



ADDS Inventory

Inventory the Active Directory service

TITLE	ADDS Inventory
AUTHOR	DocuSnap Consulting
DATE	10/18/2022
VERSION	1.0 valid from 9/28/2022

This document contains proprietary information and may not be reproduced in any form or parts whatsoever, nor may be used by or its contents divulged to third parties without written permission of itelio GmbH. All rights reserved.

CONTENTS

1. Introduction	4
2. Active Directory Inventory	5
3. Script-based Active Directory inventory	6
3.1 Performing a Script-based Inventory	6
3.2 Import inventory	7
3.3 Automate script execution	8
4. Inventory additional ADDS properties	10
4.1 Basics	10
4.2 Collect necessary values	11
4.3 Create and assign ADDS property in Docusnap	12
5. Analysis options	13
5.1 Information in the tree structure	13
5.2 Report - Changes / Comparison Report	13
5.3 Report - List Objects	14

1. Introduction

DocuSnap inventories the Active Directory with all associated classes such as users, groups, user group memberships, group policies and computer objects.

LDAP / LDAPS queries are used for the actual inventory of the objects located in the Active Directory. In detail used ports and necessary permissions are listed in the [whitepaper for the inventories](#).

In addition to the actual inventory of the Active Directory ([Chapter 2](#)), this HowTo also describes the possibility of script-based inventory ([Chapter 3](#)).

DocuSnap inventories, in the course of the ADDS inventory, among other things the used objects with a selection of the associated properties. If properties you use are not inventoried, you can add them to the ADDS inventory later ([Chapter 4](#)).

In Chapter 5 you will find the most popular reporting options on topics related to Active Directory Inventory.

2. Active Directory Inventory

For the network inventory of the Active Directory start the corresponding wizard:

- Discovery - All Wizards - Active Directory
- Inventory - All Wizards - Active Directory
- All Jobs - All Wizards - Active Directory

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 an appropriately authorized user with their password. Use the NetBios notation for the user (domain\user).

In **step 3**, you can now set the necessary properties for the inventory:

Using the **Start search at** filter criterion, you have the option to limit the AD inventory to a specific organizational unit.

This may be necessary if your users, groups and computers etc. are available as of a specific organizational unit in a comprehensive Active Directory in which parent / subsidiaries are mapped.

If this is not the case, then you should not set a filter here!

When filtering, note the default active option within the **advanced options**: Read all users, groups and computers!

This option should be deactivated as a rule, because otherwise all users, groups and computers of the overall structure are inventoried again.

For the inventory of the group policies (GPO) a host with installed group policy management console is needed. Usually one of the domain controllers. Alternatively, the console can be installed on other systems.

The inventory of GPOs is performed using PSEXec. If an error occurs during the check, you can perform the error analysis using the Inventories via PSEXec HowTo.

In the advanced options, you can enable that the

- domain structure
- Active Directory Sites and
- structure permissions

are inventoried.

3. Script-based Active Directory inventory

3.1 Performing a Script-based Inventory

Docusnap offers the possibility to capture the Active Directory also locally, on a domain controller, using a script-based inventory.

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

- C:\Program Files\Docusnap 11\Tools\Scan-ADDS.exe.

In the simplest case, without further configuration and with full inventory scope (All classes, forest, GPOs, domain structure, permissions, locations) you can copy the Scan-ADDS.exe to a domain controller and run it there.

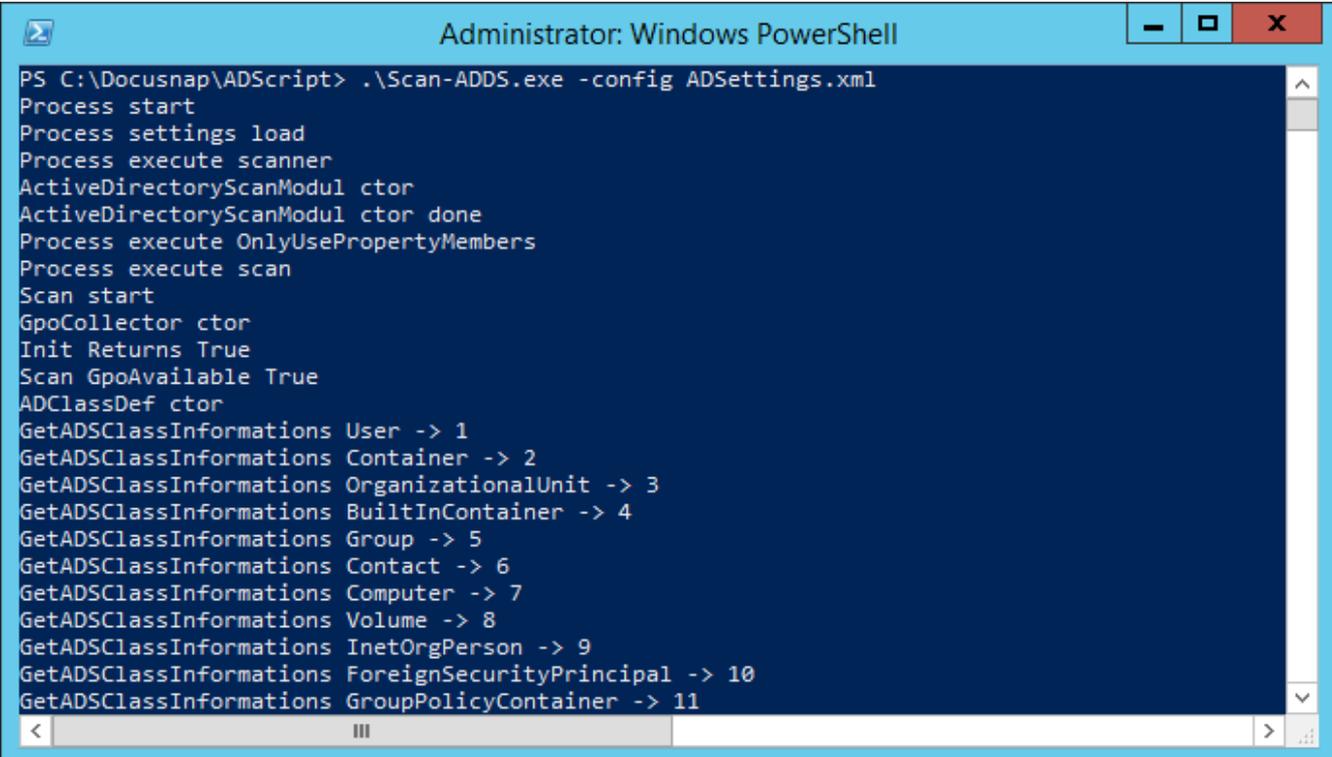
If further settings are required, the script-based Active Directory inventory can also be customized. To do this, use the Export AD Settings wizard:

- Discovery - All Wizards - Export AD Settings.
- Inventory - All Wizards - Export AD Settings
- All orders - All wizards - Export AD settings

Within this wizard, you can manage the same inventory options as the Active Directory Inventory Wizard discussed earlier.

After all options have been set, the settings will be exported to a zip file. Transfer the zip file to the target domain controller and unzip it.

Now run the Scan-ADDS.exe additionally with the parameter -config ADSettings.xml.



```
Administrator: Windows PowerShell
PS C:\Docusnap\ADScript> .\Scan-ADDS.exe -config ADSettings.xml
Process start
Process settings load
Process execute scanner
ActiveDirectoryScanModul ctor
ActiveDirectoryScanModul ctor done
Process execute OnlyUsePropertyMembers
Process execute scan
Scan start
GpoCollector ctor
Init Returns True
Scan GpoAvailable True
ADClassDef ctor
GetADSClazzInformations User -> 1
GetADSClazzInformations Container -> 2
GetADSClazzInformations OrganizationalUnit -> 3
GetADSClazzInformations BuiltInContainer -> 4
GetADSClazzInformations Group -> 5
GetADSClazzInformations Contact -> 6
GetADSClazzInformations Computer -> 7
GetADSClazzInformations Volume -> 8
GetADSClazzInformations InetOrgPerson -> 9
GetADSClazzInformations ForeignSecurityPrincipal -> 10
GetADSClazzInformations GroupPolicyContainer -> 11
```

Figure 1 - Active Directory Administration in Docusnap Administration

3.2 Import inventory

Depending on the configuration, you will find up to five JSON files containing the inventoried information after the inventory is complete:

- Domains.json
- Objects.json
- Result.json
- Sites.json
- Trusts.json

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

- Discovery - All Wizards - Script Import
- Inventory - All Wizards - Script Import
- All Orders - All Wizards - Script 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 JSON 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 (DNS, DHCP, 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 domain controller and create a new task.

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

Use the following user account: User with full read permissions to the ADDS / local system

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 Scan-ADDS.exe

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

On this share place the Scan-ADDS.exe and the JSON files

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

`\\SRV-Docu\DocusnapScript$\Account Name#Domain.FQDN1`

Within this share / subfolder the executing user can read and write

Action: Start program

Program / script: `\\SRV-Docu\DocusnapScript$\Scripts\ADS\Scan-ADDS.exe`

Arguments: `-config ADSettings.xml -O "\\SRV-Docu\DocusnapScript$\Your Account#intern.local"`

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

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!

¹ The specification of the folder structure corresponds to the standard of the global script import and causes that you are also prepared for possibly future scenarios.

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 Script Import Wizard:

- Discovery - All Wizards - Script Import.
- Inventory - All Wizards - Script Import
- All Orders - All Wizards - Script 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 JSON 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.

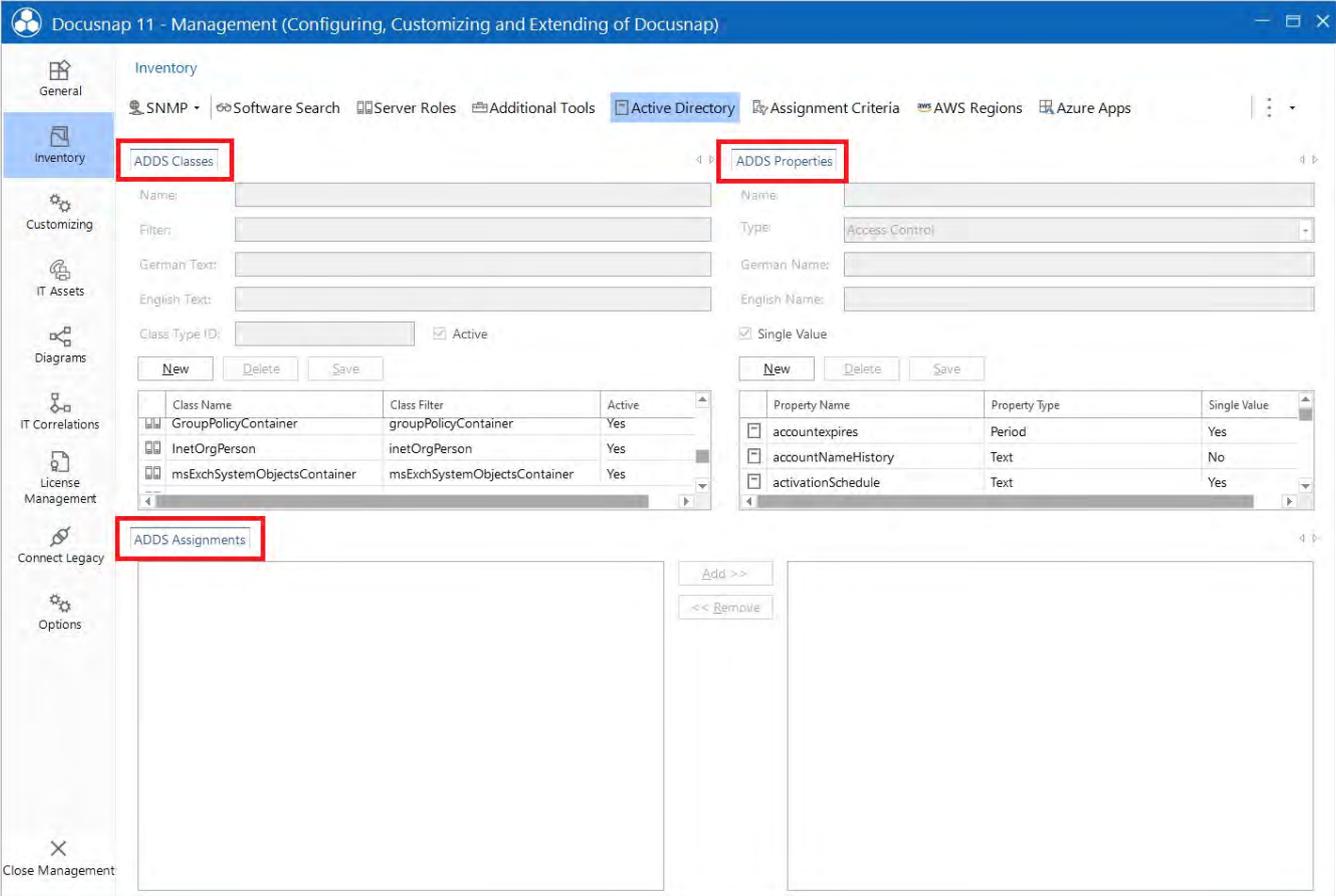
Besides the simple script import, you can also use the [global script import](#). This allows you to import scripts for multiple companies and/or domains at the same time.

4. Inventory additional ADDS properties

4.1 Basics

In Docusnap Administration, you will find Active Directory Management in the Inventory section. Within this you can

- Customize and extend ADDS classes
- Customize and extend ADDS properties
- Assign newly added ADDS properties to their associated classes (ADDS Assignments).



The screenshot shows the 'Active Directory' management interface in Docusnap Administration. The interface is divided into three main sections, each highlighted with a red box:

- ADDS Classes:** A table listing existing classes.

Class Name	Class Filter	Active
GroupPolicyContainer	groupPolicyContainer	Yes
InetOrgPerson	inetOrgPerson	Yes
msExchSystemObjectsContainer	msExchSystemObjectsContainer	Yes
- ADDS Properties:** A form for defining a new property.
 - Name: [Text Field]
 - Type: [Dropdown Menu: Access Control]
 - German Name: [Text Field]
 - English Name: [Text Field]
 - Single Value:
- ADDS Assignments:** A section for assigning properties to classes, currently empty with 'Add >>' and '<< Remove' buttons.

Figure 2 - Active Directory Administration in Docusnap Administration

4.2 Collect necessary values

The first step in adding new ADDS properties is to collect the information necessary in DocuSnap. DocuSnap requires the following values for adding new ADDS properties:

- Name

The name of the property must match the name that the property or attribute has in Active Directory.

- Type

The type defines the value of the property.

- German Name / English Name

Name of the property as it should be named during the inventory in DocuSnap.

- Single value

The checkbox indicates whether this property can be found multiple times per class (e.g., mail addresses) or whether this value exists only once (e.g., name).

Microsoft provides corresponding information within the DOCS - e.g., you can find the documentation for the [Employee-ID attribute](#).

4.3 Create and assign ADDS property in Docusnap

After the values are collected, go to Administration - Inventory - Active Directory and select New below ADDS Properties.

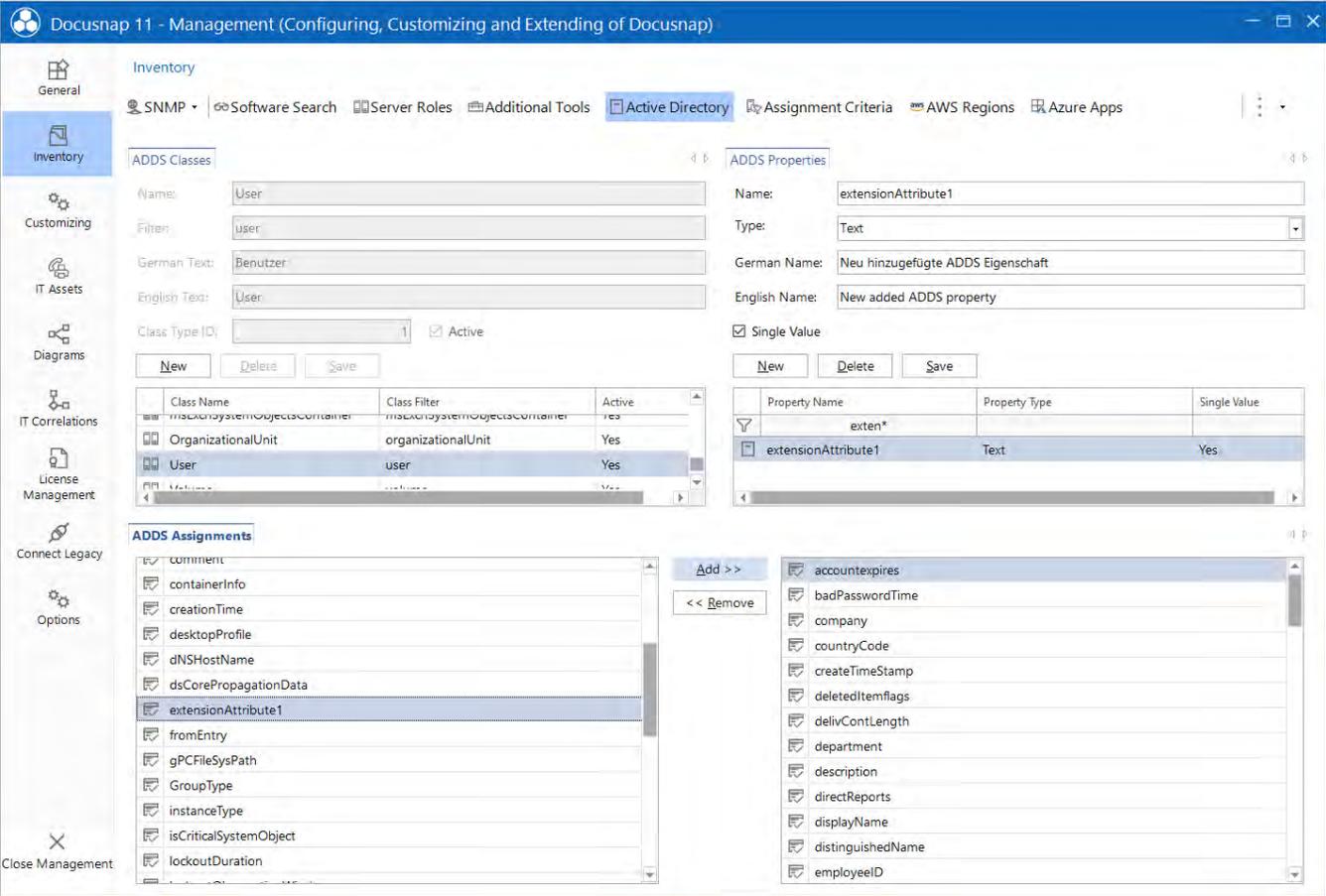
In this example, the extensionAttribute1 will be added to Docusnap:

- Name: extensionAttribute1
- Type: Text
- German Name: Neu hinzugefügte ADDS Eigenschaft
- English Name: New added ADDS property
- Single value: Yes (Active)

After saving, the new property must be assigned to the ADDS class(es).

To do this, first select the corresponding ADDS class - in this example it is the users.

Now, below the ADDS assignment, on the left side, all existing and not yet assigned ADDS properties are listed. Find the newly created property - select it and the Add button adds the new property to the class.



The screenshot shows the Docusnap 11 Management interface. The 'Active Directory' tab is selected. The 'ADDS Classes' section shows the 'User' class selected. The 'ADDS Properties' section shows a new property 'extensionAttribute1' being configured with the following details:

- Name: extensionAttribute1
- Type: Text
- German Name: Neu hinzugefügte ADDS Eigenschaft
- English Name: New added ADDS property
- Single Value:

The 'ADDS Assignments' section shows a list of properties on the left and a list of classes on the right. The 'extensionAttribute1' property is selected in the left list, and the 'Add >>' button is visible. The right list shows various classes, including 'User'.

Figure 3 - Create and assign ADDS property in Docusnap

Now when you run a new Active Directory inventory, you will find the new property on it.

5. Analysis options

5.1 Information in the tree structure

Active Directory inventory information can be found in the tree structure as follows:

- Your Company - Infrastructure - Your Domain - Active Directory.

Here you can now navigate through the inventoried structure, including the group policies.

Below the users you will find all active as well as deactivated users of the Active Directory. In the next level you can evaluate the properties and the direct group memberships of the user.

Furthermore, you have this information also for groups and computer objects.

5.2 Report - Changes / Comparison Report

The Changes report lists all changes between the current and the previous Active Directory inventory. You get an overview of

- Added and deleted user accounts
- Added and deleted groups
- Added and deleted computer accounts
- Added and deleted group memberships
- ADDS container changes (user, group or computer objects were moved)

You can find the report in the tree structure as follows:

- Your company - Infrastructure - Your domain - Reports - AD DS Infrastructure.

In addition to the Changes report, you can also find the Comparison report there. This report lists the same changes in the Active Directory, but you can choose which inventory levels should be compared.

5.3 Report - List Objects

The List objects report provides you with a flexible way to evaluate the inventoried information from the Active Directory. You can find the report in the tree structure as follows:

- Your Company - Infrastructure - Your Domain - Reports - AD DS Infrastructure.

When the report is called, a form field appears first.

- **Class:** Here you select the class for which you want to run an evaluation (user).
- **Property:** Here you select the property to be evaluated (Newly added...).
- **View:** Here you can select other properties to be displayed.

You can use the report to answer the following questions, for example:

- List all users of a department
- List all active users whose password does not expire
- List all users who have not been logged in for X days

LIST OF FIGURES

FIGURE 1 - ACTIVE DIRECTORY ADMINISTRATION IN DOCUSNAP ADMINISTRATION	6
FIGURE 2 - ACTIVE DIRECTORY ADMINISTRATION IN DOCUSNAP ADMINISTRATION	10
FIGURE 3 - CREATE AND ASSIGN ADDS PROPERTY IN DOCUSNAP	12

VERSION HISTORY

Date	Description
09/29/2022	HowTo created
