



## Inventorying - Microsoft Azure

Inventorying Microsoft Azure

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## 1. About this document

Docusnap inventories cloud environments. In this document we describe which steps are necessary to map information of your Microsoft Azure infrastructure in Docusnap.

[Chapter 2](#) – How to prepare your Azure environment for the inventory with Docusnap

[Chapter 3](#) – How to schedule and perform an Azure inventory with Docusnap

The last revision of this HowTo and screenshots took place on April 24, 2020. Please note that it can be that some information on the screenshots do no longer exist. However, the basic steps are still valid.

## 2. How to prepare your Azure environment for Docusnap

This chapter describes the preparation steps to be carried out in Microsoft Azure to perform an inventory with Docusnap. The **Docusnap Azure Inventory** dialog prompts you for multiple IDs. These IDs are assigned during the preparation in Azure. We recommend that you save the values in a text editor to have them at hand when you are prompted to enter them in the **Azure Inventory Wizard**.

### 2.1 Overview of the preparations in Azure

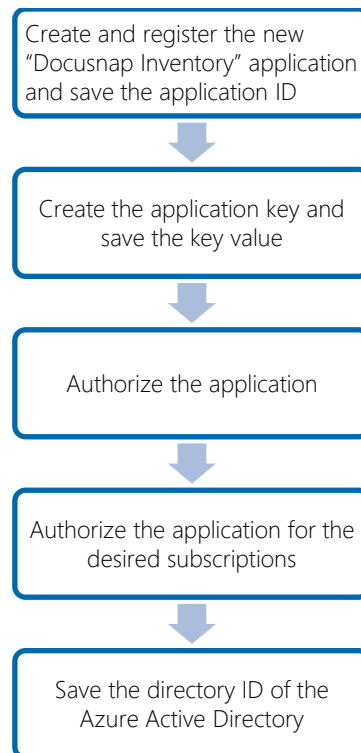


Fig. 1 – Azure preparations for Docusnap

### 2.2 Azure preparations – required permission

Before you start, make sure that you can log on as an Azure user who has **global administrator** rights.

## 2.3 Creating the new application

For the Docusnap Azure Inventory feature, a registered application is required. This application must have read access to the Microsoft Azure data. This section describes how to create such an application. In our example, the application is called **Docusnap-Inventory**. You can choose any name you like.

### 2.3.1 Starting App registration

- Select the **Azure Active Directory** item from the resource list or search
- In the Azure Active Directory view, select the **App Registrations** item under **Manage**
- Choose **New Registration**

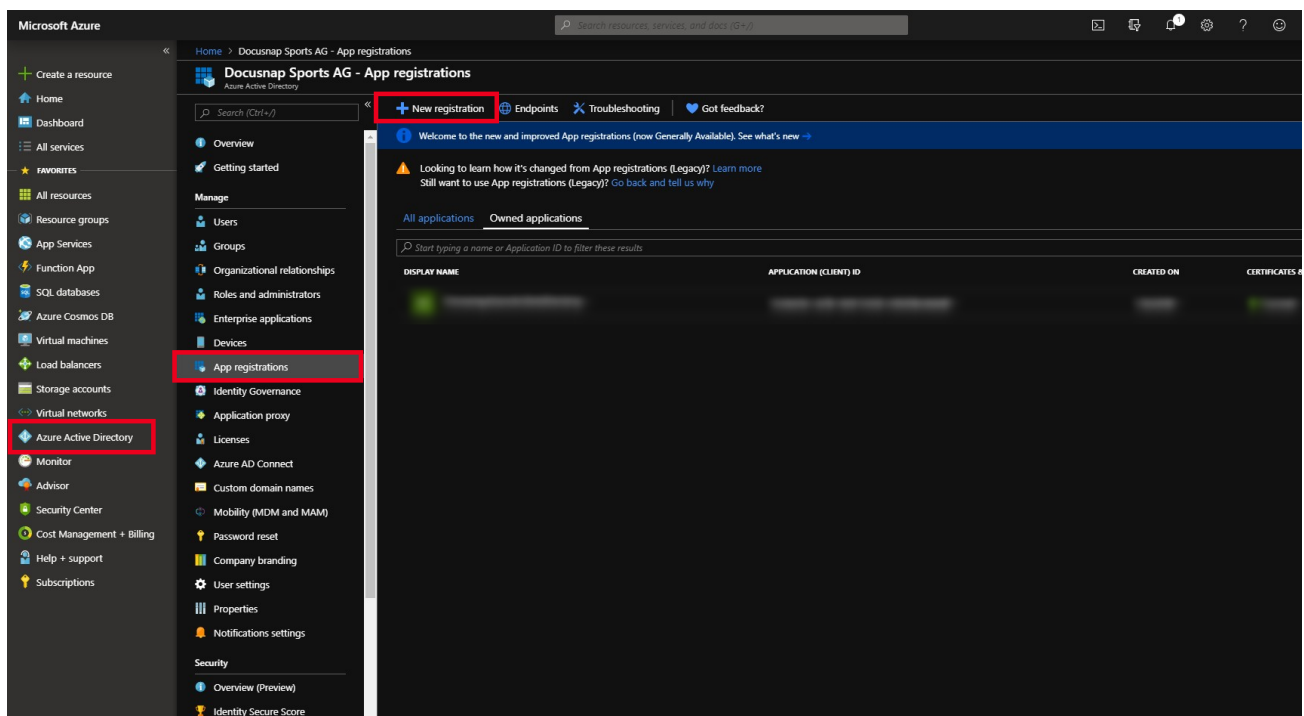
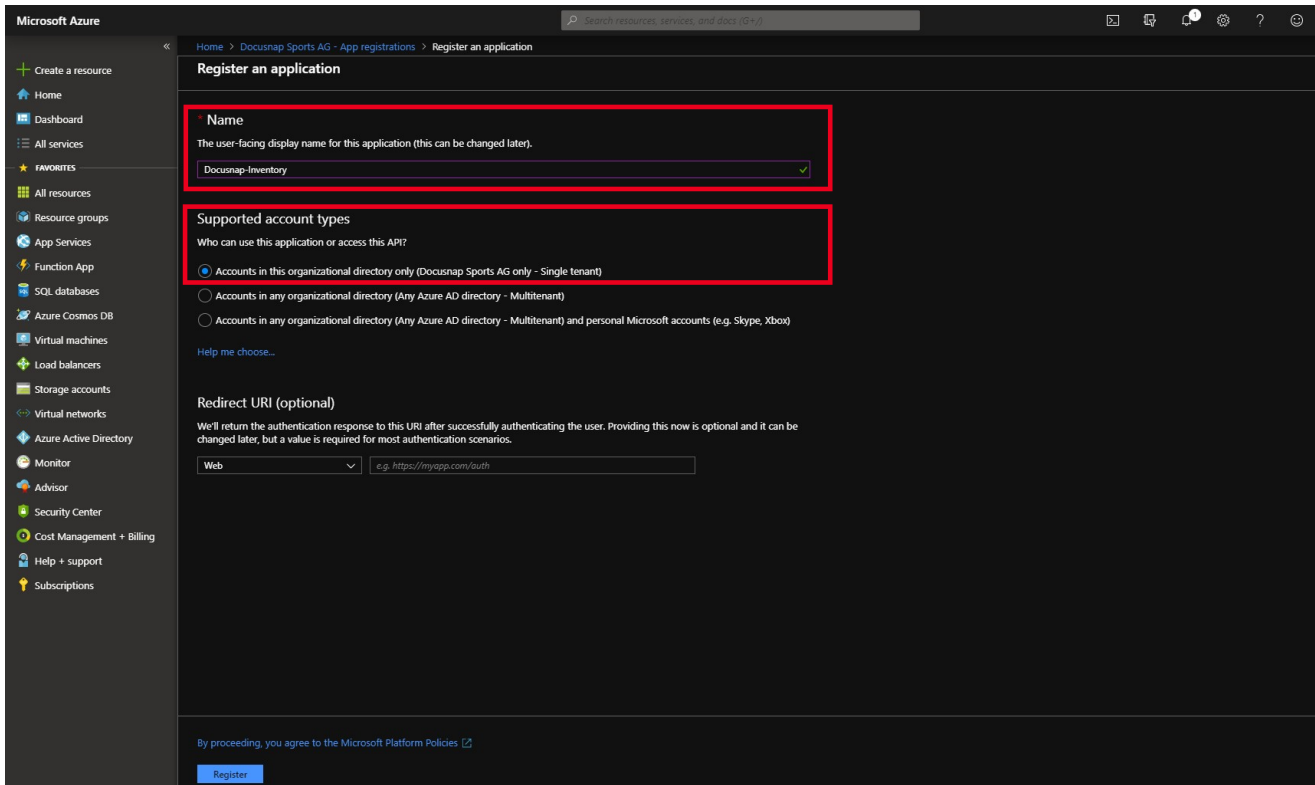


Fig. 2 – New App registration

## 2.3.2 Register the application

The following information is required to register the application:

- **Name:** Enter the application name Docusnap-Inventory.
- **Supported account types:** Here you can select who can use the application - select **Accounts in this organizational directory only**.



The screenshot shows the 'Register an application' page in the Microsoft Azure portal. The page is titled 'Register an application' and is part of the 'App registrations' section for 'Docusnap Sports AG'. The 'Name' field is set to 'Docusnap-Inventory'. The 'Supported account types' section is highlighted with a red box, showing three options: 'Accounts in this organizational directory only (Docusnap Sports AG only - Single tenant)' (selected), 'Accounts in any organizational directory (Any Azure AD directory - Multitenant)', and 'Accounts in any organizational directory (Any Azure AD directory - Multitenant) and personal Microsoft accounts (e.g. Skype, Xbox)'. The 'Redirect URI (optional)' section is also visible, with a dropdown set to 'Web' and a text box containing 'e.g. https://myapp.com/auth'. At the bottom, there is a 'Register' button and a link to the Microsoft Platform Policies.

Fig. 3 – Register the application

### 2.3.3 Determine Application and Directory ID

After the creation is completed, the overview dialog of the application is displayed. Now note / copy the application and directory ID.

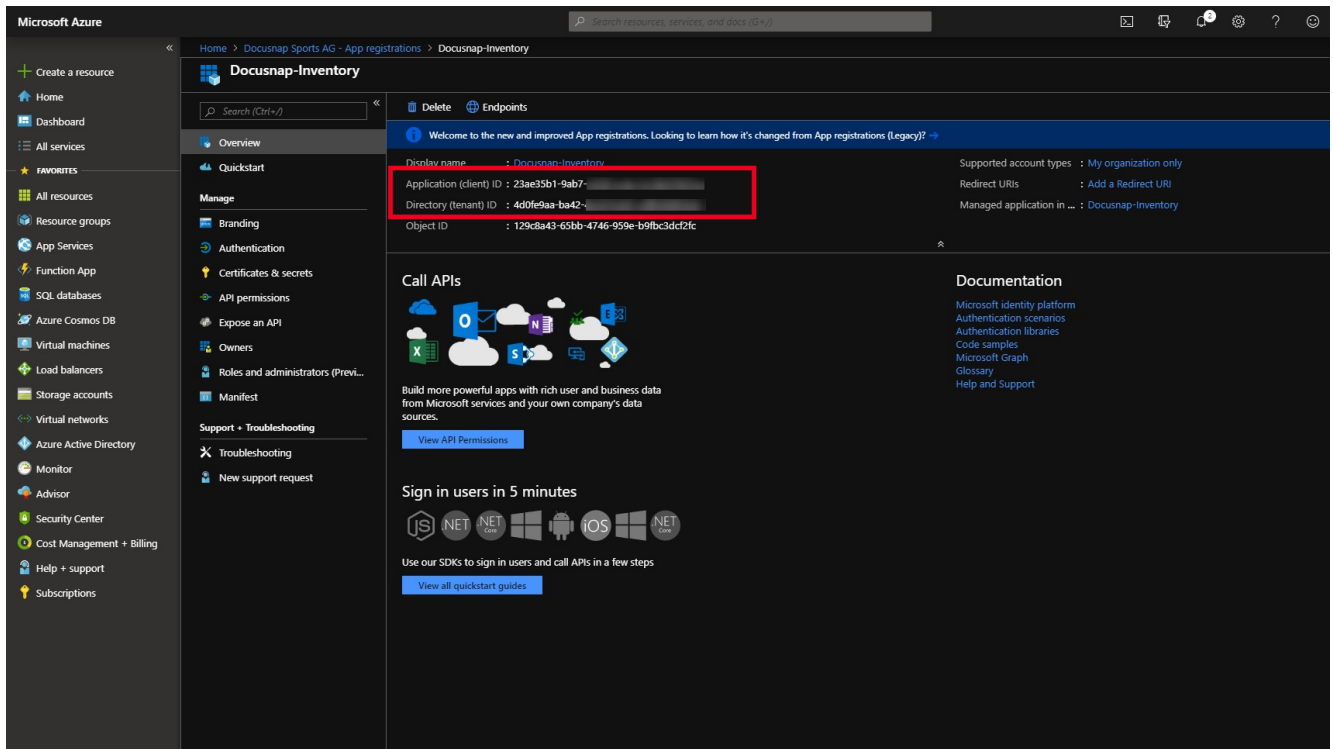


Fig. 4 – Determine Application and Directory ID



### 2.3.4 Create a client secret

Now create a client secret. In the **Manage** area, select the item

- Certificates & secrets
- New client secret
- Enter a **description** and
- the validity of the secret

**Note:** The key can only be viewed directly after creation. If the key is lost or becomes invalid, it must be recreated.

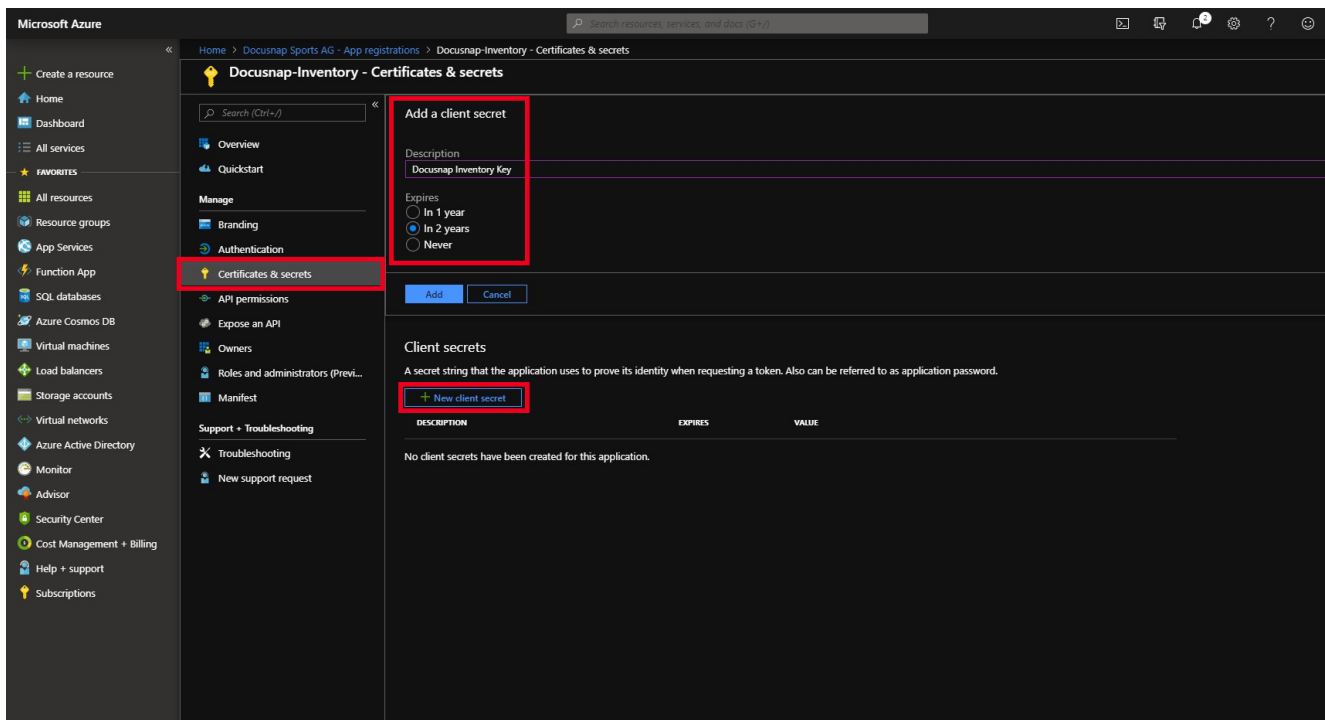


Fig. 5 – Create a secret client key

### 2.3.5 Authorizing the application – API permissions

Now the application must be authorized for the Windows Azure Service Management API.

- In the Manage pane, select API Permissions
- Add a permission
- Azure Service Management
- Now select the authorization `user_impersonation` (Access Azure Service Management as organization users) and add this authorization.

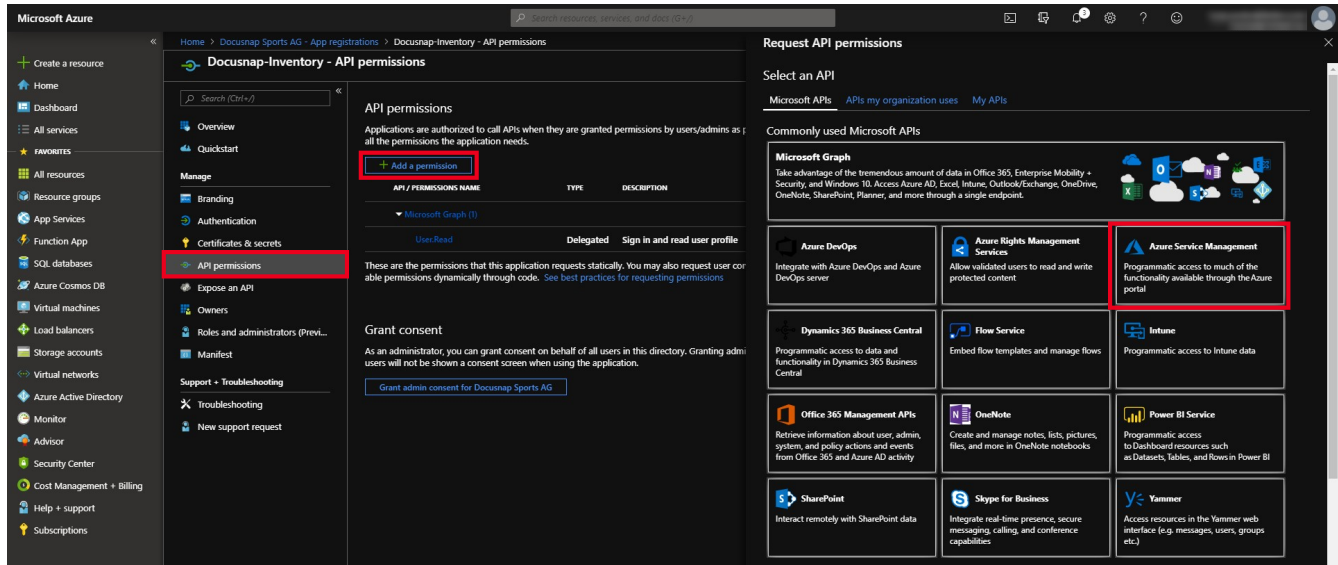


Fig. 6 – Authorize application

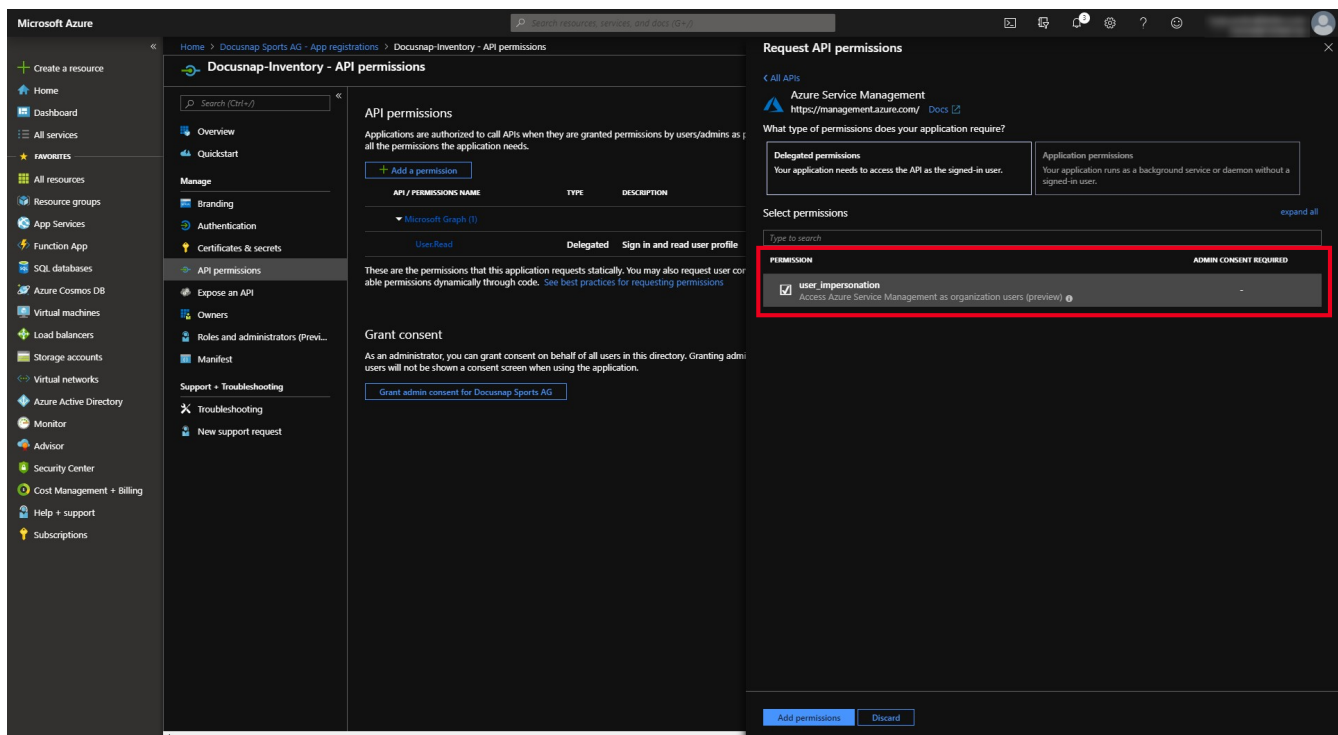


Fig. 7 – Authorize application II

## 2.3.6 Authorizing the application for all desired subscriptions

Now the application is granted read access to the required subscriptions in Azure.

- From the resource overview or search, select **Subscriptions**
- Select the desired subscription
- In the subscription selection, choose **Access Control (IAM)**
- **Add – Add Role Assignment**
- In the role selection, select the **Reader** role.
- In the Select field, enter the name of your application
- Select your application. It will now be listed under Selected Members
- Confirm the assignment with a click on **Save**

**Note:** The steps listed must be repeated for each subscription you wish to inventory with Docusnap.

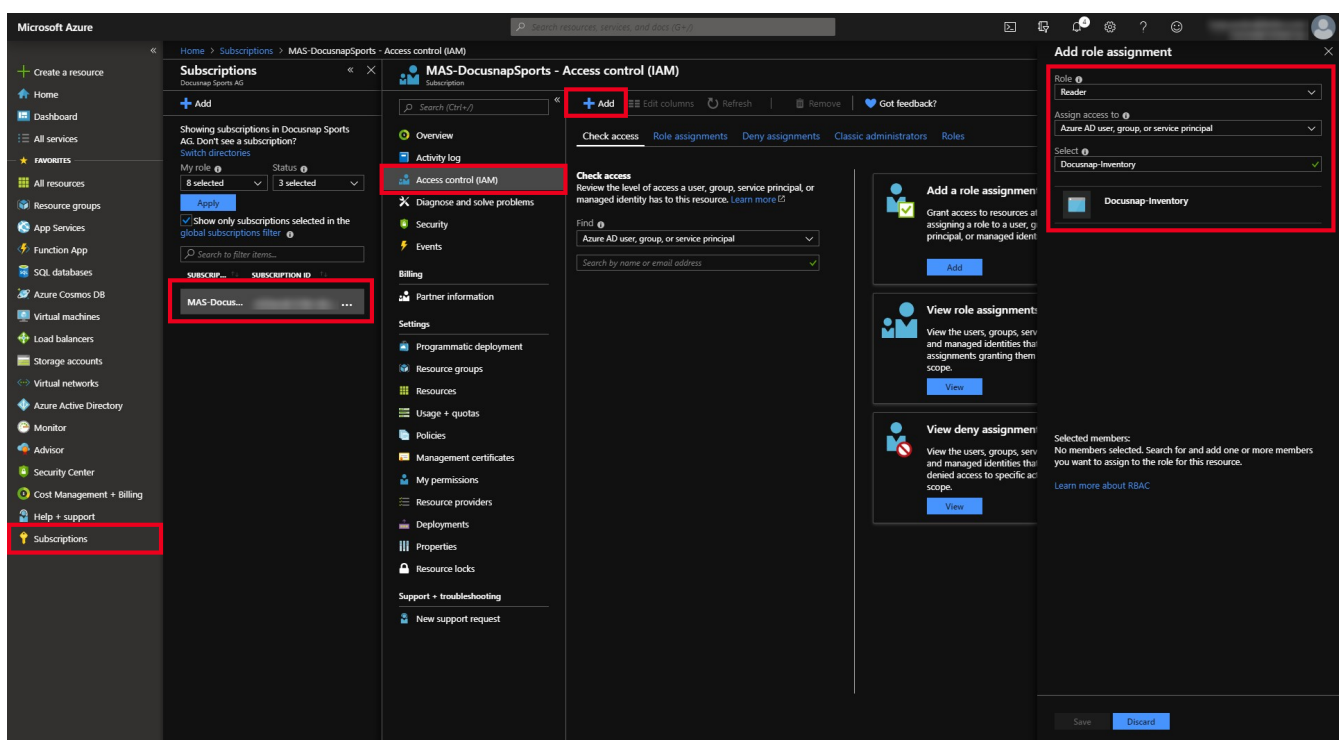


Fig. 8 – Assigning Authorization for the Subscription (Access Control (IAM))

### 3. Inventorying the Azure Cloud with Docusnap

#### 3.1 Docusnap Azure inventory wizard

##### 3.1.1 Prerequisite: proxy configuration

If your network uses a proxy, you must specify the proxy parameters in the connection settings. It is possible that you normally do not need these settings when using the other scan modules. Basically, the proxy settings must be suitable for the respective DDS (Docusnap Discovery Service). The settings shown in the exemplary screenshot are suitable for interactive Azure inventory scans. If you selected the Discovery Service of another location as the DDS, you would have to adjust the proxy settings for this DDS installation.

Adjusting the proxy settings:

- Click on the top right of the title bar on the **gear wheel (Settings)** - **General options** - **Connections**
- Perform the following **proxy settings**
  - Select **Manual Setup**
  - Under **Address**, enter your proxy URL including port
  - A suitable user with password must be entered
- Confirm your changes with **OK**

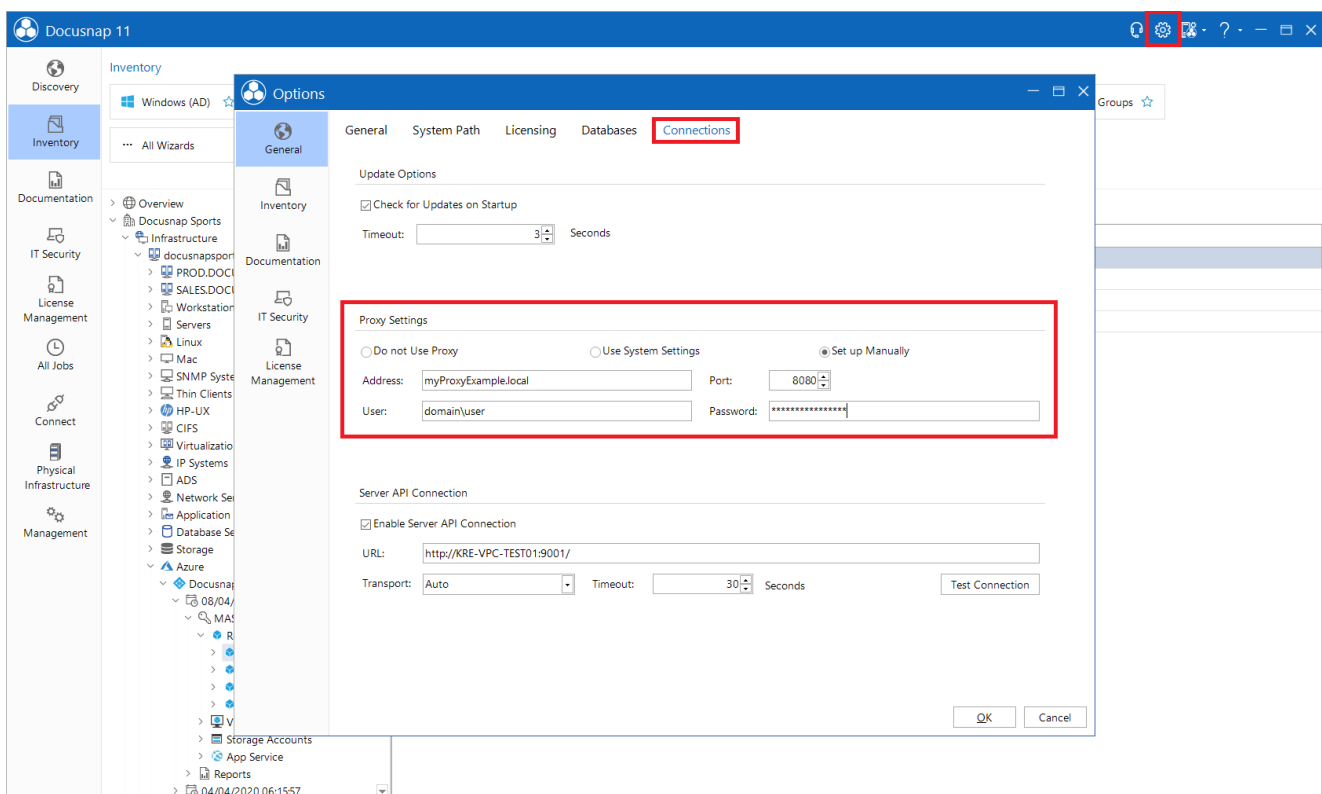


Fig. 9 – Manually entering proxy settings in the Docusnap option dialog

### 3.1.2 Inventorying Microsoft Azure

Start the Azure Inventory Wizard via the button in the **Inventory** section. If the button is not displayed on your computer, you can find it by clicking on the **All Wizards** button.

Select the desired company and domain.

Now you need the IDs and key information previously collected in Azure:

- **Display Name** is only a placeholder and can be freely selected
- **Directory ID** corresponds to the ID of your Azure Active Directory
- The ID of the previously created application is entered as the **Application ID**
- In the **Key** field, insert the value of the previously created key.

In the Subscriptions area, all existing subscriptions are displayed and selected by default. These can be deselected if required. Note that your Azure application must be authorized for all selected subscriptions.

Then click Save. If you receive a proxy error, refer to the [Proxy Configuration](#) section of this chapter.

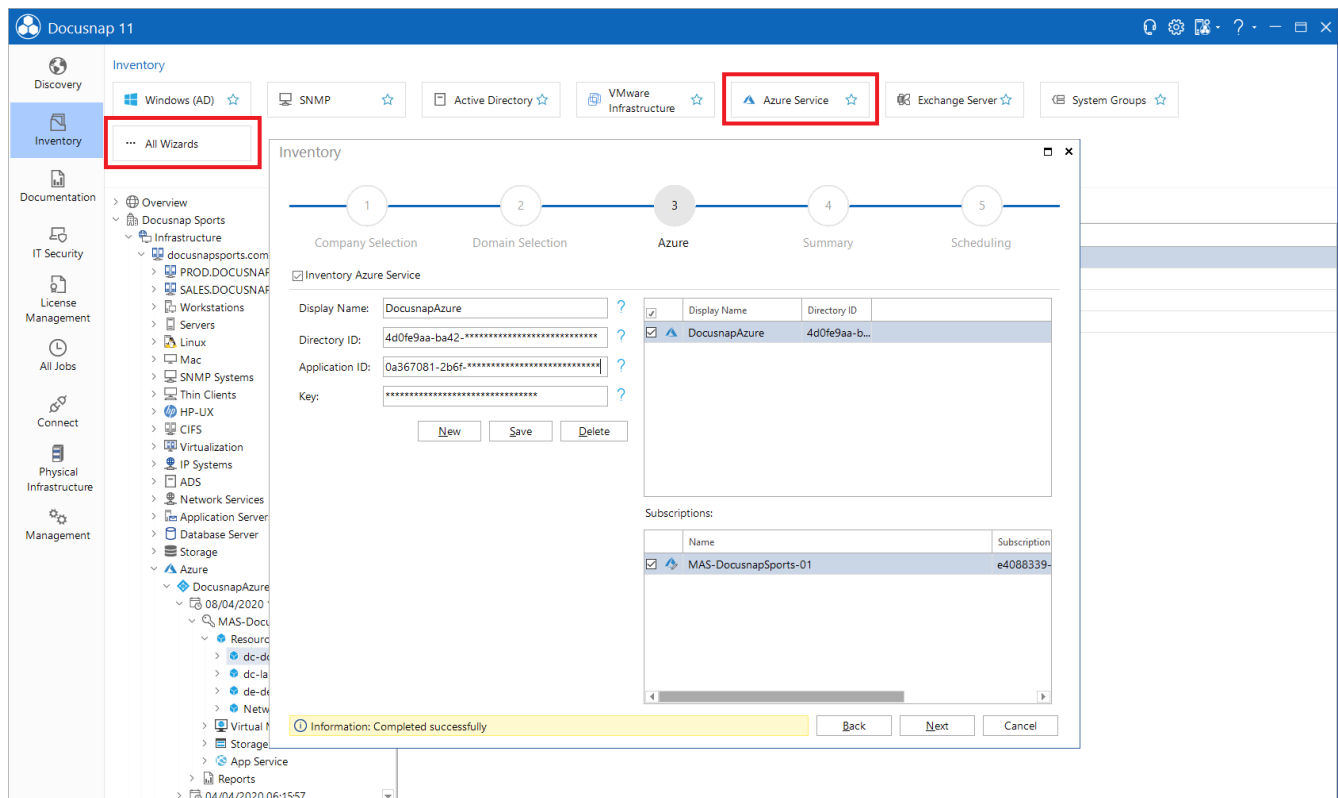
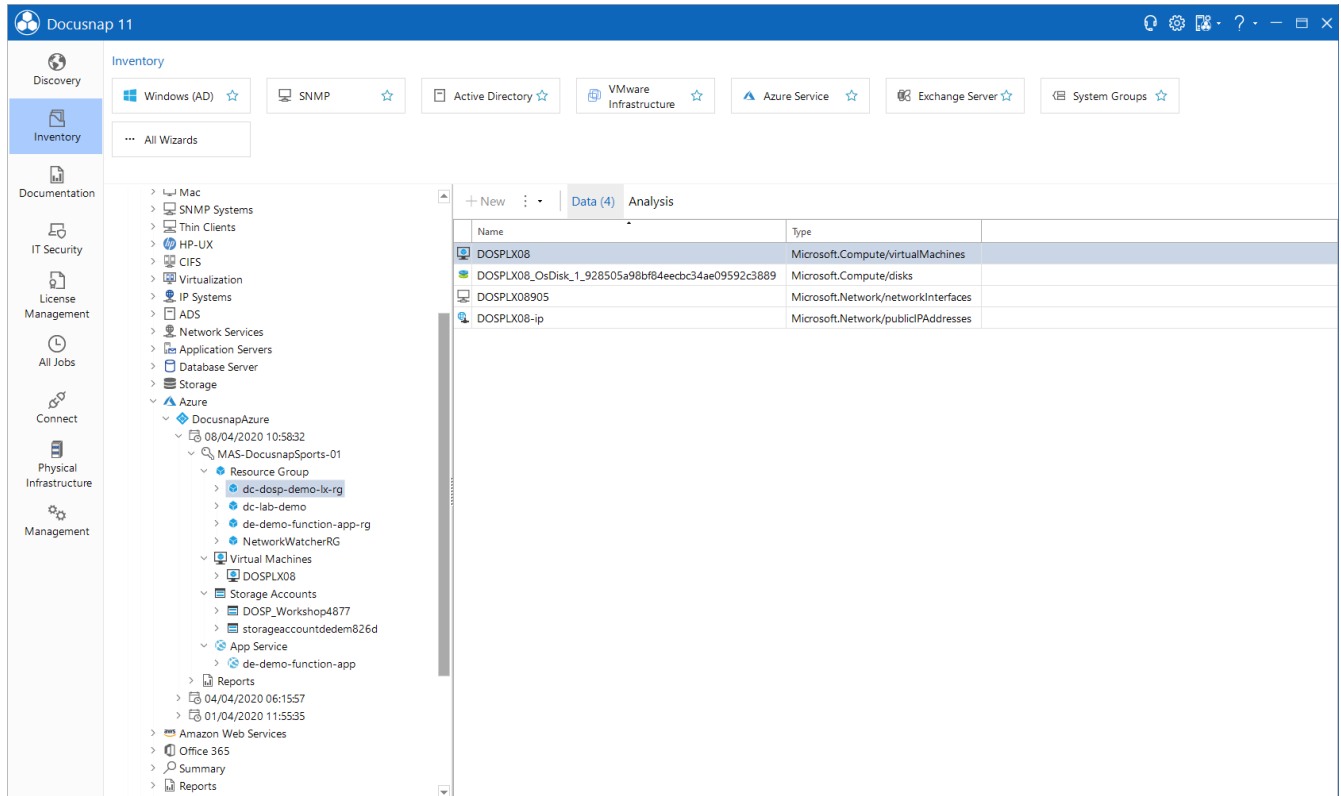


Fig. 10 – Azure Inventory Wizard

## 3.2 Azure scan result in Docusnap

The scan result will be displayed as a separate node called **Azure** in the Inventory module, below the previously selected domain within the infrastructure of the respective company.



The screenshot shows the Docusnap 11 interface. The left sidebar contains navigation icons for Discovery, Inventory, Documentation, IT Security, License Management, All Jobs, Connect, Physical Infrastructure, and Management. The main area is titled 'Inventory' and shows a tree view of the infrastructure. The 'Azure' node is expanded, showing a list of resources. The 'Data (4)' tab is selected, displaying a table with the following data:

Name	Type
DOSPLX08	Microsoft.Compute/virtualMachines
DOSPLX08_OsDisk_1_928505a98bf84e09592c3889	Microsoft.Compute/disks
DOSPLX08905	Microsoft.Network/networkInterfaces
DOSPLX08-ip	Microsoft.Network/publicIPAddresses

Fig. 11 – Display of the Azure Cloud in Docusnap

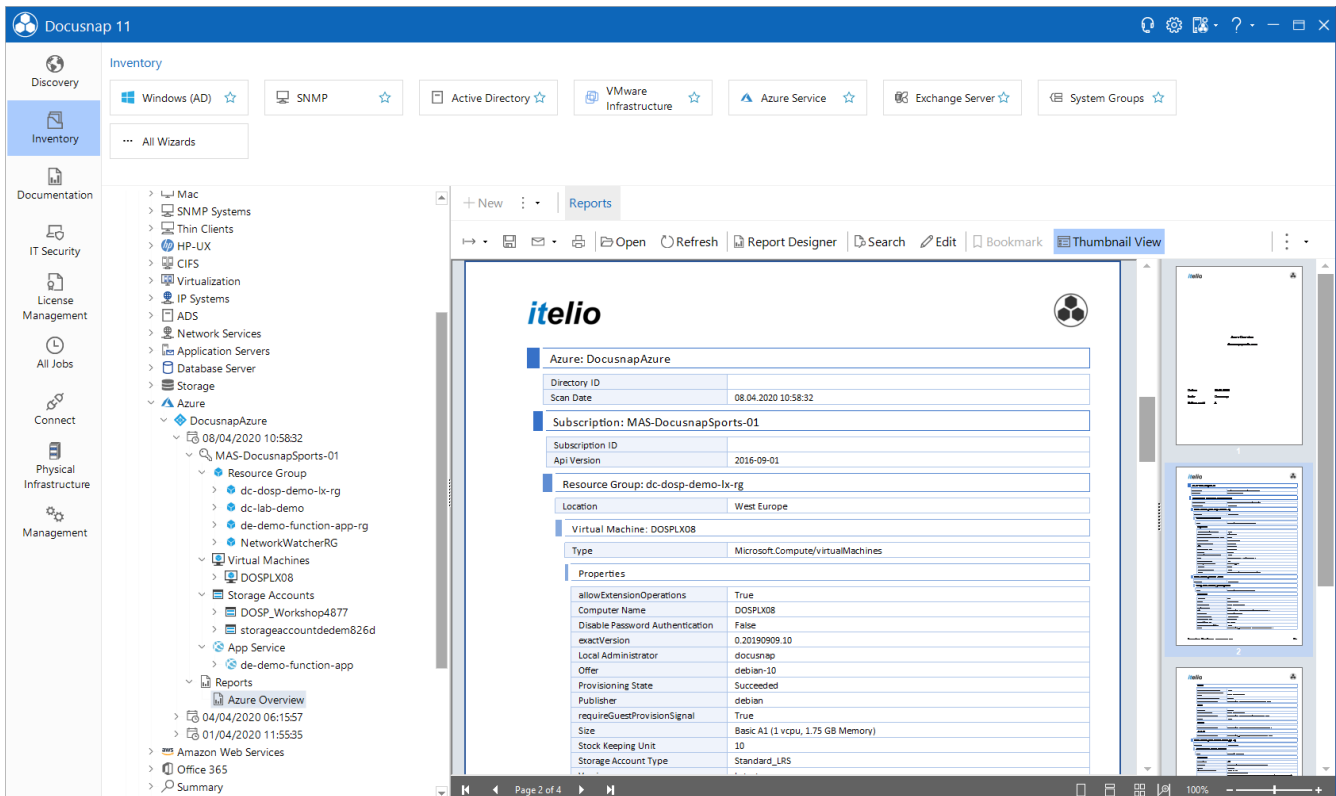
### 3.3 Azure report

You can display an overview report of your Azure Cloud by clicking **Azure Overview** below the Azure data. Before Docusnap generates the report, a dialog appears where you can optionally select the following Azure resources:

- Virtual computers
- Store accounts
- Computers with an SQL Server
- SQL databases

If you have performed several Azure inventories that have been separated from each other, you can use the **Overview Domain** report. You will find this report as follows:

- Your Company - Infrastructure - Your Domain - Reports - Microsoft Azure



The screenshot shows the Docusnap 11 interface. The left sidebar contains a navigation tree with categories like Discovery, Inventory, Documentation, IT Security, License Management, All Jobs, Connect, Physical Infrastructure, and Management. Under 'Inventory', the 'Azure' section is expanded, showing a list of reports. The 'Azure Overview' report is selected.

The main window displays the 'Azure Overview' report for 'Azure: DocusnapAzure'. The report includes the following information:

- Directory ID**: 08/04/2020 10:58:32
- Subscription: MAS-DocusnapSports-01**
- Subscription ID**: 2016-09-01
- Api Version**: 2016-09-01
- Resource Group: dc-dosp-demo-lx-rg**
- Location**: West Europe
- Virtual Machine: DOSPLX08**
- Type**: Microsoft.Compute/virtualMachines
- Properties**:
 

allowExtensionOperations	True
Computer Name	DOSPLX08
Disable Password Authentication	False
exactVersion	0.20190909.10
Local Administrator	docusnap
Offer	debian-10
Provisioning State	Succeeded
Publisher	debian
requireGuestProvisionSignal	True
Size	Basic A1 (1 vcpu, 1.75 GB Memory)
Stock Keeping Unit	10
Storage Account Type	Standard_LRS

Fig. 12 – Azure Overview report

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## VERSION HISTORY

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Date	Description
January 25, 2018	Version 1.0 completed
October 24, 2018	Changed Screenshots
August 19, 2019	Changed Screenshots
April 23, 2020	Version 2.0 - Revision of the HowTos for Docusnap 11

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