Discovery Services

Installation and Configuration

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1. Introduction

The Docusnap Discovery Service (DDS) is a component of Docusnap and enables inventory operations to be performed automatically in a decentralized network (e.g., site, disconnected VLAN) and the results to be transmitted to a central Docusnap server.

After successfully connecting the Docusnap Discovery Service (DDS) to the central Docusnap Server, you can manage and start inventory jobs from the central location.

The connection from the Docusnap Discovery Services (DDS) to the central Docusnap Server is made via the http or https protocol and is initiated by the Docusnap Discovery Service (DDS). All data and information are transmitted in encrypted form.

For the transmission of data and information, the http or https protocol is used as well. The results of each job are temporarily stored in files on the computer running the Docusnap Discovery Service (DDS) and forwarded to the Docusnap Server.

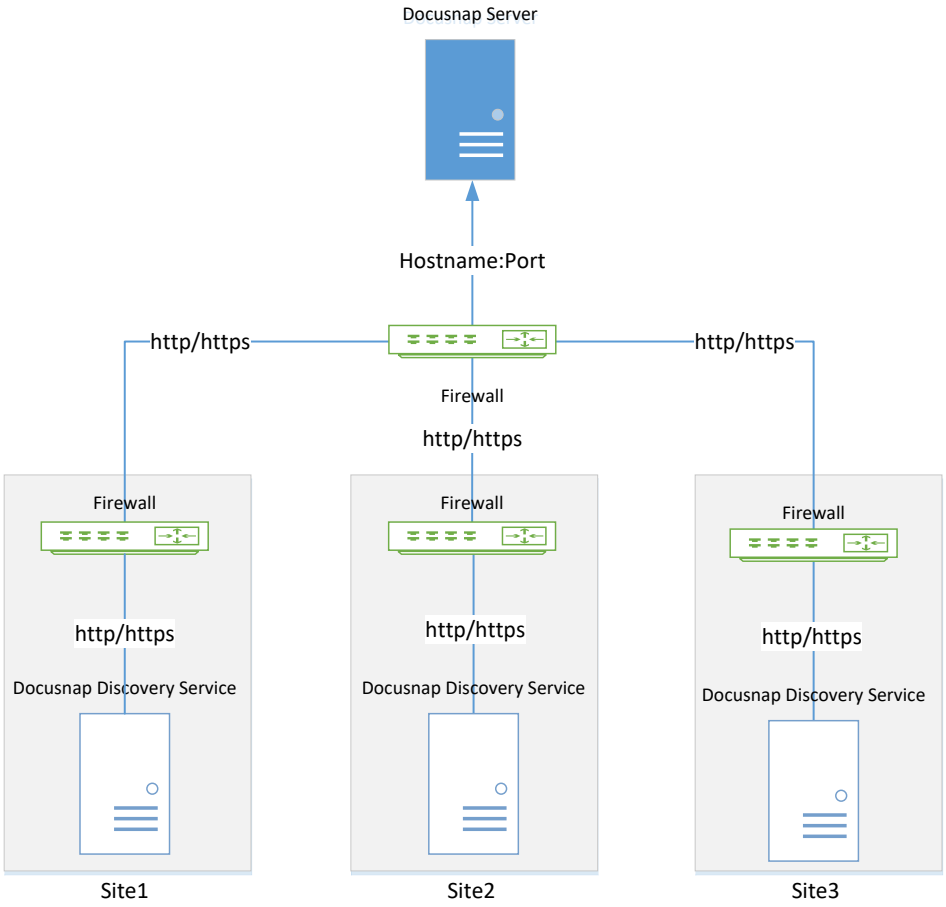

Fig. 1 – Docusnap Discovery Service – Overview of the working principle

2. Prerequisites for Using the DDS

Using the Docusnap Discovery Services requires that a Docusnap Server for the respective Docusnap database has been configured and is up and running at the central location. The Docusnap Discovery Service must be installed on any computer at the location to be inventoried.

2.1 System Requirements

- Recommended is at least Windows 10 / Windows Server 2016
- At least 2GB RAM
- At least 2 CPU cores
- .NET Framework 4.8

2.2 Prerequisites

To make sure that you will be able to successfully configure the Docusnap Discovery Service, you should verify the Docusnap Server configuration.

1. The Docusnap Server configuration must have been completed successfully. This includes enabling the Docusnap Server API. To do so, run the configuration wizard. To verify the correct configuration, check the settings.

   The procedures are described in a separate HowTo document called **Docusnap Installation and Configuration** that is available for download in the Knowledge Base-area of our website.

   It must be ensured that communication between the Docusnap Server API and the Docusnap Discovery Service is possible in both directions. The connection is initiated by the Docusnap Discovery Service. If necessary, firewall exceptions or port forwarding must be configured.

   You can check from the Docusnap Discovery Service system whether the Docusnap Server API is accessible by specifying the URL of the Docusnap Servers API in the browser and appending **/info**.

   Example: https://DocusnapServer:9001/info

   When available, the Docusnap Server version number is displayed in the browser (exception: Microsoft Internet Explorer – this offers an info.json for download).

   The Server API is used for Docusnap Web in addition to the connection and communication between DDS and Docusnap Server. If the Server API is accessible from outside, it is also Docusnap Web. For this reason, you must ensure that **Basic** and/or **Integrated Windows Authentication** and **User Management** is enabled as the authentication scheme. If this is not the case, anonymous authentication applies, and everyone can access Docusnap Web.

2. The Docusnap Server service must have been started and must be accessible from the network.
3. For inventories using the Docusnap Discovery Service, make sure that the central Firewall forwards requests to the respective Docusnap Server.
4. The Docusnap Server and the Discovery Service Host must have the same server time. A discrepancy of only a few minutes will result in denial of registration, even though the server API is accessible. For systems from different time zones, the time zones must be observed.

3. Configure, install and register the DDS

The Docusnap Discovery Service configuration is started from the Docusnap Client: In the title bar General - Docusnap Discovery Service Configuration.

Create a new Discovery Service using the New button and store the following data:

- Name
- Company name
- Location (optional)

Finish the process with Save.

Now you will see the registration data for the newly created DDS: Registration URL and Pin.

Create the installation package using the Create Package button. This contains the setup file for the DDS and the registration data.

Transfer the package to the target system, extract the package and perform the installation. The installation is divided into the steps:

- End User License Agreement
- NPCAP driver installation (recommended)
- Installation directory

Start the configuration of the DDS after the installation. The registration data will then be automatically loaded from the XML file. Execute the registration.

The DDS should now be successfully registered.

If the registration is not completed successfully, please check the prerequisites again or the checklists at the end of the document.

If you prefer a service user for the execution of the Discovery Service, you can define this user in the settings of the DDS GUI. Note here that the user has the right to log in as service and replace a token on process level (Secpol.msc - local policies - assign user rights).

4. IP segments of a DDS

The Docusnap Discovery Service can be restricted for inventorying decentralized networks or VLANs. This restriction is performed by specifying specific IP segments.

By default, the DDS have no restrictions on IP segments.

In the Docusnap Discovery Services configuration (Title Bar - General - Docusnap Discovery Configuration), you can specify specific IP segments for the DDS. Select a DDS - Edit IP Segments. Here you can now store the IP segments that are to be inventoried via the selected discovery service.

5. DDS Updates

The Docusnap Discovery Service is updated automatically. In case of an update of Docusnap, the files needed for the Discovery Service will be replaced automatically. The duration of the update depends on the available bandwidth and workload.

6. Store inventory modules / script files

Script-based inventories are available in Docusnap. Here, the inventory is executed locally on a system via an executable file. The inventoried data is stored in an XML/JSON file. The inventoried data can then be imported - also time-controlled. Script-based inventory can also be automated using software distribution tools, Windows task scheduling, group policies, etc.

The following script-based inventories are available:

- Windows
- Linux
- Mac
- Microsoft SharePoint
- Microsoft Exchange
- DNS
- DHCP
- Active Directory
- DFS
- Veeam

When using script-based inventories, care must be taken to ensure that the script files used are also exchanged in the course of an update. When using a DDS this can be done automatically.

In the configuration GUI of a DDS (on the DDS system), you will find the item Storage of inventory modules in the settings. In the specified directory, all script files are available and are also automatically updated in the course of an update.

The directory can also be a shared folder / UNC path. Note here that the files are copied / overwritten by the executing user of the Docusnap Discovery service. By default, the service is executed by the local system account.

7. Further Topics

7.1 Unattended install of a DDS

The Docusnap Discovery Service can also be installed unattended. The */Q* parameter is available for this purpose.

The installation call could look like this:

%ProgramFiles%\Docusnap 13\Setup\DocusnapDiscoverySetup.exe /Q

7.2 Creating a DDS via CSV file

In larger customer environments, with various decentralized networks, VLANs or customer networks, the Docusnap Discovery Services and their IP segments can also be created using a CSV file.

The CSV file for the Discovery Services must have the following structure. Please make sure that both the company name and the site name match the ones in Docusnap, otherwise no automatic mapping can be performed. An adjustment of the data is still possible afterwards.

DDS Name	Company	Site	Max Thread
DDS-Kiefersfelden	Docusnap GmbH	Kiefersfelden	30
DDS-Frankfurt	Docusnap GmbH	Frankfurt	30
DDS-Wellington	Docusnap GmbH	Wellington	30
DDS-New York	Docusnap GmbH	New York	30
DDS-San Francisco	Docusnap GmbH	San Francisco	30

Perform the import within the Docusnap Client - Title Bar - General - Docusnap Discovery Service Configuration.

- Select the Import button - Discovery Service Import from the top panel.
- Load the CSV file and import it.
- Now check that the correct mappings have been made and make necessary adjustments
- Additional DDS can be created using the Add button

If you save, the Discovery Services are created. Furthermore, a CSV file is created which contains the connection data for the Discovery Services creation. This data is required for the registration of the Discovery Services. This can then be carried out script based. See Docusnap Discovery Service CLI.

In the next step, the IP segments for the Discovery Services can also be imported via CSV file.

The CSV file must have the following structure. This time you have to make sure the names of the Discovery Services match so that the automatic mapping can be performed.

IP Start	IP End	Active	DDS Name
192.168.0.1	192.168.9.254	1	DDS-Kiefersfelden
192.168.10.1	192.168.19.254	1	DDS-Frankfurt
192.168.20.1	192.168.29.254	1	DDS-Wellington
192.168.30.1	192.168.39.254	1	DDS-New York
192.168.40.1	192.168.49.254	1	DDS-San Francisco

Perform the import again within the Docusnap Client:

- Select the Import button - IP Range Import from the top panel.
- Load the CSV file and import it.
- Now check that the correct mappings have been made and make any necessary adjustments
- Additional IP ranges can be created using the Add button

When you save now, the IP ranges will be added to the Discovery Services.

7.3 Docusnap Discovery Service CLI

The Docusnap Discovery Service provides a command line interface (CLI) that you can use to perform various actions and obtain information.

For example, you can start, stop, and restart the service. Information regarding the status can be requested. The configuration can also be done via the CLI.

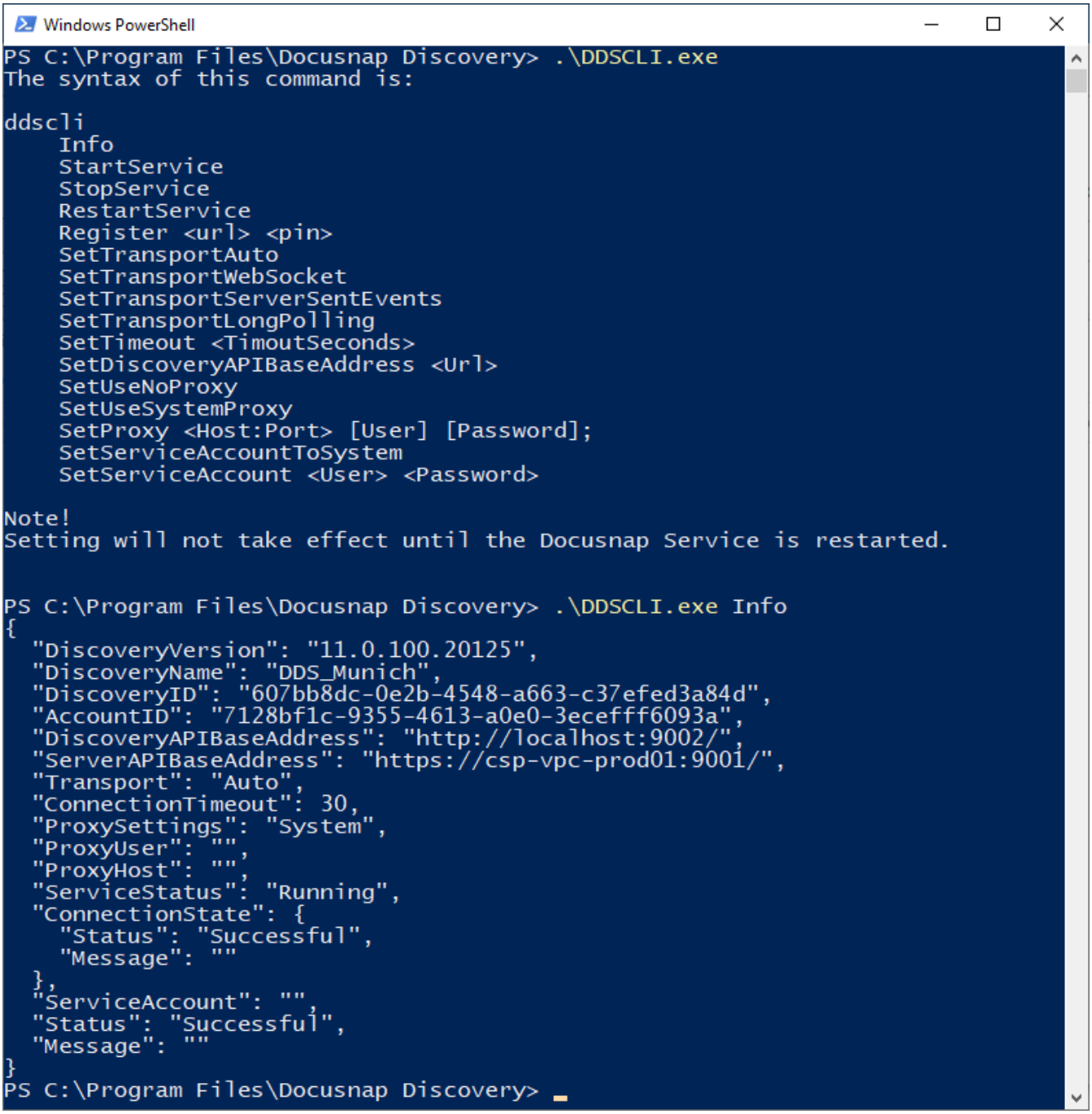

Fig. 2 – Docusnap Discovery Service CLI

The following example shows how you can register the Discovery Service using the CLI:

DDSCLI.exe Register „https://csp-vpc-prod01:9001/Discovery/Register/607bb8dc-0e2b-4548-a663-c37efed3a84d“ „F9E61CE3“

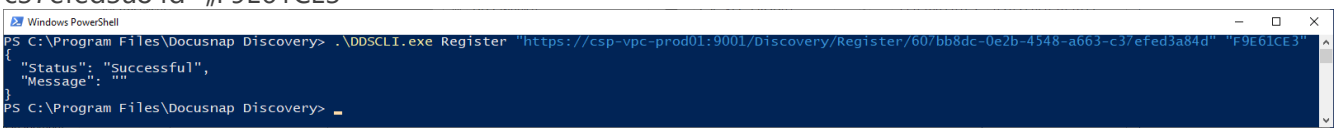

Fig. 3 – Docusnap Discovery Services CLI registration

This allows you to install and register Discovery Services through your software distribution or scripts.

8. Checklist – Error Analysis

8.1 Discovery Service connection test failed

☐Docusnap Server is running?
- ☐Yes: Continue with next step
- ☐No: Start Docusnap Server service

☐Server API locally available on Docusnap Server? http://localhost:9001/info
- ☐Yes: Continue with next step
- ☐Nein: Check your Docusnap server configuration

☐Server API reachable on discovery service host system? http://DocusnapServerAPI:9001/info
- ☐Yes: Continue with next step
- ☐No: Check Windows firewall from Docusnap Server system or other relevant firewalls.

☐Connection test in Discovery Service console successful?
- ☐Yes: Continue with next step
- ☐No: If Schannel errors occur in Windows Event Viewer contact Docusnap Support. Event ID 36874 and Event ID 36888

☐Register Discovery Service
- ☐Yes: Successful
- ☐No: Continue with next chapter

8.2 Discovery Service registration failed

The following checklist describes the error analysis in case of a successful connection test. However, Discovery Service registration is not possible.

☐Is Docusnap underlicensed?
- ☐Yes: Fix underlicensing
- ☐No: Continue with next step

☐Docusnap Discovery Service user is local Administrator
- ☐Yes: Continue with next step
- ☐No: Add user to local administrators group

☐Docusnap Discovery Service account has the right to log on as a service / replace a token at process level
- ☐Yes: Continue with next step
- ☐No: Grant permission in local security policy

☐Time mismatch between Docusnap Server and Discovery Service
- ☐ Yes: Correct time mismatch. If time zones are different, set the appropriate time zone and time.
- ☐No: Continue with next step

☐Does the registration fail only if the Docusnap Server API uses https?
- ☐Yes: Is the used service account or local system account allowed to communicate via https?
- ☐No: Continue with next step

☐Create new package for registration
- ☐Yes: Successful
- ☐No: Contact Docusnap Support

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VERSION HISTORY

Date	Description
September 02, 2016	Document created
September 20, 2018	Document revised New chapter *Docusnap Discovery Service CLI* added
October 24, 2018	Broken Link near 2.1 deleted
January 27, 2020	Screenshots updated; Prerequisites extended by further information
May 05, 2020	Version 2.0 – Revision of the HowTos for Docusnap 11
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