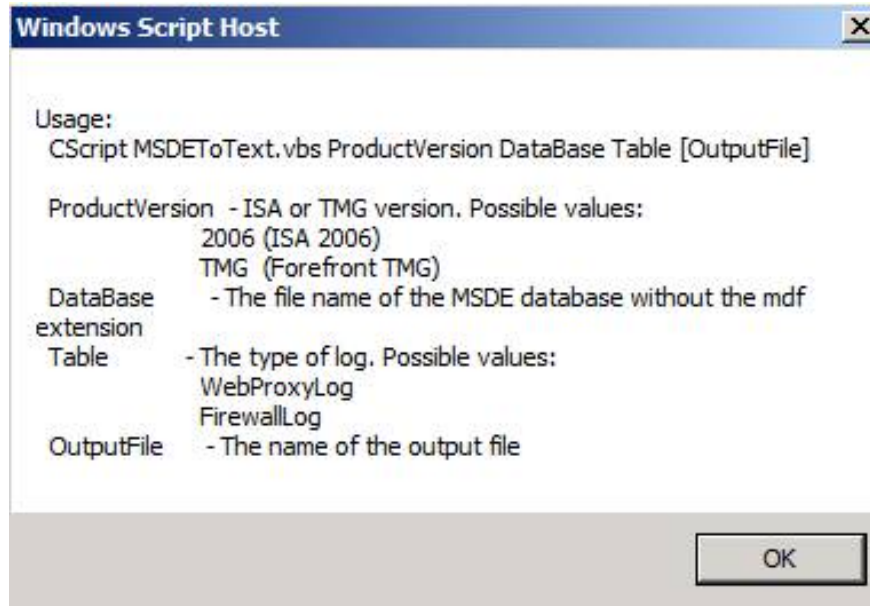


Figure 7: MSDE to Text conversion tool

The figure below shows an example of exporting the Firewall log file.

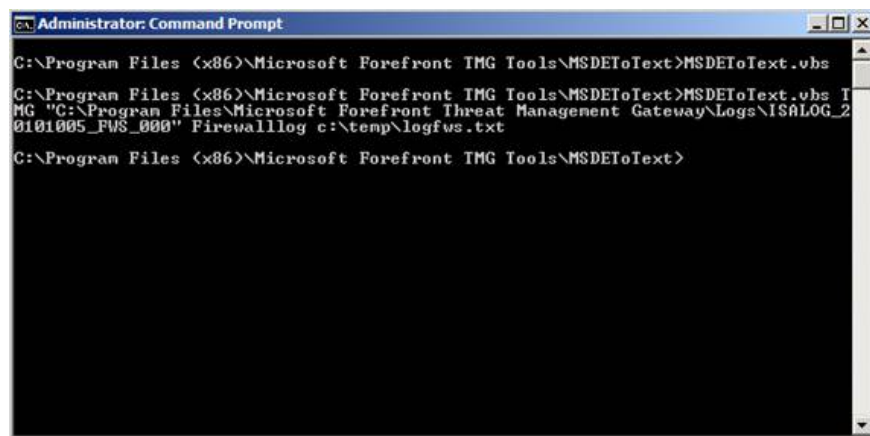


Figure 8: An example of an MSDE to Text converter

Remote Access Quarantine

Forefront TMG also supports the Remote Access Quarantine service, the service used in ISA Server 200x, to quarantine VPN clients connected to ISA Server. You should use NAP (Network Access Protection) of Windows Server 2008 in combination with Forefront TMG, which allows you to more easily and flexibly configure RQS components from the TMG SDK.

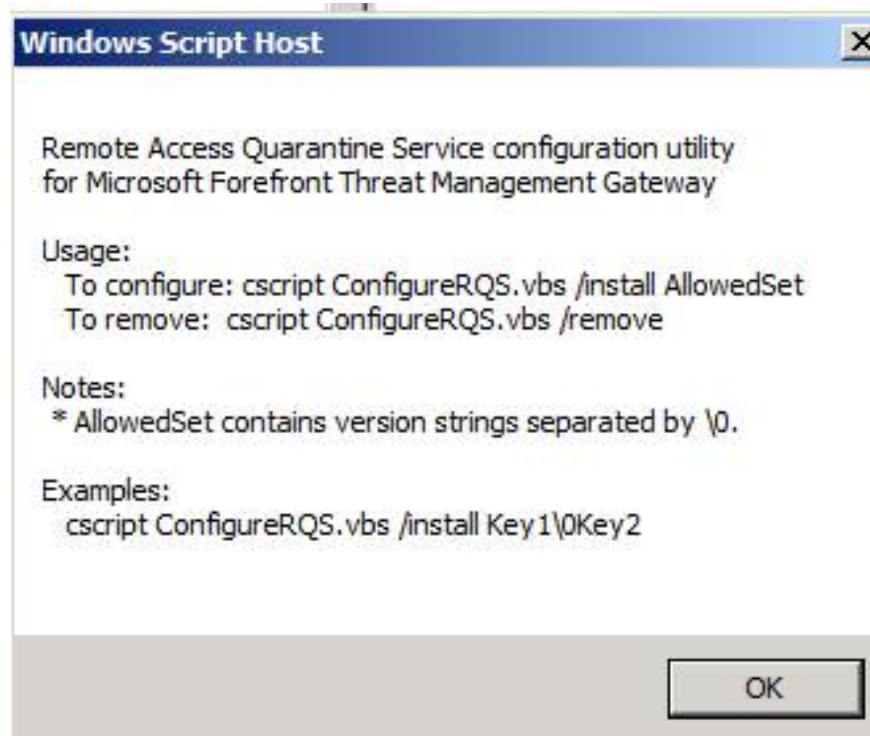


Figure 9: RQS tool

RSA Test Authentication

The RSA Test Authentication utility can be used to verify that a computer running Forefront TMG can authenticate to a computer running RSA Authentication Manager. To use the RSA Test Authentication utility, copy the SDTEST.EXE and SDUI.DLL files to the Forefront TMG installation directory.

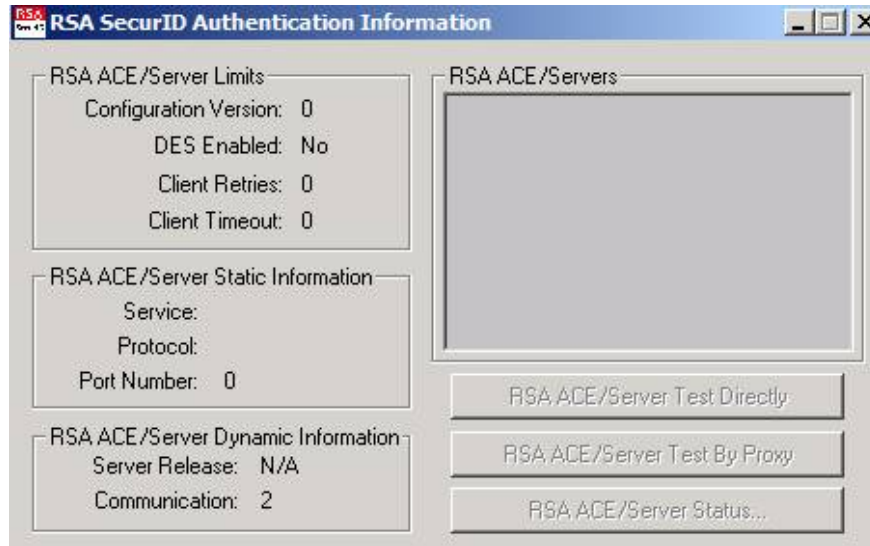


Figure 10: RSA SecurID Authentication tool

Upgrade the Security Configuration Wizard (SCW) for Forefront TMG Standard and Enterprise versions

Windows Server 2008 and Windows Server 2008R2 have integrated a tool called the Security Configuration Wizard (SCW). This tool can be used to simplify the task of "hardening" the underlying operating system during preparation of deploying Forefront TMG. The SCW will create a policy to configure services, registry settings, authentication policies, and . based on the roles and features installed. By default, SCW does not know that Forefront TMG is installed. The Forefront TMG SDK comes with an extension of SCW.

There are two files to be copied into the WindowsSecurityMsscwkbs folder:

- SCW_TMG_W2K8R2_SP0.XML
- SCW_TMGEMS_W2K8R2_SP0.XML

Then open the command prompt and enter the following command: *scwcmd register / kbname: TMG /kbfile:SCW_TMG_W2K8R2_SP0.xml*

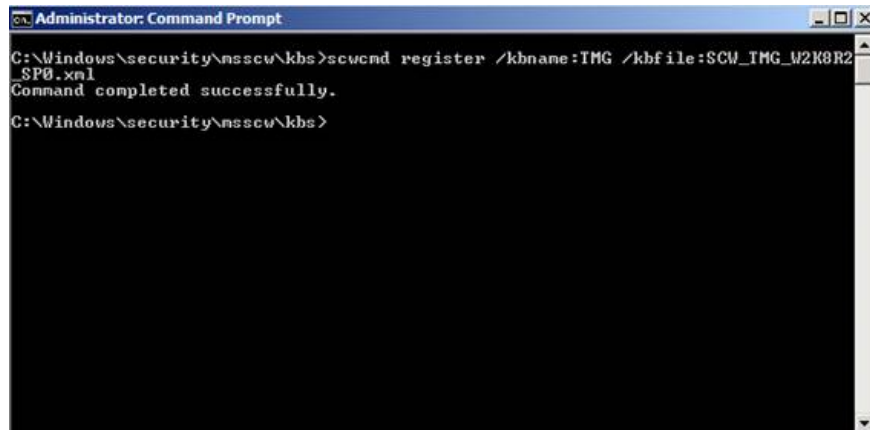


Figure 11: TMG SCW tool

Then create a new Security policy and the SCW will see the roles installed on the Forefront TMG server.

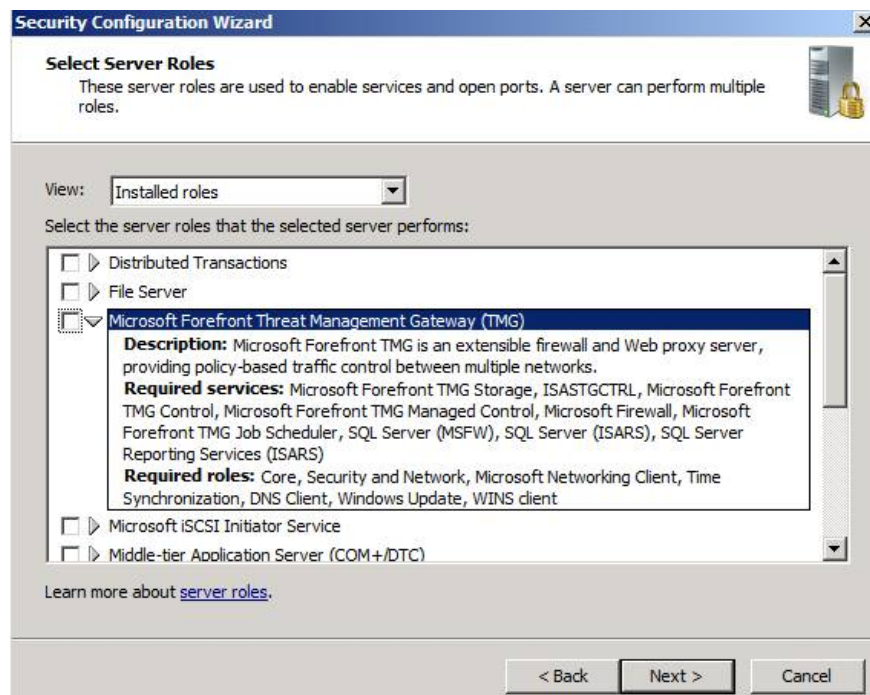


Figure 12: SCW with the TMG role

Forefront TMG 2010 SDK

Forefront TMG SDK has a useful ISASDK.CHM file, which contains a lot of technical information about Forefront TMG and some examples to develop Application and Web filters in Forefront TMG.

ISASDK.CHM

The ISASADK.CHM file contains information about the Forefront TMG architecture and its subsystems, as well as some example code that helps configure and extend programming capabilities for Forefront TMG.

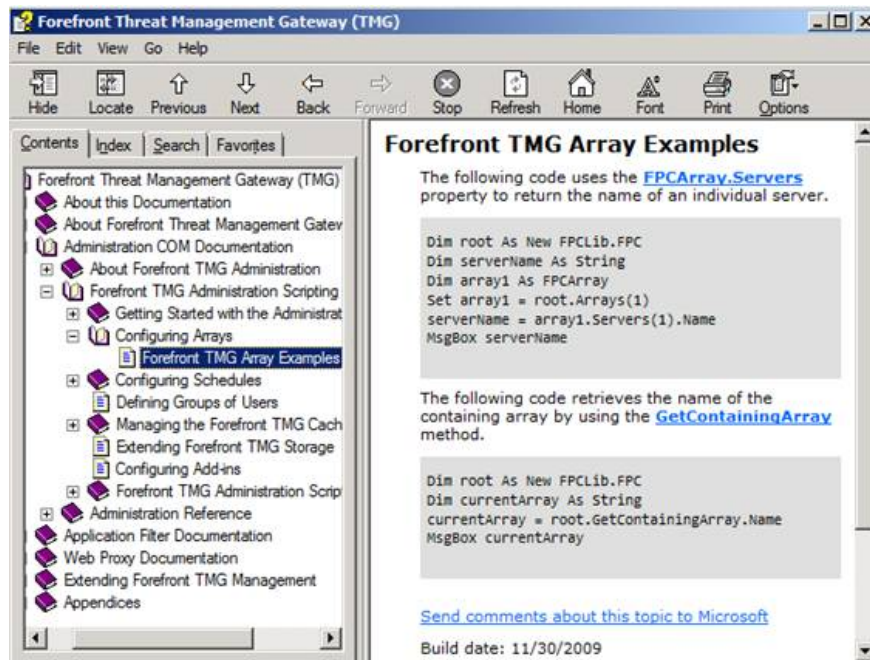


Figure 13: Support documentation of TMG SDK

Samples / Admin directory

There are many useful VBS scripts in the samples / Admin directory installed by the Forefront TMG SDK installation routine. In this article, we will show you two examples. The first scenario is `HTTPFilterconfig.vbs`, the script can be used to import or export HTTP filter settings from a firewall policy policy.

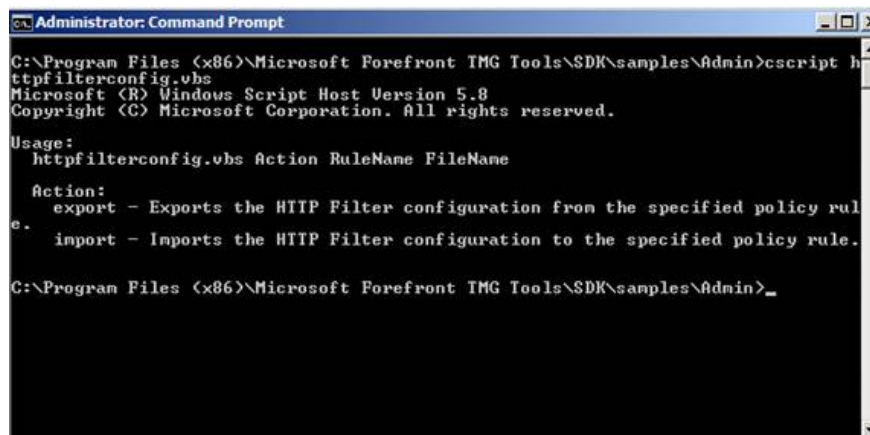
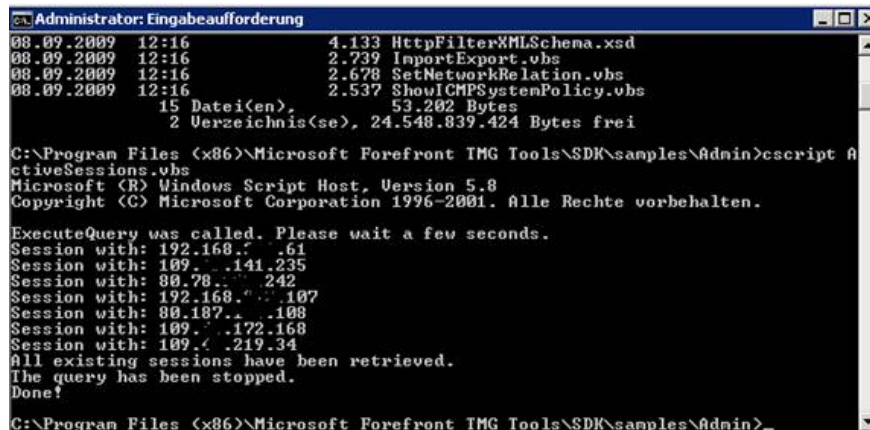


Figure 14: TMG SDK sample script to export HTTP Filter

Another script is called ActiveSession.vbs, which gives you an overview of the current connection sessions on Forefront TMG.



```
Administrator: Eingabeaufforderung
08.09.2009 12:16 4.133 HttpFilterXMLSchema.xsd
08.09.2009 12:16 2.739 ImportExport.vbs
08.09.2009 12:16 2.678 SetNetworkRelation.vbs
08.09.2009 12:16 2.537 ShowICMPSystemPolicy.vbs
15 Datei(en), 53.202 Bytes
2 Verzeichnis(se), 24.548.839.424 Bytes frei

C:\Program Files (x86)\Microsoft Forefront TMG Tools\SDK\samples\Admin>cscript ActiveSessions.vbs
Microsoft (R) Windows Script Host, Version 5.8
Copyright (C) Microsoft Corporation 1996-2001. Alle Rechte vorbehalten.

ExecuteQuery was called. Please wait a few seconds.
Session with: 192.168.7.161
Session with: 109.141.235
Session with: 80.78.242
Session with: 192.168.107
Session with: 80.187.108
Session with: 109.172.168
Session with: 109.219.34
All existing sessions have been retrieved.
The query has been stopped.
Done!

C:\Program Files (x86)\Microsoft Forefront TMG Tools\SDK\samples\Admin>
```

Figure 15: TMG SDK sample script to display Active Session

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