



DFS

Inventory DFS

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1. Introduction

Docusnap can inventory the DFS (Distributed File System from Microsoft). This means that all DFS servers, namespaces, folder targets and their share permissions are available to you in Docusnap. The inventory of share permissions is a prerequisite for performing the permission analysis.

The DFS inventory requires a WMI connection (DFS server) and an LDAP connection (Active Directory Domain Controller). The ports used in detail and the necessary authorizations are listed [in the white paper for the inventories](#).

[Chapter 2](#) describes the remote inventory.

[Chapter 3](#) describes the script-based inventory.

[Chapter 4](#) contains evaluation options.

The remote inventory of the DFS has limitations, so we recommend using the script-based inventory!

2. DFS remote inventory

2.1 Performing the remote inventory

For the network inventory of DFS start the corresponding wizard:

- Discovery - All Wizards – DFS
- Inventory - All Wizards - DFS
- All Jobs - All Wizards - DFS

In **step 1**, select your company or your customer'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 or a Discovery Service you have configured here.

Furthermore, select or enter the domain and a corresponding authorized user with their password. Use the NetBios spelling for the user (domain\user).

In **step 3**, you can now search for the domain-based DFS server. The namespace server role must be installed for the DFS servers to be found. Alternatively, you can also specify the DFS servers manually - e.g. standalone namespace servers.

2.2 Restrictions and unsuccessful inventories

2.2.1 SMB access rights to DFS folder targets could not be inventoried

If the folder targets of the DFS shares are on servers that are not namespace servers, a "double hop" occurs during the remote inventory. This double hop is not possible, access to the third system (Docusnap server - DFS namespace server - system with the folder targets) is not permitted.

In this case, the script-based inventory must be carried out.

2.2.2 Restrictions for the remote inventory

- Namespace: Administrative rights field - shows all administrators who are allowed to administer the namespace
- Replication: Status of replication groups, memberships, connections, replicated folders
- Replication: Cross-file RDC status for connections
- Replication: Publication status for replicated folders

2.2.3 Share permissions of NAS systems

Share permissions of folder targets that are available on NAS systems cannot be inventoried. In this case, the NAS systems must be inventoried as CIFS systems. The share permissions are also inventoried as part of this inventory.

3. Script-based DFS inventory

3.1 Performing a Script-based Inventory

Docusnap offers the possibility to capture the DFS information also locally, on the DFS namespace server, using a script-based inventory.

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

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

You can copy the Discovery-DFS.exe to the DFS servers and run it.

3.2 Import inventory

After the inventory is finished, you will find two files:

- dfs-DfsServerName-crypticLabel.dsi

You can import this data to Docusnap using the File 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 or a discovery service you have configured here.

Note here that the user running one of the services must have read and write access to the path selected in the next step.

Local system = storage directory can only be local

In **step 3**, select the directory where you have stored the generated DSI files.

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

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

If there are files from other script inventories (Active Directory, DNS, Windows, 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, as well as with Windows on-board means - task scheduling.

Switch to the Task Scheduler of your DFS namespace server and create a new task.

In the **General** tab, enter a name and select the security options:

Use the following user account: User with DFS permission

Run regardless of user logon

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

Weekly, repeat every 1 week on: Sunday

In the **Actions** tab you define the execution of the Discovery-DFS.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-DFS.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-DFS.exe`

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

The -O parameter redirects the result files to the specified path. The user performing the inventory must have write permissions on this path.

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\SYSTEM\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`.

The newly created task ensures that the inventory is run regularly and automatically.

It should always be ensured that the current version of the script file is used! This means that after an update of Docusnap you also exchange the script files! A best practice approach for this can be found in the chapter - [Keeping used script files up to date](#).

The next step is to set up the import of the inventory as a job. Note that during an import job, you can also automatically import the results of the other script-based inventories.

Open the File 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 customer's company.

In **step 2**, select the Docusnap Server service or a discovery service you created.

In **step 3**, select the directory where the generated DSI files will be stored:

In the recommended configuration, this folder is located locally on the Docusnap Server or on the system that provides the discovery service

Additional directories can also be added for the remaining script executions

In **step 6**, you configure the scheduling.

Besides the simple File Import, you can also use the Multi-company import. This allows you to import files for multiple companies and/or domains at the same time.

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 (read permission)

- \\SRV-Docu\DocusnapScript\$\Scripts\Discovery-DFS.exe

and to store the result files (write permission):

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

4. Evaluation options

The inventoried information of the DFS inventory can be found in the tree structure as follows:

- Your company - Infrastructure - Your domain – Network Services - DFS

Here you can now navigate through the inventoried information.

Reports are available in two places in the tree structure. Once below the respective inventory and directly below the domain:

- Your company - Infrastructure - Your domain – Network Services - DFS - Namespace - Scan date - Reports
- Your company - Infrastructure - Your domain - Reports – Network services DFS

VERSION HISTORY

Date	Description
06/04/2024	HowTo created
11/11/2024	Revision of the HowTo for script storage
11/20/2024	Version 2.0 - Revision of the HowTo for Docusnap 14
03/13/2025	Version 2.1 - Best practice recommendation for NTFS permissions