



Inventory – Discovery-Windows

Script-based Inventory for Windows

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1. Introduction

In addition to the remote inventory of Windows systems, Docusnap also offers the option of a script-based inventory of Windows systems.

The script file can be found in the installation directory of Docusnap:

- %Docusnap-Installationfolder%\Tools\Discovery-Windows.exe

When Discovery-Windows.exe is called, a local inventory is performed. All inventoried information is stored in an XML file, which is then imported into Docusnap.

Corresponding scripts also exist for Linux systems, Mac systems, SharePoint, Exchange, DNS, DHCP, Veeam, DFS and the Active Directory, which are covered in separate support documents and within the user manual.

2. Basics

2.1 Required permissions

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

Please note that for the inventory of

- **BitLocker status and recovery keys**
- **Anti-Virus and Anti-Spyware information**
- **Power options**
- **Bios type (UEFI, Legacy BIOS)**
- **Bios boot options - secure boot / secure boot active or inactive**
- **Presence of security modules (TPM)**
- **User Profiles**

the Discovery-Windows.exe must be run with administrative rights.

2.2 Parameters

Available parameters can be viewed by calling Discovery-Windows.exe -?

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

```
Discovery-Windows.exe -O \\SMDC0001\DC-Share\
```

2.3 Discovery-Windows-Legacy

The Discovery-Windows.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 must be used.

The Discovery-Windows-Legacy.exe is also located in the Tools folder below the Docusnap application folder:

- %Docusnap-Installationfolder%\Tools

3. Script-based Windows inventory

3.1 Performing a Script-based Windows Inventory

The script file can be found in the Docusnap installation directory:

- %Docusnap-InstallationDirectory%\Tools\Discovery-Windows.exe.

In the simplest case, run Discovery-Windows.exe on the target system. Then the inventory of the Windows system will be performed.

3.2 Import Inventory

The inventory is complete when the result file is generated. By default, the result file is created at the location where the Discovery-Windows.exe call was made.

- Hostname_User_Timestamp.xml

You can import this data to Docusnap using the Script Import wizard:

- Discovery - All Wizards - File Import.
- Inventory - All Wizards - File Import
- All Orders - All Wizards - File Import

In **step 1**, select your company or your client's company.

In **step 2**, select the discovery service through which you want to perform the inventory.

For a scheduled inventory, select Docusnap Server Discovery here or a discovery service you have configured.

Note here that the user running one of the services must have modify rights to the path selected in the next step.

Local system = storage directory can only be local

In **step 3** you select the directory where you have stored the generated XML file.

This directory can also be a network drive. Note the release permissions.

In **step 4** you can now search for valid script files.

If there are files from other script inventories (DNS, DHCP, Active Directory, etc.) in the folder you selected, these will also be considered.

3.3 Automate script execution

The big advantage of Docusnap is that data is regularly and automatically inventoried and therefore up-to-date. This can also be achieved with script inventories.

The first step is to automate the execution of the script. Among other things, this can be done with a software distribution. Furthermore, it is possible to do this using Windows task scheduling and group policies - this variant is described below.

Create or adjust a group policy and go to

- Computer configuration - Settings - Control panel settings - Scheduled tasks

In the **General** tab, store a name / action and select the security options:

Use the following user account: User with local administration permissions / local system account "NT-AUTHORITY\SYSTEM" (recommended).

Run regardless of user login

Run with highest privileges

Configure for: Select the appropriate operating system

In the **Trigger** tab you can configure the script execution schedule - for example:

Start Task: On a schedule

Start: XX.XX.XXXX, 10:00:00

Weekly, repeat every 1 week on: Monday

If you want to inventory current data of your Windows systems several times a week, let the execution be performed accordingly more often.

In the **Actions** tab define the execution of Discovery-Windows.exe

We recommend creating a hidden share on the Docusnap server / system that runs the Docusnap Discovery Service.

Two folders are required in this share:

To store the Discovery-Windows.exe - read permissions are required here.

z. B. \\SRV-Docu\DocusnapScript\$\Scripts

To store the result files - change authorisations are required here.

z. B. \\SRV-Docu\DocusnapScript\$\Company#Domain.FQDN

We recommend the Microsoft Best Practice for the use of permissions, so that the **Everyone** group receives **full access** and only the **Domain Computers** and **Domain Controllers** groups receive **Change** permissions via NTFS permissions. Additional hardening measures must be taken on a customer-specific basis.

Action: Start program

Program / Script: \SRV-Docu\DocusnapScript\$\Scripts\Discovery-Windows.exe

Arguments: -O "\SRV-Docu\DocusnapScript\$\Company#Domain.FQDN"

The -O parameter redirects the result files to the specified path. The user or system accounts that perform the inventories must have write permissions on this path.

In the **Settings** tab activate the options:

- Allow execution of the task on demand
- Execute task as soon as possible after a missed startup
- End task if execution is longer than: 1 day

If you use different languages on the domain controller, you must use the SID of the local system account -> to do this, edit the group policy after creating it under the following path:

[\\YourDomain\SYSVOL\YourDomain\Policies\{YourGPOGUID}\Machine\Preferences\ScheduledTasks\ScheduledTasks.xml](#)

Search for the string `runAs="NT AUTHORITY\SYSTEM"` in all places in the XML file and replace `NT AUTHORITY\SYSTEM` with the SID `S-1-8-15`.

3.4 Keeping used script files up to date

We generally recommend installing a Docusnap Discovery Service (DDS) at least on the system where the Docusnap Server has been configured when using one / the script variants. Additional DDSs can be placed in the decentralized networks (sites, VLANs, etc.).

In the DDS settings, you can specify an additional directory for storing the inventory modules (script files). This causes the script files to be automatically replaced when Docusnap is updated, so they are always up-to-date.

Install and configure the DDS - a HowTo can be found in our Knowledge Base.

After configuration, go to the Settings tab and set the storage directory:

- `C:\DocusnapScript\Scripts.`

Then share the folder over the network: `\\SRV-Docu\DocusnapScript$`.

You can use this share again to call the script file

- `\\SRV-Docu\DocusnapScript$\Scripts\Discovery-Windows.exe`

and to store the JSON files:

- `\\SRV-Docu\DocusnapScript$\Company#Domain.FQDN`

4. Notable parameters

A short explanation is necessary for the following parameters.

4.1 Software and filesearch -S

The software and file search is used to search for specific files on the file system or to search for applications that have been "installed" on the target system without registration.

How to perform the software and file search within the remote inventory is described in the following HowTo: Inventory - Software and File Search.

The use of the software and file search during the inventory using the Discovery-Windows.exe requires an XML file. The XML blocks for software and file search differ, but can be combined in one XML file.

You can open the help with syntax via the parameter -H filesearch:

```
"%Docusnap-Installationfolder%\Tools\Discovery-Windows.exe" -H filesearch
```

The use of the software and file search during the script inventory is activated by means of the parameter -S and the path to the XML file:

```
\\SRV-Docu\DocusnapScript%\Scripts\Discovery-Windows.exe -S \\SRV-Docu\DocusnapScript%\Scripts\SoftwareAndFileSearch.xml
```

In addition to the structure of the XML file, the evaluation options also differ. A detailed description can also be found in the HowTo: Inventory - Software and File Search.

4.1.1 File search

```
<?xml version="1.0" encoding="UTF-8" ?>
<Search>
  <SearchItem>
    <Category>1</Category>
    <Name>Test log4j</Name>
    <FileName>*log4j*</FileName>
    <FileSize>0</FileSize>
    <IncludeExcludeList>
      <SearchPath>
        <IncludePath>C:\Temp</IncludePath>
        <ExcludePath></ExcludePath>
      </SearchPath>
      <SearchPath>
        <IncludePath>C:\ProgramData</IncludePath>
        <ExcludePath></ExcludePath>
      </SearchPath>
    </IncludeExcludeList>
    <OnlyFirstMatch>true</OnlyFirstMatch>
    <UseSystemDrive>false</UseSystemDrive>
  </SearchItem>
</Search>
```

OPTION	DESCRIPTION
CATEGORY	1= File search
NAME	Means the search in general
FILENAME	Specifies the file to be searched - wildcards (*) can be used.
FILESIZE	Optional - if the size does not match, no match is available
SEARCHPATH	Including OR excluding search paths Inclusion and exclusion cannot be combined!
ONLYFIRSTMATCH	Determines whether only the first result found should be displayed (true) If false, all results found are recorded
USESYSERMDRIVE	Determines whether only the system partition should be searched (true) or all partitions on the system (false)

4.1.2 Software search

The following is the structure of the XML file for the software search:

```
<?xml version="1.0" encoding="UTF-8" ?>
<Search>
  <SearchItem>
    <Category>0</Category>
    <Name>Test log4j</Name>
    <Version />
    <Publisher>Publisher</Publisher>
    <FileName >*log4j*.jar</FileName>
    <FileSize />
    <ModifyDate />
    <SearchPath>C:\ProgramFiles</SearchPath>
  </SearchItem>
</Search>
```

OPTION	DESCRIPTION
CATEGORY	0= Software search
NAME	Means the search in general
VERSION	Optional indication of the software version
PUBLISHER	Publisher of the software
FILENAME	Specification of the file to be searched for - wildcards (*) can be used
FILESIZE	Optional - if the size does not match, no match is available
MODIFYDATE	Optional specification of a modification date
SEARCHPATH	Optional Inclusive search path – specifies the path to search for the FileName

4.2 Additional tools -Y

Using 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:

```
<?xml version="1.0" encoding="UTF-8" ?>
<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:

Discovery-Windows.exe -Y <path\> <filename.xml>

Discovery-Windows.exe -Y C:\DocusnapScript\ToolInfo.xml

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.

For more information on how to use the add-on programs, call:

```
"%Docusnap-Installationfolder%\Tools\Discovery-Windows.exe" -H tools
```

4.3 Select Windows Components for Scan -Z

Docusnap provides the option of selecting the components to be inventoried for the Windows systems (software, hotfixes, services, etc.). You can also make this selection of components when using Discovery-Windows.exe.

The call is made via the parameter -Z <number>.

You get the necessary number in two ways:

1. Windows scan wizard

Switch to one of the Windows Scan Wizards (AD or IP). In step 3 you will find the Select Components button. Select the components to be inventoried and note the DS Script parameter.

2. Manual enumeration

Start the Discovery-Windows.exe help specific to the scan components with:

```
"%Docusnap-Installationfolder%\Tools\Discovery-Windows.exe" -H scan
```

Now you can specify the appropriate components by adding the numbers behind them.

4.4 Anonymize filenames -ANO

The .XML files created by Discovery-Windows.exe are named as follows.

- Computer name
- User or system that performed the execution of Discovery-Windows.exe.
- Date and time of execution

Example:

VPC-SDA_VPC-SDA_admin_20210323090358.xml

Running Discovery-Windows.exe with the -ANO parameter will anonymize the filename.

Example:

383ee2d1-46ae-4cbc-b2f9-b4dc437bf911.xml

By using the -ano parameter, Docusnap can no longer detect from the file name whether files from the same system already exist in the destination folder and move them to the archive folder. This means that there can be several files from one system in the folder, which will be imported afterwards. The order of the import is random. This does not ensure that the state of the most recent file is available in Docusnap.

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
09.06.2020	Version 2.0 - Revision of the HowTos for Docusnap 11
23.03.2021	Version 2.1 - Extension of the HowTo with the description of the -ANO parameter
03.09.2021	Version 2.2 – Required right edited
27.09.2022	Version 2.3 – Revision of the software and file search
13.10.2022	Version 2.4 - General revision of the HowTo
22.12.2022	Version 3.0 – Revision for Docusnap 12
19.07.2023	Version 3.1 – Added permissions for BitLocker recovery keys
23.11.2023	Version 4.0 - Revision of the HowTo for Docusnap 13
11.11.2024	Version 4.1 - Revision of the HowTo for script storage
20.11.2024	Version 5.0 - Revision of the HowTo for Docusnap 14
19.02.2025	Version 5.1 - XML syntax correction of the software search
13.03.2025	Version 5.2 - Best practice recommendation for NTFS permissions

