

How to migrate Microsoft ISA Server 2006 to Microsoft Forefront TMG

Abstract

In this article, I will show you how migrate from Microsoft ISA Server 2006 to Microsoft Forefront TMG.

Let's begin

Microsoft Forefront TMG (Threat Management Gateway) is the upcoming successor of ISA Server 2006 and will be available in the final version in 2009. This article is based on a beta version of Microsoft Forefront TMG. If you want to evaluate Forefront TMG, a public beta is available at the following website:

[http://technet.microsoft.com/de-de/evalcenter/cc339029\(en-us\).aspx](http://technet.microsoft.com/de-de/evalcenter/cc339029(en-us).aspx)

If you want to have a look at a special version of Microsoft Forefront TMG which is already RTM, you should evaluate Microsoft Windows Essential Business Server 2008 which contains Forefront Threat Management Gateway Medium Business Edition. But keep in mind that this is not the same version of TMG which Microsoft will publish in 2009 as a standalone product.

Before we start upgrading ISA Server 2006 to Microsoft Forefront TMG, we have to understand the following upgrade and migration limitations:

- You cannot update ISA Server 2006 to Forefront TMG on the same machine, because ISA Server 2006 is running only on 32 Bit systems, Forefront TMG will only run on Windows 2008 64 Bit.
- ISA Server 2006 cannot be upgraded to Forefront TMG during an in-place upgrade of Windows Server 2003 to Windows Server 2008.
- Microsoft Forefront TMG does not support more than 300 licensed users.
- It is not possible to migrate from ISA Server 2006 Enterprise to Microsoft Forefront TMG
- It is not possible to migrate from ISA Server 2000 and 2004 to Forefront TMG, you first have to update both older versions to ISA Server 2006
- You cannot upgrade ISA Server 2006 Standard Edition in workgroup mode to Forefront TMG. ISA 2006 must be a member of a domain, but it is possible to migrate ISA 2006 to Forefront TMG which is not part of a Windows domain.
- If you have enabled the Local Host network to listen for Web proxy client requests, this setting is not migrated.
- The migration process doesn't migrate custom log fields you selected in ISA Server 2006
- Report configuration settings are not migrated.
- All features from the ISA Server 2006 Supportability Pack are not available after the migration, but I think that many of these feature will be part of Forefront TMG when the product gets final
- Before you upgrade to Forefront TMG you should check if installed third party software is compatible to Microsoft Forefront TMG

Setup requirements for Forefront Threat Management Gateway:

- A PC with a 64-bit processor.
- Windows Server 2008 64-bit operating system
- 1 GB RAM or more
- 150 MB free hard disk space and some more disk space for additional log files, cache drives and temporary Anti Malware files (**Attention:** The setup process of TMG says that about 630 MB are needed!)
- A local hard disk partition that is formatted with the NTFS
- A minimum of one network adapter if Forefront TMG should be used only as a proxy or reverse publishing Server. One or more additional network adapters are needed for full Firewall functionality

More considerations

There are some more considerations when you plan to use Forefront TMG. I copied these information from the Microsoft Forefront TMG website:

Forefront TMG installed in an Essential Business Server scenario drops all IPv6 traffic. For a following Forefront TMG installation note the following:

- Forefront TMG denies all IPv6 traffic.
- ISATAP (Intra-Site Automatic Tunnel Addressing Protocol) is disabled.
- The 6to4 interface is disabled. This mechanism allows IPv6 packets to be transmitted over an IPv4 network.
- Whenever the Forefront TMG Control service restarts the Forefront TMG server reregisters with DNS to ensure that there is only an A record registered for the server, and no AAAA (IPv6) record. It also clears the DNS, Address Resolution Protocol (ARP), and Neighborhood Discovery (IPv6 version of ARP) caches.
- Changing the Forefront TMG installation folder is not supported.
- By default Forefront TMG is configured to log to a local SQL Server® Express database. Forefront TMG installs a number of SQL Server Express components, including an instance for logging and an instance for reporting.
- Forefront TMG installs the Web Server (IIS) role. Note that this component is not removed if Forefront TMG is uninstalled.
- Services and driver files installed by Forefront TMG are placed in the Forefront TMG installation folder.
- You can use Forefront TMG on a computer that has only one network adapter. Typically, you will do so when another firewall is located on the edge of the network, connecting your corporate resources to the Internet.

Migration process

OK, after we discussed some limitations about the migration process and the installation requirements of Microsoft Forefront TMG, I will show you the high level steps to upgrade your ISA Server 2006 to Microsoft Forefront TMG:

- Export the ISA Server 2006 configuration to an XML file
- Install Microsoft Forefront TMG on a 64 Bit Windows Server 2008 machine
- Import the exported ISA Server 2006 XML file into the Forefront TMG management console
- Check functionality, available hotfixes, event logs and more
- Modify certificate and VPN authentication settings if required
- Take your old ISA Server 2006 down and bring Forefront TMG into your production environment

Attention:

This article deals with a beta version of Forefront TMG. You should not use the beta version of Forefront TMG as a production server.

Export settings

As a first step logon to your ISA Server 2006 machine, start the ISA Server 2006 management console and click the Server object to **Export (Back Up)** the entire ISA Server 2006 configuration.

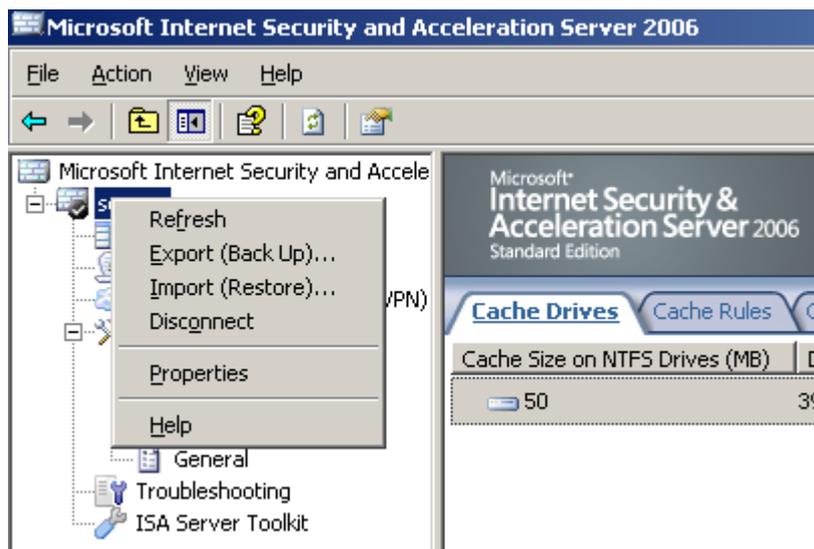


Figure 1: Export / Backup the entire ISA Server 2006 configuration

It is possible to export confidential information like RADIUS shared secrets or ISA Server role settings.

If you want to export confidential information's you must specify a password which protects the XML file for unauthorized import attempts.

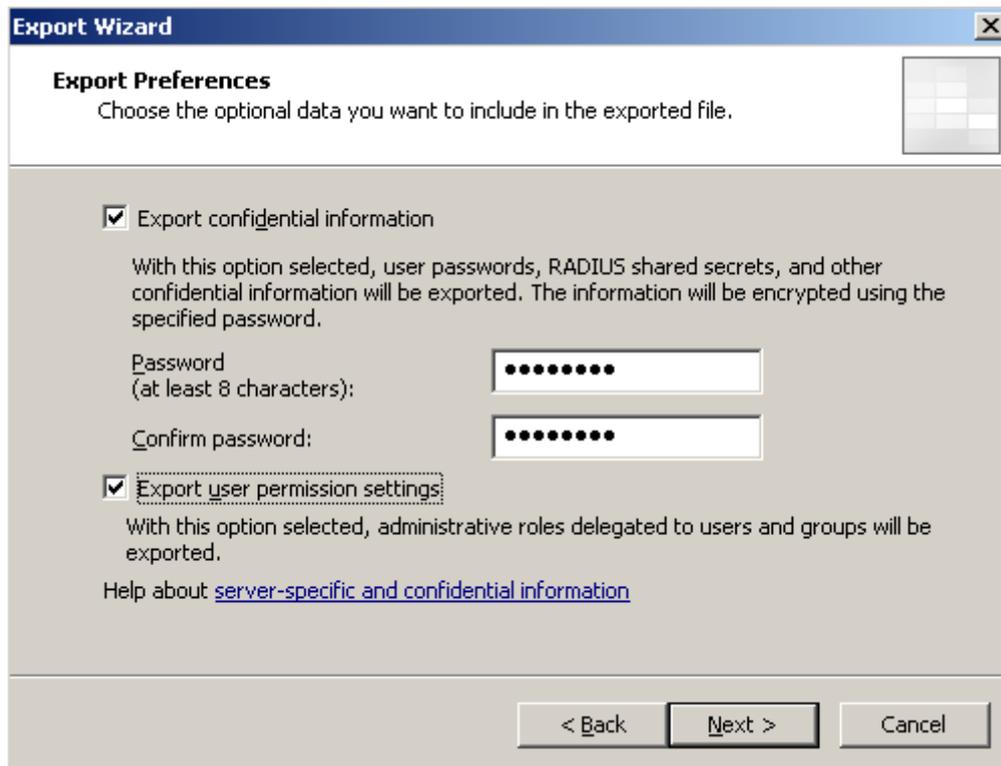


Figure 2: Export confidential information

As a next step specify a file name for the ISA Server 2006 configuration file.

Forefront TMG Installation

Start the Forefront TMG installation and chose the setup scenario you want to establish. If you want to install a complete set of Forefront TMG services without dependencies, select the first installation option.

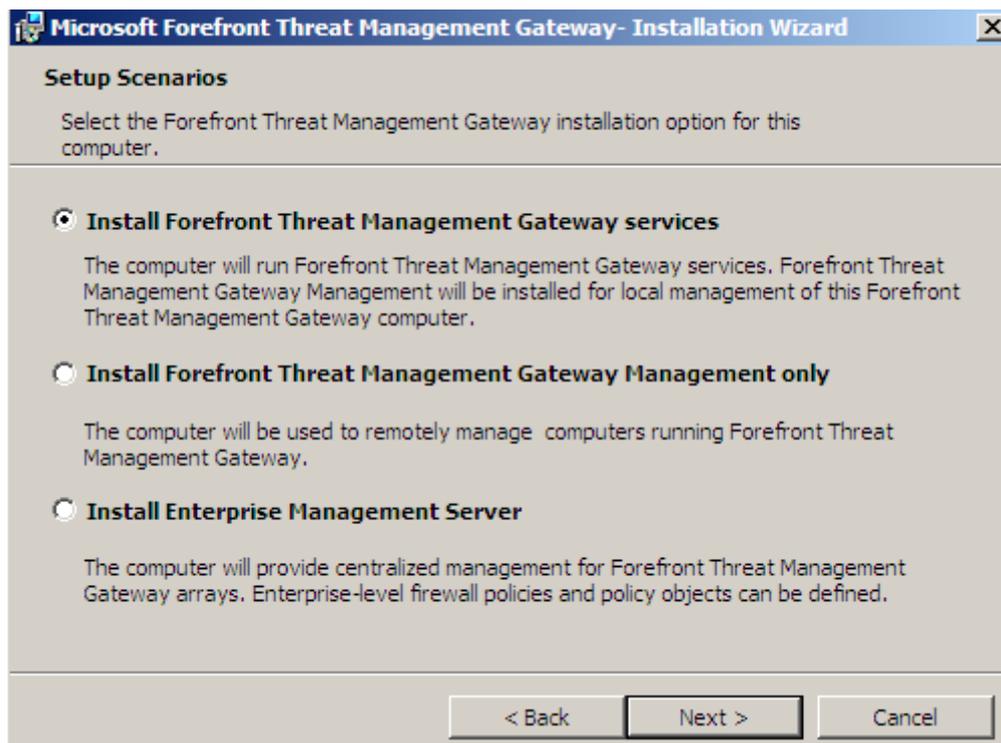


Figure 3: Choose which setup scenario is the right for you

Select the components you want to install. In this case we install every component available.

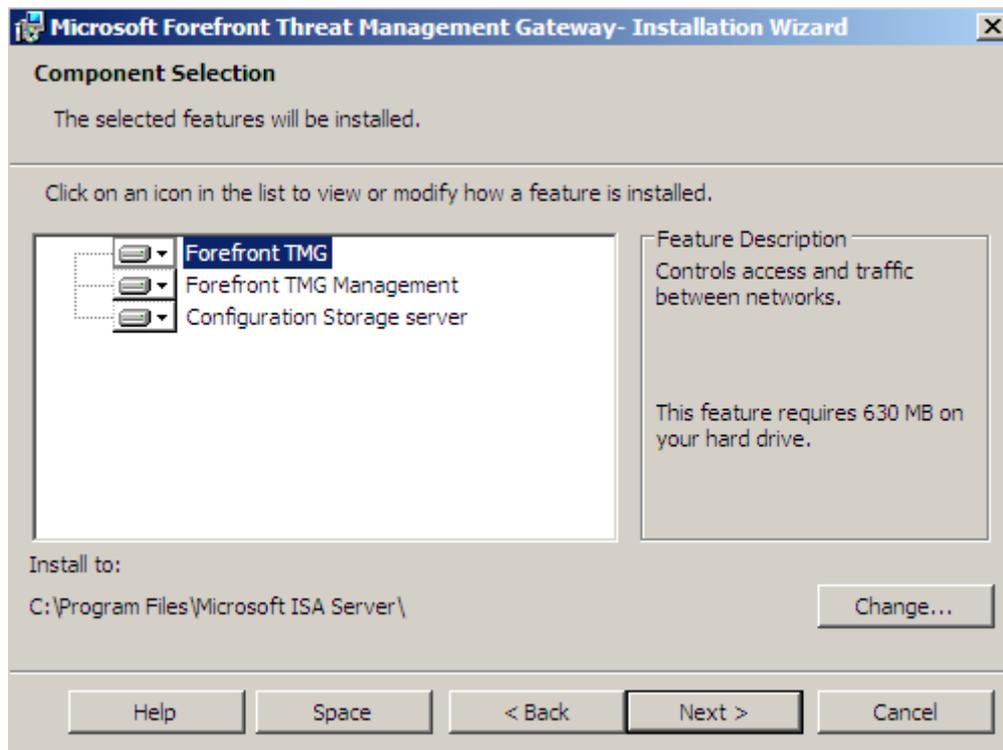


Figure 4: Modify which features you want to use

Installing Forefront TMG takes a while longer than ISA Server 2006 installations, so you should have the time to spend for a little coffee break.

After the Forefront TMG installation was successful, the first start of the Forefront TMG management console starts the Getting Started Wizard which will guide you to some basic setup steps. This step is not required as a first step if you want to import an ISA Server 2006 configuration. You can use the Getting Started Wizard after a successful migration of the ISA Server 2006 settings.

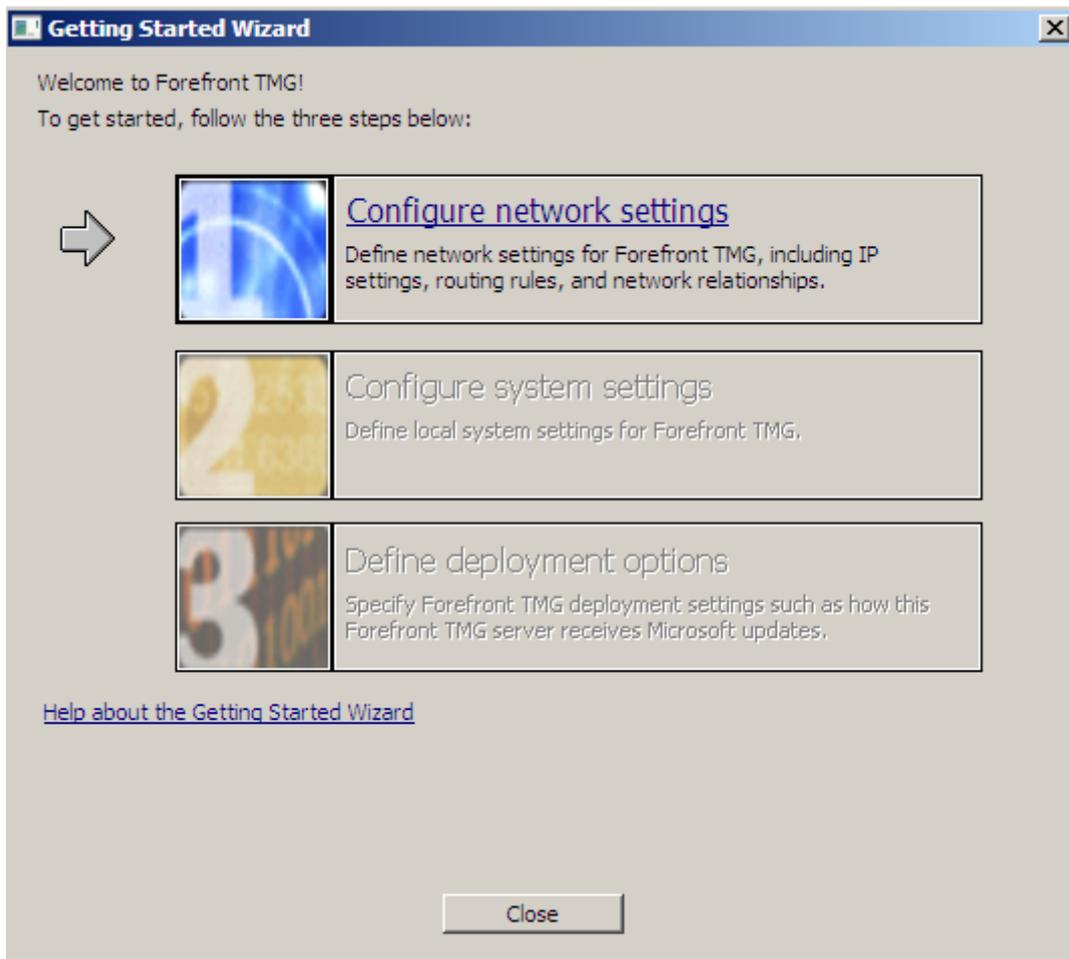


Figure 5: Forefront TMG Getting Started Wizard

Import (Restore) the ISA Server 2006 configuration.

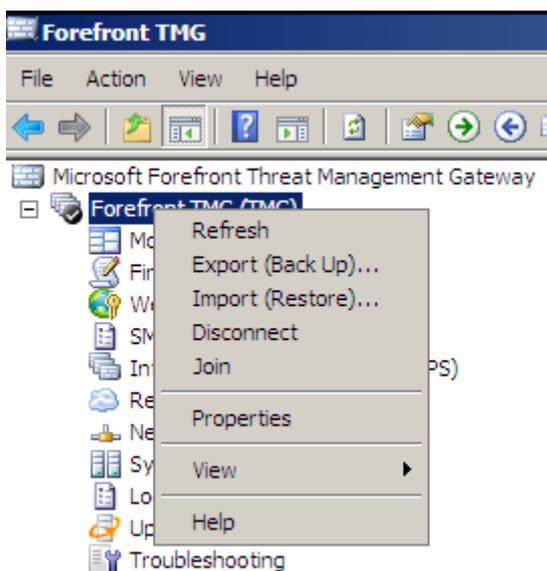


Figure 6: Import (Restore) the exported ISA Server 2006 configuration

Specify the file name with the exported ISA Server 2006 configuration.

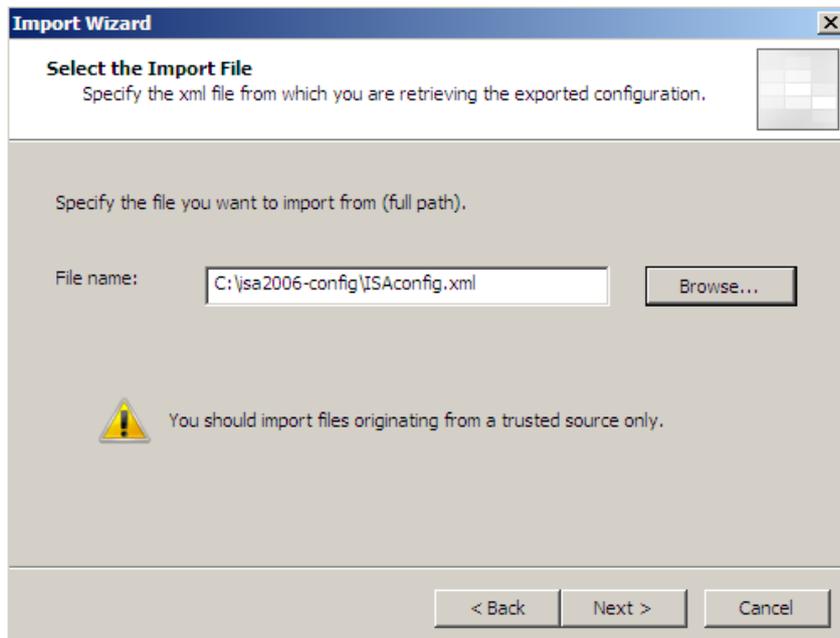


Figure 7: Specify the XML file with the exported ISA Server 2006 configuration

During the migration process, the Microsoft ISA Server 2006 configuration will be updated to Forefront TMG.

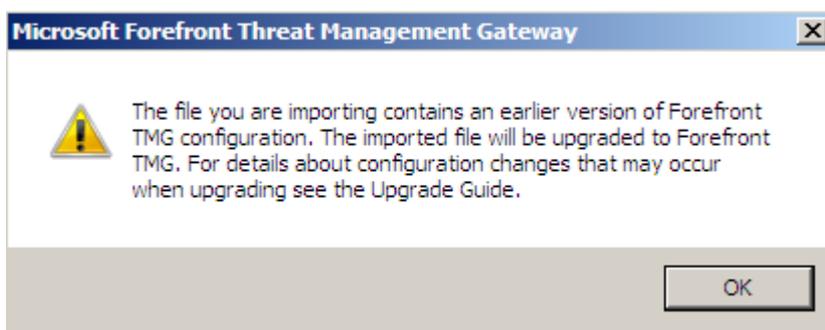


Figure 8: ISA 2006 configuration is getting updated to TMG format

Enter the password which you had to enter when you exported the ISA Server 2006 configuration with the Export confidential settings enabled.

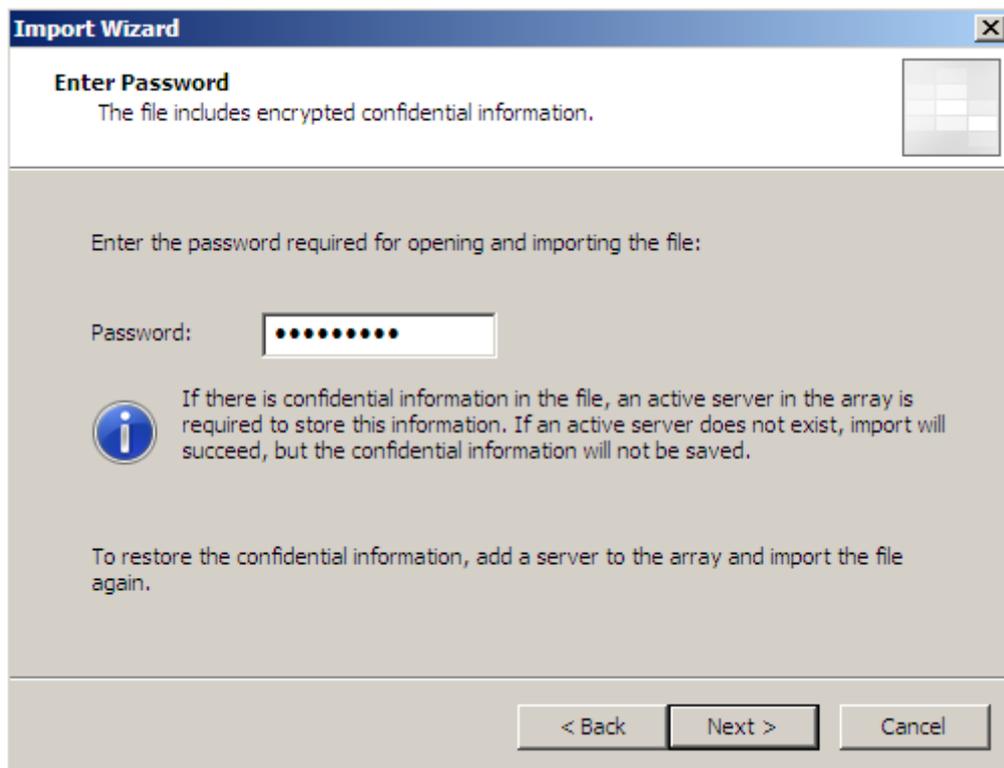


Figure 9: Enter the password required for opening the Export file

Forefront TMG will now import and convert the settings from the ISA Server 2006 configuration. This could take some minutes, depending on the size of the exported ISA Server 2006 configuration and the performance of the Forefront TMG machine.

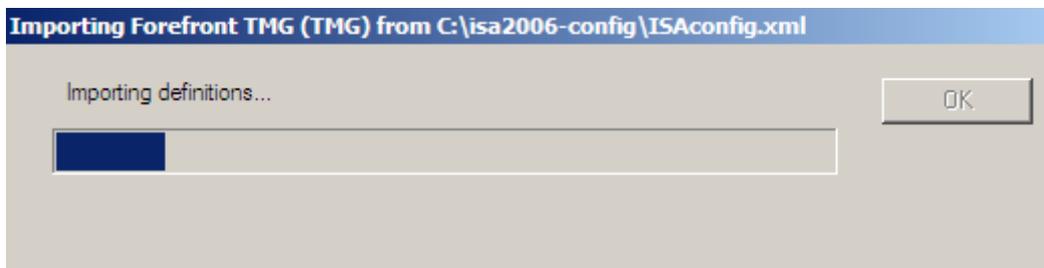


Figure 10: Depending on the Server performance and the amount of import data, importing the configuration can take while

After all settings are successfully imported, click **Apply** to save the configuration changes.

It is now time to test if all ISA settings are successfully migrated. Some settings could not be imported because they are too different between ISA Server 2006 and Forefront TMG.

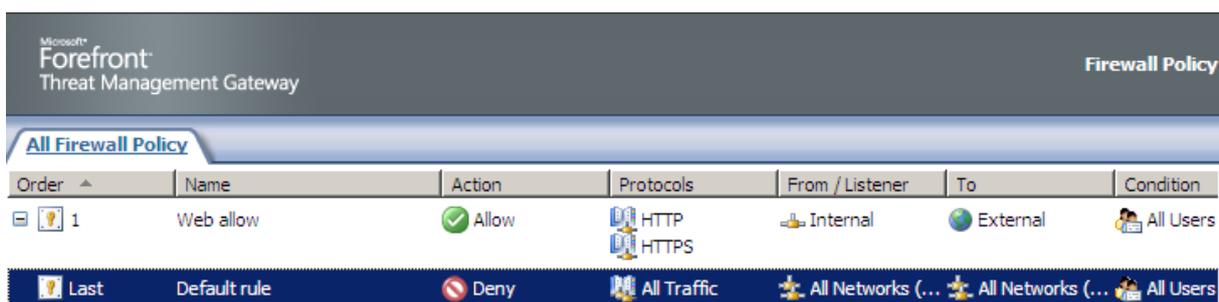


Figure 11: Congratulations, the Firewall policy was successfully imported

In this article we had a special consideration: The ISA Server 2006 was member of a Windows 2003 domain and a Windows group had access to the VPN functions of ISA Server. The destination Forefront TMG Server is member of a workgroup, so the account information in the VPN configuration gets orphaned. You manually have to remove these and other settings.

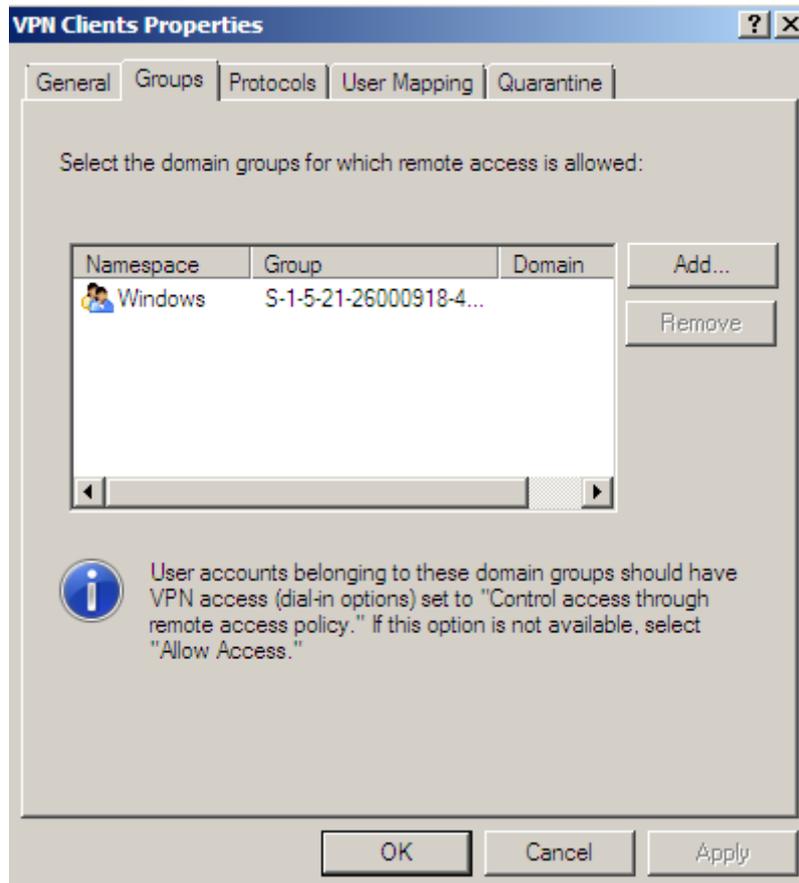


Figure 12: Orphaned Windows user group because the destination Server is not part of the same domain/Forest

For the migration process I used in this article, the statically configured VPN client address ranges wasn't successfully imported. The Forefront TMG dashboard displayed a configuration error that the VPN client address range is empty. I think that this issue is specific for my machine or if not, Microsoft will address this problem in the final version of Forefront TMG.

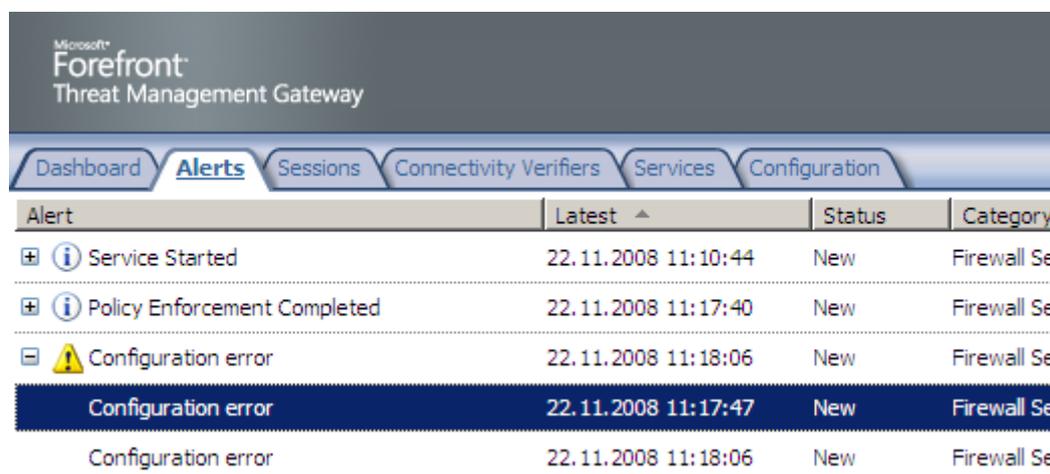


Figure 13: The are some configuration errors after the configuration has been imported

Microsoft Forefront TMG has a lot of log files which will be created during the TMG installation process or while the import process from ISA Server 2006 is running. You should have a look at these files if you are expecting problems with the migration process.

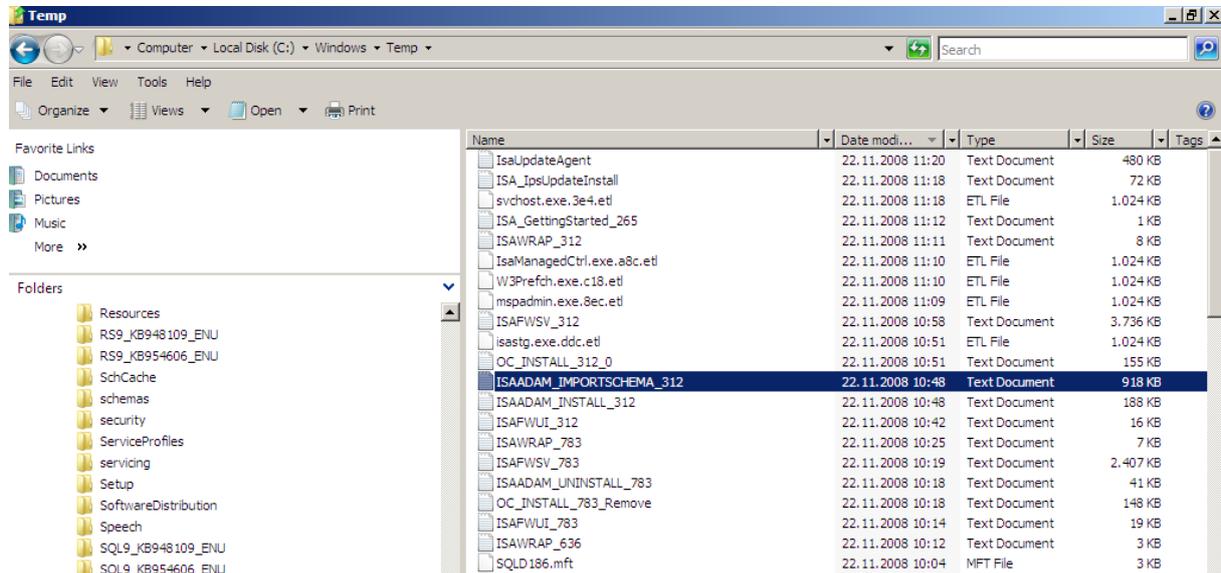


Figure14: There are a lot of TMG log files created during the installation of TMG / the import process

Decommissioning ISA 2006

After successful importing the configuration into Forefront TMG, it is time to replace the ISA Server with Forefront TMG. These are the necessary steps:

- Disconnect Forefront TMG from all networks
- Assign all IP addresses from ISA Server to Forefront TMG
- Turn of the TMG Server
- Connect all network cables from ISA Server to the TMG Server
- Shutdown ISA Server
- Start the Forefront TMG Server
- Check that the Forefront TMG server is working properly
- Start ISA Server again with no network connection and uninstall ISA Server from the old machine

Conclusion

In this article, I tried to show you how to migrate your ISA Server 2006 configuration to a new Microsoft Forefront TMG Server. There is no in place update possible because Microsoft Forefront TMG will only run under Windows Server 2008 64 Bit and ISA Server 2006 only runs on 32 Bit platforms, so you have to export the configuration from a running ISA Server 2006 and import this configuration on a new installed Microsoft Forefront TMG Server. The migration process is similar to updating ISA Server 2004 to ISA Server 2006 but please keep in mind that this article is based on a beta version of Microsoft Forefront TMG and some things could be changed until the finally version of Microsoft Forefront TMG is published.

Related links

Installing and Migrating

<http://technet.microsoft.com/en-us/library/cc441447.aspx>

Essential Business Server 2008 Editions

<http://www.microsoft.com/ebs/en/us/editions-overview.aspx>

Public Microsoft Forefront TMG version

[http://technet.microsoft.com/de-de/evalcenter/cc339029\(en-us\).aspx](http://technet.microsoft.com/de-de/evalcenter/cc339029(en-us).aspx)

Export, Import, and Backup Functionality in ISA Server 2004

<http://technet.microsoft.com/en-us/library/cc302521.aspx>