Docusnap X - Docusnap Script Windows

Script-based Inventory for Windows

TITLE	Docusnap X - Docusnap Script Windows
AUTHOR	Docusnap Consulting
DATE	3/2/2020
VERSION	1.2 | valid from February 28, 2020

CONTENTS

1. Introduction

This document describes an additional method of how to perform a network-based inventory scan of IT systems that are not or only temporarily connected to the network, such as the notebooks of field service staff. If the systems to be scanned are Window systems, we recommend to use the DocusnapScript.exe script for this purpose.

Corresponding scripts are also available for Linux, Mac or Exchange Server systems. They are covered in separate support documents.

This document describes how to integrate DocusnapScript.exe by providing it centrally using group policies or by running it manually.

Then, we will demonstrate how to import the resulting information into the Docusnap database.

2. Basics

2.1 Filing location

When you install Docusnap, DocusnapScript.exe is stored in the *Tools* folder below the Docusnap application directory. This folder can be opened from the Docusnap user interface.

- C:\Program Files\Docusnap\Tools
- C:\Program Files (x86)\Docusnap\Tools

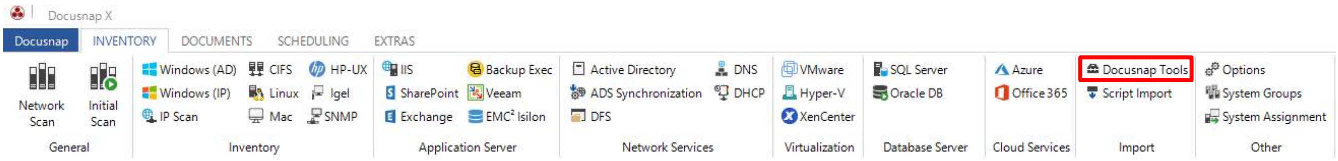


Fig. 1 - Opening the directory from within Docusnap

2.2 Functionality

When you run the DocusnapScript.exe script, it creates an XML file containing all inventory data of the local system. You can later import this XML file into Docusnap.

For further details, please refer to the IMPORTING THE INVENTORY DATA section.

2.3 Automation

It is also possible to run the DocusnapScript.exe script in an automated way. By specifying corresponding parameters, you can store the XML file created by the script in a central network share and then import it automatically at the time specified in the schedule.

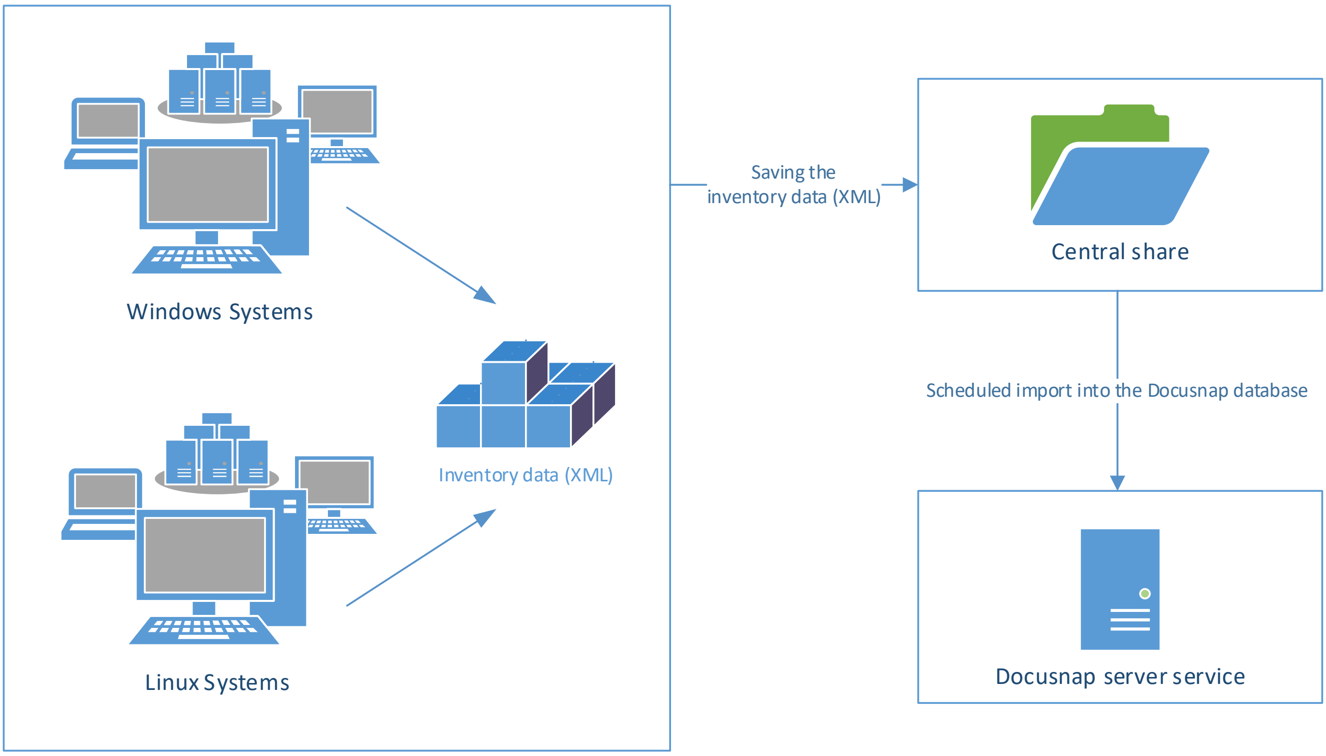


Fig. 2 - Workflow of the automatic import

When you start DocusnapScript.exe while being logged on as a particular user, the script will be run with the permissions of that user account. This means that this user must have a write permission to the central network location.

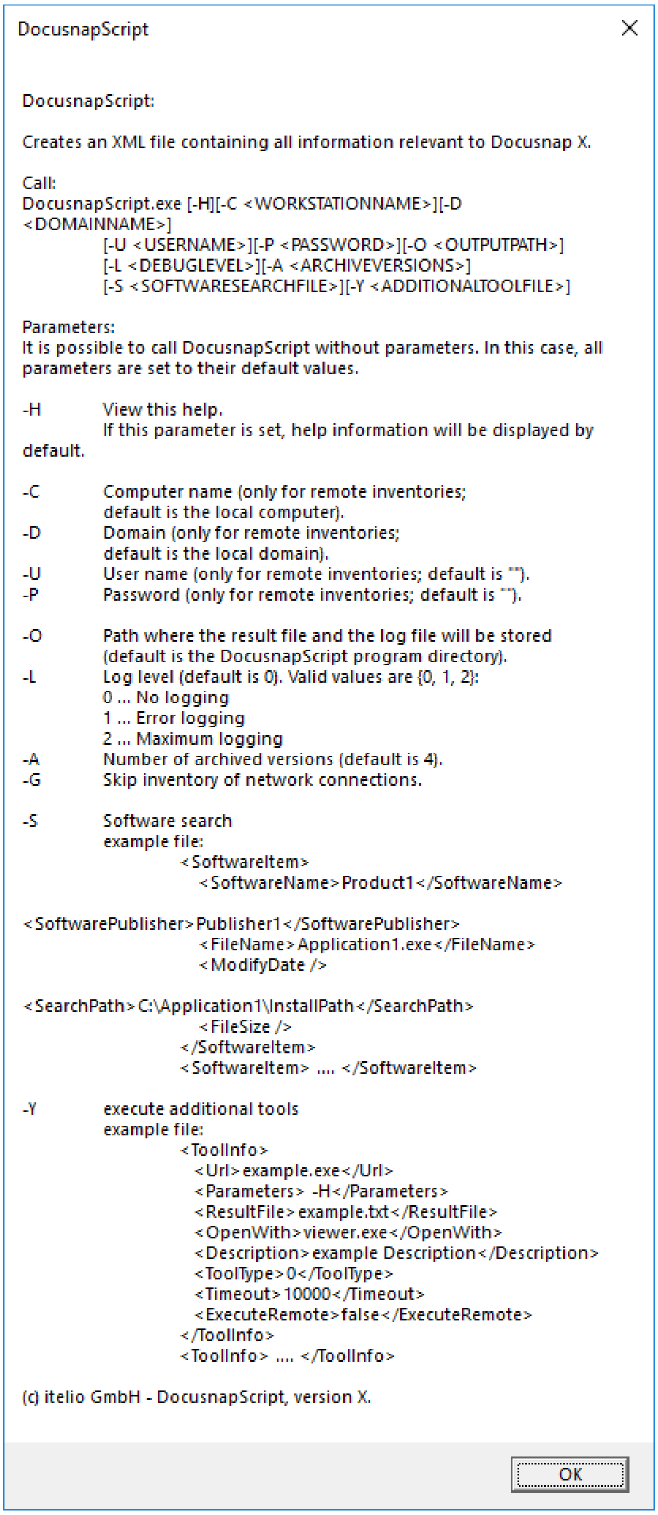
2.4 Required permissions

In order to perform the inventory scan of a local system with DocusnapScript.exe, normal user permissions are sufficient.

Please note that for the inventory of BitLocker information the DocusnapScript.exe must be executed with administrative rights.

2.5 Parameters

Available parameters can be viewed by calling DocusnapScript.exe -?



```
DocusnapScript:

Creates an XML file containing all information relevant to Docusnap X.

Call:
DocusnapScript.exe [-H][-C <WORKSTATIONNAME>][-D
<DOMAINNAME>]
              [-U <USERNAME>][-P <PASSWORD>][-O <OUTPUTPATH>]
              [-L <DEBUGLEVEL>][-A <ARCHIVEVERSIONS>]
              [-S <SOFTWARESEARCHFILE>][-Y <ADDITIONALTOOLFILE>]

Parameters:
It is possible to call DocusnapScript without parameters. In this case, all
parameters are set to their default values.

-H            View this help.
              If this parameter is set, help information will be displayed by
default.

-C            Computer name (only for remote inventories;
              default is the local computer).
-D            Domain (only for remote inventories;
              default is the local domain).
-U            User name (only for remote inventories; default is "").
-P            Password (only for remote inventories; default is "").

-O            Path where the result file and the log file will be stored
              (default is the DocusnapScript program directory).
-L            Log level (default is 0). Valid values are {0, 1, 2}:
              0 ... No logging
              1 ... Error logging
              2 ... Maximum logging
-A            Number of archived versions (default is 4).
-G            Skip inventory of network connections.

-S            Software search
              example file:
                        <SoftwareItem>
                          <SoftwareName>Product1</SoftwareName>

<SoftwarePublisher>Publisher1</SoftwarePublisher>
                          <FileName>Application1.exe</FileName>
                          <ModifyDate />

<SearchPath>C:\Application1\InstallPath</SearchPath>
                          <FileSize />
                        </SoftwareItem>
                        <SoftwareItem> .... </SoftwareItem>

-Y            execute additional tools
              example file:
                        <ToolInfo>
                          <Url>example.exe</Url>
                          <Parameters> -H</Parameters>
                          <ResultFile>example.txt</ResultFile>
                          <OpenWith>viewer.exe</OpenWith>
                          <Description>example Description</Description>
                          <ToolType>0</ToolType>
                          <Timeout>10000</Timeout>
                          <ExecuteRemote>false</ExecuteRemote>
                        </ToolInfo>
                        <ToolInfo> .... </ToolInfo>

(c) itelio GmbH - DocusnapScript, version X.
```

Fig. 3 – Docusnap Script parameters

The following example scans the system and creates the .XML file in the central network share named \\SMDC0001\DC-Share:

```
DocusnapScript.exe –O \\SMDC0001\DC-Share\
```

2.6 Docusnap Script Legacy

The DocusnapScript.exe cannot be used to *manually* inventory Windows systems running the following operating system:

- Windows XP
- Windows Server 2000
- Windows Server 2003.

To inventory these systems *manually* the DocusnapLegacyScript.exe has to be used.

The DocusnapScriptLegacy.exe is also located in the *Tools* folder below the Docusnap application folder:

- C:\Program Files\Docusnap\Tools
- C:\Program Files (x86)\Docusnap\Tools

3. Centralized execution

3.1 Prepatrations

A particularly efficient variant for the distribution of logon scripts is to use a group policy object (GPO). Depending on the inventory requirements, this can either be done via a user configuration or a computer configuration.

The DocusnapScript.exe script can be made available under \\%userdomain%\netlogon. DocusnapScript.exe will then be distributed to other domain controllers in the infrastructure by the Active Directory replication feature.

Depending on the Active Directory infrastructure, the distribution of group policies and logon scripts can take some time (in most cases, it is done within 15 minutes).

A central storage path must be provided for storing the XML files. All users or computers who are supposed to save files must have access to this path.

3.2 Restrictions

3.2.1 Windows 10

Since Windows 10 there is the fast startup in Windows. This is enabled by default on every Windows 10 system in the power settings and cannot be disabled by Group Policy.

If fast startup is enabled, the system will not shut down completely. By not shutting down the system completely, Group Policy will not recognize the startup as a full system startup. As a result, the script will not run at startup.

3.3 Management console (GPMC)

For the following examples, the Microsoft Group Policy Management Console (GPMC) tool is used.

If the Microsoft Group Policy Management Console has not been installed on your system, you can download it for free from Microsoft. It is strongly recommended to previously test this in a test environment or to implement the settings only in a dedicated test OU *(organizational unit)* in the Active Directory.

The remote server management tools that include the GPMC can be downloaded from the Microsoft website for the Windows client operating systems.

Windows Server operating systems (2008 and higher) already include the GPMC, but it might be necessary to install it subsequently via the Server Manager.

3.4 Starting GPMC

To start the Group Policies Management Console, open the Windows Run dialog (Windows key + R) and enter *gpmc.msc*.

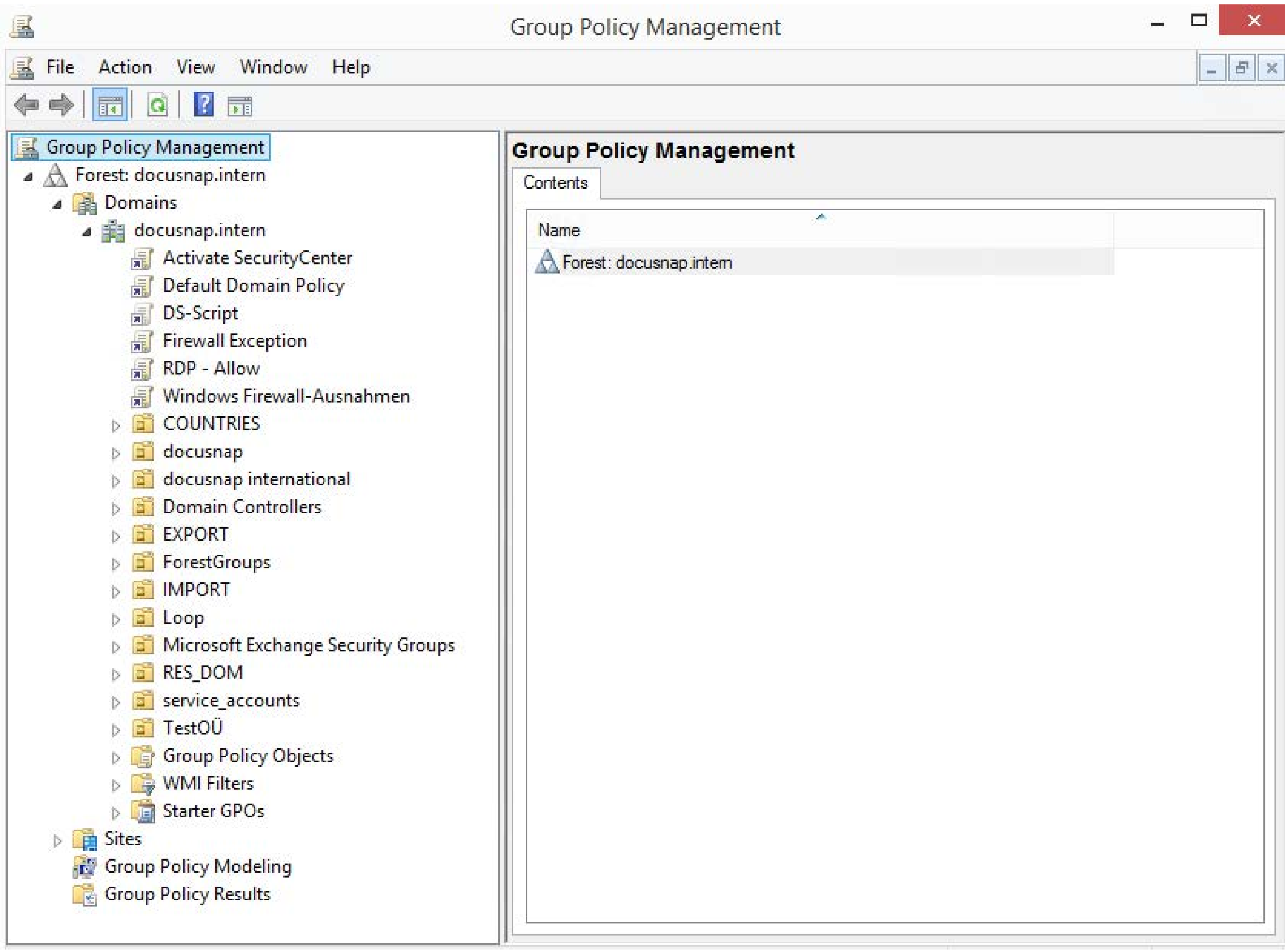


Fig. 4 - Group Policy Management

3.5 Integrating the script via a parameterised GPO

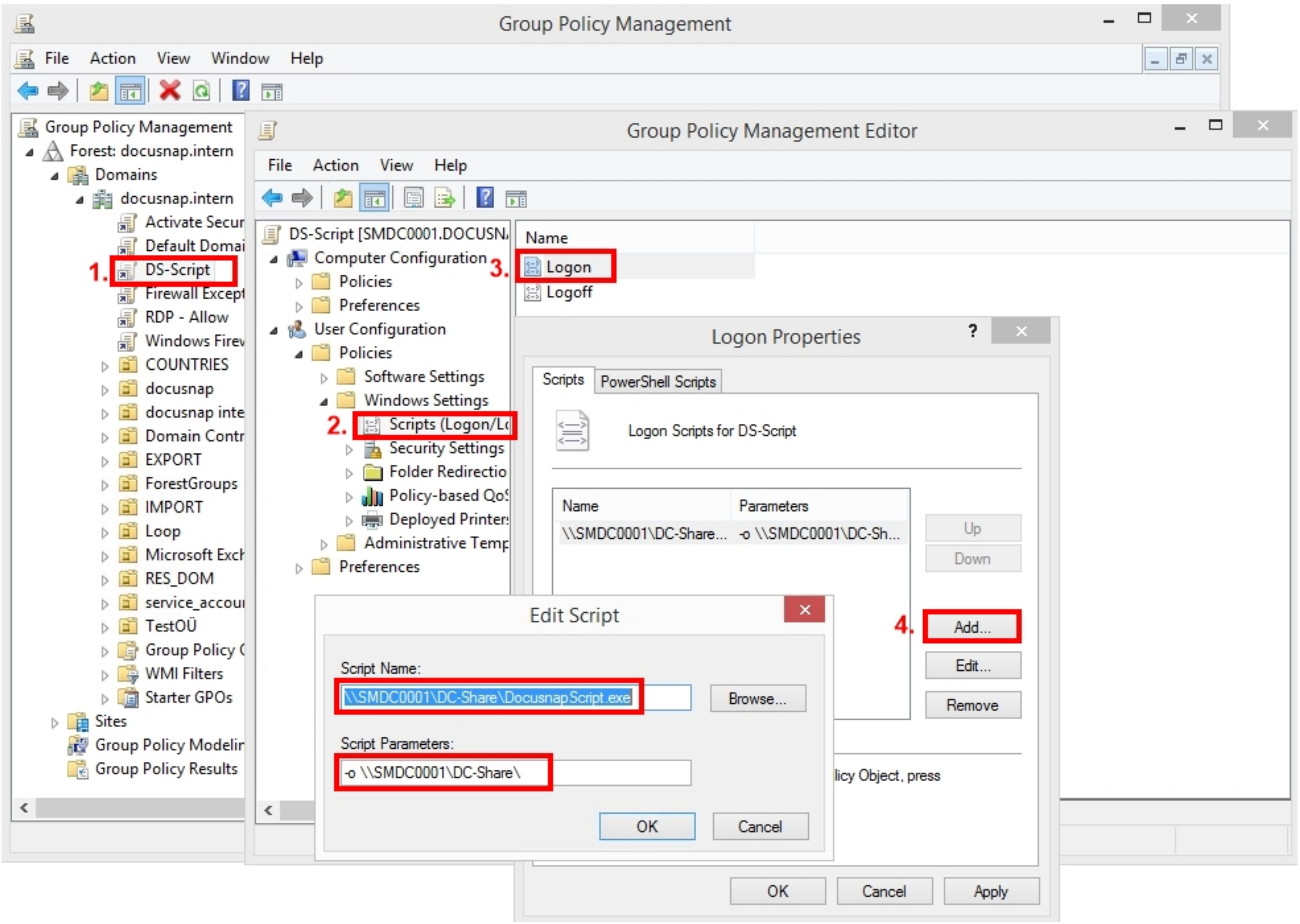
Step 1: Right-click the desired group policy object and click Edit.

Step 2: User Configuration / Computer Configuration => Windows Settings => Scripts

Step 3: Double-click Logon / Logoff (or Startup / Shutdown)

Step 4: Add a new script and enter the required data

Script Name: \\%userdomain%\netlogon\DocusnapScript.exe
Script Parameters: -o \\UNC_path



Name	Parameters
\\SMDC0001\DC-Share...	-o \\SMDC0001\DC-Sh...

Script Name: \\SMDC0001\DC-Share\DocusnapScript.exe

Script Parameters: -o \\SMDC0001\DC-Share\

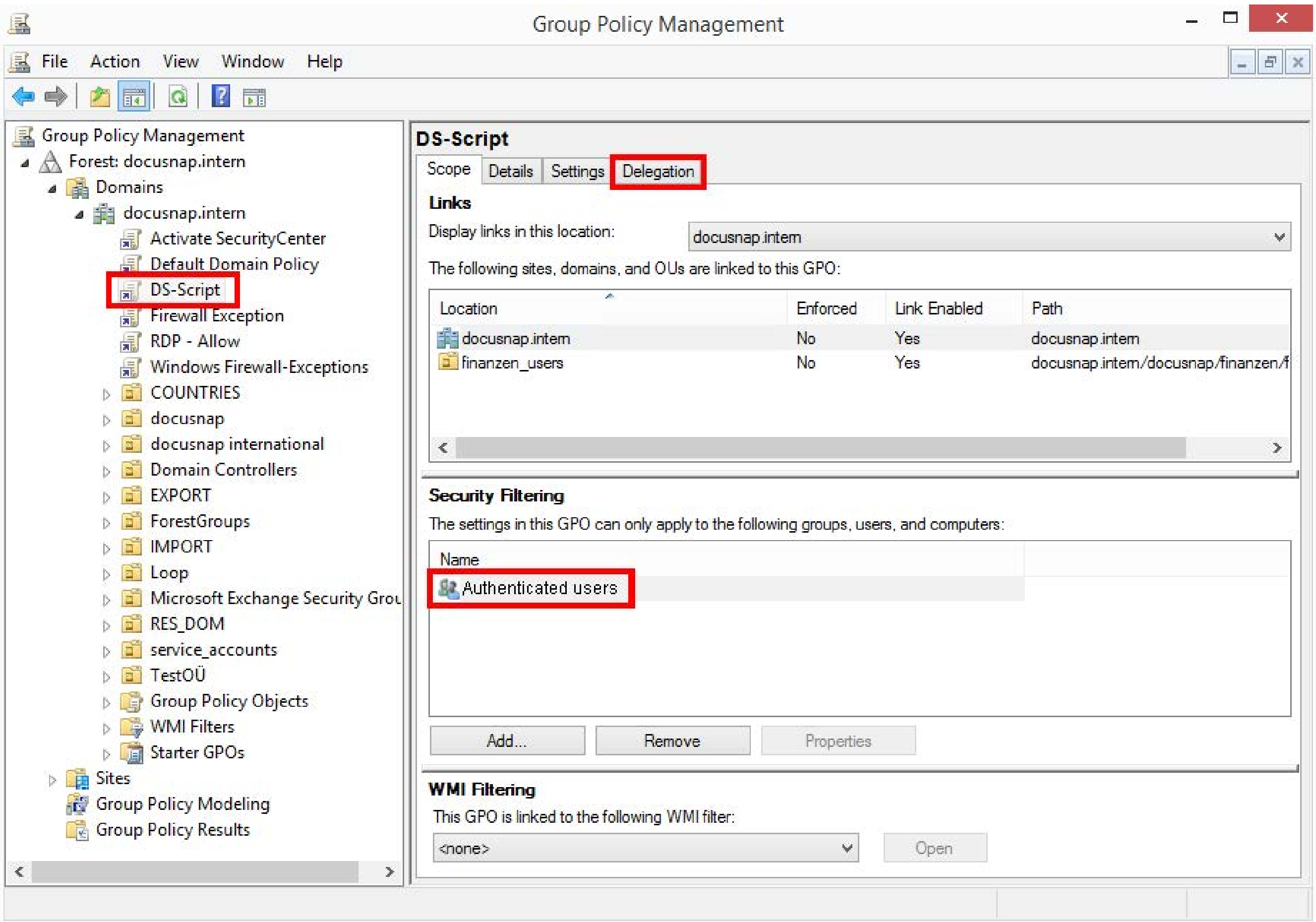
Fig. 5 - Integrating DocusnapScript.exe via a GPO

IMPORTANT

As mentioned above in the restrictions, the fast startup on Windows 10 systems causes problems when running startup scripts. In this case, we always recommend using a logon or logoff script, as this is not affected by the fast startup.

If only older Windows versions are in use, the script can still be executed during startup or shutdown.

Step 5:



Location	Enforced	Link Enabled	Path
docusnap.intern	No	Yes	docusnap.intern
finanzen_users	No	Yes	docusnap.intern/docusnap/finanzen/f

Fig. 6 - Setting Security Filtering

Make sure to select the desired users or groups in the Security Filtering group. In addition, open the *Delegation* tab to check which users and groups have the right to access this GPO.

3.6 Integrating the script via VB script

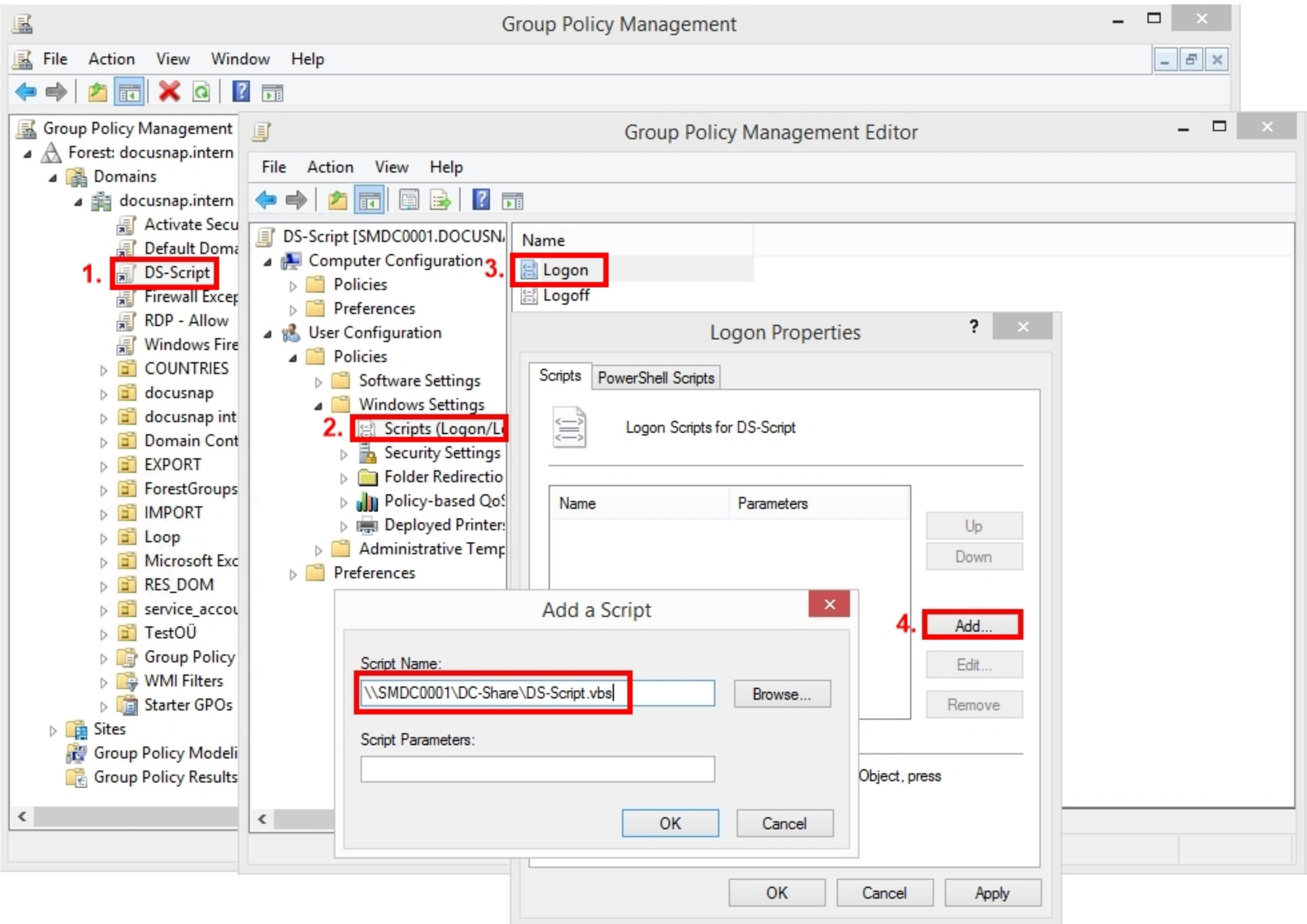
Step 1: Right-click the desired group policy object and click Edit.

Step 2: User Configuration / Computer Configuration => Windows Settings => Scripts

Step 3: Double-click Logon / Logoff (or Startup / Shutdown)

Step 4: Add a new script and enter the required data

Script Name: \\%userdomain%\netlogon\DS-Script.vbs



Script Name: \\SMDC0001\DC-Share\DS-Script.vbs

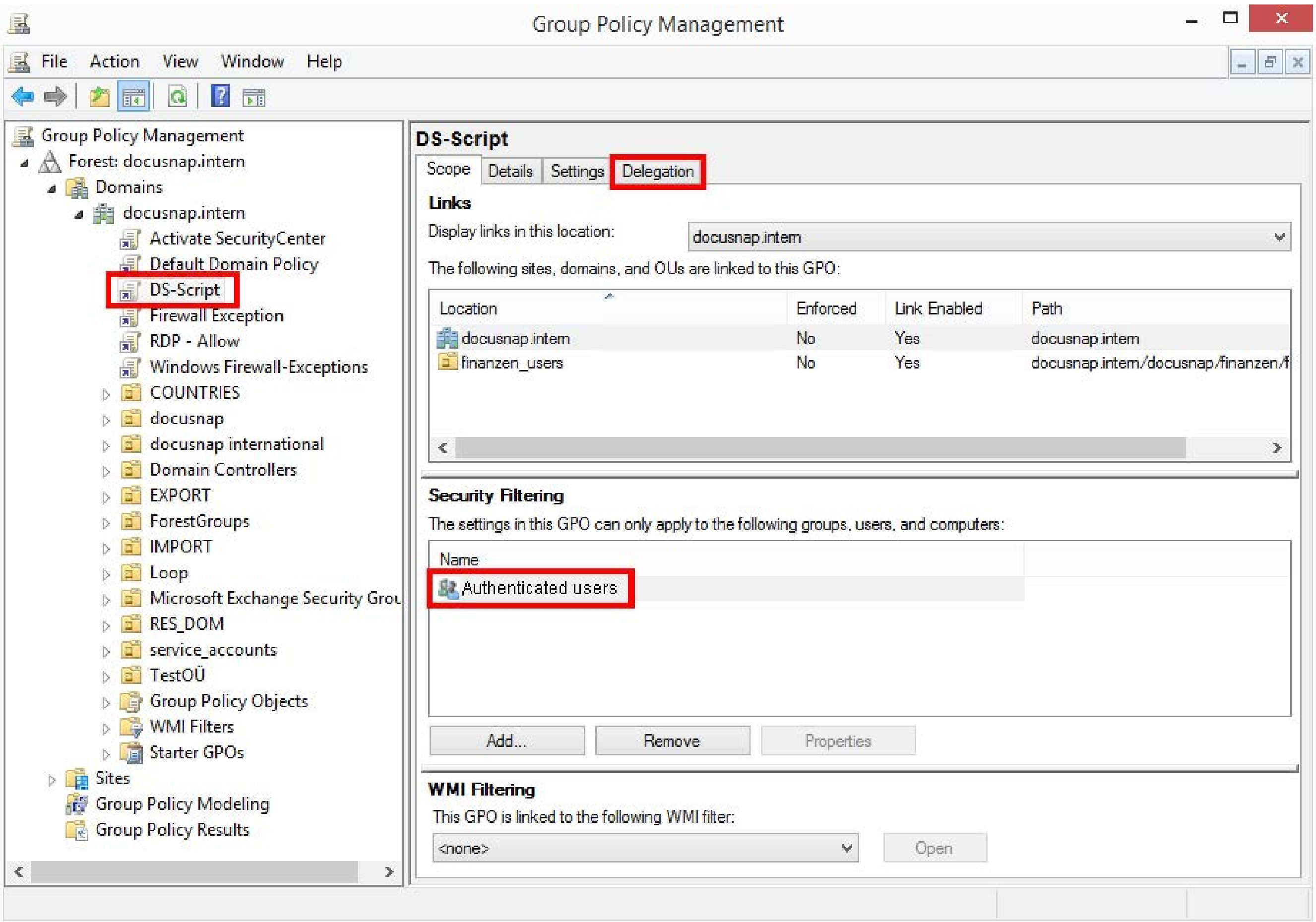
Script Parameters:

Fig. 7 - Integration via VB script

<u>Sample DS-Script.vbs file</u>:

```
on error resume next
Set WshShell = WScript.CreateObject("WScript.Shell")
WshShell.Run "\\DOCUSNAP\Netlogon\DocusnapScript.exe -o \\SMDC0001\Public\DS-Script"
```

Step 5:



DS-Script

Links

Display links in this location: docusnap.intern

The following sites, domains, and OUs are linked to this GPO:

Location	Enforced	Link Enabled	Path
docusnap.intern	No	Yes	docusnap.intern
finanzen_users	No	Yes	docusnap.intern/docusnap/finanzen/f

Security Filtering

The settings in this GPO can only apply to the following groups, users, and computers:

Name
Authenticated users

WMI Filtering

This GPO is linked to the following WMI filter:

<none>

Fig. 8 - Setting Security Filtering

Make sure to select the desired users or groups in the Security Filtering group. In addition, open the *Delegation* tab to check which users and groups have the right to access this GPO.

3.7 Using a WMI filter

3.7.1 How to create the filter

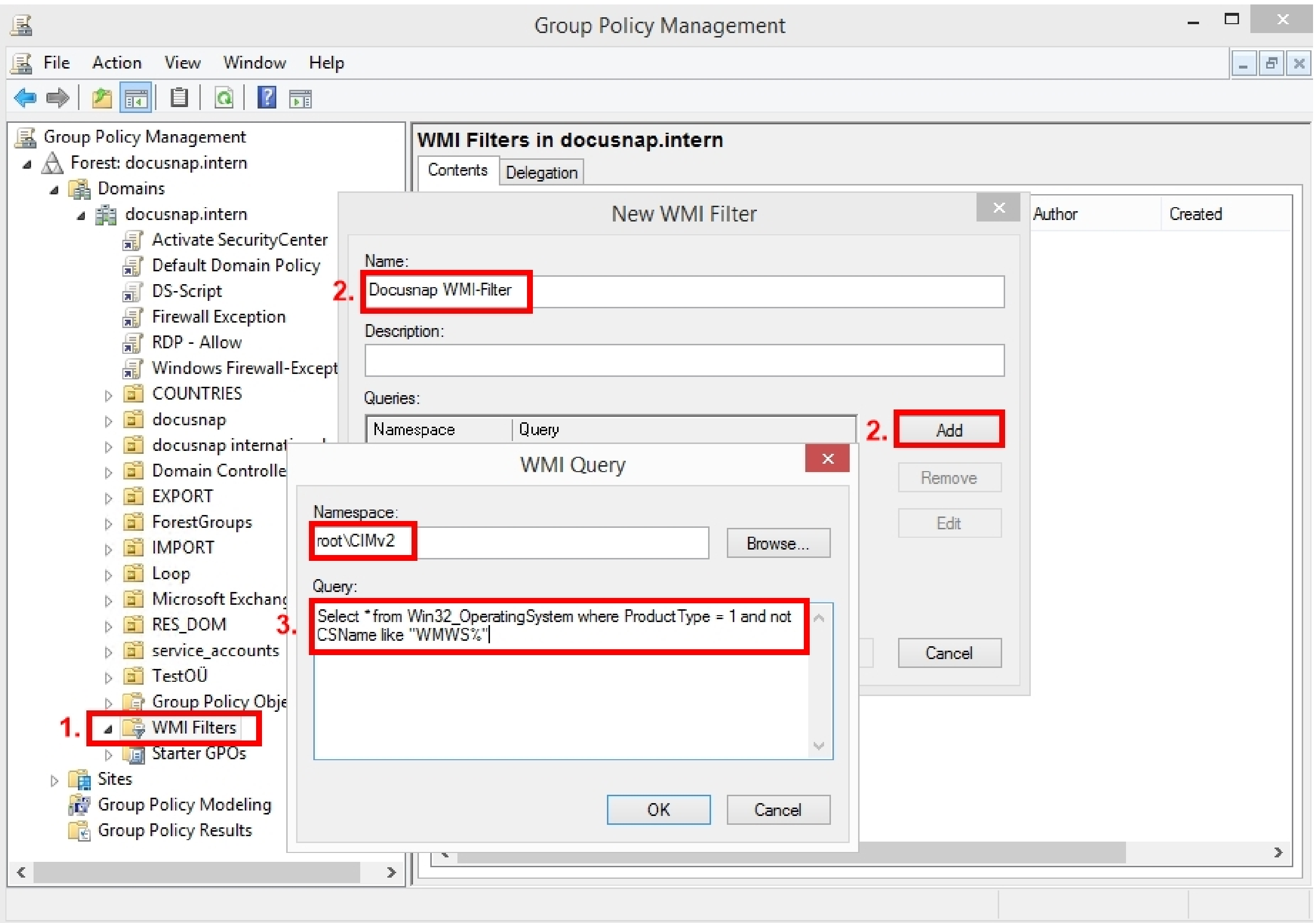
In some cases, it might be necessary to restrict the validity of a GPO, independent of the OU it is linked to. This may be useful if the computer accounts in the Active Directory are dispersed over many OUs and you want to restrict the inventory to be performed via a Docusnap script to some devices.

Below, we explain how you can do this using a WMI filter.

Step 1: Right-click the WMI Filters node in the Group Policies Management Editor to create a new filter.

Step 2: Enter a descriptive name for the filter.

Step 3: Add the corresponding query for the root\CIMv2 namespace.



Name: Docusnap WMI-Filter

Description:

Namespace: root\CIMv2

Query: Select * from Win32_OperatingSystem where ProductType = 1 and not CSName like "WMWS%"

Fig. 9 - Group Policy Management

<u>Sample WMI query</u>:

```
Select * from Win32_OperatingSystem where ProductType = 1 and not CSName like "WMWS%"
```

⇨ This query selects all clients whose name starts with WMWS.

⇨ The "ProductType" variable returns the following values:

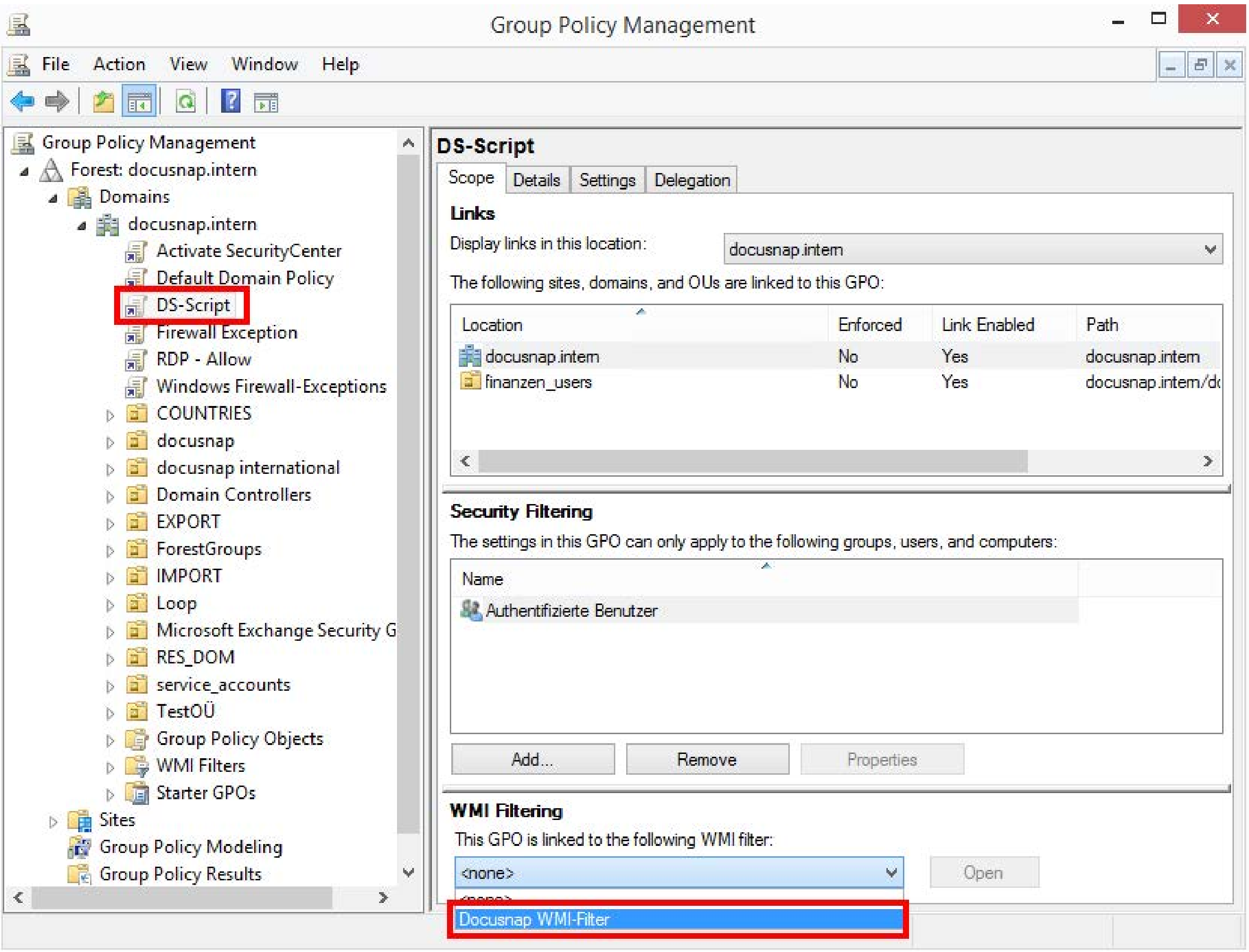
1 = Microsoft Windows client operating systems (e.g. Windows XP, Windows 7, Windows 8)

2 = Microsoft Windows Server operating systems configured as domain controllers

3 = Microsoft Windows Server operating systems not configured as domain controllers

3.7.2 How to link the filter

Link the newly created WMI filter to the group policies object that calls the DocusnapScript.exe script.



DS-Script

Links

Display links in this location: docusnap.intern

The following sites, domains, and OUs are linked to this GPO:

Location	Enforced	Link Enabled	Path
docusnap.intern	No	Yes	docusnap.intern
finanzen_users	No	Yes	docusnap.intern/d

Security Filtering

The settings in this GPO can only apply to the following groups, users, and computers:

Name
Authentifizierte Benutzer

WMI Filtering

This GPO is linked to the following WMI filter:

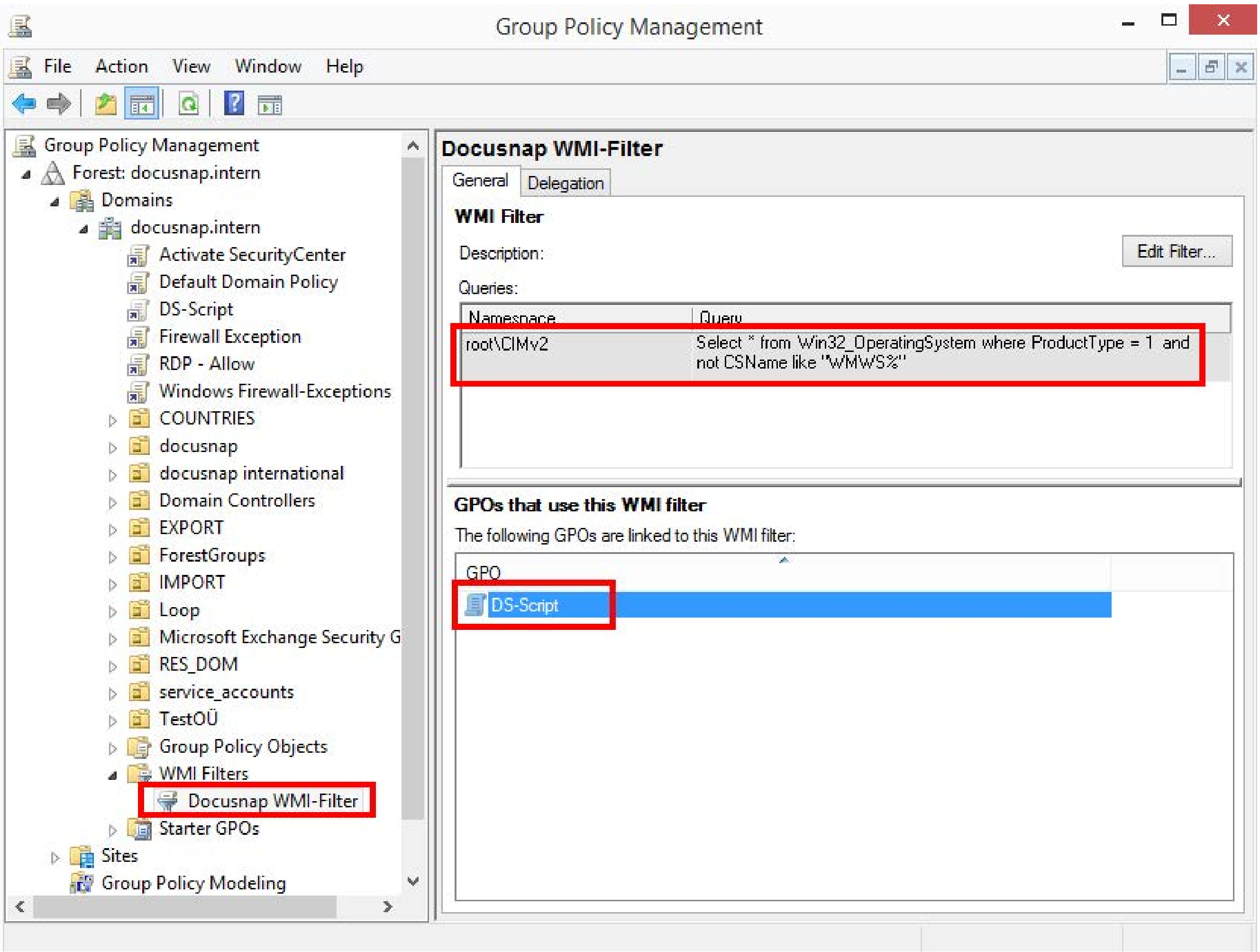
<none>

<none>

Docusnap WMI-Filter

Fig. 10 - Linking the WMI filter

This link is also visible from the WMI filter properties.



Docusnap WMI-Filter

WMI Filter

Description:

Queries:

Namespace	Query
root\CIMv2	Select * from Win32_OperatingSystem where ProductType = 1 and not CSName like "WMWS%"

GPOs that use this WMI filter

The following GPOs are linked to this WMI filter:

GPO
DS-Script

Fig. 11 - WMI filter

4. Running the script manually

In cases where the system to be scanned is not connected to the network, it makes sense to run DocusnapScript.exe manually. This is also advisable in cases of network access problems (e.g. due to Firewall settings, WMI access problems, etc.) that cannot be solved at all or not immediately. In these cases, create the XML files locally and use a USB stick to transfer them to the network. From there, you can import them either manually or automatically into Docusnap (provided the files have been copied to the central import share).

Then, just run the DocusnapScript.exe file on the system to be scanned. By default, the XML file will be stored in the folder where the DocusnapScript.exe file resides.

For an overview of the inventory parameters for manual execution, please refer to section 2.5 – PARAMETERS.

4.1 Software search

With the help of the software search Docusnap offers an additional feature to inventory software products which cannot be captured via the Windows inventory. The software search can also be used in combination with Docusnap Script. To be able to use the software search, an XML software list must be created manually.

The XML file must have the following structure:

```
<SoftwareItem>
      <SoftwareName>Notepad</SoftwareName>
      <SoftwarePublisher>Microsoft</SoftwarePublisher> <!-- optional-->
      <SoftwareVersion>1.0</SoftwareVersion> <!-- optional-->
      <FileName>notepad.exe</FileName>
      <SearchPath>C:\Windows</SearchPath>
      <FileSize>193536</FileSize> <!-- optional byte-->
      <ModifyDate>01.01.2018</ModifyDate> <!-- optional-->
</SoftwareItem>
```

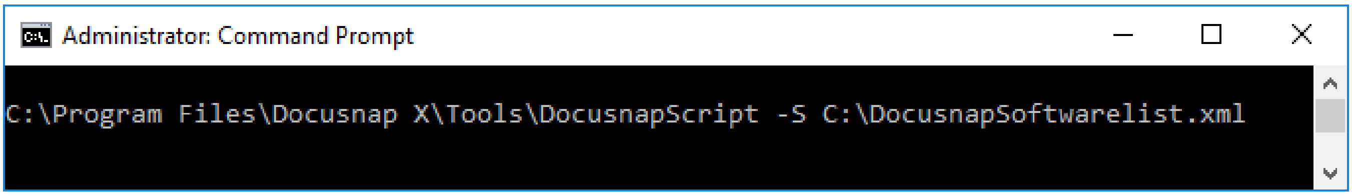
The file name must be specified correctly or set using wildcards (?,*).

```
<SoftwareItem>
      <SoftwareName>Notepad</SoftwareName>
      <SoftwarePublisher /> <!-- optional-->
      <SoftwareVersion /> <!-- optional-->
      <FileName>notepad.exe</FileName>
      <SearchPath>C:\Windows</SearchPath>
      <FileSize /> <!-- optional byte-->
      <ModifyDate /> <!-- optional-->
</SoftwareItem>
```

If one of the optional fields is not specified, the syntax must be the same as in the example above (<SoftwarePublisher />).

If an incorrect file size is entered, the desired software will not be scanned!

To use the software list in the DocusnapScript, use the following command: DocusnapScript.exe -S <path\><filename.xml>



```
C:\Program Files\Docusnap X\Tools\DocusnapScript -S C:\DocusnapSoftwarelist.xml
```

Fig. 12 - Use of software list

4.2 Additional tools

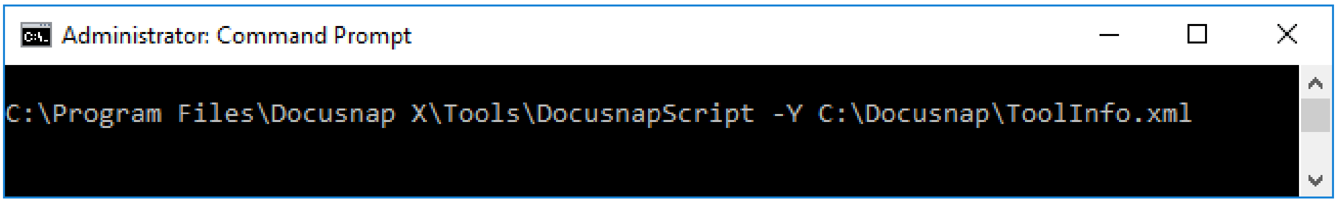
Through the use of additional tools, further information about a Windows system can be captured during the inventory. The execution of the additional tool can also be started as part of the Docusnap script. To execute the additional tool, an XML file with the required information must be created.

The XML file must have the following structure:

```
<ToolInfo>
 <Url>systeminfo.exe</Url>
 <Parameters> </Parameters>
 <ResultFile>systeminfo.txt</ResultFile>
 <OpenWith>notepad.exe</OpenWith>
 <Description>Systeminfo</Description>
 <ToolType>0</ToolType>
 <Timeout>10000</Timeout>
 <ExecuteRemote>false</ExecuteRemote>
</ToolInfo>
```

To execute the additional tools in DocusnapScript, use the following command:

DocusnapScript.exe -Y <path\><filename.xml>



```
C:\Program Files\Docusnap X\Tools\DocusnapScript -Y C:\Docusnap\ToolInfo.xml
```

Fig. 13 - Use of additional tools

Data collected during the execution of additional tools as part of the script, is stored in the result XML file. By importing the XML file into Docusnap, this data will be imported as well.

5. Importing the inventory data

Using the Docusnap script import feature, you can import the XML files generated by the script into Docusnap.

To open the Import wizard, select *Inventory > Other Sources > From DocusnapScript.exe* from the user interface.

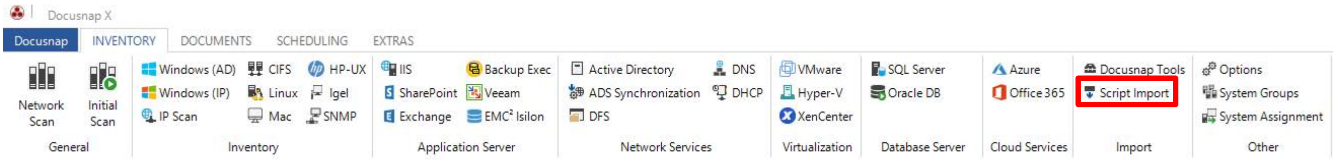
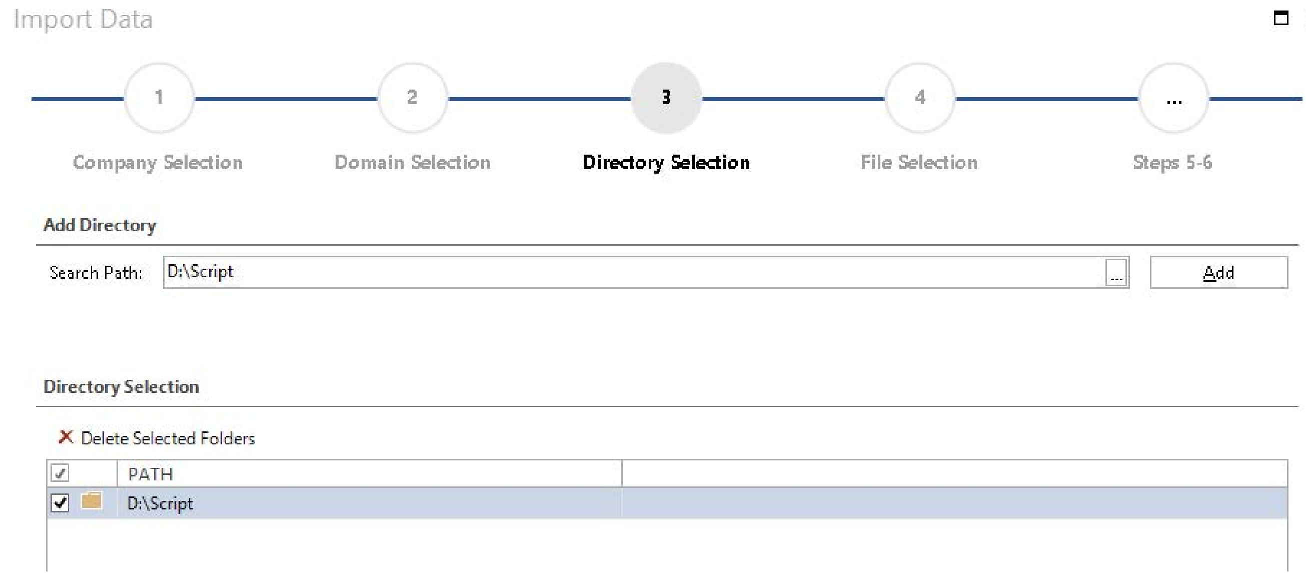


Fig. 14 - Opening the Import wizard

In the first step, select the desired company and domain for the import. Then, specify the path for the XML files. Specify the directory or UNC path of the central share from which to import the XML files.



Add Directory

Search Path: D:\Script

Directory Selection

☑	PATH
☑	D:\Script

Fig. 15 - XML import

In the next step, choose the button "Start searching for files" – now the wizard is searching for XML files generated by Docusnap - also for XML files which were generated by the Windows or Exchange script.

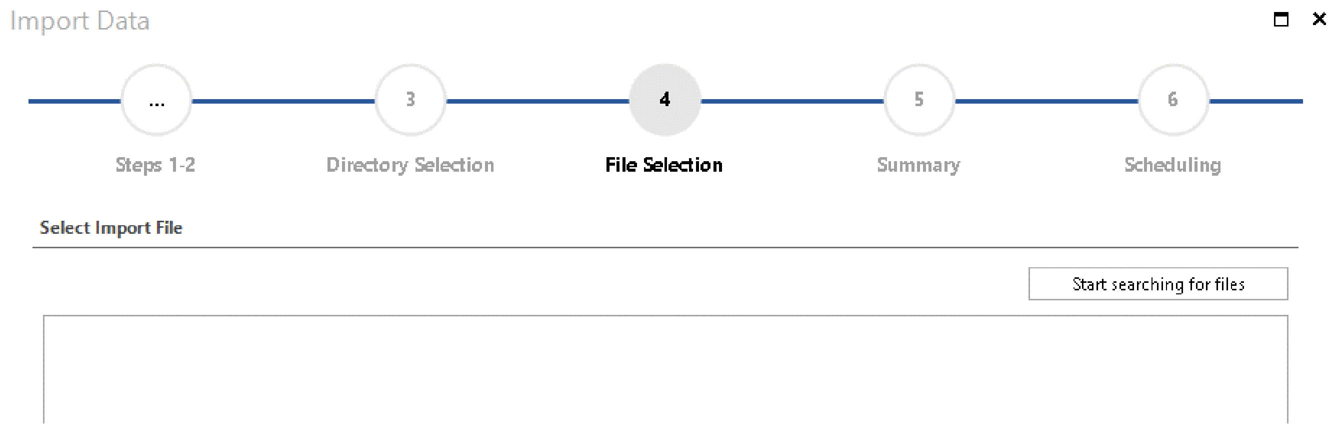
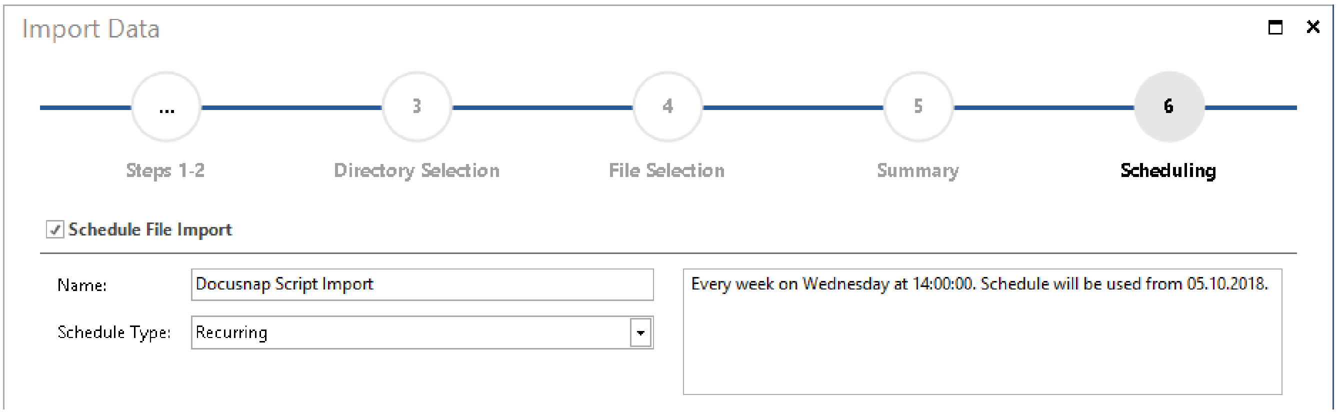


Fig. 16 - Directory selection



☑ Schedule File Import

Name: Docusnap Script Import

Schedule Type: Recurring

Every week on Wednesday at 14:00:00. Schedule will be used from 05.10.2018.

Fig. 17 - Scheduling automatic import

If you want to import inventory data automatically, schedule the import process. Make sure that the user account which was used to run the Docusnap Server service has read and write access to that directory.

Under Scheduling, you can create a job for this import, i.e. the XML files created by the script will be imported periodically at the times specified there.
However, this is only possible if Docusnap Server has been configured before. Please refer to the User Manual under https://www.docusnap.com/help/docusnap-x/user/docusnap-server.html.

It is not possible to import XML-Files which are generated with a DocusnapScript.exe of the version 6.3

ILLUSTRATION DIRECTORY

VERSION HISTORY

Date	Description
25.04.2017	Version 1.0 finished
24.10.2018	Version 1.1 – Replacement of outdated screenshots, added points software search and additional tools, links updated
28.02.2020	Version 1.2 – Added Windows 10 fast startup in the centralized execution area