



## **Exchange Inventory**

*Inventorying Exchange and Exchange Online*

<b>TITLE</b>	Exchange Inventory
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## 1. Introduction

This document describes the inventory of **Microsoft Exchange** (On-Premise) and **Exchange Online**.

During Exchange On-Premise inventory, problems can occur due to the use of **PSExec**. This document provides solutions for solving these problems as well as alternatives for inventory.

In addition since version 11 of Docusnap it is possible to take an inventory of Exchange Online environments. This is also part of the document.

In addition to the standalone Exchange Online inventory, this is also part of the Microsoft 365 inventory. Currently (as of 10/2023), more data is inventoried in the standalone Exchange Online inventory than in the Microsoft 365 inventory:

- Public Folders
- Permissions

### Note:

If Microsoft Exchange is mentioned in the document, the On-Premise environment is always meant. The online environment is always explicitly referred to as Exchange Online.

## 2. Prerequisites

The Exchange inventory is divided into two areas:

- Active Directory
- Exchange Server
  - Mailboxes, mailbox folders, permissions

Therefore, for successful inventory, appropriate permissions are required in Active Directory as well as on the Exchange environment.

The following permissions are required for the inventory:

- Mailboxes, mailbox folders, permissions.
  - Local administrator permissions on the Exchange server(s) (PSExec connection)
  - View-Only Organization Management / Organization Management
- Active Directory
  - Read access to the Configuration Partition
  - Only domain administrators have this by default
  - ADSI Editor
    - Configuration
      - CN=Configuration...
      - CN=Services
      - CN=Microsoft Exchange
      - CN=Domain
      - CN=Administrative Groups
      - CN=Exchange Administrative Group...
      - CN=Servers

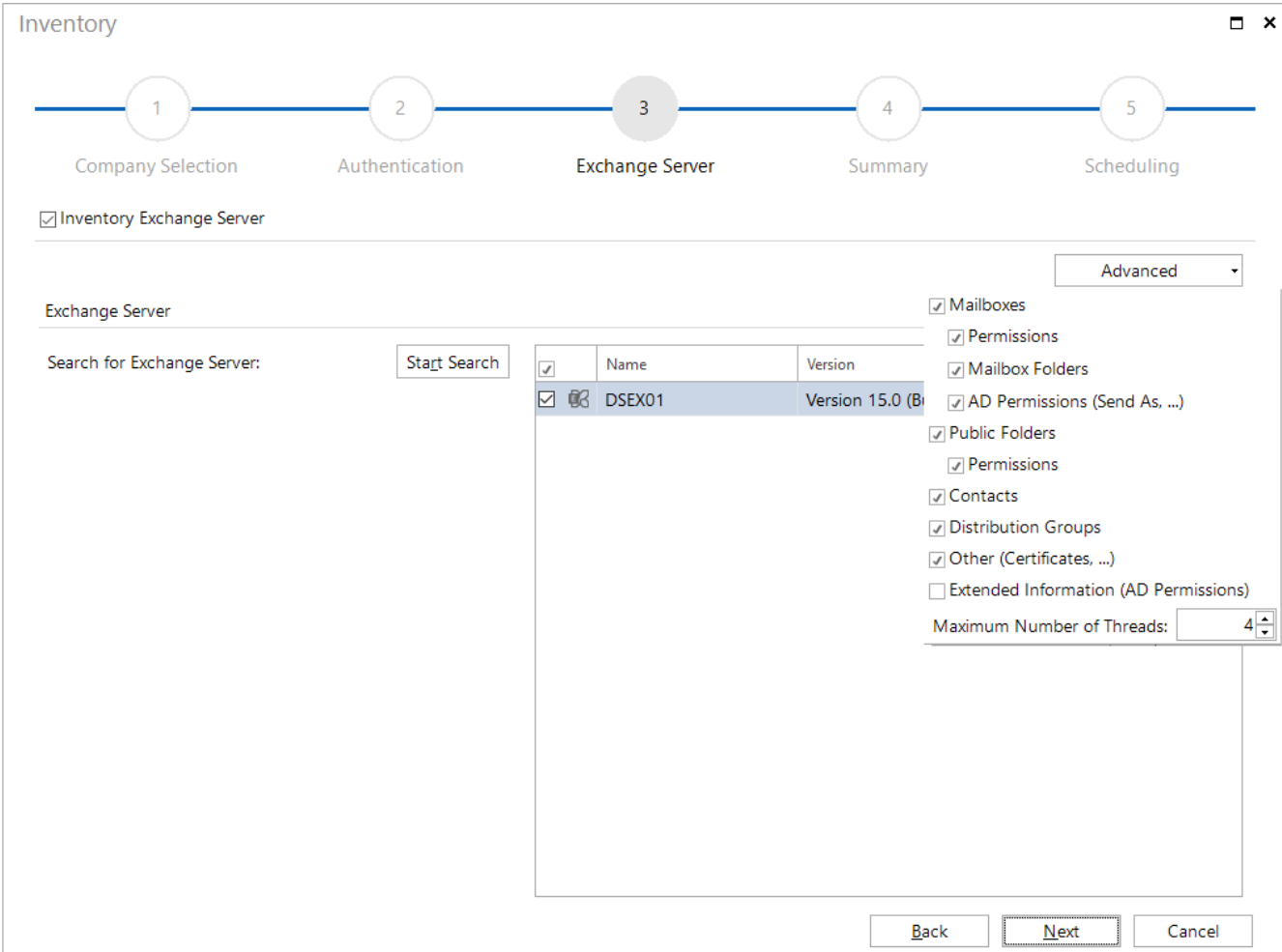
### 3. Execute the inventory

#### 3.1 Performing the network inventory of MS Exchange

For network inventory, start the Exchange Scan Wizard:

- Discovery - All Wizards - Exchange Server
- Inventory - All Wizards - Exchange Server
- All Jobs - All Wizards - Exchange Server

In step 3 you start the search for the Exchange servers. In the advanced options you can select the inventory scope.



Inventory

1 Company Selection 2 Authentication 3 Exchange Server 4 Summary 5 Scheduling

☒ Inventory Exchange Server

Exchange Server

Search for Exchange Server:

<input checked="" type="checkbox"/>	Name	Version
<input checked="" type="checkbox"/>	DSEX01	Version 15.0 (B)

Advanced

- ☒ Mailboxes
- ☒ Permissions
- ☒ Mailbox Folders
- ☒ AD Permissions (Send As, ...)
- ☒ Public Folders
- ☒ Permissions
- ☒ Contacts
- ☒ Distribution Groups
- ☒ Other (Certificates, ...)
- ☐ Extended Information (AD Permissions)

Maximum Number of Threads: 4

Fig. 1 – Exchange Inventory wizard

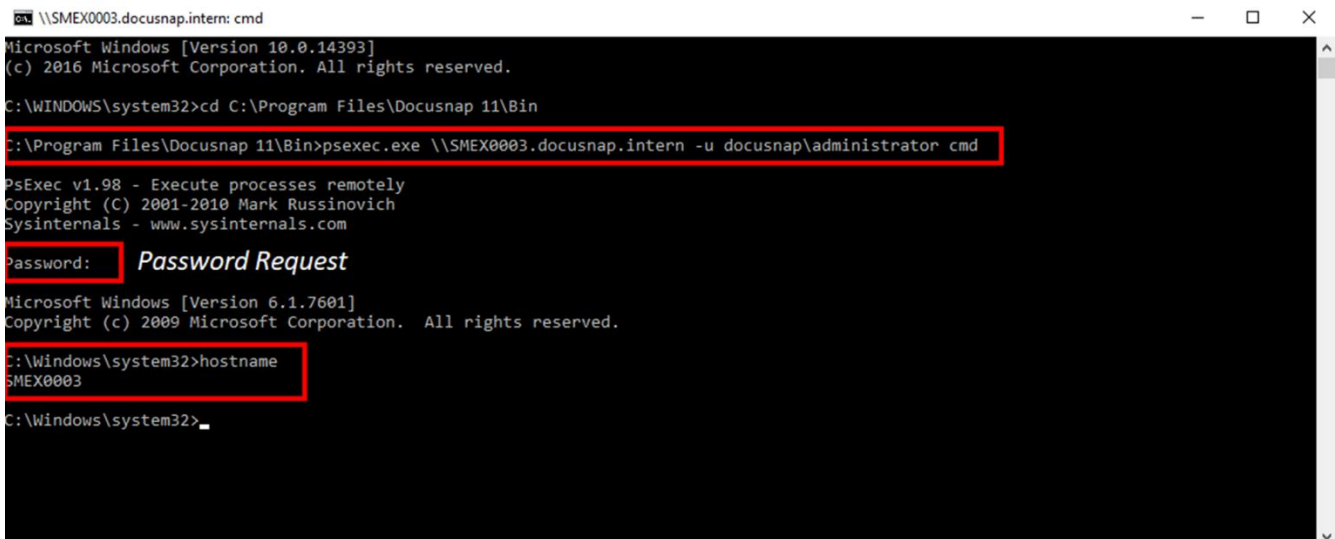
## 3.2 Check PSEXec connection

The Exchange inventory in Docusnap is performed by LDAP and PowerShell queries. The PowerShell queries are performed locally on the Exchange servers using PSEXec. PSEXec is a Windows Sysinternal tool that allows you to run programs on remote systems. In addition, a WMI connection to the Exchange Server is required.

PSEXec is classified as "dangerous" by some anti-virus products, which is why execution is not allowed by default. PSEXec would have to be classified as "secure" in this case - or you would perform the Exchange inventory using Exchange script. Furthermore, the user who performs the inventory and thus also establishes the PSEXec connection must be the local administrator on the Exchange servers.

Check PSEXec connection:

- Open command line as administrator and change to following path
  - o C:\Program Files\Docusnap 11\Bin
- Now run PSEXec with the following parameters
  - o psexec.exe \\hostname cmd
    - using the parameter -u domain\username - another user can be specified for the connection



```
\\SMEX0003.docusnap.intern: cmd
Microsoft Windows [Version 10.0.14393]
(c) 2016 Microsoft Corporation. All rights reserved.

C:\WINDOWS\system32>cd C:\Program Files\Docusnap 11\Bin

C:\Program Files\Docusnap 11\Bin>psexec.exe \\SMEX0003.docusnap.intern -u docusnap\administrator cmd

PsExec v1.98 - Execute processes remotely
Copyright (C) 2001-2010 Mark Russinovich
Sysinternals - www.sysinternals.com

Password: Password Request

Microsoft Windows [Version 6.1.7601]
Copyright (c) 2009 Microsoft Corporation. All rights reserved.

C:\Windows\system32>hostname
SMEX0003

C:\Windows\system32>
```

Fig. 2 - Check PSEXec Connection

If this connection cannot be successfully established, the anti-virus product on the target computer should be deactivated as a test. If the connection is now successful, PSEXec must be released or allowed to run within the anti-virus product.

## 4. Script-based exchange inventory

### 4.1 Performing a script-based inventory

Docusnap provides the possibility that the mailboxes and public folders can be inventoried locally on the Exchange system.

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

- C:\Program Files\Docusnap 13\Tools\Discovery-Exchange.exe

**Note:** In addition to the two files, you will find an XML configuration file in the Tools folder for the respective script. This enables AES encryption when FIPS (Federal Information Processing Standards) is enabled. If an inventory is made via script, it must also be transferred, if required. If script and XML configuration file exist in the same folder, it will be used automatically. No additional parameter is required.

In the following, only the DocusnapExchange.exe for an Exchange 2010 is specified.

### 4.2 Import inventory

When the inventory is complete, you will find a large number of files inside the folder where you ran the script file.

Move the files to a path that is accessible to Docusnap. The Script Import wizard can then be used to import the information into Docusnap:

- Discovery - All Wizards – File Import.
- Inventory - All Wizards – File Import
- All Jobs - All Wizards – File Import

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.

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 placed the generated result 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.



### 4.3 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 Exchange Servers and create a new task.

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

Use the following user account: User with the necessary Exchange permissions.

Execute independently of the 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 corresponding script file

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

On this share place the Exchange script variant and the result files

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

\\SRV-Docu\DocusnapScript\$\Company#Domain.FQDN<sup>1</sup>

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

**Action:** Start program

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

**Arguments:** -outputdir "\\SRV-Docu\DocusnapScript\$\yourcompany#intern.local "

The -outputdir 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 updating Docusnap, you also replace the script files! A best practice approach for this can be found in the chapter - Keeping used script files up to date.

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<sup>1</sup> 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 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 folder where the generated result files will be placed:

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. Through this, you can perform script imports for multiple companies and / or domains at the same time.

## 4.4 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\Exchange.exe

and to store the result files:

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

## 5. Exchange Online Inventory

### 5.1 Prerequisites

The Exchange Online inventory requires an Entra-ID-App. This forms the interface between Docusnap and Exchange Online. The necessary Entra-ID-App can be created from Docusnap. Manual creation in the Azure Portal is also possible.

You can also use the app created for Exchange Online for Azure Service and Microsoft 365 inventory.

The requirements for creation are:

- The user used must be a Global Administrator
  - Only necessary for the creation of the app
  - The app to be created will not have this permission!
  - The app will then only receive read permissions to the necessary information.
- If problems occur during the creation process, you should clear the browser cache!
  - At least default browser and Internet Explorer

### 5.2 Register Entra ID App

You can open the dialogue for creating the necessary Azure App in two ways:

- From the Exchange Online Inventory Wizard via the button Register new Entra ID App.
- In the Docusnap Administration
  - Administration - Inventory – Entra ID App Registrations

#### Register Entra ID App

Store the necessary data for:

Display Name (must not exist yet)

Primary Domain / Tenant ID

Company selection

App Description - Optional

Select Create Code

Copy the device code and select Perform Registration

Your default browser will open

Paste the device code you copied earlier

Log in with your Global Administrator

Confirm the prompt for the CLI

Now the required app for the Exchange Online inventory is created and you can perform / schedule the Exchange Online inventory.

## 5.3 Troubleshooting

If the creation of the app fails, you should check whether you can connect to Exchange Online using PowerShell. Perform this check on the Docusnap Server / DDS system.

### Start PowerShell as Admin

```
Install-Module -Name ExchangeOnlineManagement
Import-Module ExchangeOnlineManagement
Connect-ExchangeOnline -UserPrincipalName IhrUserPrincipalName@IhreFirma.com
```

Now the window for logging on to your account should open - here you still need the password. If this connection can be established, you should now contact our support: [support@docusnap.com](mailto:support@docusnap.com).

If the connection cannot be established, the error is not initially in Docusnap.

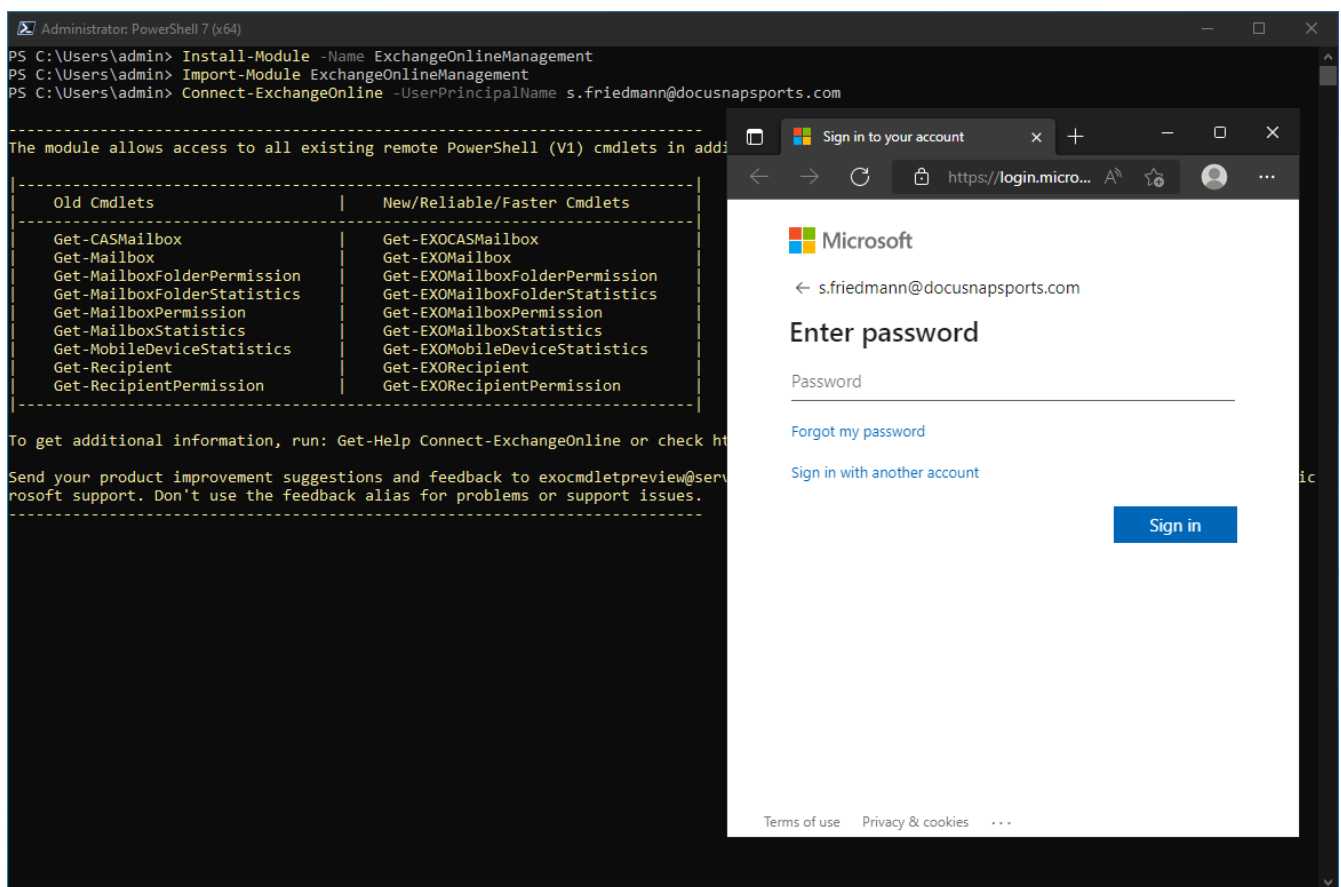


Fig. 3 - Check EXO Connection via PowerShell

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## VERSION HISTORY

Date	Description
05/10/2016	HowTo created
10/24/2018	Screenshots updated; New wizard for script import, customize parameter information
07/18/2019	Screenshots updated. FIPS note added, permissions updated
06/09/2020	Version 2.0 - Revision of the HowTos for Docusnap 11
03/24/2021	Version 2.1 - Revision of the HowTo for Exchange Online inventory
04/23/2021	Version 2.2 - Revision of the HowTo for Exchange Online inventory
01/20/2022	Version 2.3 - Revision of the HowTo for Exchange Online inventory
06/20/2022	Version 2.4 – Added Chapter Troubleshooting
12/22/2022	Version 3.0 – Revision of the HowTos for Docusnap 12
07/17/2023	Version 3.1 – Adjusted the Azure App
10/06/2023	Version 3.2 - Name change Azure Active Directory to Entra-ID
10/19/2023	Version 4.0 - Revision of the HowTos for Docusnap 13

