

Forefront UAG backup and restore Capabilities

Abstract

In this article I will show you the backup and restore capabilities of Forefront UAG to create automatic or manually backups to be able to recover a faulty Forefront UAG configuration or to recover the configuration to a new Forefront UAG Server.

Let's begin

The basic concept behind Forefront UAG backups are automatic backups during an activation triggered by a Forefront UAG configuration change. Forefront UAG keeps a backup history of last Forefront UAG configuration changes so you can restore a Forefront UAG configuration to the last working configuration. You are also able to create manually backups of the Forefront UAG configuration in the Forefront UAG MMC or with a command line utility called ConfigMgrUtil.exe. Forefront UAG export configuration files contain a record of the latest configuration settings, and can be used, during maintenance or disaster recovery, to restore configuration settings to the same Forefront UAG server or to a different Forefront UAG server with a short Registry configuration change. By default, the Forefront UAG export file is automatically exported to the \Program files\Microsoft Forefront Unified Access Gateway\Backup folder, when you activate the Forefront UAG configuration. During the first Forefront UAG configuration you will be asked for a password and the backup directory for the Forefront UAG configuration. You can change the password and the backup directory in the Forefront UAG MMC.

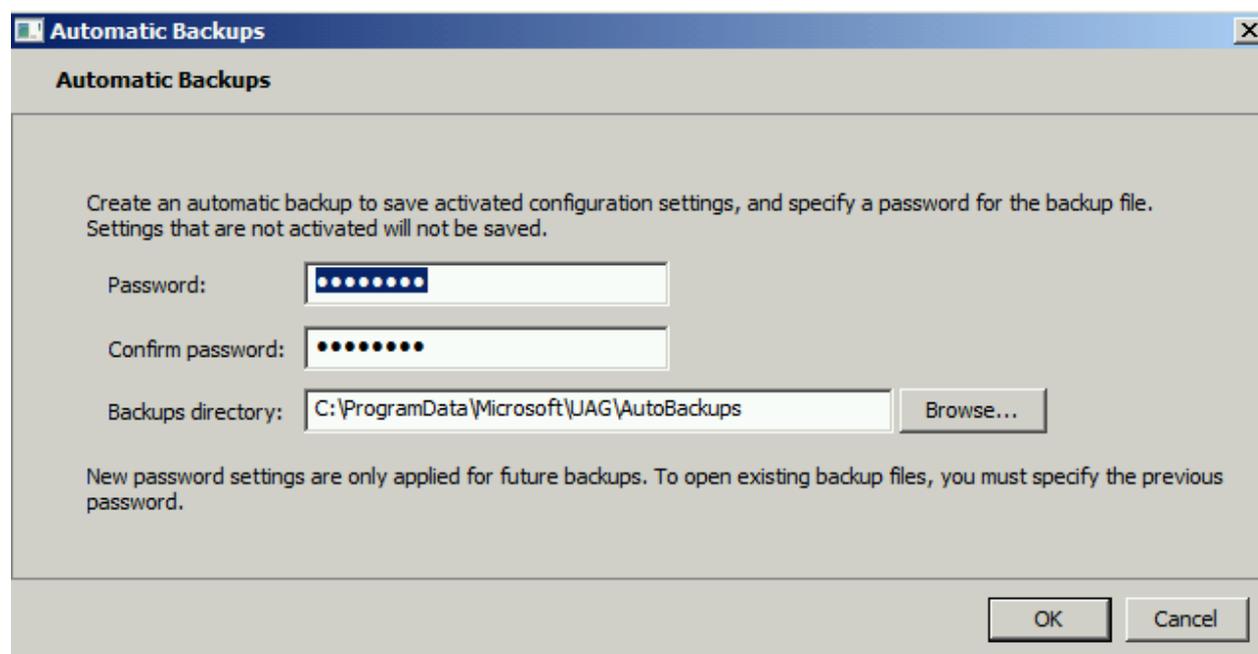


Figure 1: Forefront UAG automatic backups

The automatic backup configuration files contains the Forefront UAG configuration and some other files like customized configuration files and bitmaps if you customized your Forefront UAG configuration.

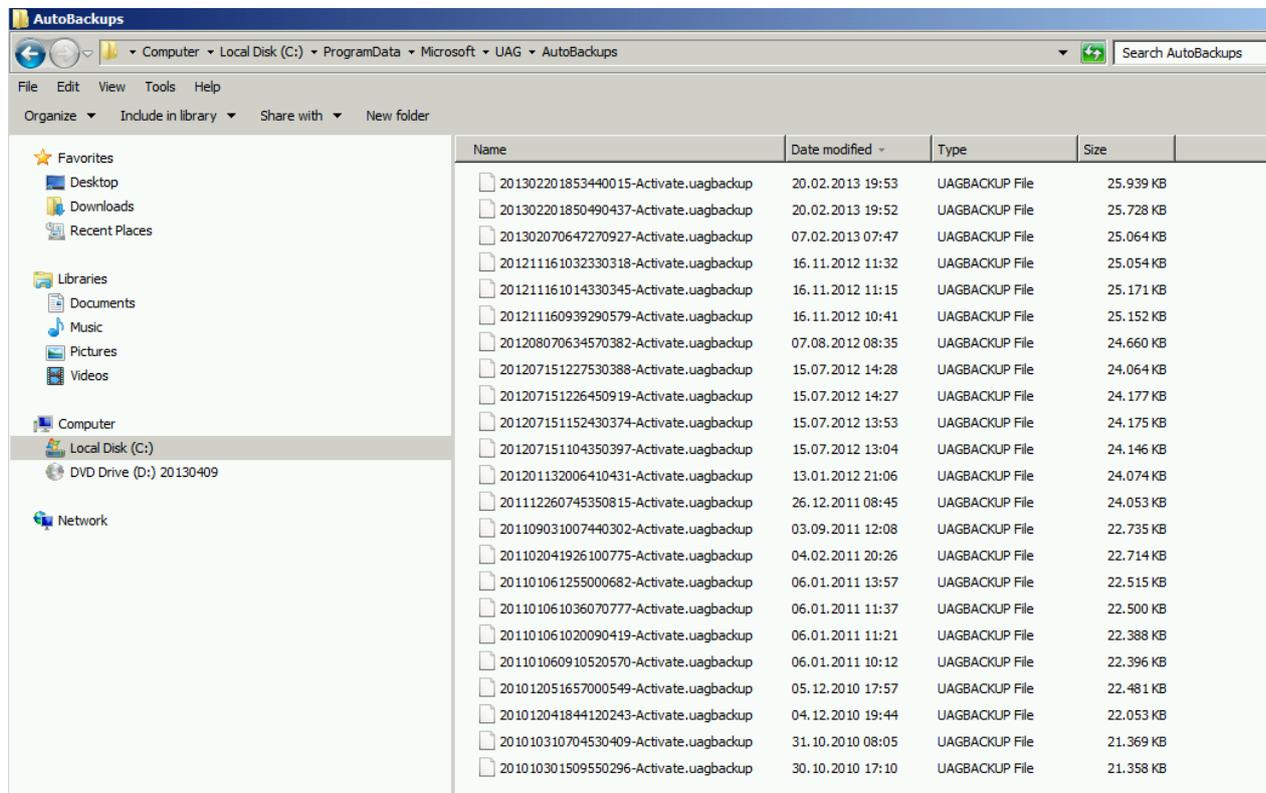


Figure 2: Forefront UAG configuration backups

Part of a Forefront UAG configuration backup is a backup of Forefront UAG Activation Monitor log files. You can find the log file in the directory C:\ProgramData\Microsoft\UAG\LOGS. The Activation Monitor log files contains the status of the Activation process in Forefront UAG.

```
Monitor-tmp911C.log - Notepad
File Edit Format View Help
DateTime=2013-04-29T05:11:01.0532962Z
Monitor Information: 0 : UAG
DateTime=2013-04-29T05:11:01.0532962Z
Monitor Information: 0 : Start print activation messages
DateTime=2013-04-29T05:11:01.0532962Z
Monitor Information: 0 : Start ShowData
DateTime=2013-04-29T05:11:21.0701453Z
Monitor Information: 0 : Fetch.
DateTime=2013-04-29T05:11:21.0701453Z
Monitor Information: 0 : On ClusterActivationResults
DateTime=2013-04-29T05:11:21.0701453Z
Monitor Information: 0 : Get Containing Array
DateTime=2013-04-29T05:11:21.0701453Z
Monitor Information: 0 : Attempting to fetch: Node activation Guid vps
DateTime=2013-04-29T05:11:21.0701453Z
Monitor Information: 0 : Current activation Guid in array: 6132AF06740B450C9052E1AFB2789A30
DateTime=2013-04-29T05:11:21.1639055Z
Monitor Information: 0 : Current AMS: UAG
DateTime=2013-04-29T05:11:21.1639055Z
Monitor Information: 0 : Proccess memeber: UAG
DateTime=2013-04-29T05:11:21.1639055Z
Monitor Information: 0 : Current activation Guid on the member: 6132AF06740B450C9052E1AFB2789A30
DateTime=2013-04-29T05:11:21.1795322Z
Monitor Information: 0 : (Loaded XML)
DateTime=2013-04-29T05:11:21.1795322Z
Monitor Information: 0 : Current Message GUID: 6132AF06740B450C9052E1AFB2789A30
DateTime=2013-04-29T05:11:21.1795322Z
Monitor Information: 0 : Featch messages done
DateTime=2013-04-29T05:11:21.1795322Z
Monitor Information: 0 : Memebr UAG added to collection with status: Success
DateTime=2013-04-29T05:11:21.1795322Z
Monitor Information: 0 : Proccess memeber: UAG2
DateTime=2013-04-29T05:11:21.1795322Z
Monitor Information: 0 : Current activation Guid on the member: 6132AF06740B450C9052E1AFB2789A30
DateTime=2013-04-29T05:11:21.1795322Z
Monitor Information: 0 : (Loaded XML)
DateTime=2013-04-29T05:11:21.1795322Z
Monitor Information: 0 : Current Message GUID: 6132AF06740B450C9052E1AFB2789A30
DateTime=2013-04-29T05:11:21.1795322Z
Monitor Information: 0 : Featch messages done
DateTime=2013-04-29T05:11:21.1795322Z
Monitor Information: 0 : Memebr UAG2 added to collection with status: Success
DateTime=2013-04-29T05:11:21.1795322Z
Monitor Information: 0 : Nodes fetched. Show nodes on tree
DateTime=2013-04-29T05:11:21.1795322Z
Monitor Information: 0 : Start ShowStationMsg
DateTime=2013-04-29T05:11:21.1795322Z
Monitor Information: 0 : UAG
DateTime=2013-04-29T05:11:21.1795322Z
Monitor Information: 0 : Start print activation messages
DateTime=2013-04-29T05:11:21.1795322Z
Monitor Information: 0 : Start ShowStationMsg
DateTime=2013-04-29T05:11:21.1951589Z
Monitor Information: 0 : UAG
DateTime=2013-04-29T05:11:21.1951589Z
Monitor Information: 0 : Start print activation messages
```

Figure 3: Forefront UAG Activation monitor log file

Before you activate a configuration change in Forefront UAG, you should enable the checkbox to back up the configuration before performing the activation. Forefront UAG stores the configuration backups by default in the \Program files\Microsoft Forefront Unified Access Gateway\Backup folder.

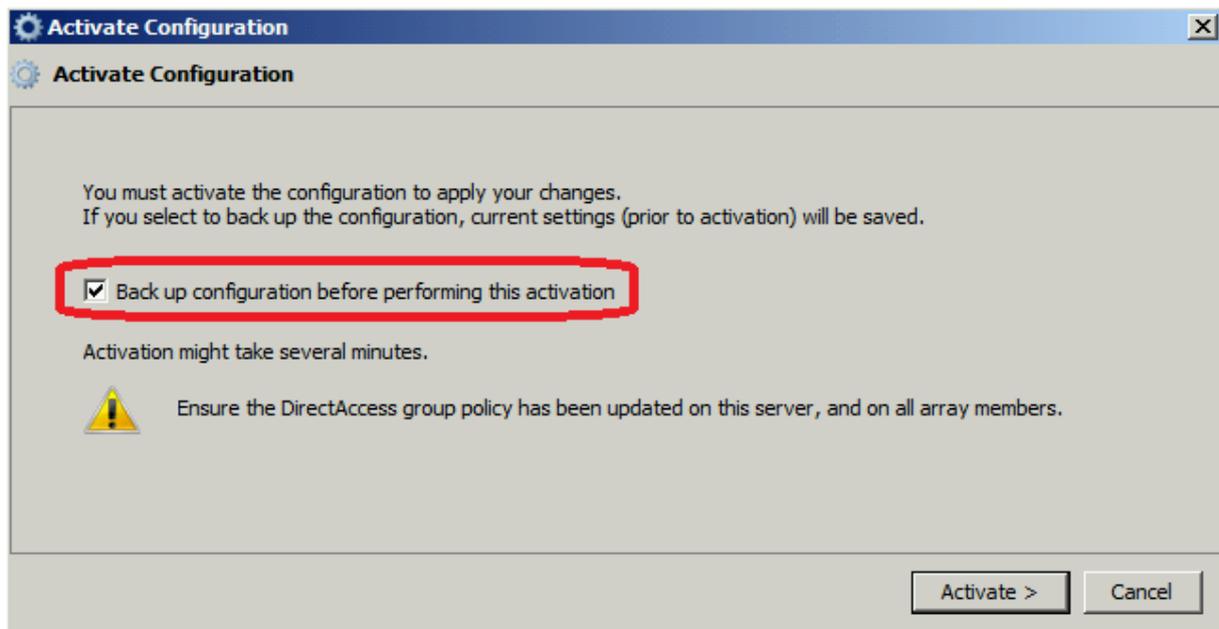


Figure 4: Backup a Forefront UAG configuration before activation

Built-in log files

When using built-in log files, events are logged in native Forefront UAG format. The log files are used by the Forefront UAG Web Monitor. Web Monitor queries this event logs, and lets you filter events according to type, time, users, trunk usage and many other parameters. When setting up built-in logging, you can specify the location to where log files that are generated by the built-in reporter should be stored. Forefront UAG Web Monitor creates a new event log file for every day and the previous log files will be stored in the default folder \Program files\Microsoft Forefront Unified Access Gateway\Logs\Events, or to a location you specify when configuring Forefront UAG logging.

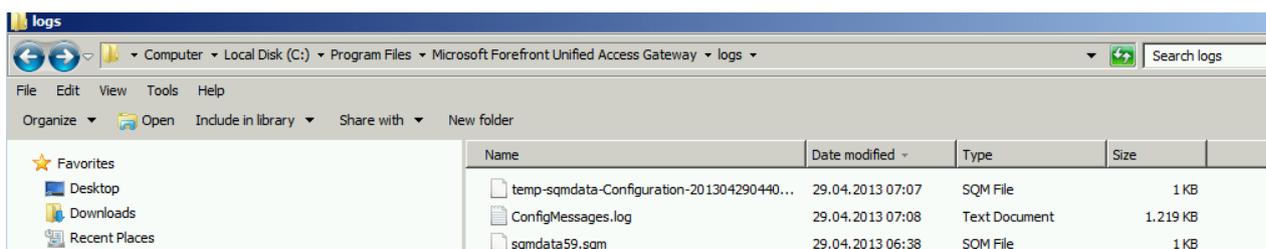
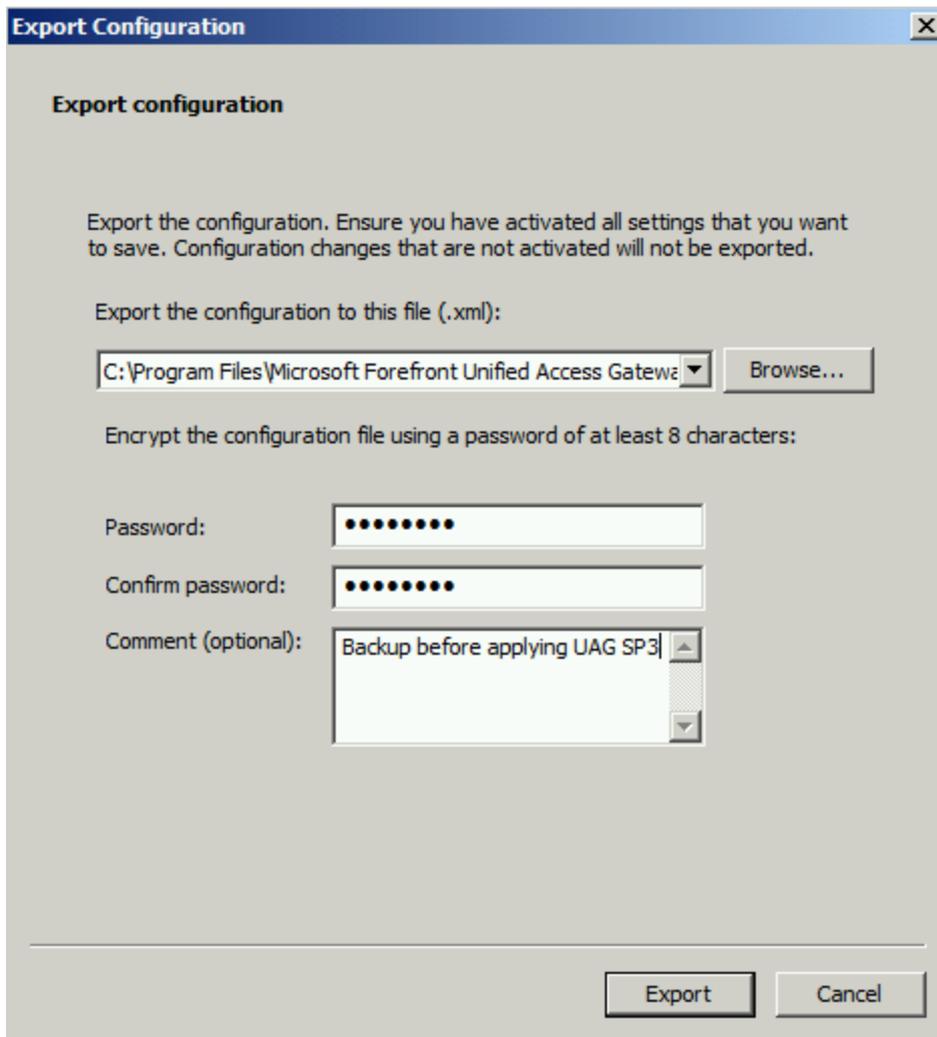


Figure 5: Forefront UAG log files and event message log files

Export / Import configuration

As a Forefront UAG Administrator you are able to create a backup of your Forefront UAG configuration at any time. Start the Forefront UAG MMC and select the *Export configuration* option from the *File* menu. In the following dialog box specify a path to store the Forefront UAG configuration and a password to encrypt the configuration file. You will be asked for the password when you try to import the Forefront UAG configuration.



The configuration export creates two files. One XML file for the Forefront UAG configuration and one cabinet file called WhlBackup.cab as shown in the following screenshot.

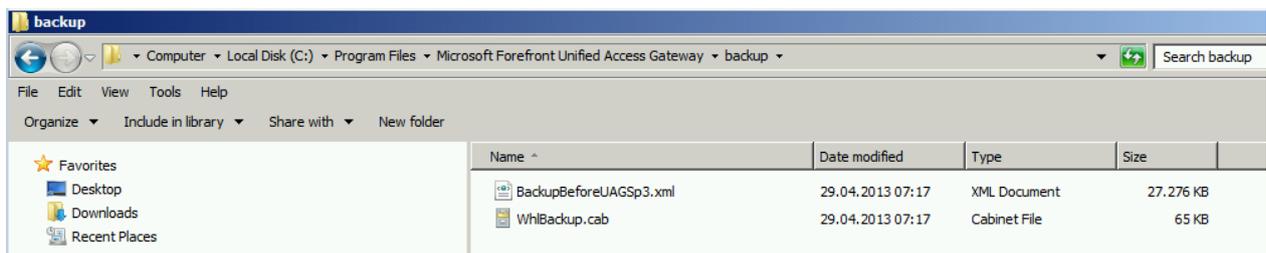


Figure 6: Forefront UAG files after a manually backup

WhlBackup.cab

The WhlBackup.cab file contains some additional configuration files like the UAG.EGF which contains the configuration of Forefront UAG or the whlreg.reg file which contains specific Forefront UAG settings and the HTTP_RuleSet.ini or HTTPS_RuleSet.ini which contains specific settings for the Whale URL filter in Forefront UAG portals. The WhlBackup.cab file in this example also contains one gif file called FileAccess.gif which is a replacement gif file for a customized bitmap for the Forefront UAG File access feature.

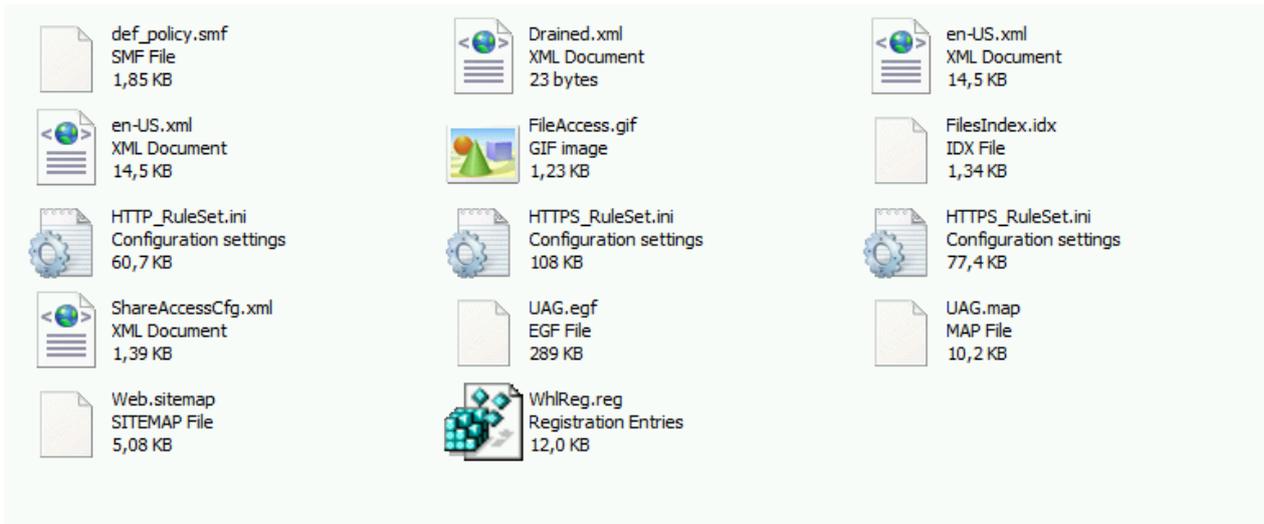


Figure 7: Content of the whlbackup.cab file

Import a Forefront UAG configuration

If you need to revert the current Forefront UAG configuration to a last known good configuration you can use the import configuration task in the Forefront UAG MMC. Specify the location of the configuration file to import as shown in the following screenshot.

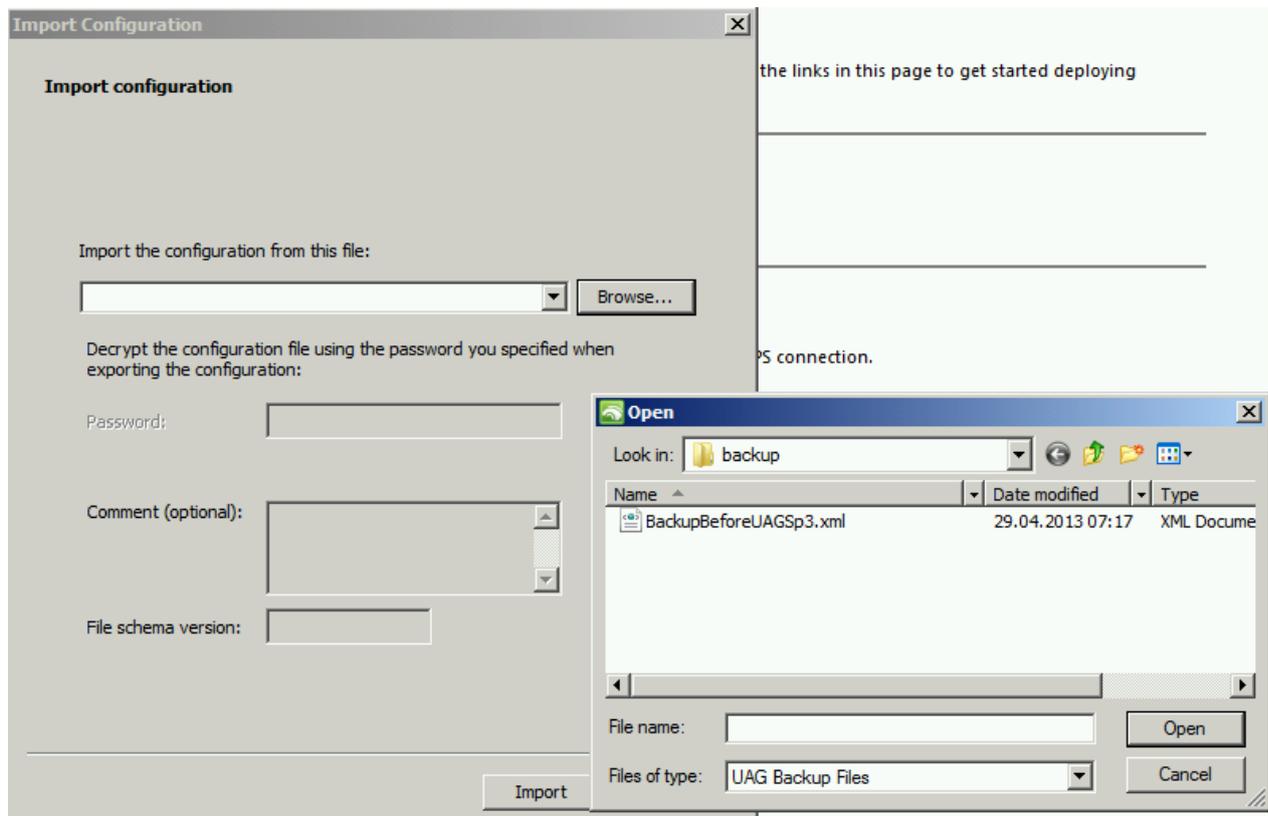


Figure 8: Import a manually or automatically created backup

During the import process you must specify the password of the Forefront UAG configuration file.

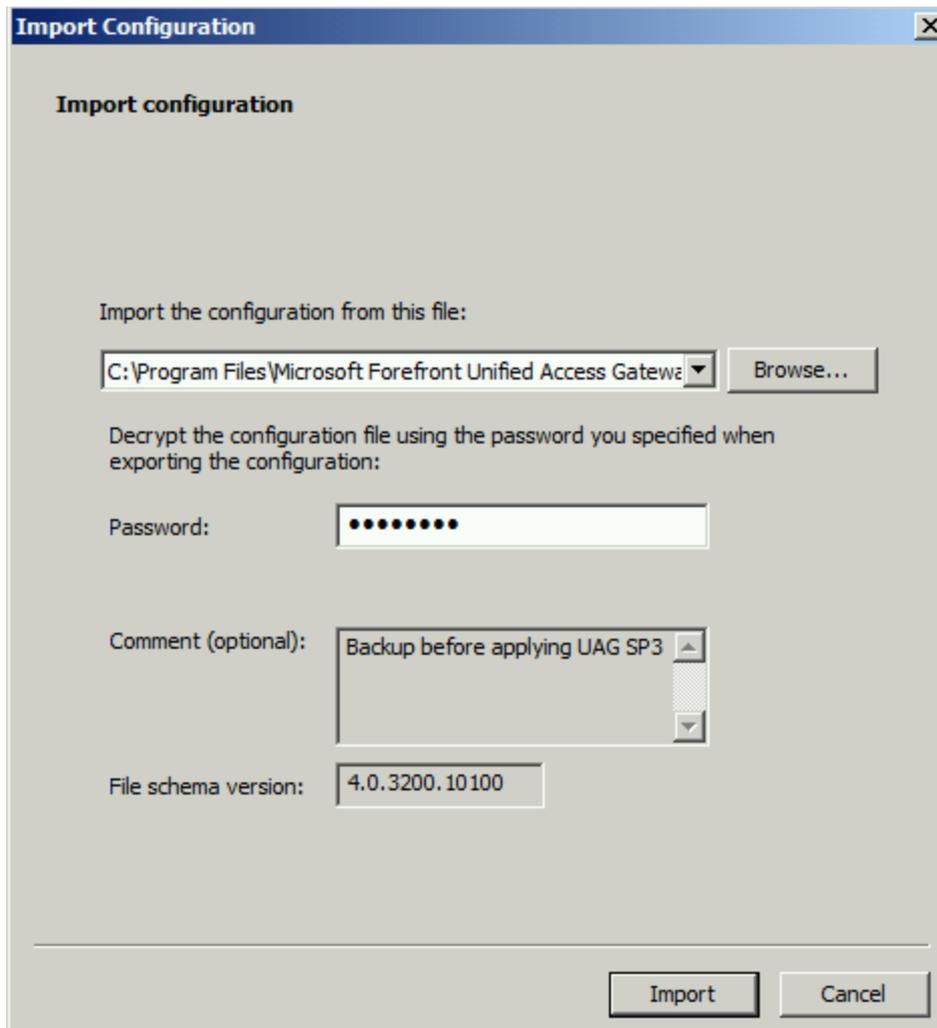


Figure 9: Check the file schema version and description before the import process

Compare the file schema version of the import file with the current built number of the Forefront UAG configuration. The file schema version and the current Forefront UAG built number must match.

The import process of the Forefront UAG configuration will overwrite the existing configuration. Keep this in mind before you start the import process.

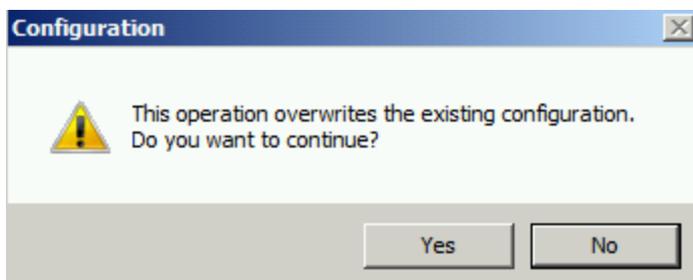


Figure 10: The existing Forefront UAG configuration will be overwritten

It takes a while until the import of the configuration has been finished. After that you must activate the configuration and you have to check the Forefront UAG Activation monitor, the Forefront UAG Web Monitor and the TMG MMC to see if the configuration has been synchronized successfully.

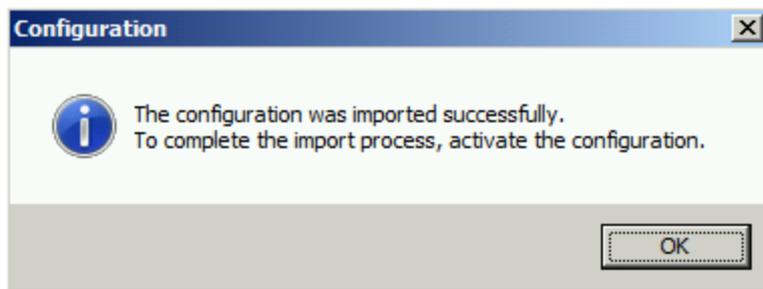


Figure 11: After a successful import, you must activate the configuration

Import the configuration to a different Forefront UAG Server

It is possible to import a Forefront UAG configuration to a different computer. To allow the import process you must modify a Registry key on the destination Forefront UAG Server: Navigate to *HKEY_LOCAL_MACHINE\Software\WhaleCom\le-Gap\Configuration*. Create a DWORD (32-bit) Value *ImportFromOtherVersion*, and set the DWORD value to 1.

Command line backup

If you want to automate the backup process of a Forefront UAG configuration you can use the *ConfigMgrUtil.exe* located in the *Utils* directory of the Forefront UAG installation. You must specify the export file name and directory and a password, typed in clear text which will be used to protect the backup file against unauthorized imports into a running Forefront UAG configuration.

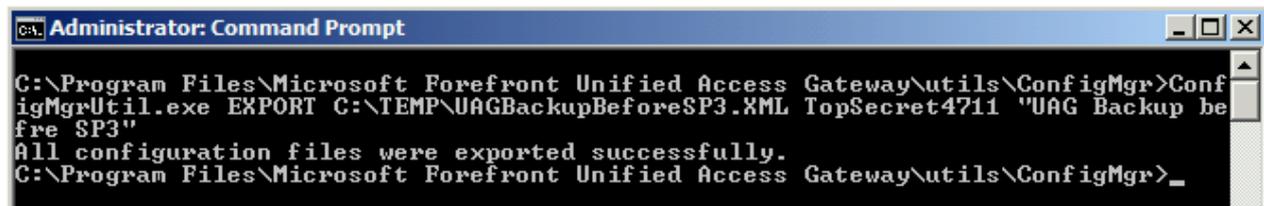


Figure 12: ConfigMgrUtil.exe to create Forefront UAG backups from the command line

Conclusion

In this article I tried to show you how to backup and restore a Forefront UAG configuration. With a valid Forefront UA backup in place you are able to restore a faulty Forefront UAG configuration on the same Forefront UAG Server or a different Forefront UAG Server when the Forefront UAG patch level is nearly the same as on the origin Forefront UAG Server. Please keep in mind that it may be necessary to create a backup of additional data like TMG log files, SQL database files used by Forefront TMG.

Related links

Backing up Forefront UAG

<http://technet.microsoft.com/en-us/library/ff607447.aspx>

Backing up and restoring with export and import

<http://technet.microsoft.com/en-us/library/ee406185.aspx>

Forefront TMG - Backup and restore capabilities

<http://www.isaserver.org/tutorials/Microsoft-Forefront-TMG-Backup-Restore-Capabilities.html>