

ISA Server 2006 Backup and Restore Capabilities

Abstract

In this article, I will show you how to Backup and Restore the entire ISA Server 2006 configuration or parts of the configuration. I will also show you how to Backup ISA Server log files and other parts of the configuration.

Let's begin

ISA Server 2006 makes it easy to backup the entire configuration or parts of the configuration for backup purposes in case of emergency or to simply backup a configuration to clone this configuration with another ISA Server. ISA Server 2006 uses the VSS (Volume Shadow Copy Service) writer that exports the configuration to an .xml file and instructs the VSS provider to back up this XML-file. In case of an restore, the VSS provider uses this file to restore the configuration, using the ISA Server import functionality. After a backup or import is complete, the ISA Server VSS writer deletes the .xml file.

The following screenshot shows the Backup and Restore Feature of ISA Server 2006. At this point, it is possible to backup the entire ISA Server 2006 configuration with and without confidential information's.



Figure 1: ISA Import / Export configuration

ISA Server 2006 provides a wizard which will help you to export the configuration you want to backup. This wizard will help you to export the entire configuration with and without confidential information.



Figure 2: ISA Export Wizard

If you want to export confidential information like user password, RADIUS shared secrets and other confidential information; you must enter a password, because this password is used to encrypt the export file.

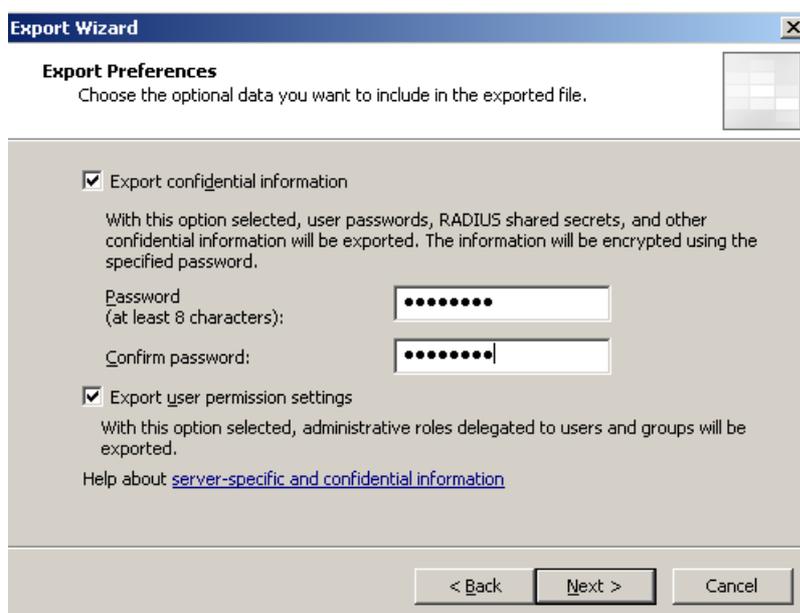


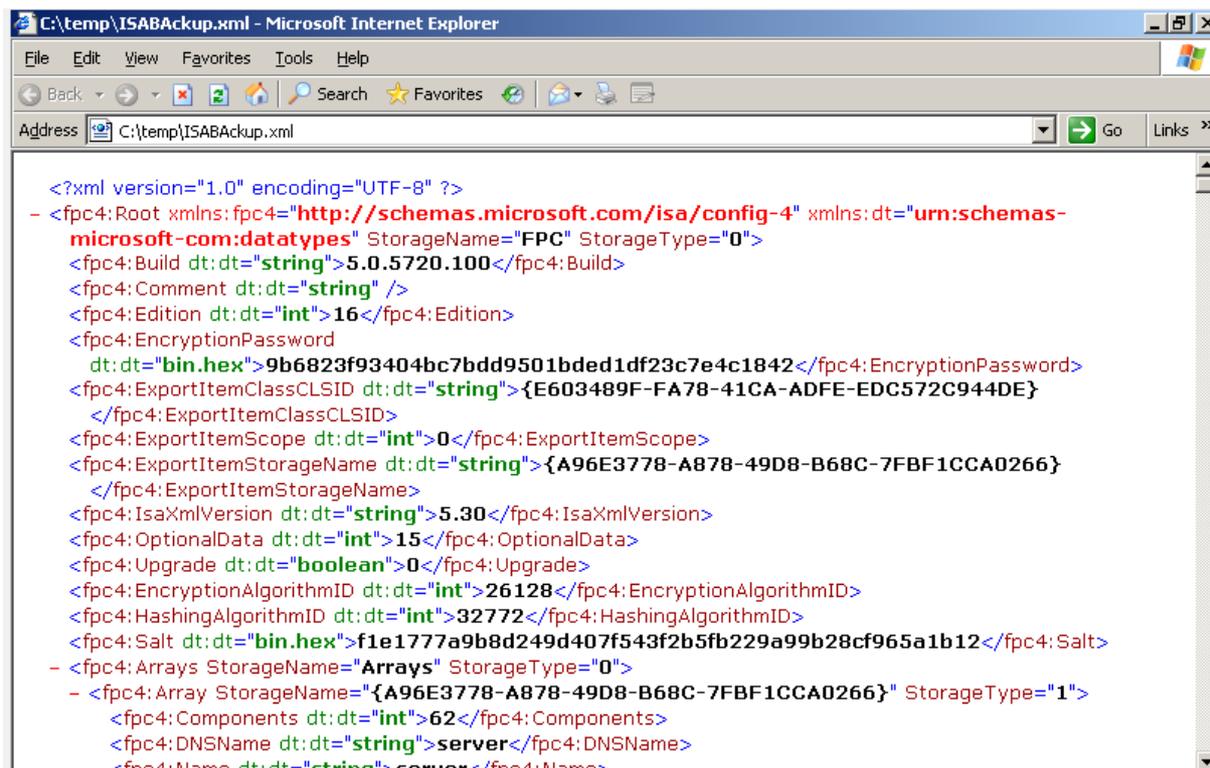
Figure 3: Export confidential data

If you select Export user permission settings, the backup contains also administrative roles delegated to users and groups.

You can view the exported XML file with Microsoft Internet Explorer or any other capable XML viewer.

Tip

If you know what you do, it is possible to modify parts of the XML file to customize some settings. After that it should be possible to import the modified XML file. You will see any errors when you import the file, because the import process



```
<?xml version="1.0" encoding="UTF-8" ?>
- <fpc4:Root xmlns:fpc4="http://schemas.microsoft.com/isa/config-4" xmlns:dt="urn:schemas-microsoft-com:datatypes" StorageName="FPC" StorageType="0">
  <fpc4:Build dt:dt="string">5.0.5720.100</fpc4:Build>
  <fpc4:Comment dt:dt="string" />
  <fpc4:Edition dt:dt="int">16</fpc4:Edition>
  <fpc4:EncryptionPassword
    dt:dt="bin.hex">9b6823f93404bc7bdd9501bded1df23c7e4c1842</fpc4:EncryptionPassword>
  <fpc4:ExportItemClassCLSID dt:dt="string">{E603489F-FA78-41CA-ADFE-EDC572C944DE}</fpc4:ExportItemClassCLSID>
  <fpc4:ExportItemScope dt:dt="int">0</fpc4:ExportItemScope>
  <fpc4:ExportItemStorageName dt:dt="string">{A96E3778-A878-49D8-B68C-7FBF1CCA0266}</fpc4:ExportItemStorageName>
  <fpc4:IsaXmlVersion dt:dt="string">5.30</fpc4:IsaXmlVersion>
  <fpc4:OptionalData dt:dt="int">15</fpc4:OptionalData>
  <fpc4:Upgrade dt:dt="boolean">0</fpc4:Upgrade>
  <fpc4:EncryptionAlgorithmID dt:dt="int">26128</fpc4:EncryptionAlgorithmID>
  <fpc4:HashingAlgorithmID dt:dt="int">32772</fpc4:HashingAlgorithmID>
  <fpc4:Salt dt:dt="bin.hex">f1e1777a9b8d249d407f543f2b5fb229a99b28cf965a1b12</fpc4:Salt>
- <fpc4:Arrays StorageName="Arrays" StorageType="0">
  - <fpc4:Array StorageName="{A96E3778-A878-49D8-B68C-7FBF1CCA0266}" StorageType="1">
    <fpc4:Components dt:dt="int">62</fpc4:Components>
    <fpc4:DNSName dt:dt="string">server</fpc4:DNSName>
    <fpc4:Name dt:dt="string">server</fpc4:Name>
```

Figure 4: the XML file

Import process

After exporting the configuration to an XML file, you can use it for a normal backup and use it only in case of emergency or you can use the configuration to install a new ISA Server and restore the previous created Backup file.

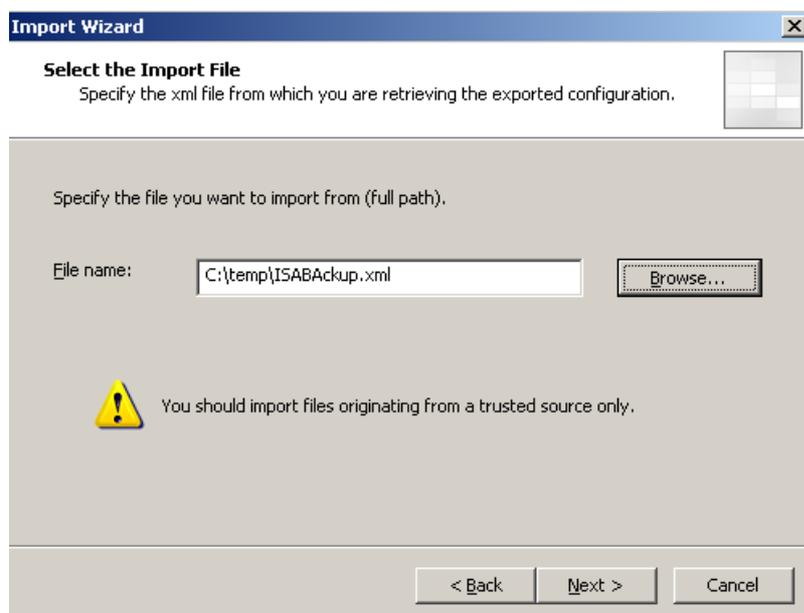


Figure 5: Export path

You should import only XML configuration files from a trusted source because you didn't know what the file exactly contains. There are some websites on the Internet

that offers some XML files for protocol definitions or entire firewall rules for specific or exotic protocols.

During the Import process you can specify if you want to Import or Overwrite (restore) the configuration. The overwrite process overwrites the entire existing configuration and is used to restore a damaged configuration.

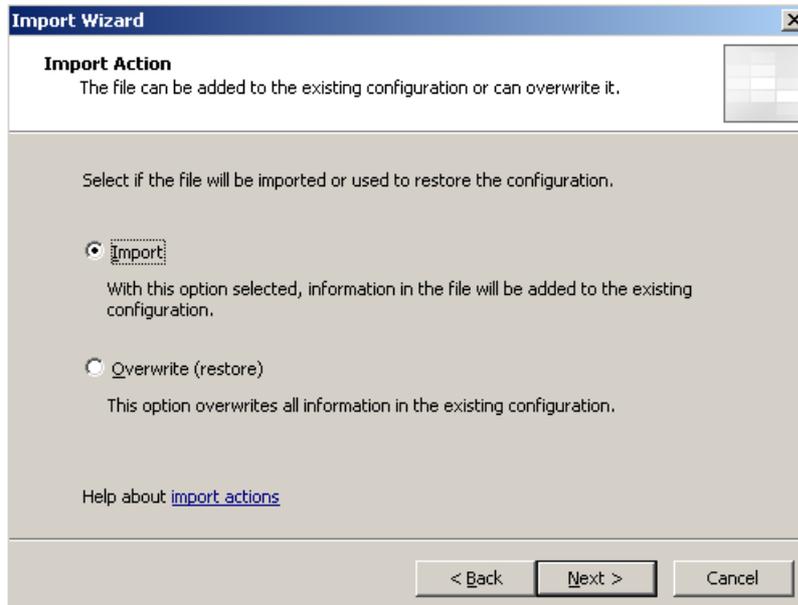


Figure 7: Import or Overwrite the configuration

If you have previously exported the ISA Server 2006 configuration with confidential information, you have to enter the password that you gave the export file if you want to import this confidential information.

After a successful import, click *Apply* to save the configuration.

Please note:

It is not possible to backup an ISA Server 2006 Standard configuration and to import these Backup into ISA Server 2006 Enterprise and visa verse, because the internal format between these versions is different.

Other things to backup

What else should we have in our backup plan? It is always a good idea to backup the entire ISA Server with a backup program like the built in backup program NTBACKUP or with other backup programs like Arcserve and BackupExec.

For a normal restore process it could be enough if you reinstall ISA Server 2006 and to import the XML backup file. In case of a complete operating system failure, reinstall the Operating system, reinstall ISA Server and import the ISA Server backup file.

In this case you will loose any log files, created by ISA Server 2006. If your security policy disallows this you must backup the log files and database created by the MSDE database.

To create a Backup of an MSDE database, use the OSQL utility:

BACKUP DATABASE mydb TO DISK = 'C:\MSDE\Backup\mydb.bak'

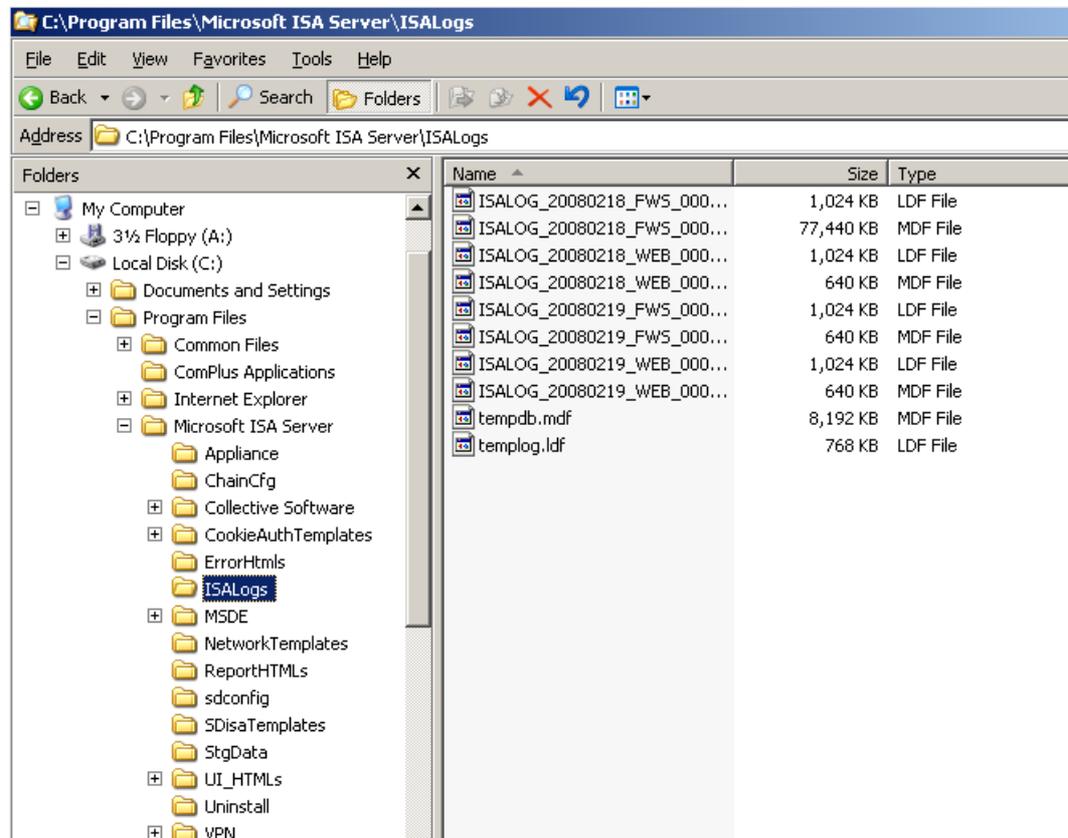


Figure 8: Other Directories to Backup

You should also backup the entire ISA Server installation directory, because if you have for an example modified the Outlook Web Access Forms based templates to reflect your corporate design, you should also backup these files.

Automatically Backups

It is possible to create a recurring Backup of the ISA Server 2006 configuration. This feature is not built into ISA Server 2006 but you can create a small script with the following lines and use this script with the built in Task Scheduler from Windows Server 2003.

Create a Script with the following content and save the script with the .VBS extension.

```
Dim fileName
Dim WSHNetwork
Dim shareName: shareName = WScript.Arguments(0)
Dim xmlDoc : set xmlDoc = 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)
```

To execute the script, use the following syntax:

```
Cscript ISA2006Back.vbs \\SERVERNAME\ISABACKUP
```

Explanation:

Cscript is the command line interpreter to execute VB scripts.
ISA2006Back.vbs is the VBS-Script to export the ISA configuration
\\ServerName is the Name of the Server to which you would copy the configuration
ISABACKUP is the name of the network share in which ISA Server 2006 should save the configuration

Scheduled Task

As a next step you have to create a scheduled task that executes the script at specific times.

There are several ways to create a new scheduled task. One way is to open Windows Explorer and navigate to the Windows\tasks directory.

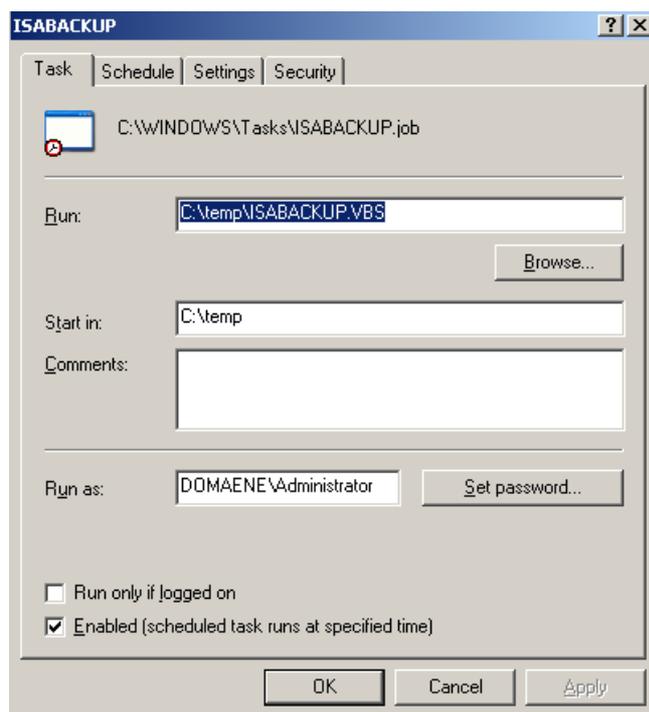


Figure 9: ISA Export Wizard

Create a new task with the script you created earlier, specify a schedule time and create the task.

Backup parts of the ISA Server 2006 configuration

As mentioned above, it is possible to backup parts of the ISA configuration. For an example it is possible to export the entire firewall rule base, a single firewall rule or

specify parts of a firewall rule, called rule elements. It is also possible to export network objects, network rules and many more.

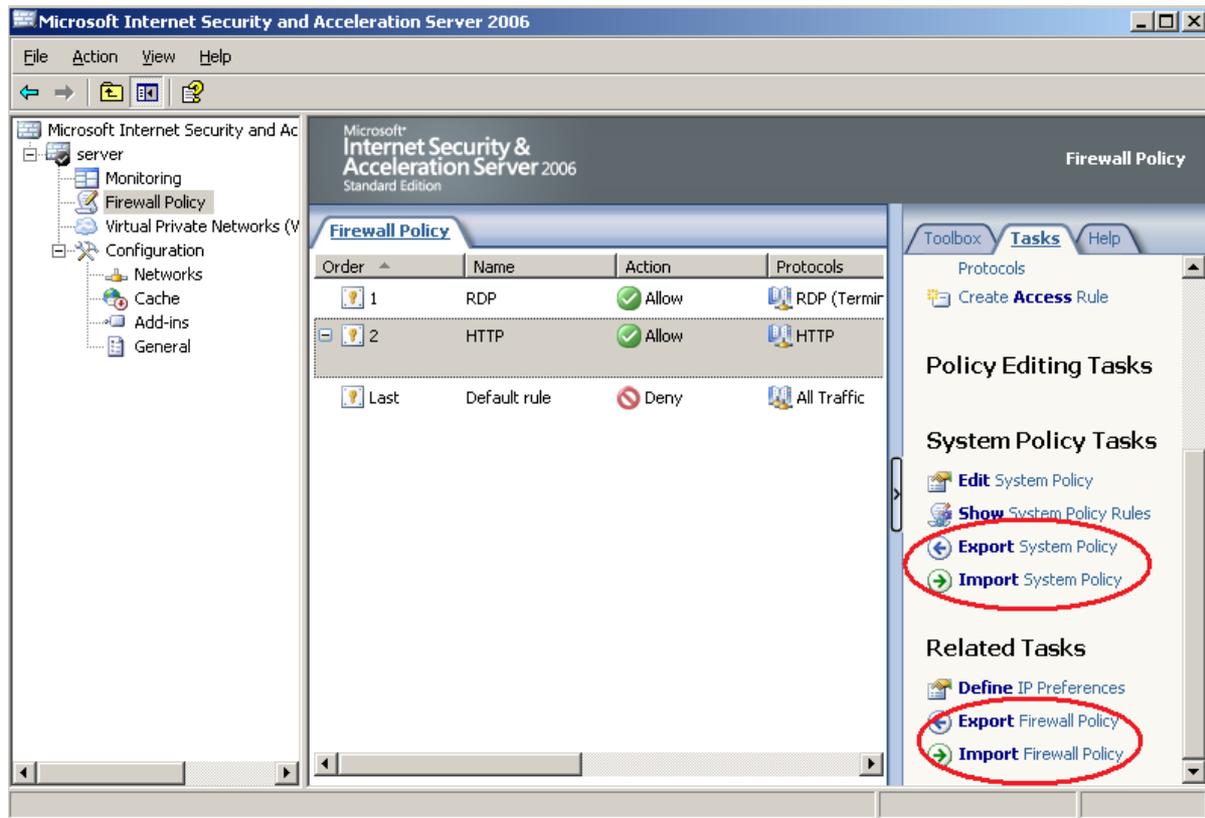


Figure 10: Export / Import specific ISA objects

Conclusion

In this article I showed you how to backup and restore the entire ISA Server configuration or parts of the ISA objects like Firewall rules, network objects or other configuration objects. ISA Server 2006 provides an easy way to export specific data to an XML file. It is also possible to export an ISA configuration to another ISA Server to clone a configuration or parts of a configuration.

Related links

How to Back Up and Restore an ISA Server Enterprise Configuration (Enterprise Edition)

http://www.microsoft.com/technet/isa/2006/backup_restore.aspx

ISA Server 2006 and VSS Writer

http://www.microsoft.com/technet/isa/2006/development/vss_writer.aspx

Export, Import, and Backup Functionality in ISA Server 2004

<http://www.microsoft.com/technet/isa/2004/plan/exportimportsettings.aspx>

How to back up a Microsoft Data Engine database by using Transact-SQL

<http://support.microsoft.com/kb/241397/en-us>

How to manage the SQL Server Desktop Engine (MSDE 2000) or SQL Server 2005

Express Edition by using the osql utility

<http://support.microsoft.com/kb/325003/en-us>