Analysis – Diagrams and IT Correlation

Visualization and evaluation of relationships between IT objects

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1. Introduction

An IT object can take different forms within Docusnap. This means that a VM can initially be a Windows system. In addition, this system has a computer account in Active Directory and is used as an SQL server and DHCP server. It is also backed up via a Veeam backup job. With IT correlations, these relationships of objects can be resolved and analyzed centrally in one place.

Diagrams offer the possibility to visualize the relationships between these objects. Diagrams can be created manually or automated using IT correlations.

- The following HowTo will cover creating the diagrams and using the IT correlations.
- Chapter 2 describes the diagrams
- Chapter 3 explains the functionality of the IT correlations
- Chapter 4 describes the dependencies for systems
- In Chapter 5, you will learn how to create your own IT correlations

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2. Diagrams

As mentioned in the introduction, diagrams offer the possibility to create visual evaluations of relationships between objects. On the one hand, objects from the inventory or predefined shapes (special) can be used.

Diagrams are created in the documentation area and categorized in folders. You can fill a newly created diagram using the inventory or special objects on the right-hand side. The objects are inserted for this by drag & drop. Objects stored in the diagram can be linked and grouped together.

For a connection, select the desired object and open the context menu via a right-click and select **Connect with**.

For connections, the following information can also be added and displayed in the diagram if desired:

- Name
- Connection type
- Priority
- Protocol
- Description

In order for the additional information to be displayed in the diagram, select **Fields** from the action area and then select the fields to be displayed.

To group several objects, select them and right-click to open the context menu and select Group. Groupings can then be named via the context menu.

Via Resolve **Descendant/Ancestor** you can resolve the descendants and ancestors located in the tree structure for a selected object, for example to display the processor of a server. To do this, select the object and right-click in the context menu to select the corresponding option.

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3. IT Correlation

With the options shown so far, relationships between objects in diagrams are mainly created manually. With the correlations you have the possibility to resolve relationships in diagrams automatically.

3.1 Standard IT correlations

The following correlations are available by default:

- Windows workstations
  - Active user
  - SQL Server
  - ADDS organizational unit
  - DNS Server
  - DHCP Server
  - Gateway
  - Virtualization host

- Windows Server
  - Local administrators
  - SQL Server
  - ADDS organizational unit
  - DNS Server
  - DHCP Server
  - Standard Gateway
  - Virtualization host
  - Backup

- Linux
  - Hypervisor

- VMware
  - vSphere
    - Datacenter
  - *Datacenter*
    - Cluster
  - Cluster
    - Host
  - Host
    - Datastore
    - VM

- Hyper-V
  - Cluster
    - Host
  - Host
    - VM

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- ADS
  - User
    - ADDS Organizational unit
    - Services
    - Exchange
    - SQL logins

- Exchange
  - Organization
    - Server
  - Server
    - Database
  - Mailbox
    - Database

- SQL Server
  - Database

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3.2 IT correlations in diagrams

The above mentioned correlations can all be used in diagrams.

In this example, an analysis is created of an Active Directory user to see which services this user starts on systems.

For this purpose, the user on the right can be added to the diagram from the ADDS inventory via drag & drop.

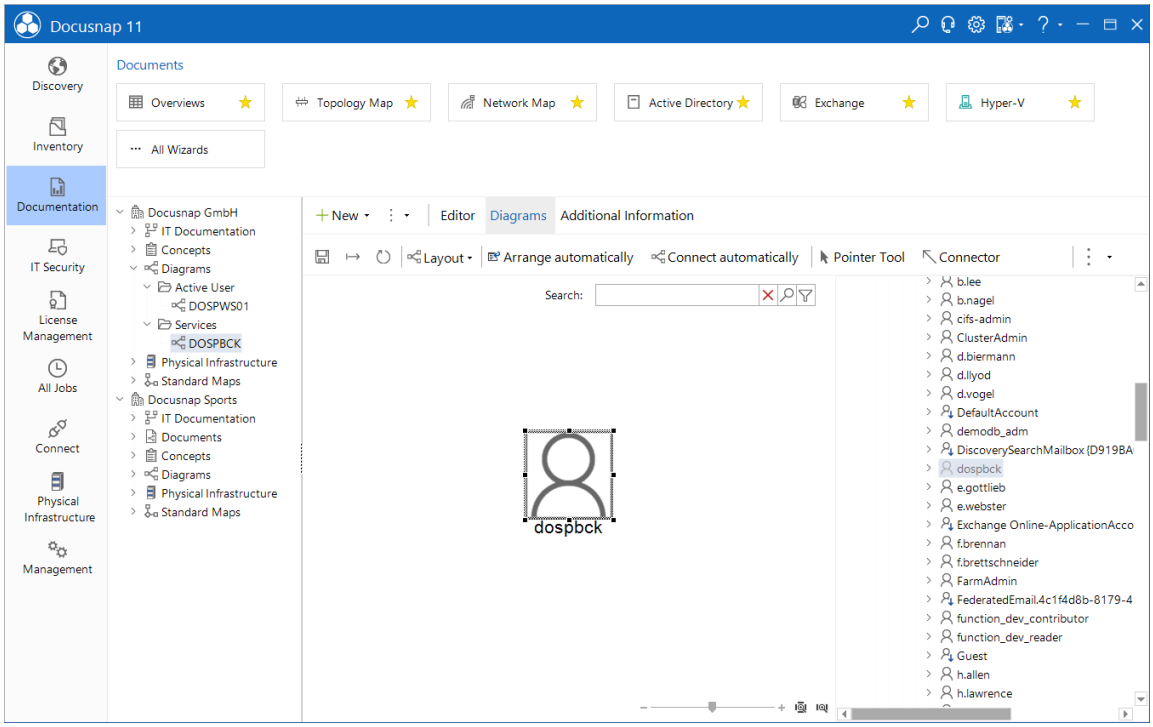


Figure 1 - Add User

When resolving the correlations, two options are available

1. Resolve one or more levels of all correlations
2. Resolve only a single group

These options can be selected by right-clicking on the object.

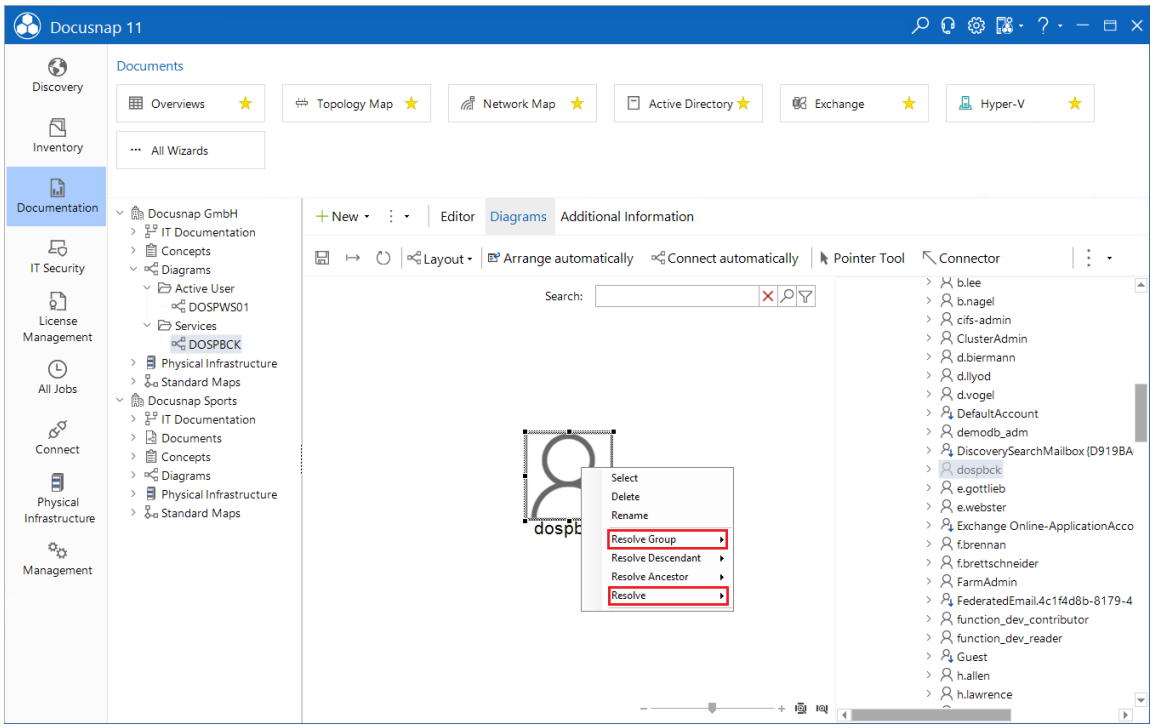


Figure 2 - Resolves Object

To resolve the services and also immediately the systems, the user is selected with a right click and then two levels are resolved.

Thereby all groups were resolved now. However, except for the Services group, these can all be selected and deleted with DEL.

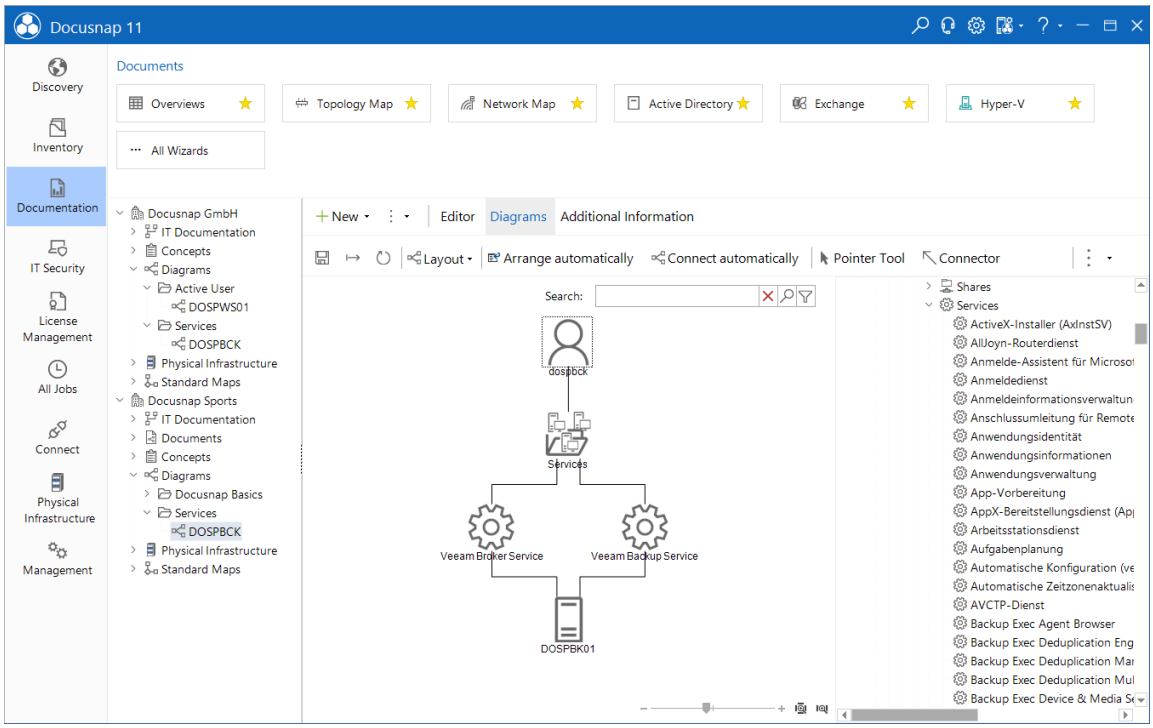


Figure 3 – Services

This diagram can now be exported directly or used in a concept.

4. Analysis

The IT correlations can not only be used in diagrams but can also be accessed directly via the object in the inventory. To do this, select the corresponding object in the inventory and select the Analysis tab.

Here, the object selected on the left in the tree is in a central position. The available groups, with the predefined correlations, are displayed as a star around this object.

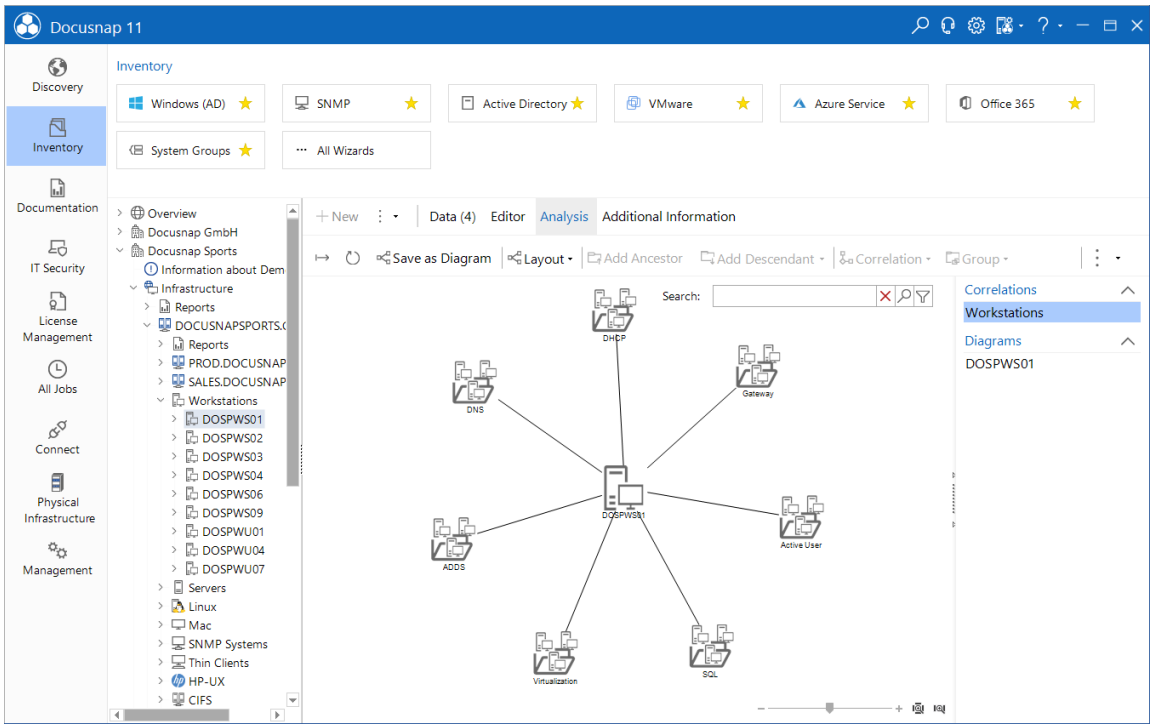


Figure 4 - Default View

In this example, a workstation is selected and the Active User group is resolved with a right-click.

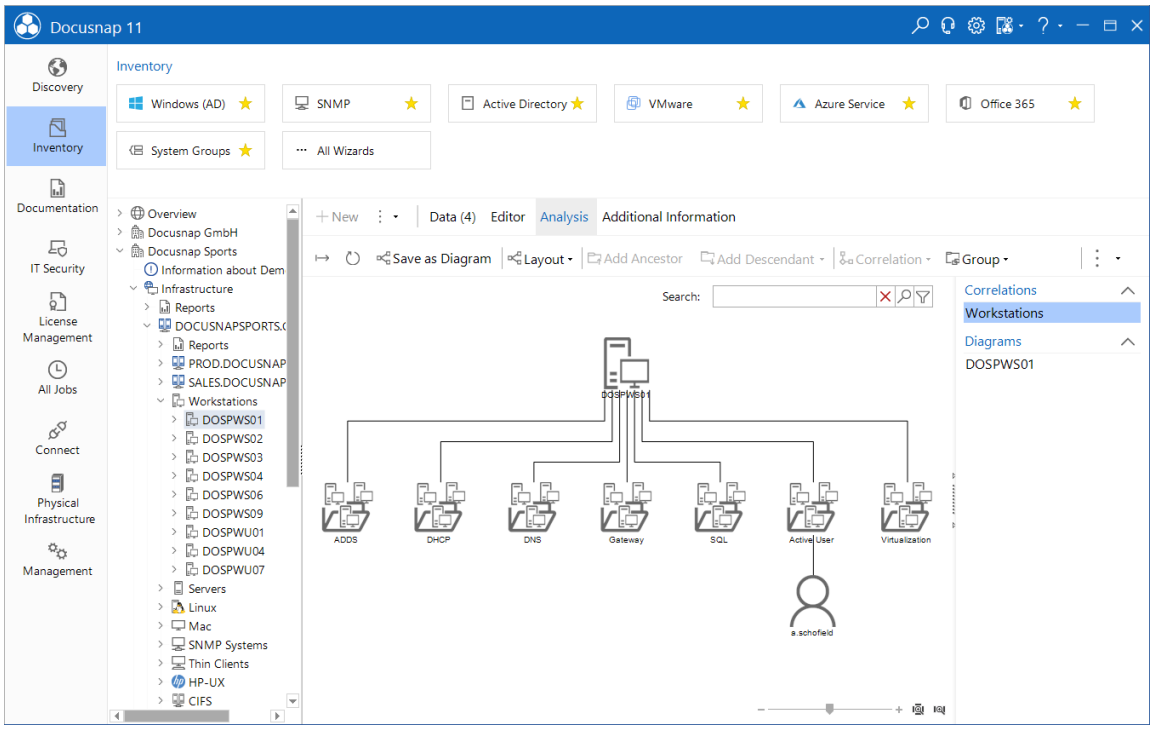


Figure 5 - Active User

With a right-click on the user, this can now be resolved one more level. Again, all or only a specific group of the user can be resolved.

Here, data from the Windows, ADS and Exchange inventories are now linked together and do not have to be searched for manually.

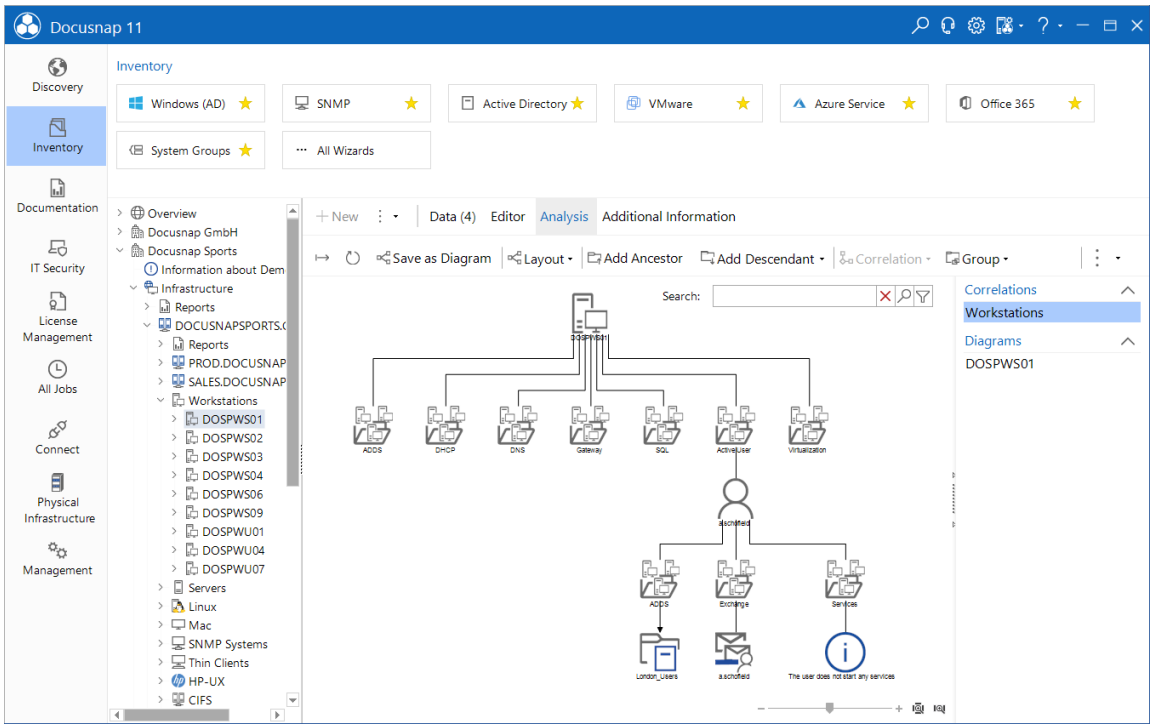


Figure 6 – Analysis

The created analysis can now be created directly as a diagram and is then available in the documentation for further editing.

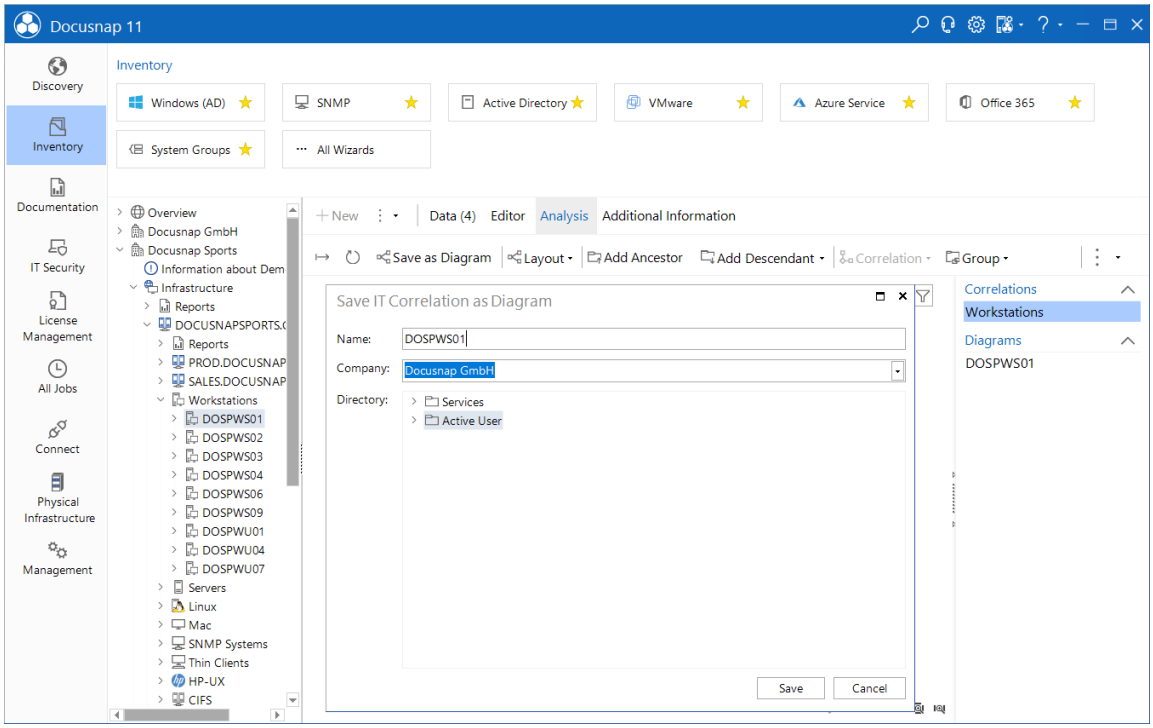


Figure 7 - Save as Diagram

In the **Analysis** tab you can also see if this object is already used in a diagram.

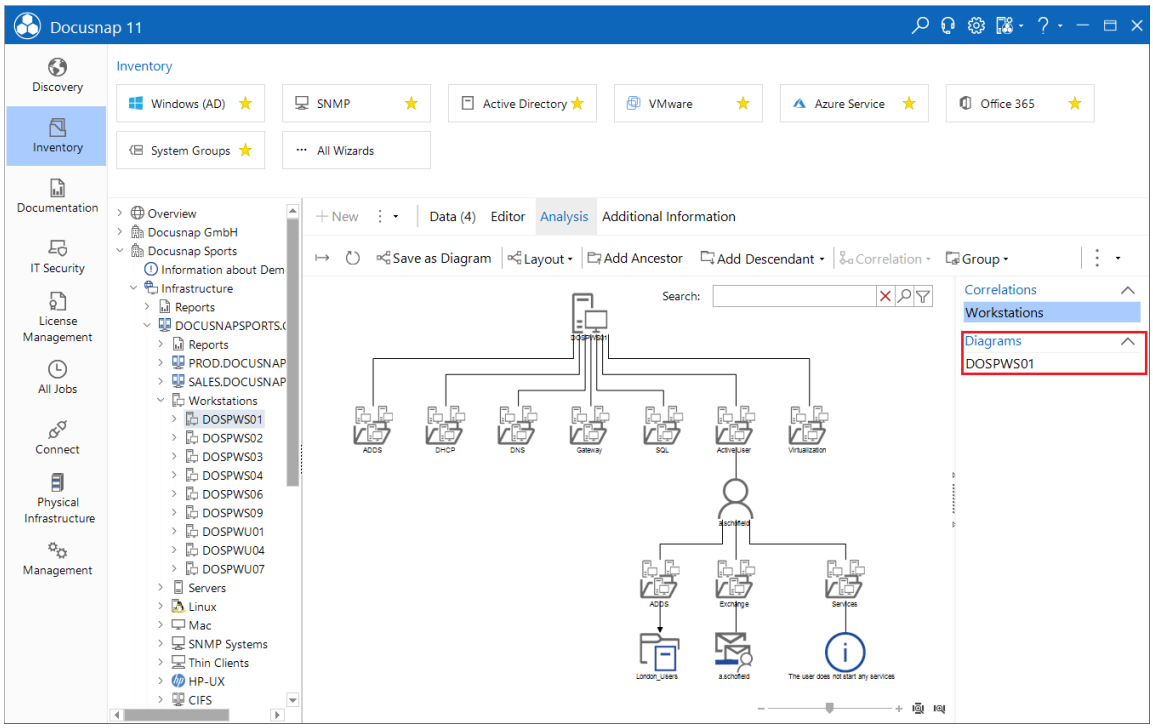


Figure 8 - Existing Diagram

5. Create IT Correlations

By default, there are already some predefined correlations in Docusnap. These can be extended with your own correlations in the administration.

To do this, open the Docusnap Administration and then the IT correlations.

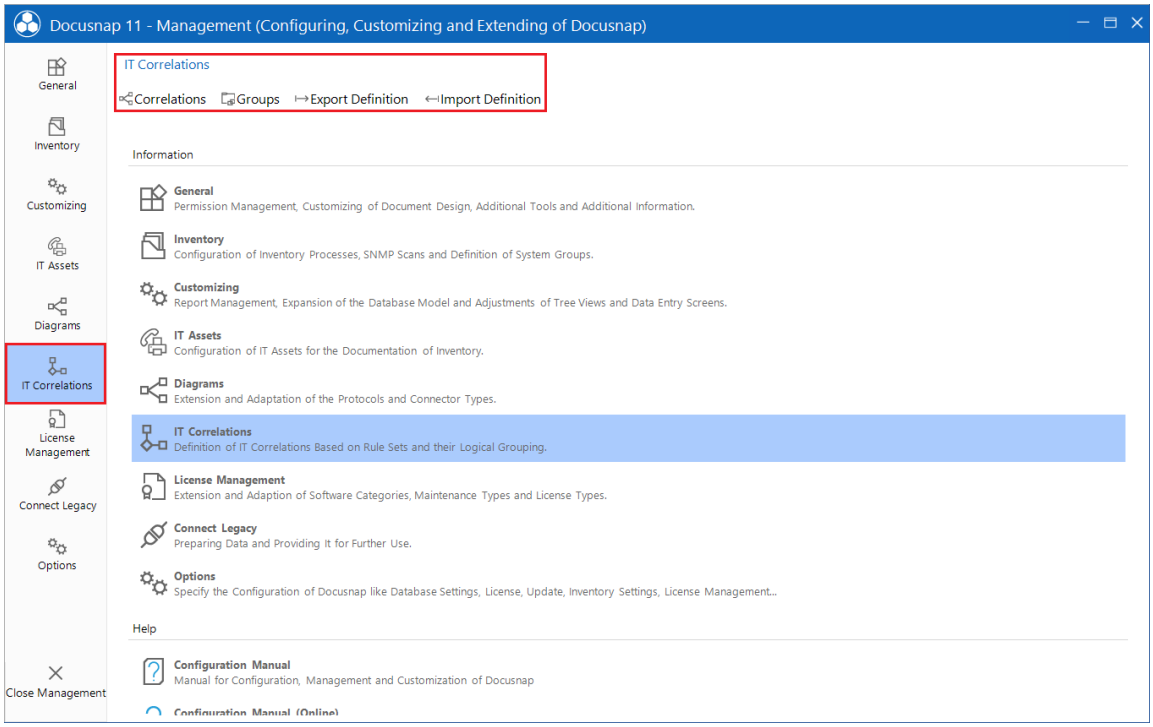


Figure 9 – Administration

All correlations can be found in the correlations tab.

In the Groups tab, the correlations are assigned to corresponding groups.

Export/import definition allows you to exchange correlations between two Docusnap installations.

5.1 Create a Correlation

In this example, a correlation is created between users and services to see which services are started by a selected user.

When creating a correlation, a general title, as well as a German and English text must be specified.

The relation changes the arrow that links the objects.

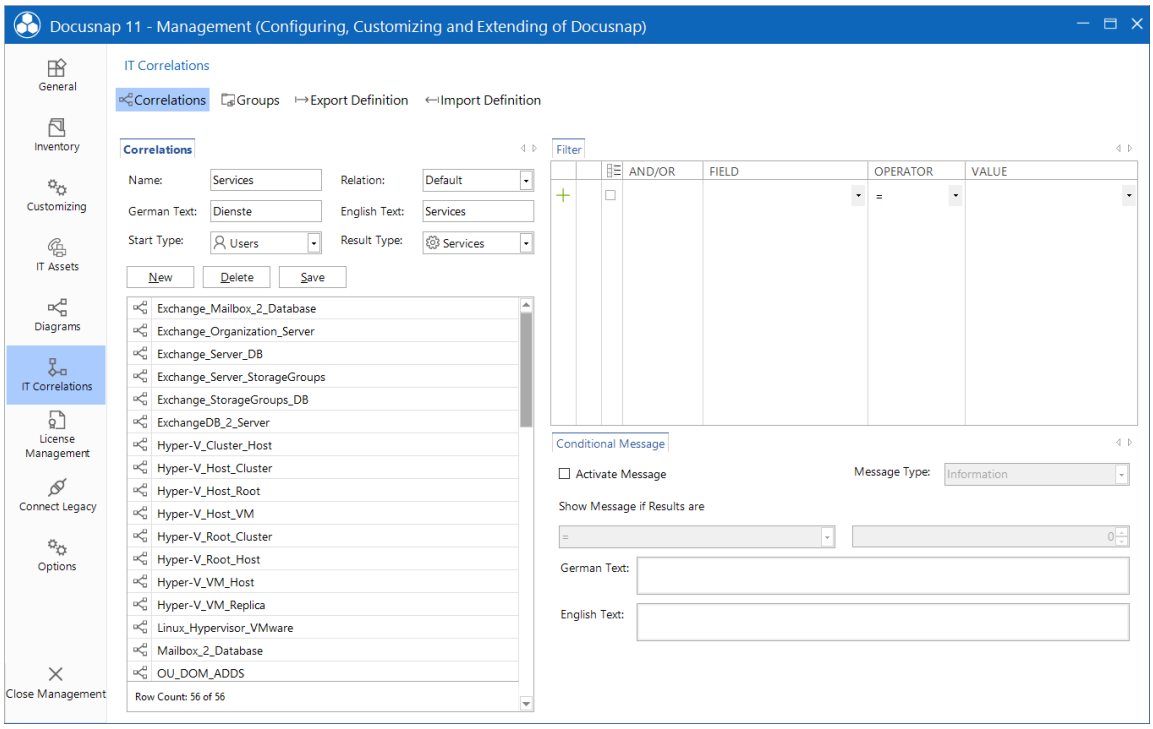


Figure 10 - Create Correlation

Also, a start and result type must be specified as well. In our example the following is set:

- Start Type
  - Inventory - Company - Infrastructure - Domain - ADS - ADDS Scans – Users
- Result Type
  - Inventory - Company - Infrastructure - Domain - Server - Server Scans – Services

5.2 Filter

After the two objects have been selected, the filter can now be set. This is located on the right side.

The fields selected in the filter must match in the database. In case of a service, the user is stored with the NetBIOS name. Therefore, the field tADSObject.NetBiosName is selected.

On the right side the comparison field is now selected. Here the field is selected in which the service user is stored.

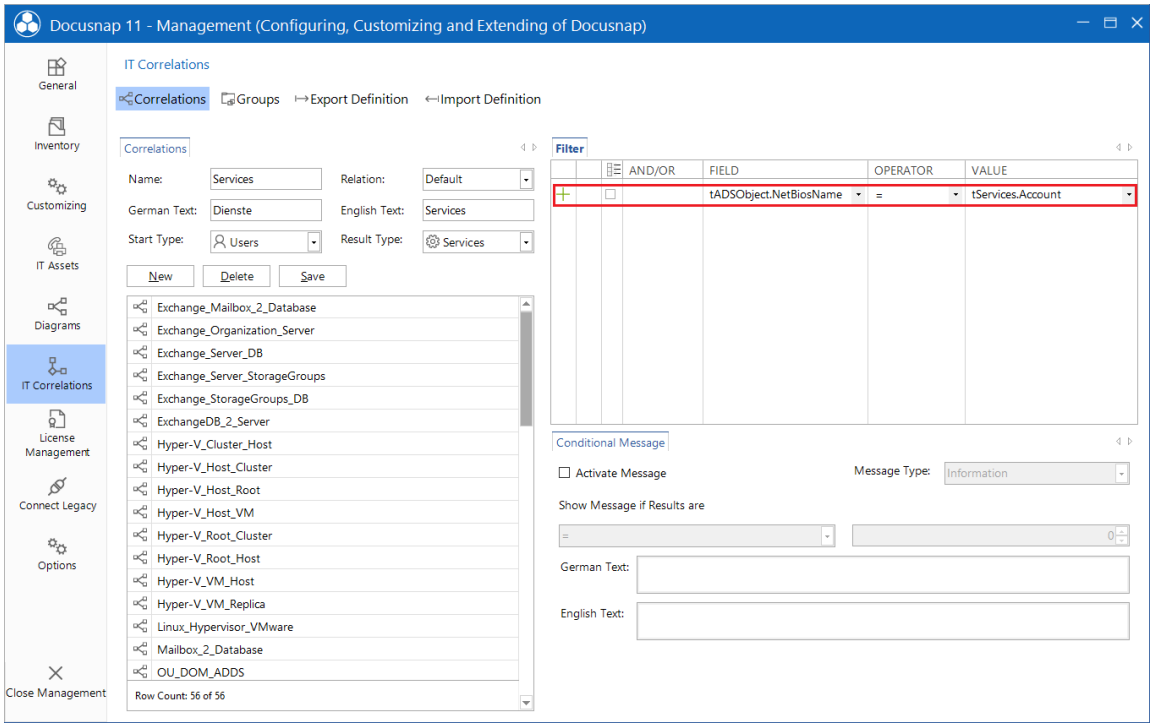


Figure 11 – Filter

5.3 Conditional Message

In addition, a conditional message can also be displayed if, for example, the dependency does not return a result.

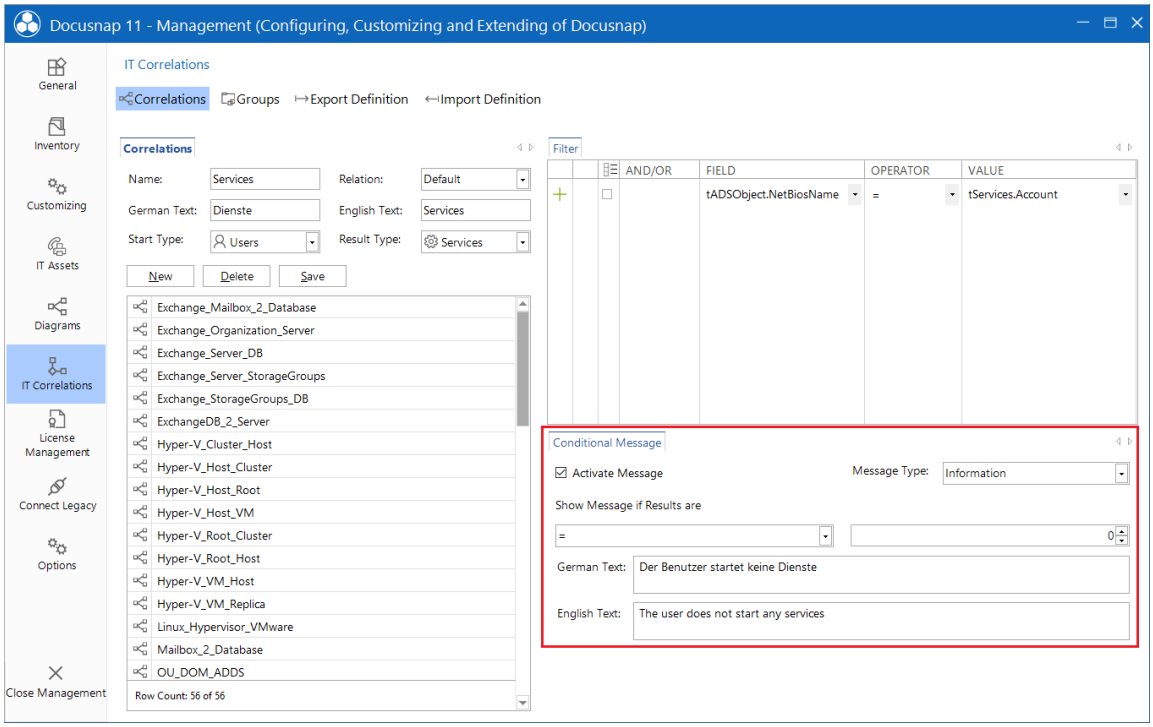


Figure 12 - Conditional Message

5.4 Groups

After the correlation has been defined, it must be assigned to a group. For this at first a new group is created. Again, a general name and a German and English title must be specified.

Afterwards, the group can be selected and the newly created correlation can be added.

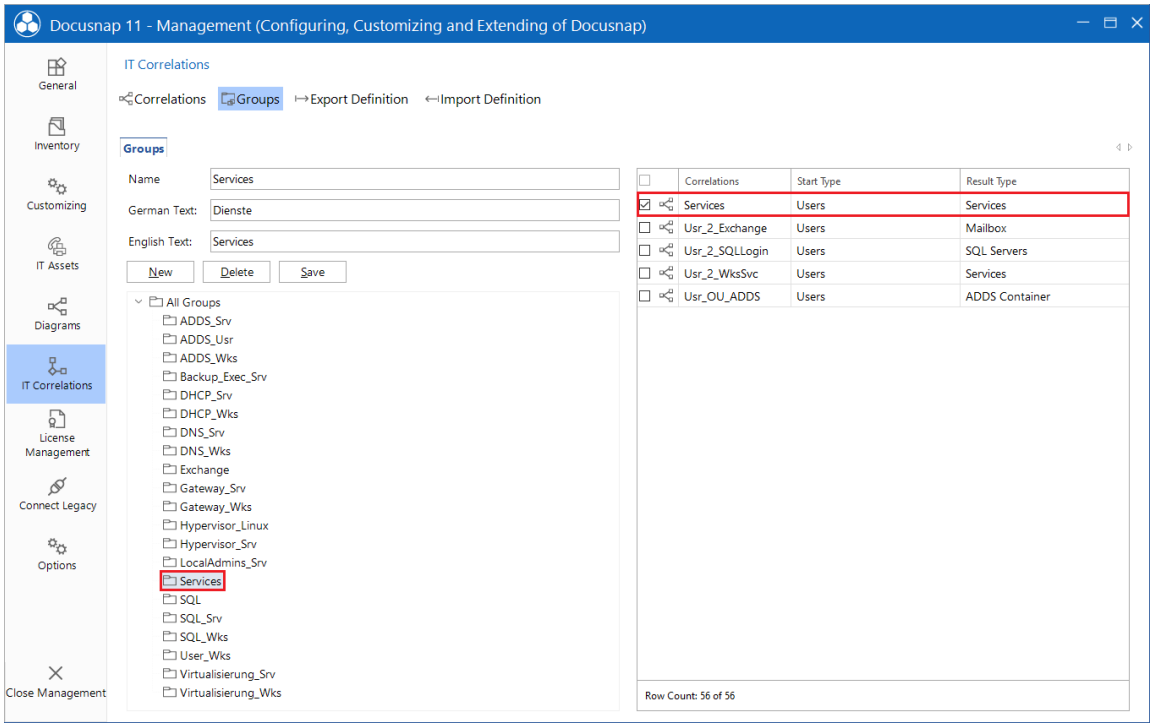


Figure 13 - Group - Add Correlation

The creation of the correlation is finished and the result can be checked in the inventory. In our case, we switch to any user below the Active Directory inventory and open the Analysis tab again. Here we find the newly created group and it can now be resolved.

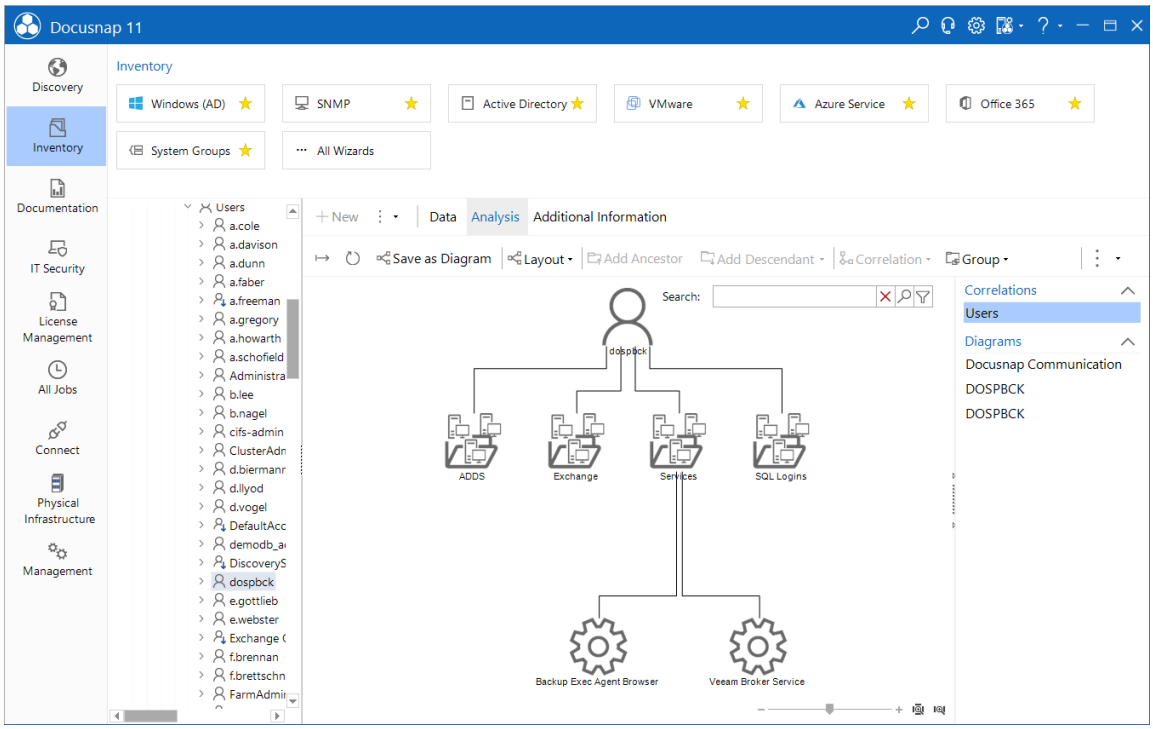
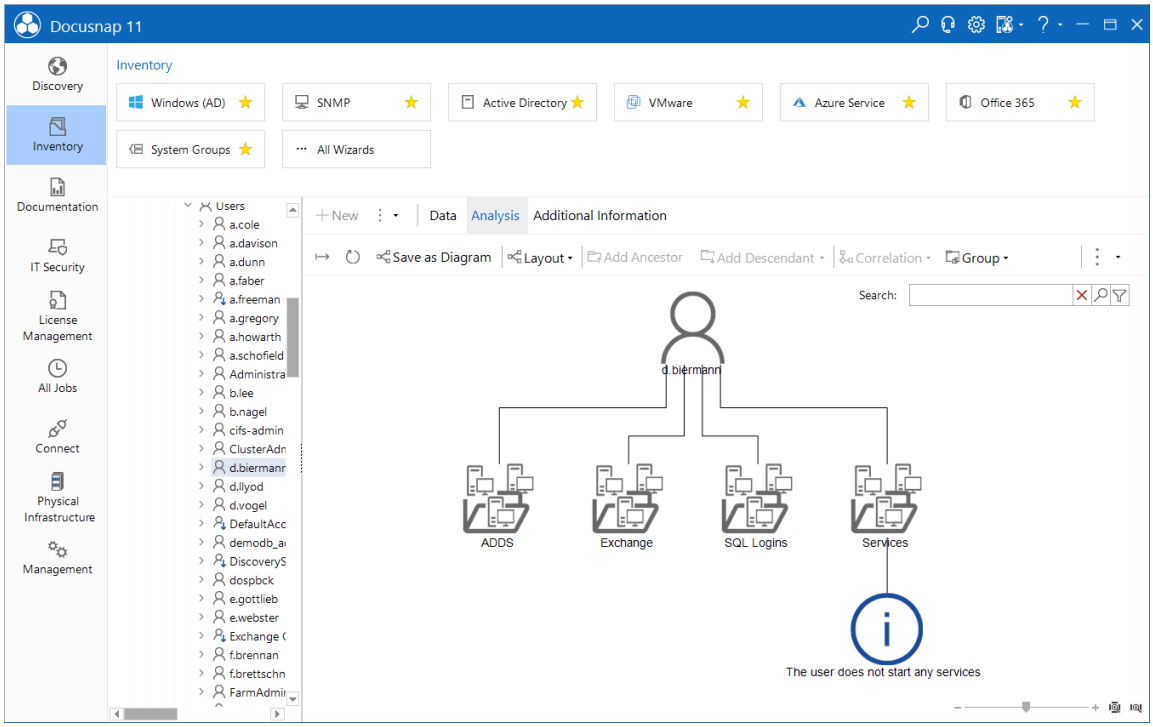


Figure 14 - Resolve new Correlation

If no service is started for a user, the conditional message is also displayed.



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