

DOX42 D365 FO

DOCUMENTATION

Version 1.5.0



Finance and Operations

dox42 D365 FO

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1 What is dox42 for Finance and Operations?

It is a tool which interacts with Microsoft Dynamics 365 Finance and Microsoft Dynamics 365 Supply Chain Management (previously, together, Microsoft Dynamics 365 for Finance and Operations, or "D365 FO" for short). dox42 for Finance and Operations can be used for creating special reports, documents or even etiquettes in different languages, this is possible because of the multiple data sources which can be integrate into one document at the same time.

dox42 for Finance and Operations is a supplementary package for dox42. dox42 for Finance and Operations is a Custom Data Source. It consists of two data sources:

- D365 FO Report - Uses data from standard SSRS reports.
- D365 FO Entity - Uses data from the OData API.

A dox42 Custom Data Source enables access to specific data sources or systems, additionally to the already predefined data sources.

2 Installation

2.1 Installation of the dox42 Office Add-Ins

The download files for the dox42 Enterprise Add-Ins are available on the dox42 website:

<https://www.dox42.com/Modules/Download>

Install and setup dox42 Word Add-Ins according to the dox42 documentation.

2.2 Installation of the dox42 for Finance and Operations Office Add-Ins

The download files for the dox42 Dynamics 365 for Finance and Operations are available on the dox42 website:

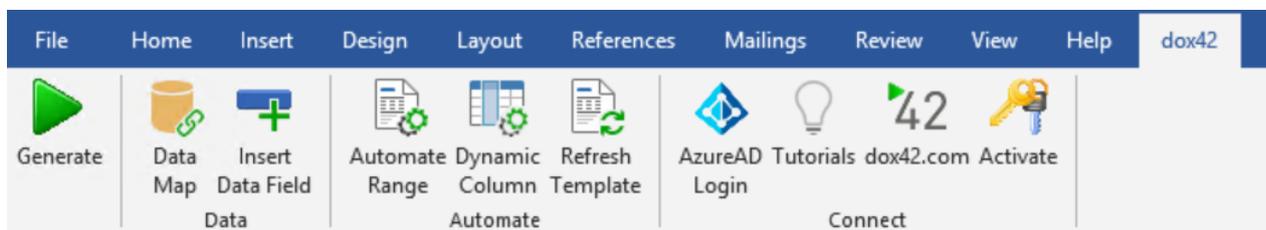
<https://www.dox42.com/Modules/Download>

Save the dox42 for Finance and Operations files to a fixed directory on the computer, where you want the dox42 D365 FO data source files to be installed.

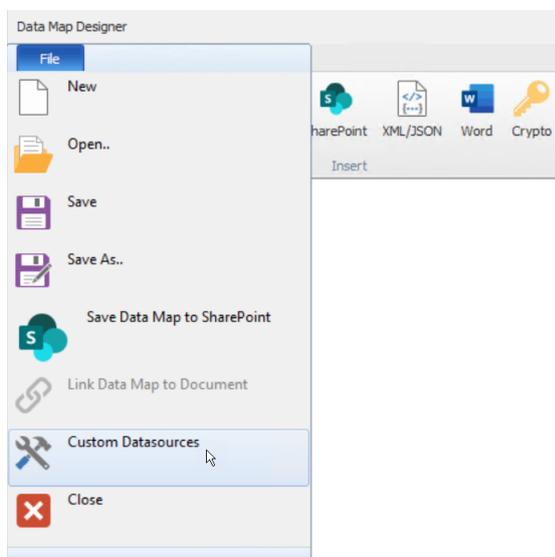
Unzip:

- D365 FO Report - **AX7_<Version Number>.zip**.
- D365 FO Entity - **AX7_0Data_<Version Number>.zip**.

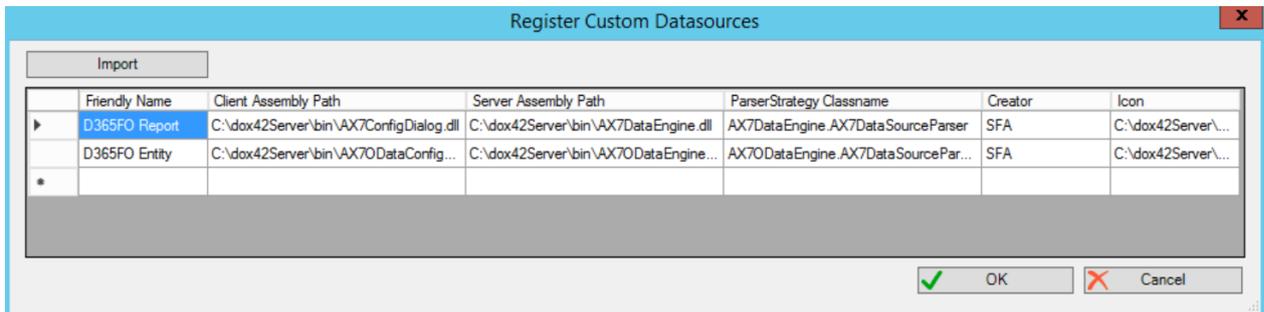
The files will not be copied during installation and need to remain on the selected path, otherwise dox42 won't be able to find the binaries of the new data sources.



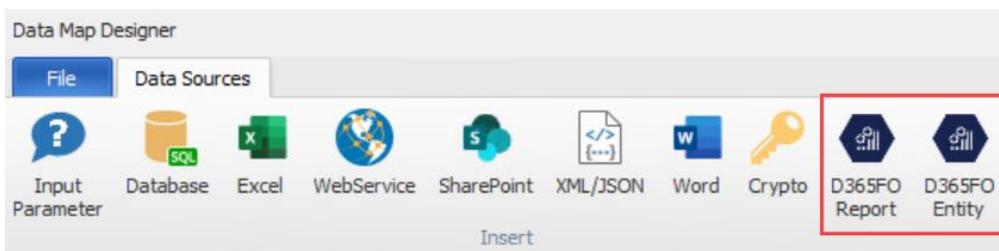
Start Word, activate the dox42-Ribbon and select **„Data Map“**. In the Data Map Designer select **„Data Map“**. Open the File-Menu and select **„Custom Datasources“**.



In the dialog „**Register Custom Datasources**“, import the configurations (**dox42OperationsDataSourceImport.config** for D365 FO Report and **AX70DataSourceImport.config** for D365 FO Entity). This way, the configurations will be defined in the Custom Data Source.

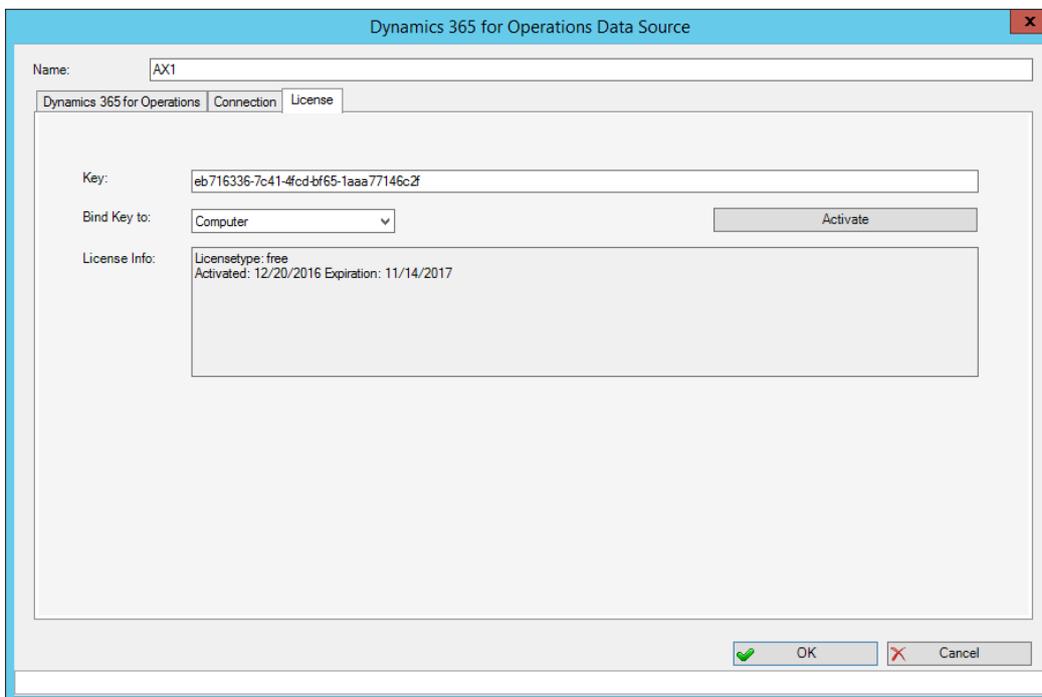


Now, the Custom Data Sources “D365 FO Report” and “D365 FO Entity” are ready for use as any other dox42 data source.



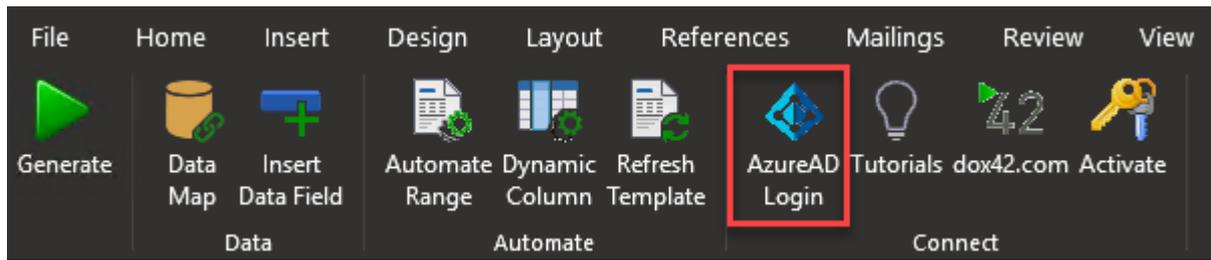
Next, the license key should be activated. To do that, simply click on “D365 FO Report” (or “Dynamics 365 for Finance and Operations Data Source” or “Dynamics 365 for Operations Data Source” in previous versions) and go to the tab called “**License**”. Insert the license key here and click “Activate”. After activating the license, the dialog can be closed with cancel or close button.

NOTE: The same key will also work for D365 FO Entity (the OData data source in previous versions).



To design or generate templates that are stored in SharePoint you need to setup Azure AD Login for SharePoint Online Site:

In the dox42 tab click "Azure AD Login" button:



Then fulfill values as described below:

AzureAD Login for SharePoint Online Site ×

SharePoint Online Site URL	AzureAD Tenant ID	AzureAD App ID	AzureAD Desktop Redirect URI
https://sharepoint.com/sites/D365Dox42Report	b4a5b61a-0d2f4cd1-...	eda2f1bc-eb54-4c...	https://www.dox42.com

Log In Behavior: Use "Always Ask" if you are working with multiple tenants

OK
 Cancel

SharePoint Online Site URL: URL to SharePoint Template Site where templates are stored

AzureAD Tenant ID: Tenant ID based on your Azure Active Directory App Registration (find in sections below setup guide)

AzureAD App ID: App ID based on your Azure Active Directory App Registration

AzureAD Desktop Redirect URIs: Desktop Redirect URIs based on your Azure Active Directory App Registration

Log in Behavior: Auto

NOTE: all values can also be taken from "web.config" file on the dox42server (in SharePoint section if it was setup earlier)

2.3 Installation of the dox42 Server

How to install and setup the dox42 Server is documented in the dox42 Server documentation, found on the dox42 Resource page:

[https://www.dox42.com/de/Resources?filter\[\]=dokumentation&search=/server/i&](https://www.dox42.com/de/Resources?filter[]=dokumentation&search=/server/i&)

2.4 Installation of dox42 for Finance and Operations for dox42 Server (cloud)

Please note: The dox42 Server behaves like any other web-service that is exposed through the internet. Therefore, the same considerations have to be applied against it, like any other web-service. Meaning, you SHOULD use [HTTPS](#) for transport encryption, as well as set up [authorization rules](#), for incoming web requests. Configurations depend on your requirements and existing infrastructure. Therefore, the setup for your use-case might differ from the setup we provide below.

It is assumed, that you have already installed the deployable package for your D365 FO instance. The provided setup of the dox42 Server, which includes in-transit encryption, as well as template loading from SharePoint sites, has the following steps:

1. Create an Azure Virtual Machine (if it does not already exist) where the dox42 Server will be hosted. In our case we will select the SKU "A2_v2". If you need more or less compute resource, you may scale the VM accordingly.

Home > Virtual machines > Create a virtual machine

Validation passed

Basics Disks Networking Management Advanced Tags [Review + create](#)

PRODUCT DETAILS

Standard A2 v2 Pricing not available for this offering
by Microsoft
[Terms of use](#) [Privacy policy](#)

TERMS

By clicking "Create", I (a) agree to the legal terms and privacy statement(s) associated with the Marketplace offering(s) listed above; and (b) agree that Microsoft may share my contact, usage and transactional information with the provider(s) of the offering(s) for support, billing and other transactional activities. Microsoft does not provide rights for third-party offerings. See the [Azure Marketplace Terms](#) for additional details.

You have set RDP port(s) open to the internet. This is only recommended for testing. If you want to change this setting, go back to Basics tab.

Basics

Subscription	(new) dox42
Resource group name	dox42server
Virtual machine name	dox42server
Region	West Europe
Availability options	No infrastructure redundancy required
Image	Windows Server 2019 Datacenter - Gen1
Size	Standard A2 v2 (2 vcpus, 4 GB memory)
Username	dox42admin
Public inbound ports	RDP, HTTPS, HTTP
Already have a Windows license?	No
Azure Spot	No

Disks

OS disk type	Standard SSD
Use managed disks	Yes
Use ephemeral OS disk	No

Networking

Virtual network	(new) dox42-vnet
Subnet	(new) default (10.0.0.0/24)
Public IP	(new) dox42server-ip
Accelerated networking	Off
Place this virtual machine behind an existing load balancing solution?	No

Management

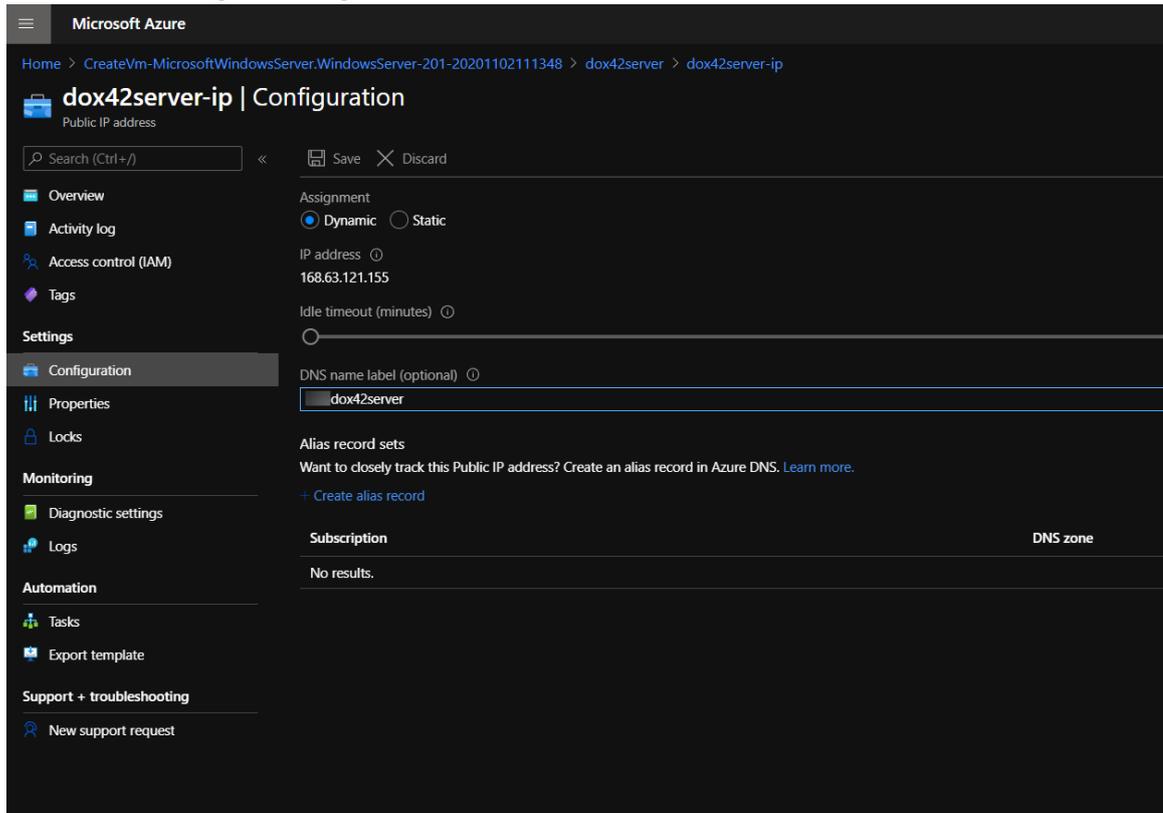
Boot diagnostics	Off
OS guest diagnostics	Off
Azure Security Center	Basic (free)
System assigned managed identity	Off
Auto-shutdown	Off
Backup	Disabled
Patch installation	OS-orchestrated patching; patches will be installed by OS

Advanced

Extensions	None
Cloud init	No
Proximity placement group	None

[Create](#) [< Previous](#) [Next >](#) [Download a template for automation](#)

- Configure a DNS name for the virtual machine in the Public IP resource. This name will be used for generating an SSL certificate.



- To use the Custom Data Sources for D365 FO on the dox42 Server, please copy the following Assemblies in the /Bin directory on the dox42 Server:

```
AX7DataEngine.dll
AX70DataEngine.dll
```

The new Custom Data Sources must be registered in the **web.config** of the server.

```
<customDataSources>
<add key="AX7DataEngine.AX7DataSourceParser" value="AX Custom
DS;c:\dox42Server\bin\AX7DataEngine.dll;"/>
<add key="AX70DataEngine.AX7DataSourceParser" value="AX OData Custom
DS;c:\dox42Server\bin\AX70DataEngine.dll;"/>
</customDataSources>
```

Furthermore, please insert the license keys in the **web.config**. You have to insert both values, one for *LicenseKey* (dox42 Server for Documents) and another for *dox42AXLicenseKey* (dox42 for Finance and Operations Server or dox42 for AX Server):

```
<appSettings>
<add key="LicenseFilePath" value="c:\dox42Server\License" />
<add key="LicenseKey" value="..." />
<add key="dox42AXLicenseKey" value="..." />
<add key="MailServer" value="smtp.1und1.de"/>
<add key="dox42ServerMail" value="mydox42server@dox42.com"/>
<add key="MailServerPassWord" value="..." />
<add key="SendErrorsToMail" value="mymonitoring@dox42.com"/>
<add key="Certificate" value="c:\dox42Server\Certs\Certificate.pfx"/>
<add key="CertificatePassWord" value="..." />
<add key="CheckServiceHeader" value="true"/>
```

```
<add key="UserPermissionODBCConnectionString"
      value="Driver={SQL Server Native Client 10.0};Server=...;Database=...;Uid=...;Pwd=...;" />
<add key="CheckUserPermissionSQL"
      value="SELECT COUNT(*) FROM Users where Username =
            '%username%' and Password = '%password%'" />
<add key="ThrowExceptionOnError" value="false" />
</appSettings>
```

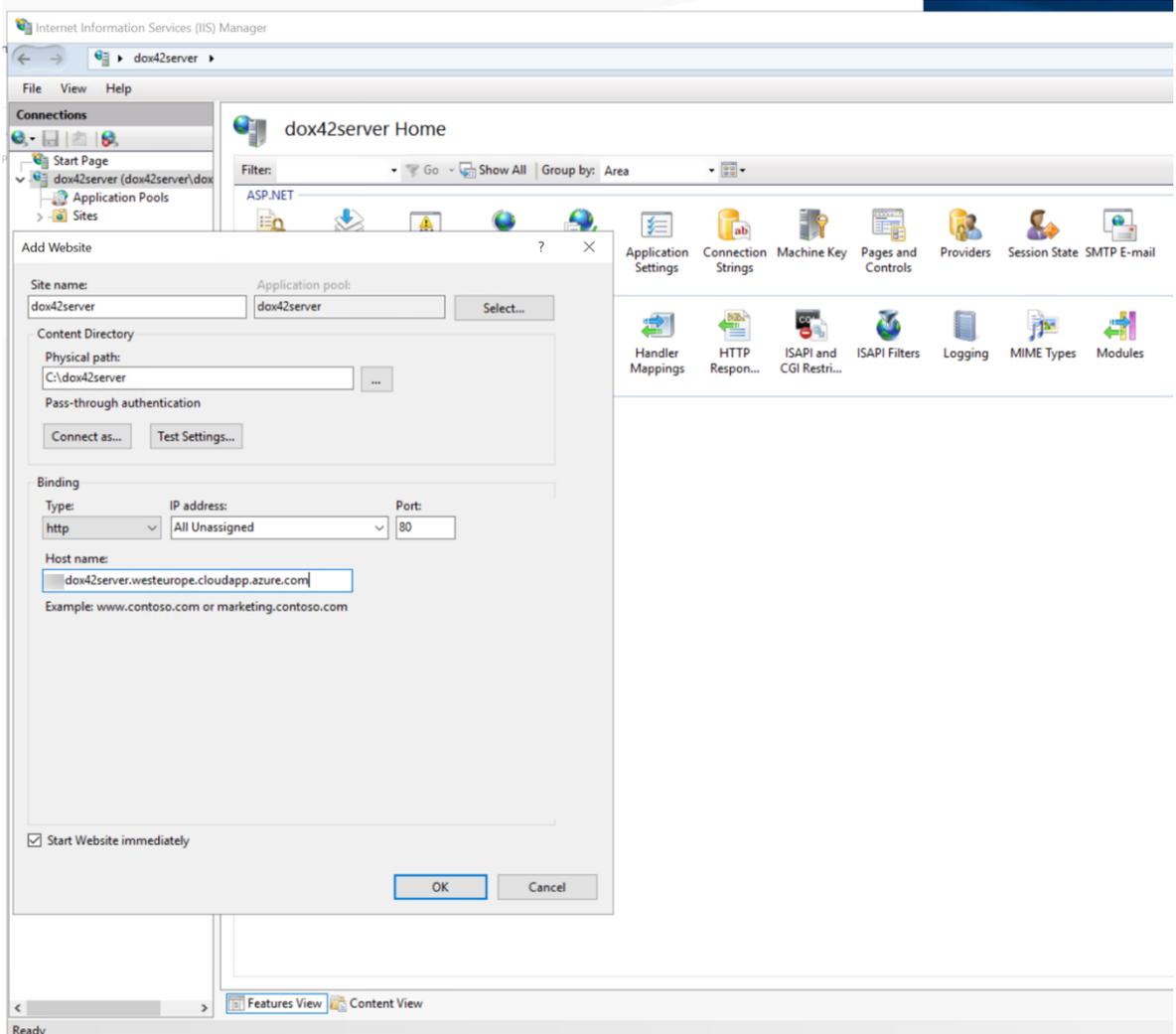
4. Create an Azure App registration, which allows access to receive data from D365 FO. It does not need any API permissions, however the Client ID has to be registered in the (System administration => Setup => Azure Active Directory applications) settings within D365 FO. Generate a secret for the app and take note of it. Both, the client id, as well as the client secret will be used to establish a data connection, when designing templates in Word with dox42.
5. Encrypt traffic using the HTTPS protocol

In our example, we will acquire a certificate from [Let's Encrypt](#). The subject name of the certificate has to match the endpoint name of the dox42 Server.

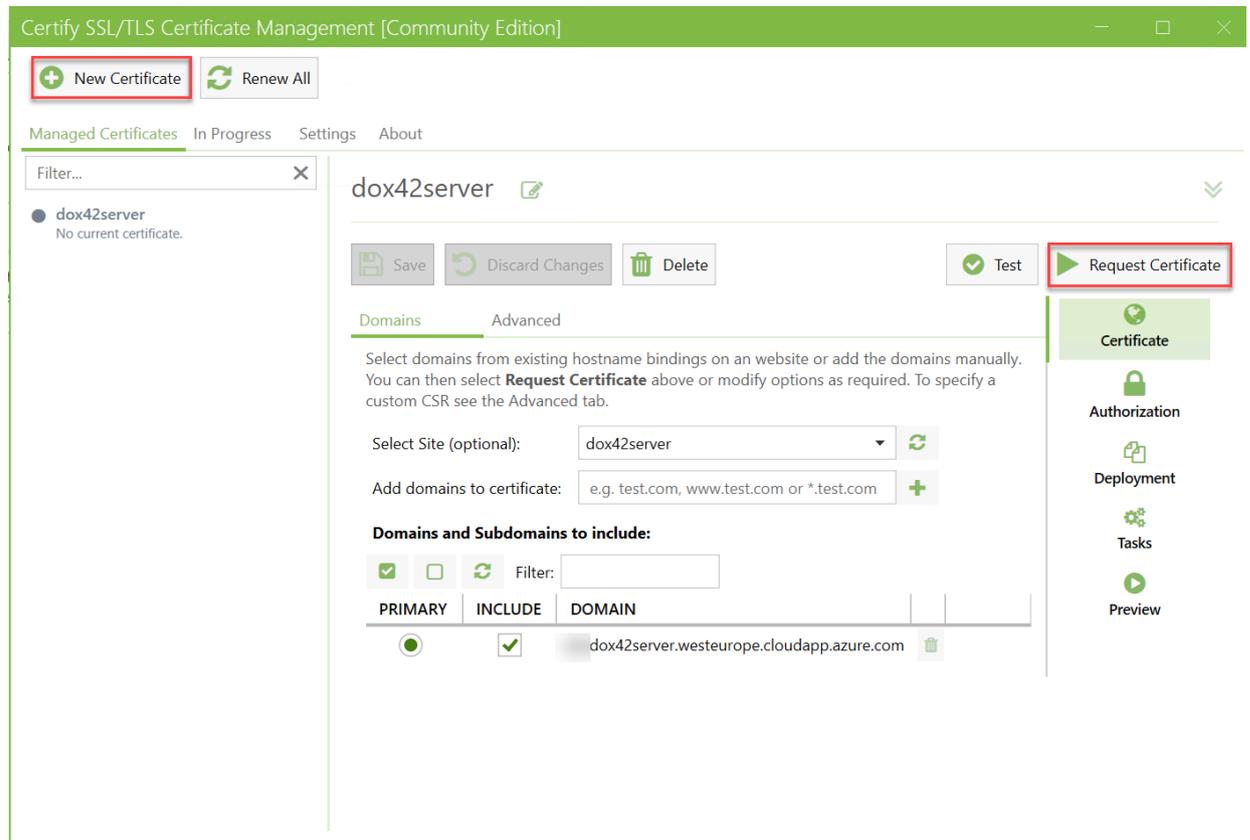
In case of a default Azure Virtual Machine, it is going to be something like ***.northeurope.cloudapp.azure.com**. When the dox42 Server is hosted on-premises, you will have to setup the domain endpoint according to your requirements.

For receiving the certificate we are using the tool "[Certify the web](#)", which lets you issue certificate request within a nice user interface.

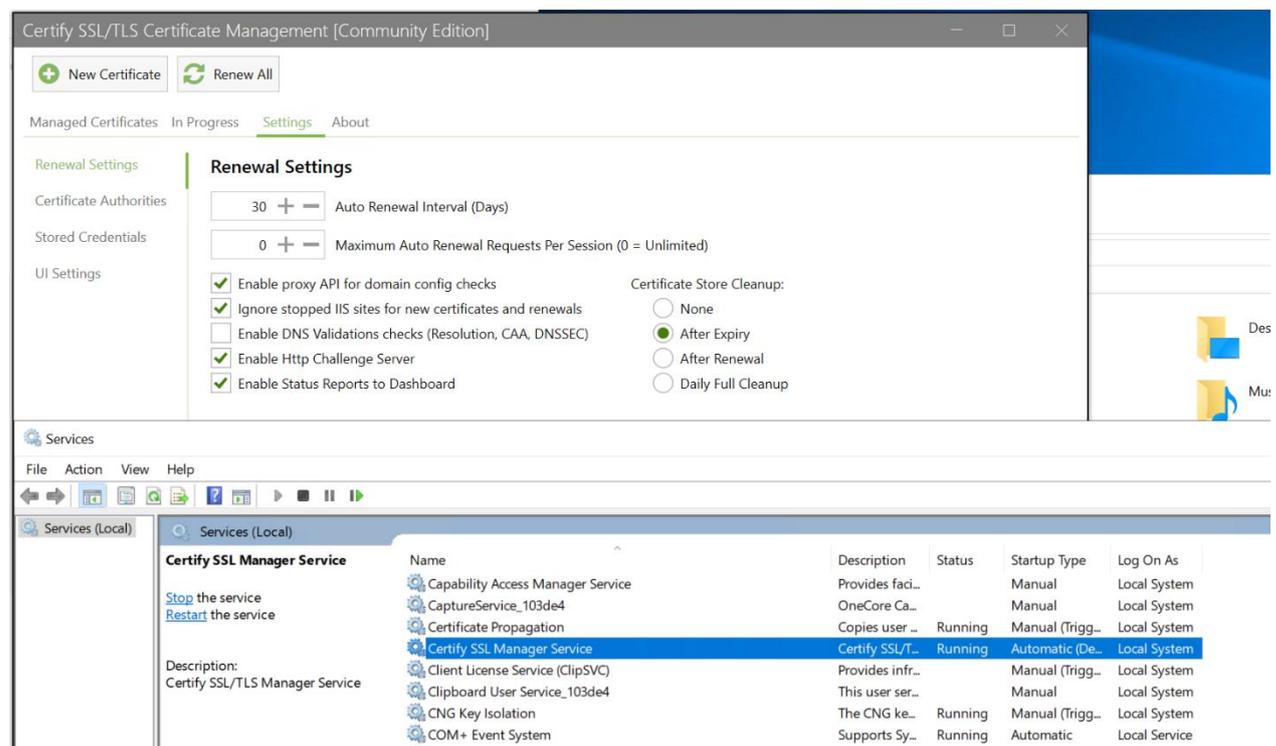
Change the hostname of the website:



When you request a new certificate, using the “Certify the web” tool, it will ask you for an e-mail to be used to notify about certificate expiration. So please enter a valid email to receive those notifications.

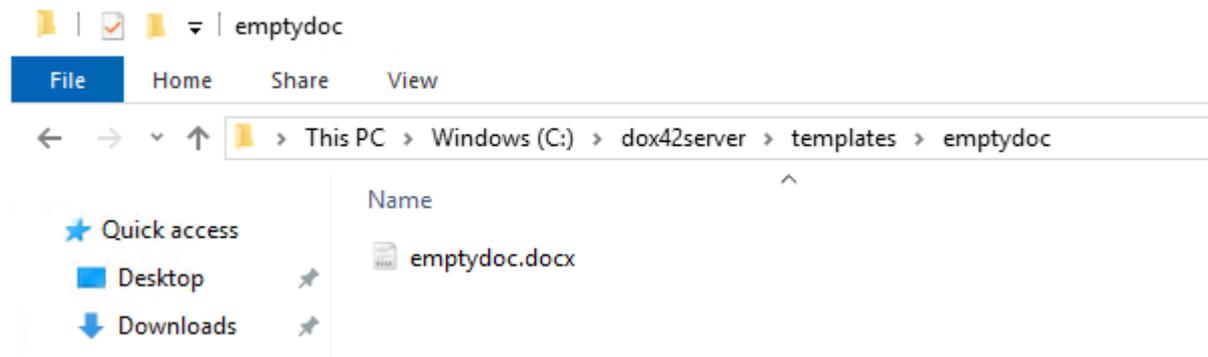


Once certificate is generated, you'll get a new service running in windows services – it will refresh a certificate after its expiration date:

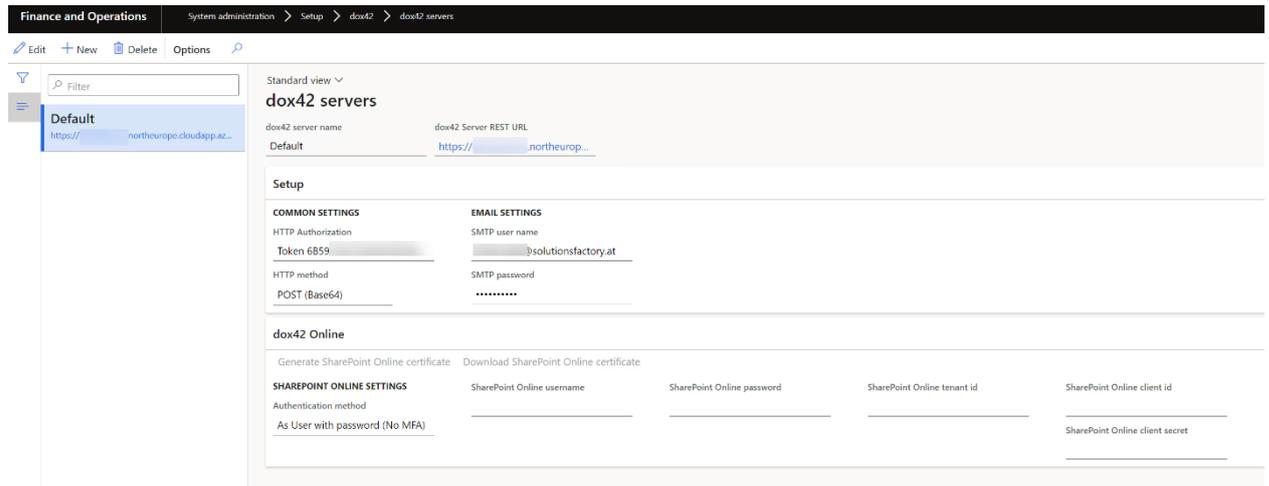


To check if you can reach the server from the test/dev D365 FO environment, do the following setup:

1. On dox42server create a new folder with and empty .docx file inside:



2. On test environment go to dox42 servers form and set up the dox42 server accordingly (it is recommended to use the "POST (Base64)" HTTP method):



dox42 servers

dox42 server name	dox42 Server REST URL
Default	https://...northeurop...

Setup

COMMON SETTINGS

HTTP Authorization: Token 6859
 HTTP method: POST (Base64)

EMAIL SETTINGS

SMTP user name: @solutionsfactory.at
 SMTP password:

dox42 Online

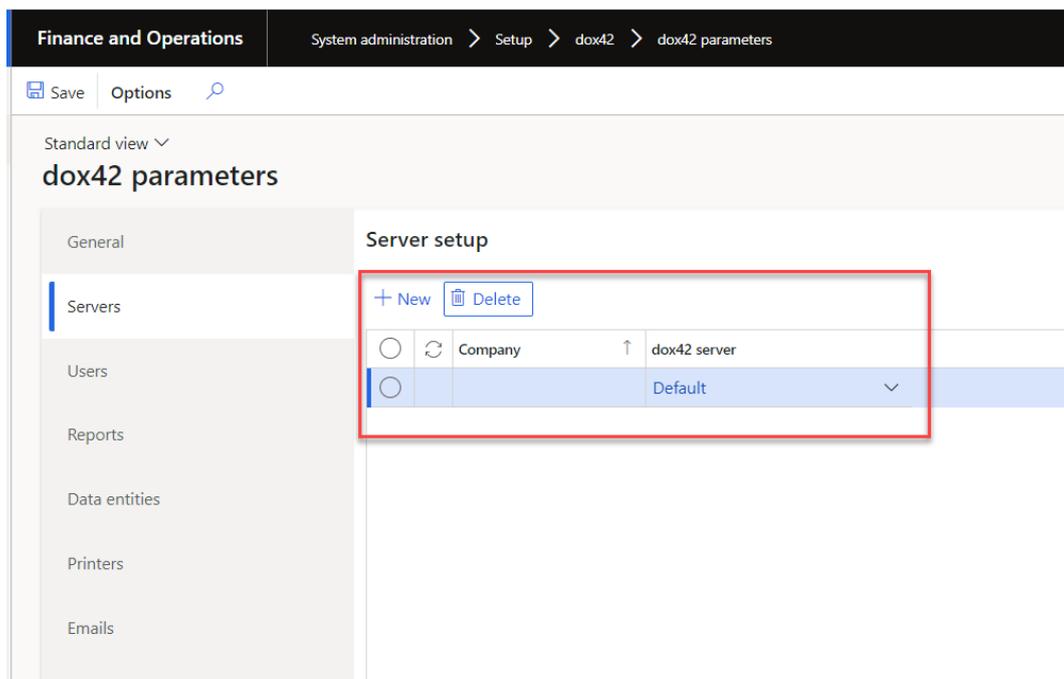
Generate SharePoint Online certificate: Download SharePoint Online certificate

SHAREPOINT ONLINE SETTINGS

Authentication method: As User with password (No MFA)

SharePoint Online username: _____
 SharePoint Online password: _____
 SharePoint Online tenant id: _____
 SharePoint Online client id: _____
 SharePoint Online client secret: _____

3. On test environment go to dox42 parameters form, tab "Servers" and set up the default dox42 server:



dox42 parameters

Servers

	Company	dox42 server
<input type="radio"/>		Company
<input type="radio"/>		Default

4. On “Reports” tab create a new report setup for (e.g.) the “CustBasedata” report:

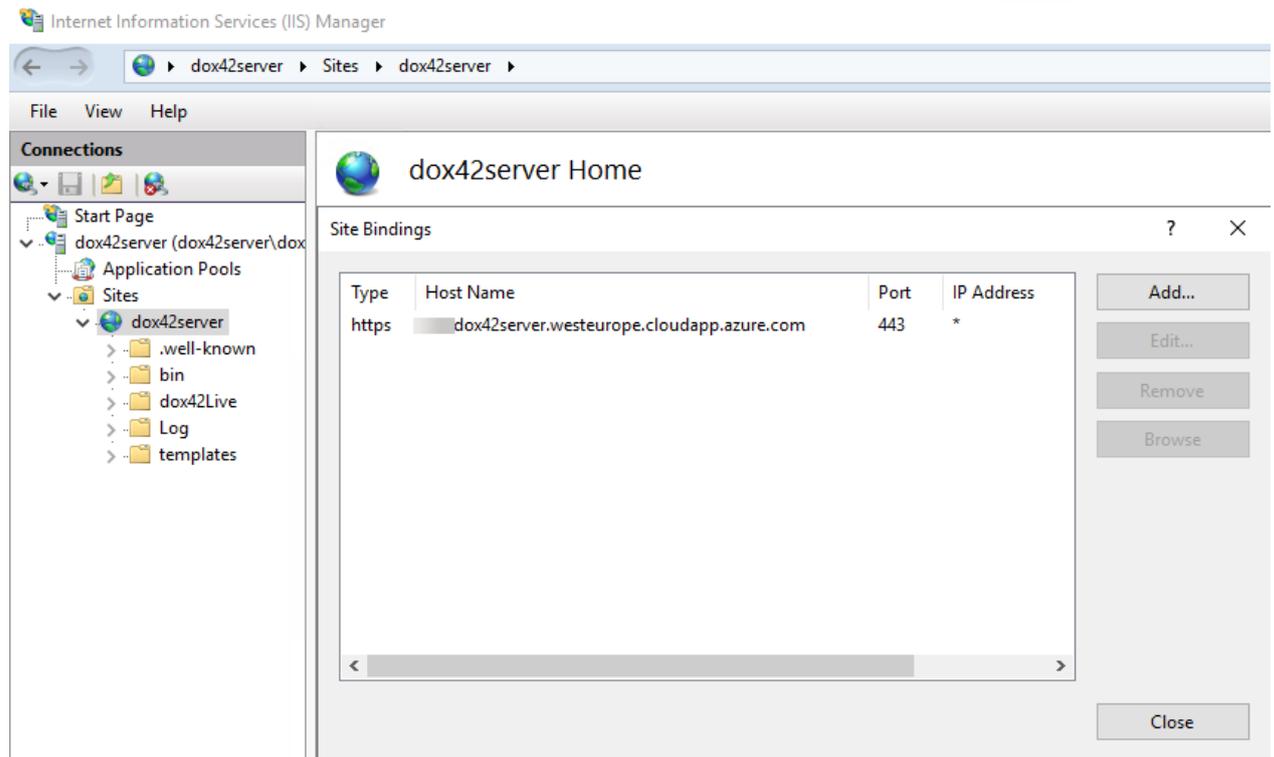
	Ena...	Company	Report	Design	Operati
<input type="checkbox"/>	<input checked="" type="checkbox"/>	▼	AgreementConfirmation	▼	Genera
<input type="checkbox"/>	<input checked="" type="checkbox"/>		CustBasedata		Genera
<input type="checkbox"/>	<input type="checkbox"/>		FreeTextInvoice		Genera
<input type="checkbox"/>	<input checked="" type="checkbox"/>		ProdPicklist		Genera
<input type="checkbox"/>	<input checked="" type="checkbox"/>		PurchPackingSlip		Genera
<input type="checkbox"/>	<input type="checkbox"/>		RetailLabel		Genera

5. On the “Report setup” form specify the path to the template on the dox42server:

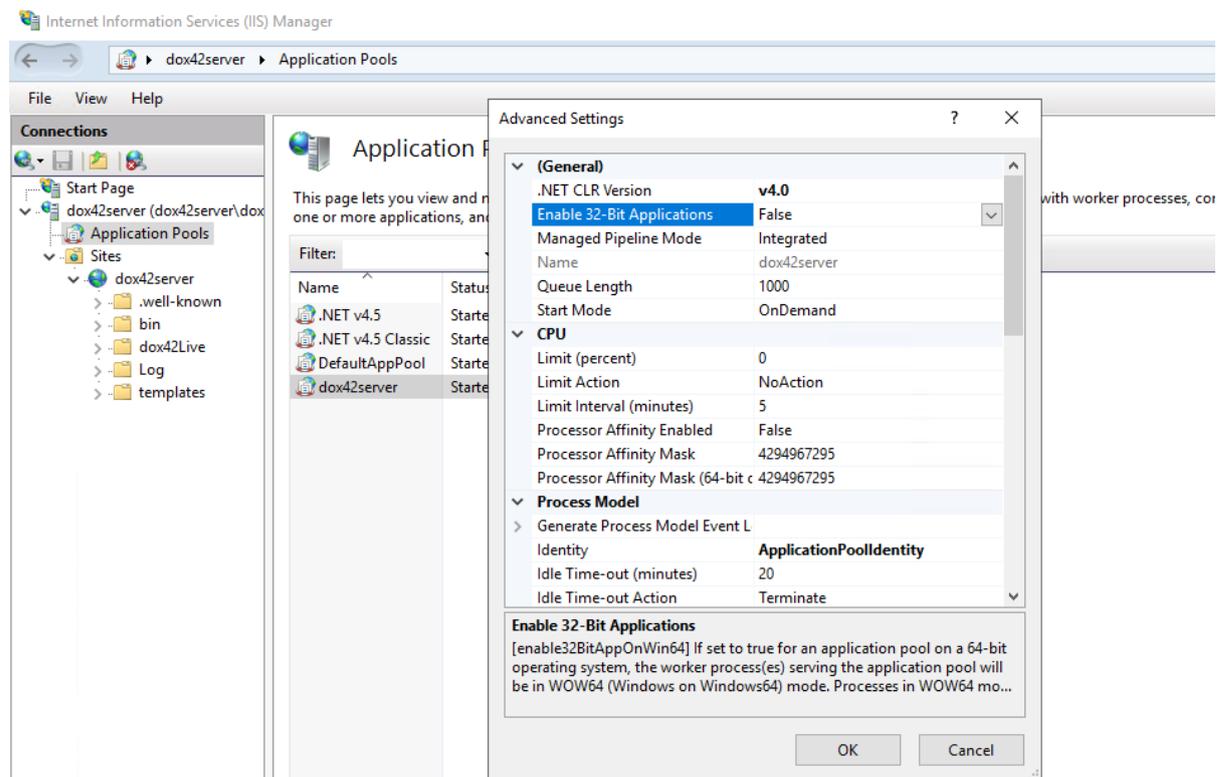
✓	Company	Language	Design	Title	Template name
	▼	▼			C:\dox42server\templates\emptydoc\emptydoc.docx

6. Finally print the report (Accounts receivable => Inquiries and reports => Customers => Customer base data report) to see if the server is reachable and the connection is secure. If you get a blank page, then you can reach the server:

- Now you can remove http binding in IIS on the dox42server, leaving only https binding:



- Finally check if the website is running as 64 bit process:



- Configure a SharePoint site as a template resource for the dox42Server (for customers who will use SharePoint as a storage for templates).

10. The specific information about AzureAD setup you can find in the chapter [Azure Active Directory App Registration](#)
11. The specific information about SharePoint certificate setup you can find in the chapter [SharePoint Online certificate setup](#)

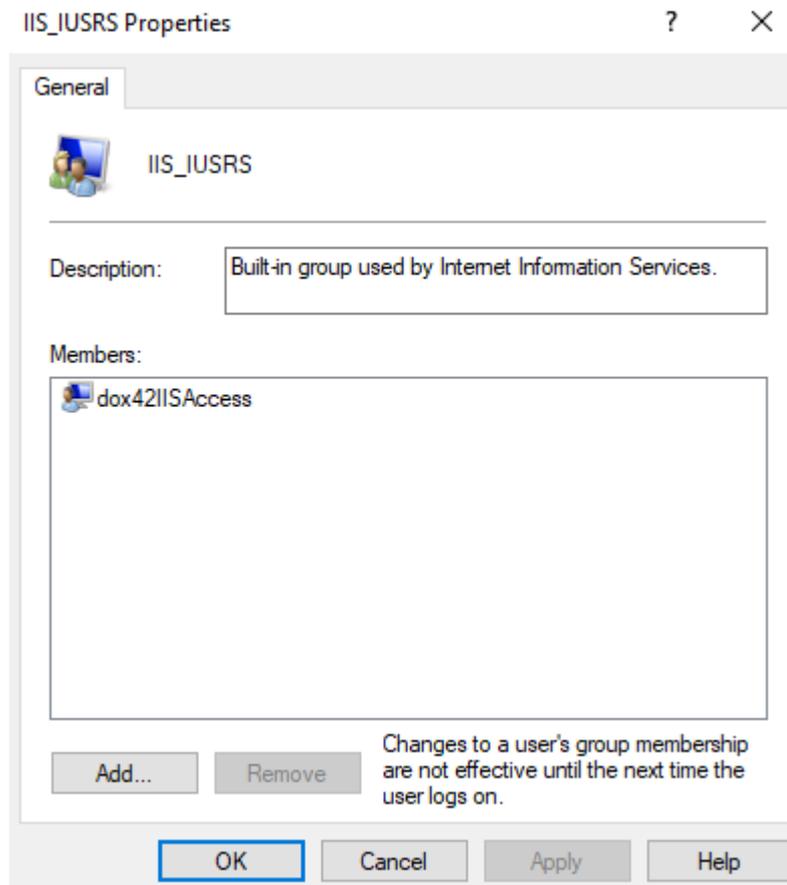
In Server Manager ensure that the next roles and features are installed for IIS:

The screenshot shows the 'ROLES AND FEATURES' window in Windows Server Manager. The left sidebar shows 'All Servers', 'File and Storage Services', and 'IIS' selected. The main area displays a list of roles and features for the 'dox42server'.

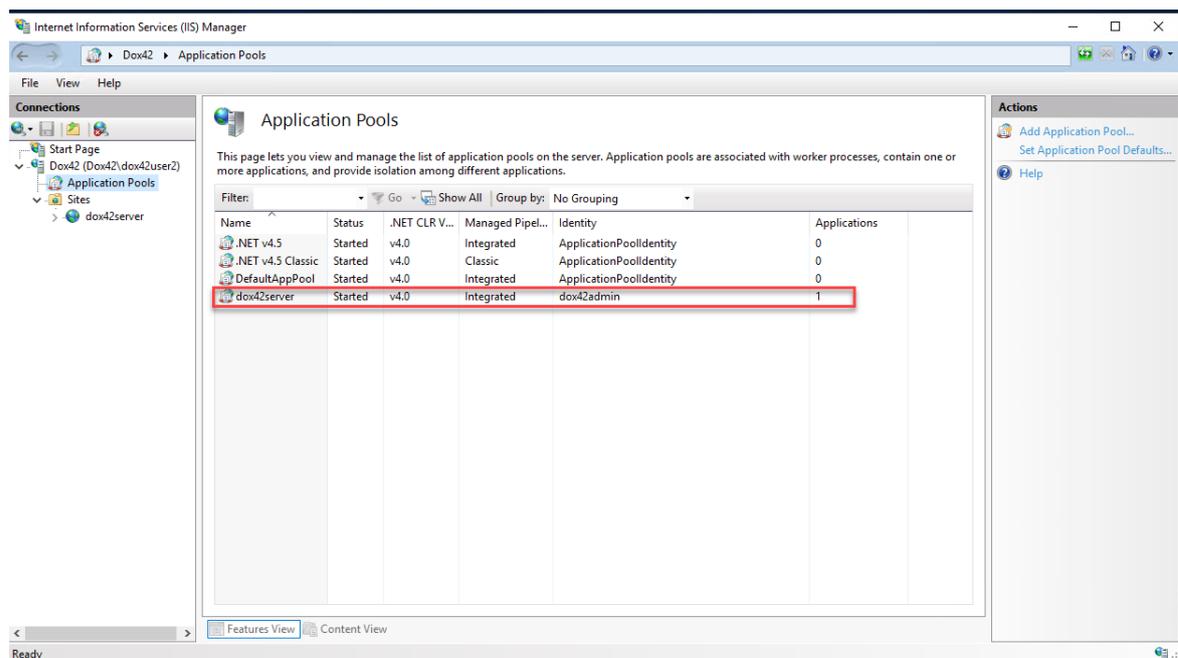
Server Name	Name	Type	Path
dox42server	Web Server (IIS)	Role	Web Server (IIS)
dox42server	HTTP Logging	Role Service	Web Server (IIS)\Web Server\Health and Diagnostics\HTTP Logging
dox42server	Health and Diagnostics	Role Service	Web Server (IIS)\Web Server\Health and Diagnostics
dox42server	ISAPI Filters	Role Service	Web Server (IIS)\Web Server\Application Development\ISAPI Filters
dox42server	ISAPI Extensions	Role Service	Web Server (IIS)\Web Server\Application Development\ISAPI Extensions
dox42server	.NET Extensibility 4.7	Role Service	Web Server (IIS)\Web Server\Application Development\.NET Extensibility 4.7
dox42server	ASP.NET 4.7	Role Service	Web Server (IIS)\Web Server\Application Development\ASP.NET 4.7
dox42server	Application Development	Role Service	Web Server (IIS)\Web Server\Application Development
dox42server	HTTP Errors	Role Service	Web Server (IIS)\Web Server\Common HTTP Features\HTTP Errors
dox42server	Directory Browsing	Role Service	Web Server (IIS)\Web Server\Common HTTP Features\Directory Browsing
dox42server	Default Document	Role Service	Web Server (IIS)\Web Server\Common HTTP Features\Default Document
dox42server	Static Content	Role Service	Web Server (IIS)\Web Server\Common HTTP Features\Static Content
dox42server	Common HTTP Features	Role Service	Web Server (IIS)\Web Server\Common HTTP Features
dox42server	Static Content Compression	Role Service	Web Server (IIS)\Web Server\Performance\Static Content Compression
dox42server	Performance	Role Service	Web Server (IIS)\Web Server\Performance
dox42server	Web Server	Role Service	Web Server (IIS)\Web Server
dox42server	IIS Management Console	Role Service	Web Server (IIS)\Management Tools\IIS Management Console
dox42server	Management Tools	Role Service	Web Server (IIS)\Management Tools
dox42server	Security	Role Service	Web Server (IIS)\Web Server\Security
dox42server	Request Filtering	Role Service	Web Server (IIS)\Web Server\Security\Request Filtering

12. For customers who store templates NOT on Sharepoint (who already takes care of authentication) BUT on the dox42server itself, the dox42 server need to be set up in a different way – we need to ensure that only authenticated requests are allowed to generate documents out of templates.

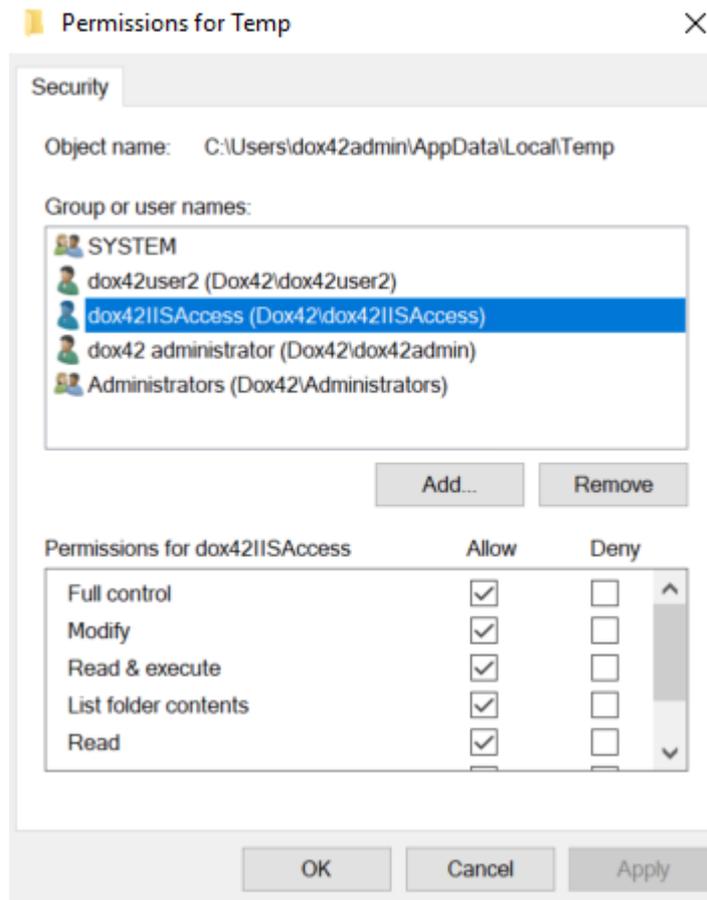
On dox42server, create a user called dox42IISAccess and place him in a group called IIS_IUSRS (create if doesn't exist), remove user from any other groups (if assigned):



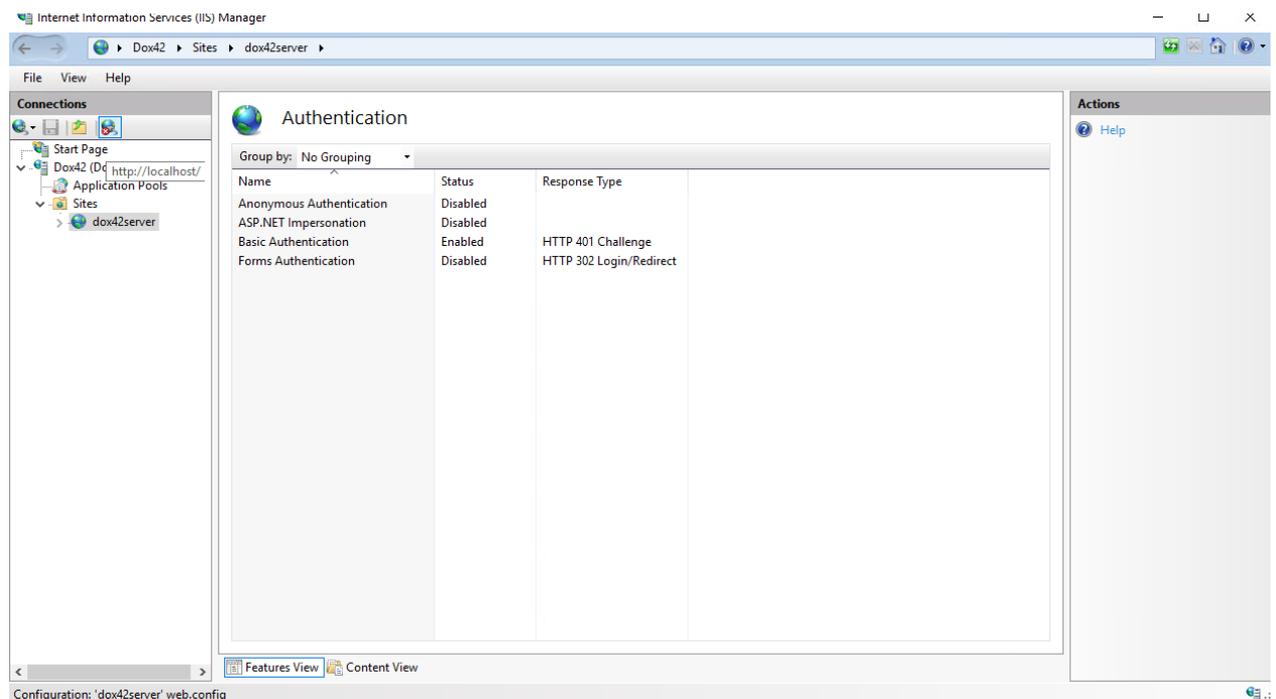
In IIS settings check the identity that dox42server web site is using (dox42admin on the screenshot):



You will need to provide full access to dox42IISAccess user for the Temp folder (path as on the screenshot, if identity is ApplicationPoolIdentity then the path would be C:\Temp):



In Authentication settings of the web site, disable anonymous authentication, and enable basic authentication (you might need to install this feature first using Server Manager tool):



Finally encode username and password of the dox42\ISAAccess user. In order to encode you can use command line for instance with the following syntax: `$ echo -n "username:password" | base64`

Paste the encoded value into HTTP Authorization, field with the preceding "Basic" word on dox42 server page, set other fields accordingly as on the screenshot below (note that encoding is not encryption and credentials can be easily decoded but in pair with https protocol it makes connection secure and encrypted):

The screenshot displays the configuration page for a dox42 server. The breadcrumb trail is: Finance and Operations > System administration > Setup > dox42 > dox42 servers. The page title is "dox42 servers | Standard view".

Fields shown include:

- dox42 server name: Default
- dox42 Server REST URL: https://...northeurop...
- HTTP Authorization: Basic
- SMTP user name: @solutionsfactory.at
- SMTP password: [masked]
- SharePoint Online settings: Authentication method (As User with password), SharePoint Online username, SharePoint Online password, SharePoint Online tenant id, SharePoint Online client id, and SharePoint Online client secret.

Now you can setup a report and try printing it.

In case you get any errors, you can troubleshoot using curl and logs on the dox42 server.

For further details also take a look at the dox42 Server Documentation:

www.dox42.com/dox42Server.aspx.

2.5 Installation of dox42 for Finance and Operations for dox42 Server (on-premises)

In general, on-premises installation of “dox42 for Finance and Operations” for dox42 server is similar to its cloud approach, although there are several differences:

1. We need to register an application in Active Directory Federation Services (ADFS - an “onprem” analog of Azure Active Directory) to be able to link a new data source during report template setup to D365 FO instance.

In most cases application registration that allows users/apps to interact with Dynamics environments should already exist. In that case you only need to add a new native client application role by logging in to ADFS server and running the following PowerShell command:

```
Add-AdfsNativeClientApplication -Name Dox42 -Identifier "aef3b71-25b8-4b4b-b7e5-3d13ab83c006" -RedirectUri http://dox42foroperations/ -PassThru
```

Note: you must use the same Identifier value as is provided in command (aef3b71-25b8-4b4b-b7e5-3d13ab83c006)

Now we want to grant permission to the application, use the following PowerShell command:

```
Grant-AdfsApplicationPermission -ClientRoleIdentifier "aef3b71-25b8-4b4b-b7e5-3d13ab83c006" -ServerRoleIdentifier "D365_Instance_URL_Here"
```

If an application, that allows interaction with D365 FO environment, is not registered in ADFS, the system administrator should create it first, in case you have to create it:

1. In ADFS expand Application Groups folder and open existing group. There you have to create a new Native Application with the properties as on the screenshot:

Microsoft Dynamics 365 for Operations On-premises - Dox42Servi... X

General

Name:
Microsoft Dynamics 365 for Operations On-premises - Dox42Service

Client Id:
aef3b71-25b8-4b4b-b7e5-3d13ab83c006

Redirect URI:

http://dox42foroperations/

Add
Remove

Description:

OK Cancel Apply

2. Click "OK" - a new application is added:

Microsoft Dynamics 365 for Operations On-premises Properties

General

Name:
Microsoft Dynamics 365 for Operations On-premises

Description:

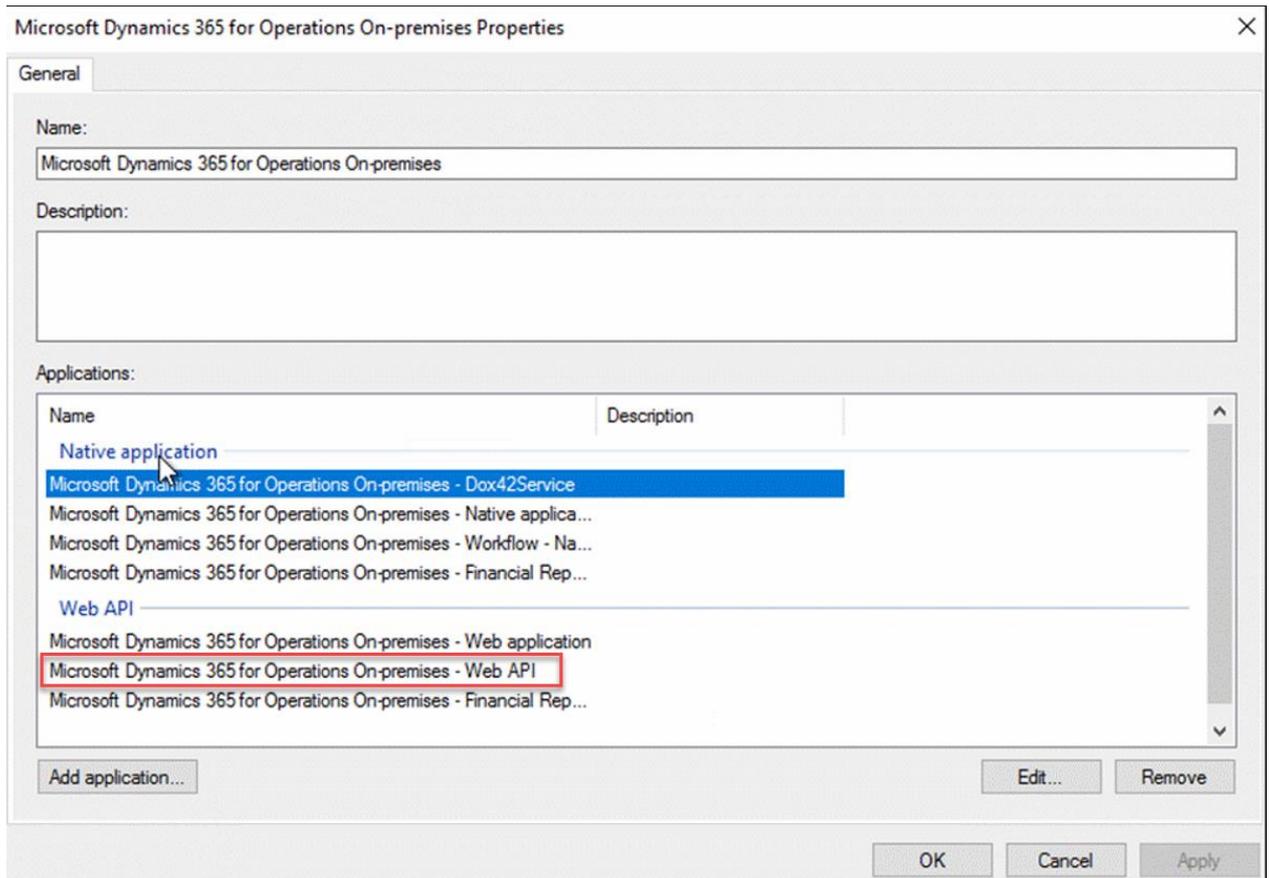
Applications:

Name	Description
Native application	
Microsoft Dynamics 365 for Operations On-premises - Dox42Service	
Microsoft Dynamics 365 for Operations On-premises - Native applica...	
Microsoft Dynamics 365 for Operations On-premises - Workflow - Na...	
Microsoft Dynamics 365 for Operations On-premises - Financial Rep...	
Web API	
Microsoft Dynamics 365 for Operations On-premises - Web application	
Microsoft Dynamics 365 for Operations On-premises - Web API	
Microsoft Dynamics 365 for Operations On-premises - Financial Rep...	

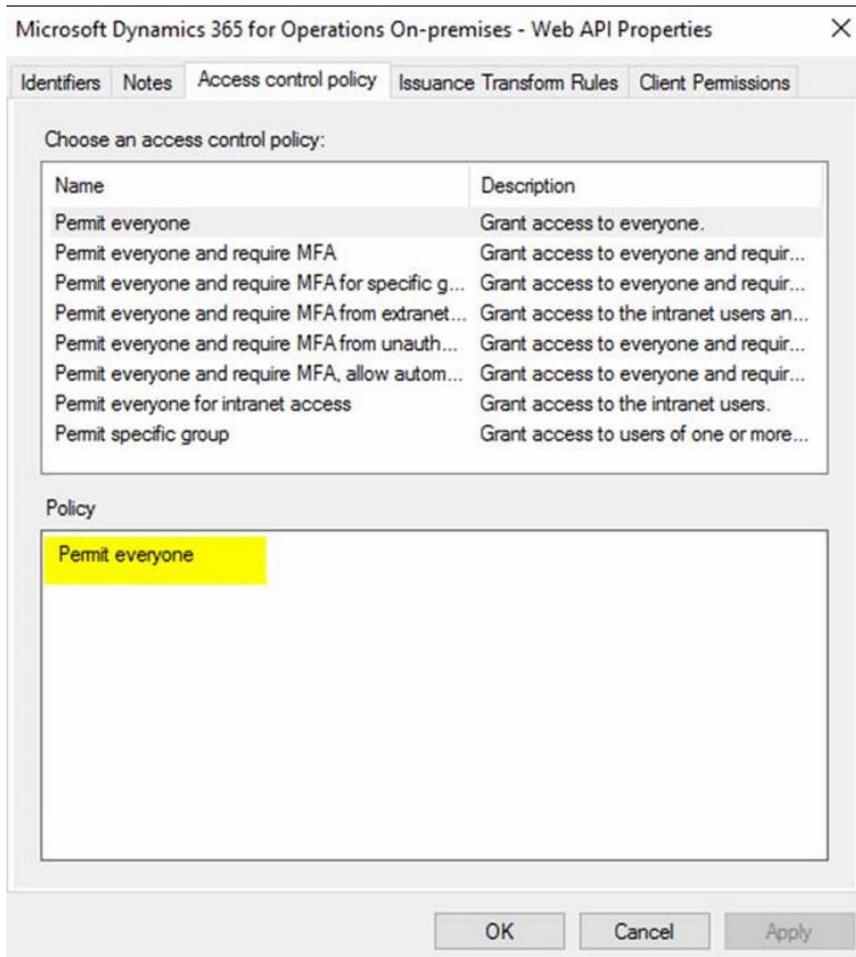
Add application... Edit... Remove

OK Cancel Apply

- Grant permission by running the following PowerShell script (as admin):
Grant-AdfsApplicationPermission -ClientRoleIdentifier "aeff3b71-25b8-4b4b-b7e5-3d13ab83c006" -ServerRoleIdentifier "**Error! Hyperlink reference not valid.**"
- Now you have to properly set properties for the Web API app:
Double click Web API app from the existing applications list in ADFS group



On the "Access control policy" tab choose "Permit everyone" policy:



On the "Client permissions" tab check the same permitted scopes as are set for the Workflow app:

Microsoft Dynamics 365 for Operations On-premises - Web API Properties

Identifiers Notes Access control policy Issuance Transform Rules Client Permissions

Configure application permissions to enable client applications to access this Web API

Client application (caller):

Name	Description
Microsoft Dynamics 365 for Operations On-premises - Workflo...	
Microsoft Dynamics 365 for Operations On-premises - Dox42S...	
Microsoft Dynamics 365 for Operations On-premises - Native a...	

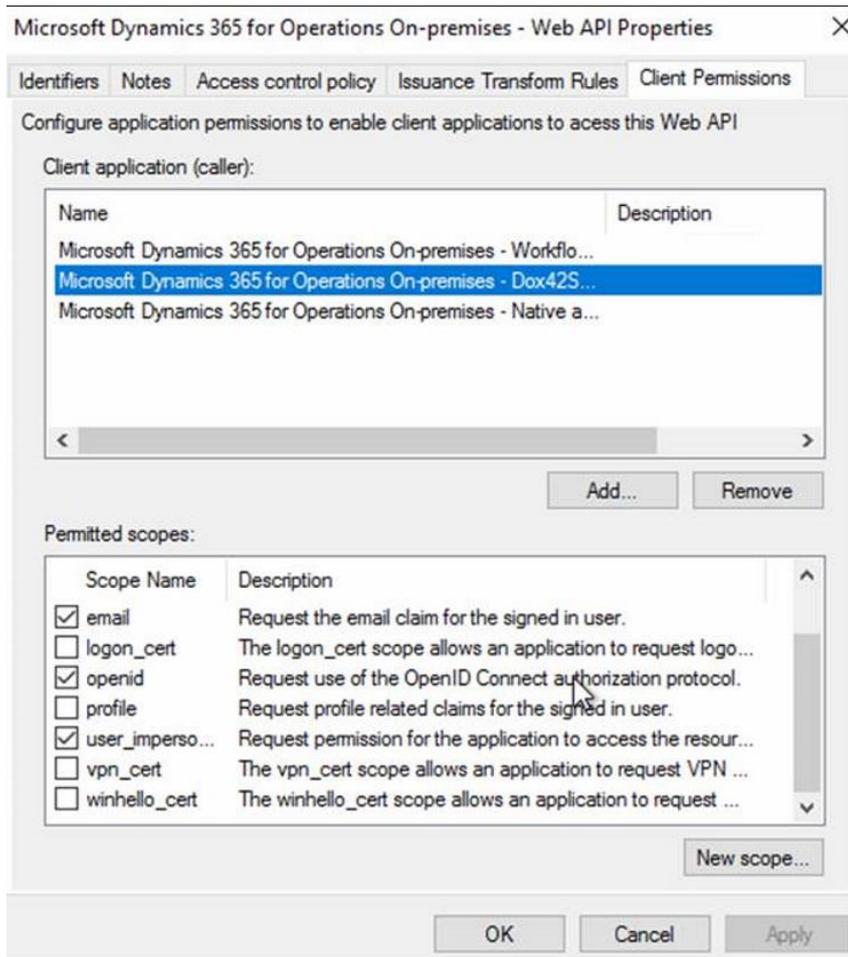
< Add... Remove >

Permitted scopes:

Scope Name	Description
<input checked="" type="checkbox"/> allatclaims	Requests the access token claims in the identity token.
<input checked="" type="checkbox"/> aza	Scope allows broker client to request primary refresh token.
<input checked="" type="checkbox"/> email	Request the email claim for the signed in user.
<input type="checkbox"/> logon_cert	The logon_cert scope allows an application to request logo...
<input checked="" type="checkbox"/> openid	Request use of the OpenID Connect authorization protocol.
<input type="checkbox"/> profile	Request profile related claims for the signed in user.
<input checked="" type="checkbox"/> user_imperso...	Request permission for the application to access the resour...

New scope...

OK Cancel Apply



5. Click "OK" to apply and save changes.

Once the app is created and set up and PowerShell commands were successfully executed, we can connect data source. On connection tab select "On-premise installation" checkbox:

The screenshot shows a dialog box titled "Dynamics 365 for Finance and Operations Data Source". It has a close button (X) in the top right corner. The "Name" field contains "AX1". Below the name field are three tabs: "Dynamics 365 for Operations", "Connection", and "License". The "Connection" tab is active. It contains the following fields and controls:

- "Dynamics 365 for Operations URL:" text box with a "..." button to its right.
- "User credentials" dropdown menu.
- "Username/Client id:" text box with a "..." button to its right.
- "Password/Secret:" text box with a "..." button to its right.
- A checked checkbox labeled "On-premise installation".
- "Authority:" text box with a "..." button to its right.
- A "Connect" button.

At the bottom right of the dialog box are three buttons: a green checkmark icon, "OK", and "Cancel".

Now populate field values taking into consideration the following descriptions:

Dynamics 365 for Operations URL – URL of the target Dynamics environment

Username/Client id – e-mail address of the user that has access and is enabled in D365 FO instance that we are connecting to

Password/Secret - password of that valid user

Authority – ADFS server URL (normally is <https://hostname/adfs/> can be taken from user settings page in D365 FO: System administration => Users => any valid user settings)

2.6 Installation of dox42 for Finance and Operations for dox42 Online

Using dox42 with AAD and/or with **dox42 Online** (Saas), requires the following properties:

- **Application ID / Client ID** > is provided after the app registration in the Microsoft Admin Center
- **Redirect URL**
- **Tenant ID**
- **Client Secret for dox42 Online**

For the AAD integration, you have to configure a few settings in the Microsoft **admin center** and in dox42 Online.

Please note: for some of the following steps you need (global-) Admin rights:

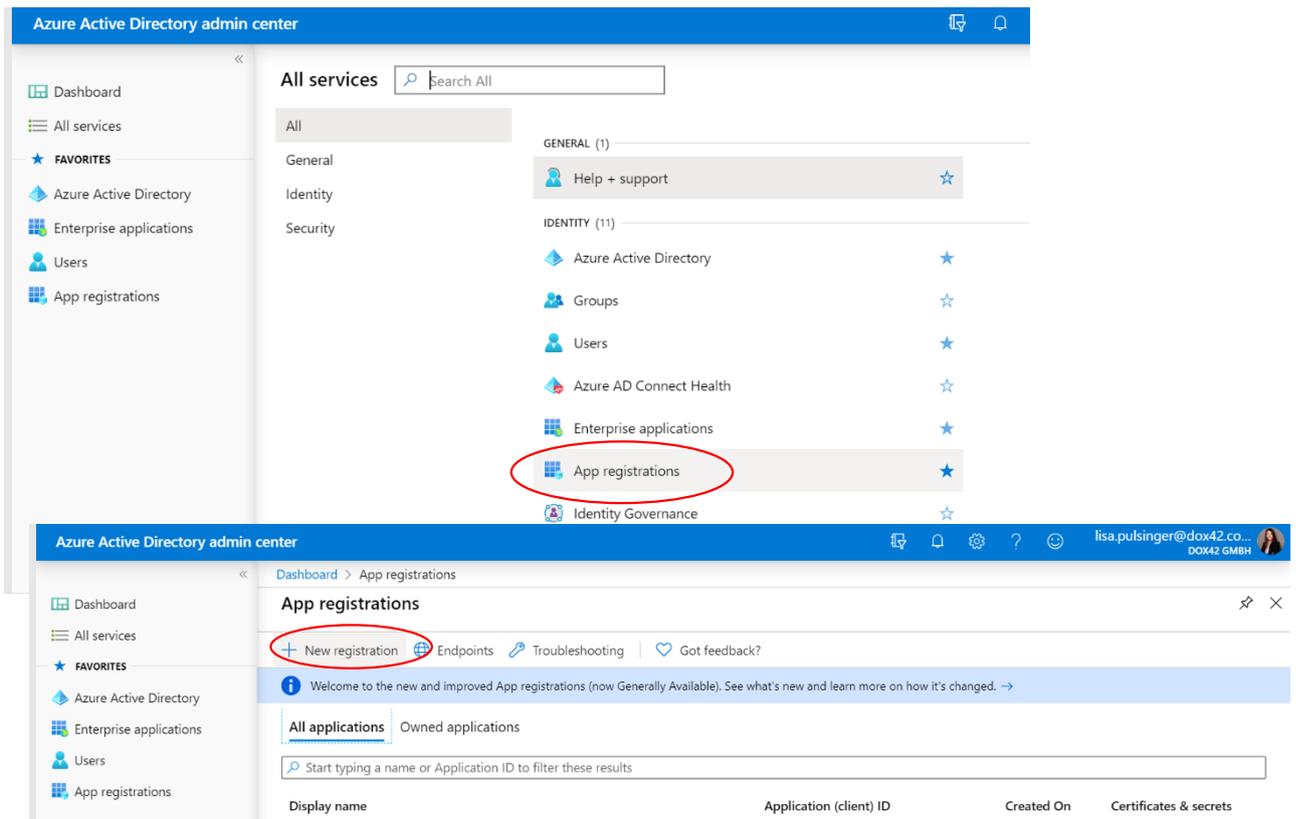
- App Registration
- Enabling required permissions
- Entering Redirect URL(s)

2.6.1 Azure Active Directory App Registration

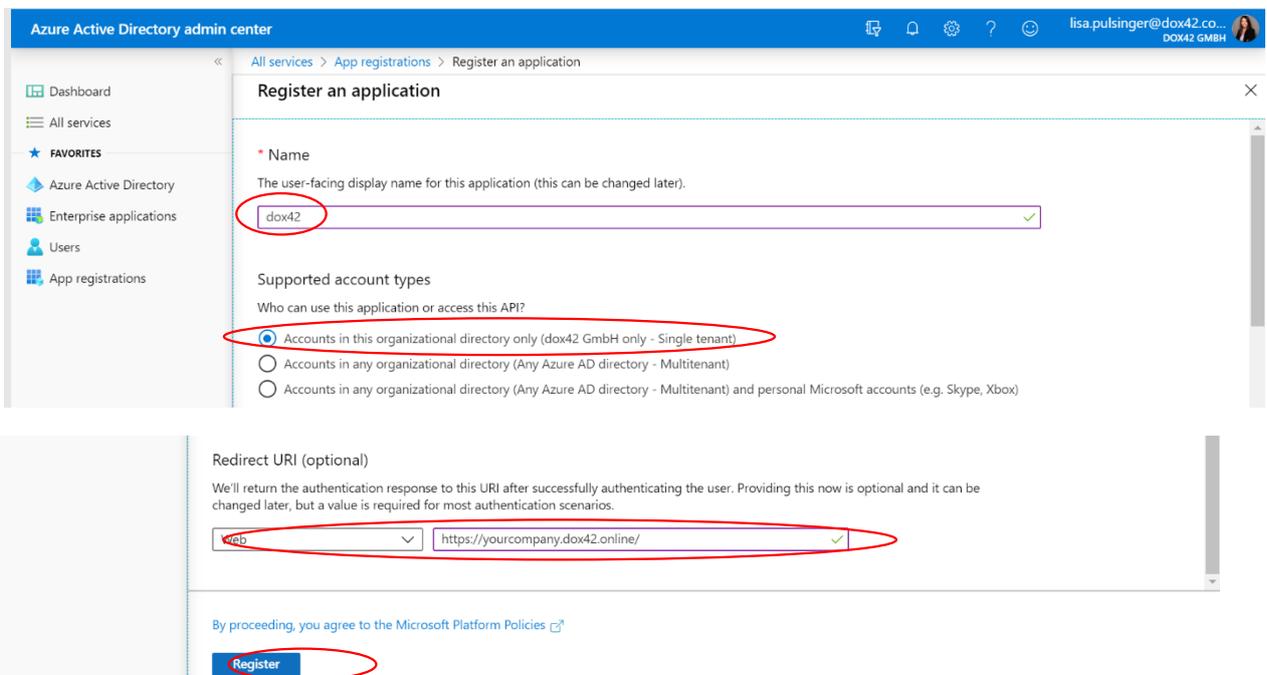
Firstly, you need to create an application in the Microsoft Azure AD admin center to set the AAD permissions for the dox42 Add-in and Server.

- Open the Office 365 Admin Center
- Go to -> **Admin centers** -> **Azure AD**, or click here in order to log in immediately: <https://aad.portal.azure.com>
- Click on **All services** -> **App registrations**

- **Click on New Registration**



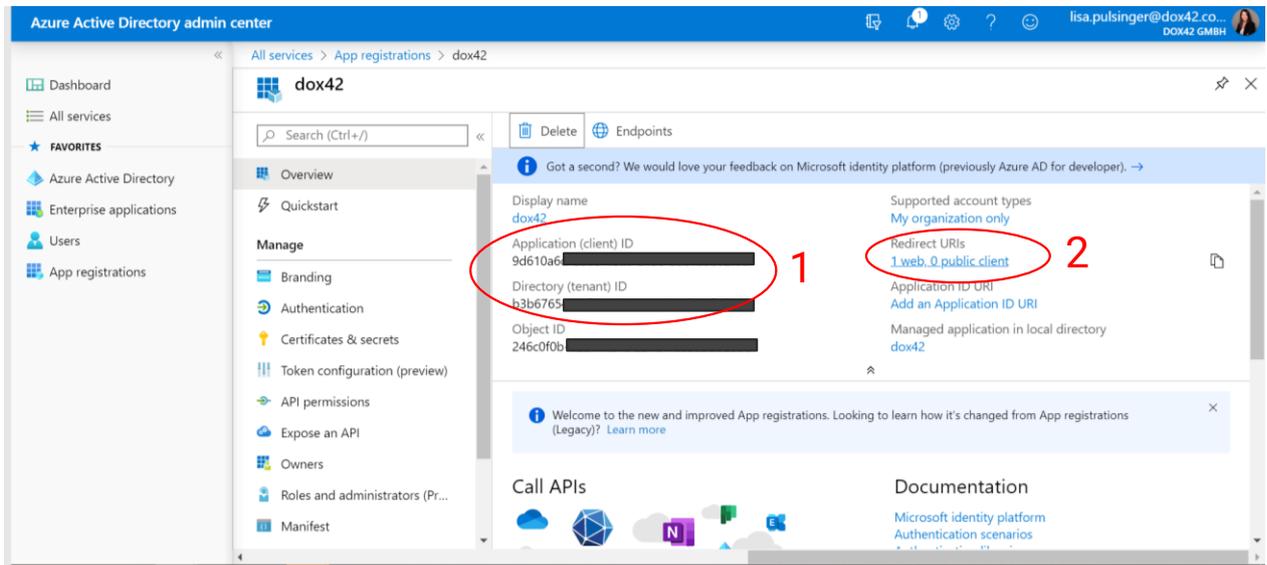
Name your application accordingly and choose which accounts should have access to your application. Also add a Web Redirect URI containing the link to your dox42 Server instance and click



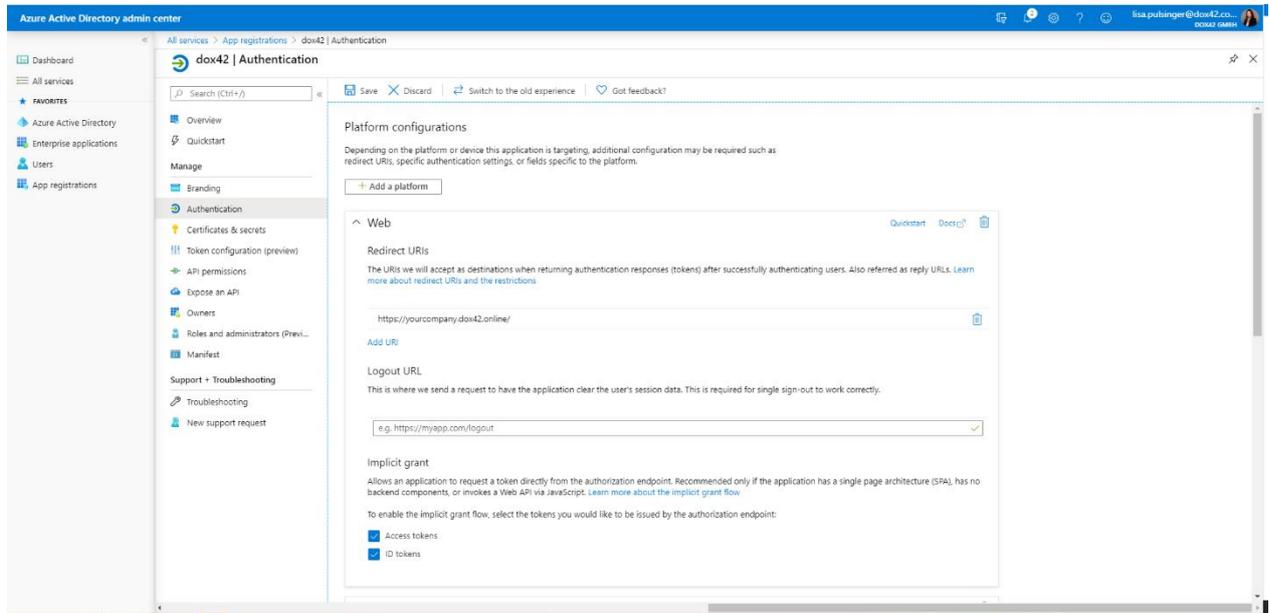
on Register:

Token Permissions

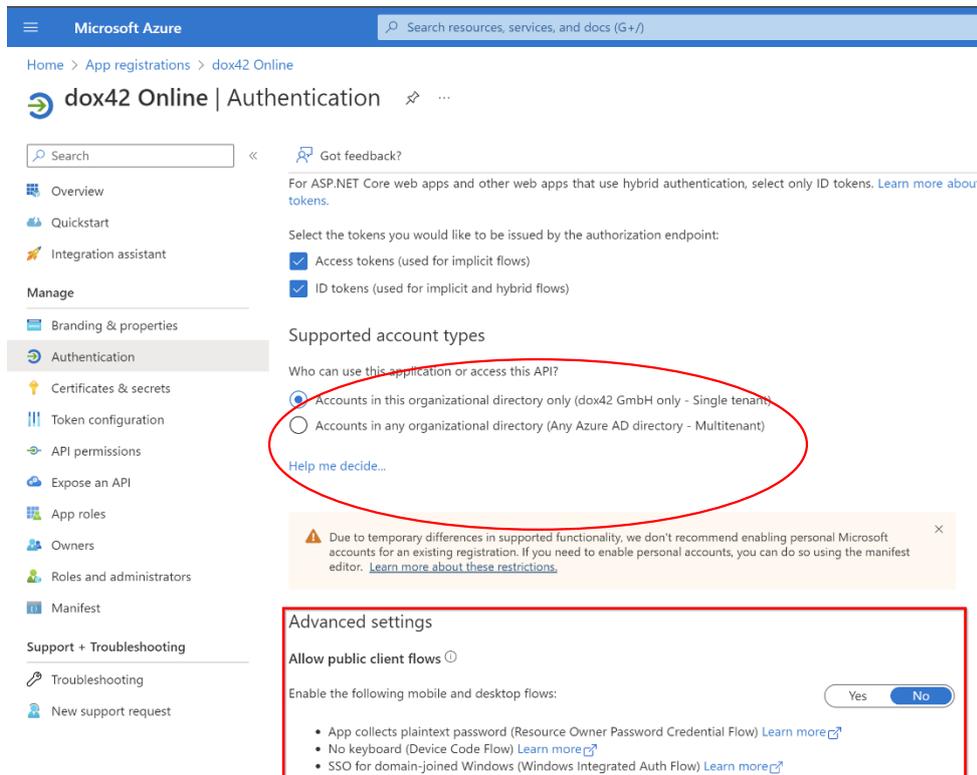
Next, you need to grant token permissions for your app. Within your newly added application, click on Redirect URIs (2).



Now, on the In the Implicit grants section of the Authentication register, tick both “Access tokens” and “ID tokens”:



Scroll down further to find additional settings. Under Advanced Settings keep “Allow public client flows” set on No.



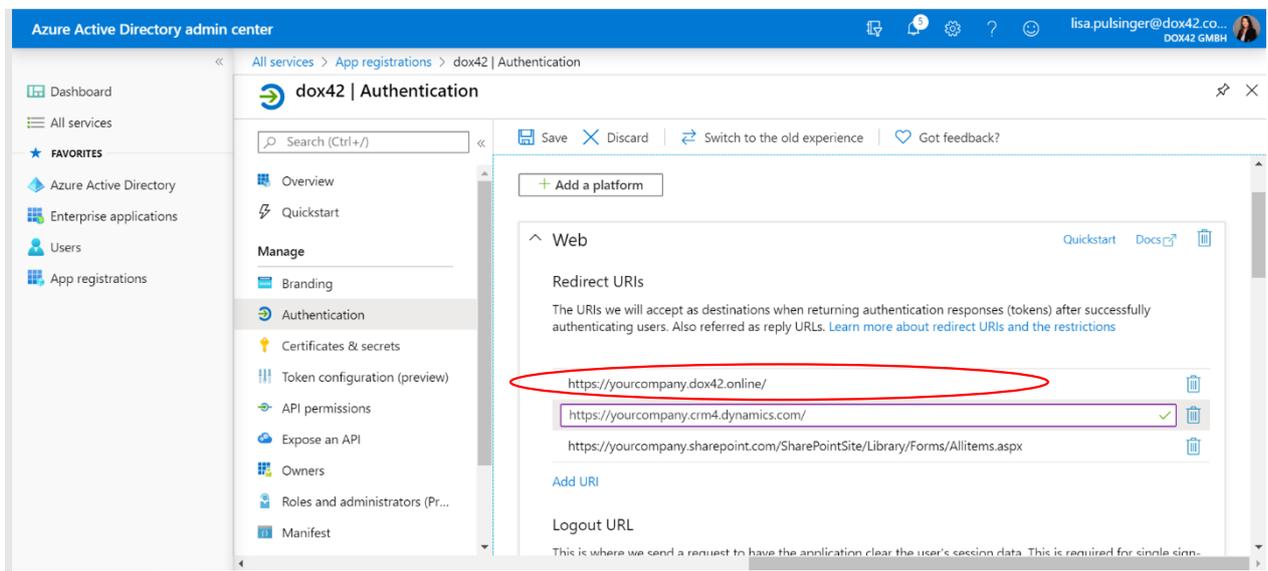
Enter Redirect URIs

Now scroll up again to the beginning of your Authentication page. You need to add Redirect URIs next. Please specify the following:

- your dox42 Online URL:
<https://yourcompany.dox42.online/>
- any additional URLs for applications you want to call the dox42 server from, e.g. Dynamics 365 CE/CRM. Please add the exact URLs where the dox42 Server will be called from. (e.g. <https://Yourcompany.crm4.dynamics.com/> for CRM or <https://global.consent.azure-apim.net/redirect> for Power Automate.

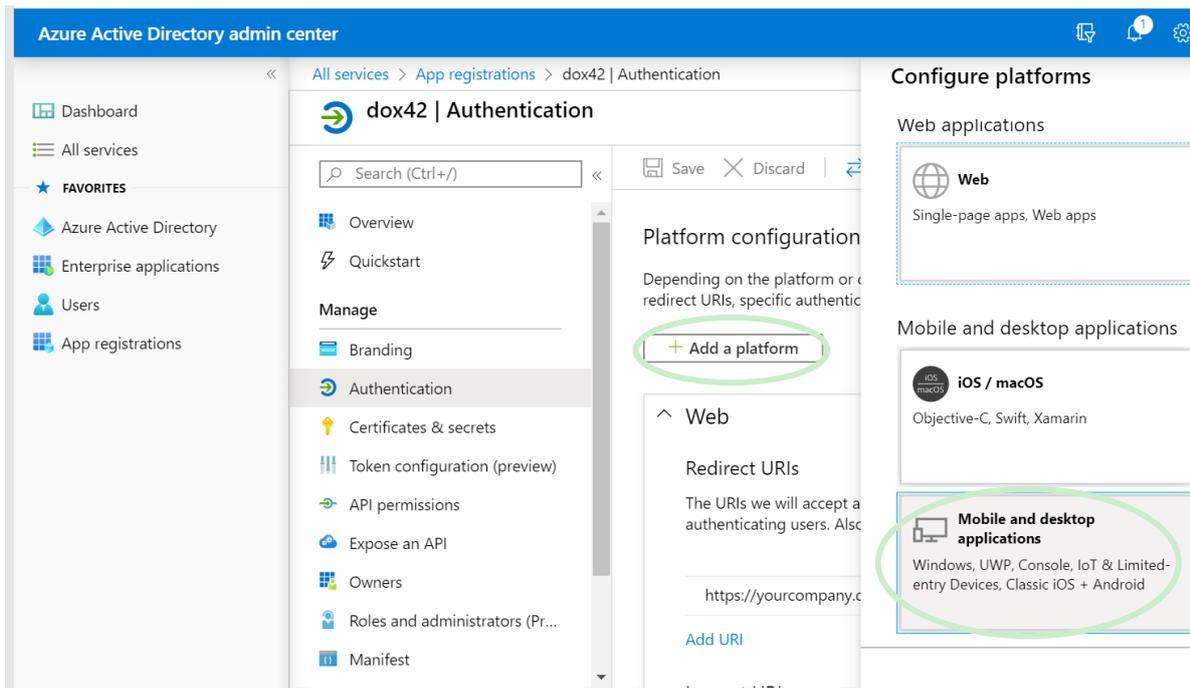
Note: You may NOT use wildcards (*). Microsoft changed this behavior during 2018, so you may find older working App registrations using wildcards, but new App registrations will not work with wildcards.

To use dox42 Online with D365 FO you will only need the dox42 Online URL like indicated in the red circle below:

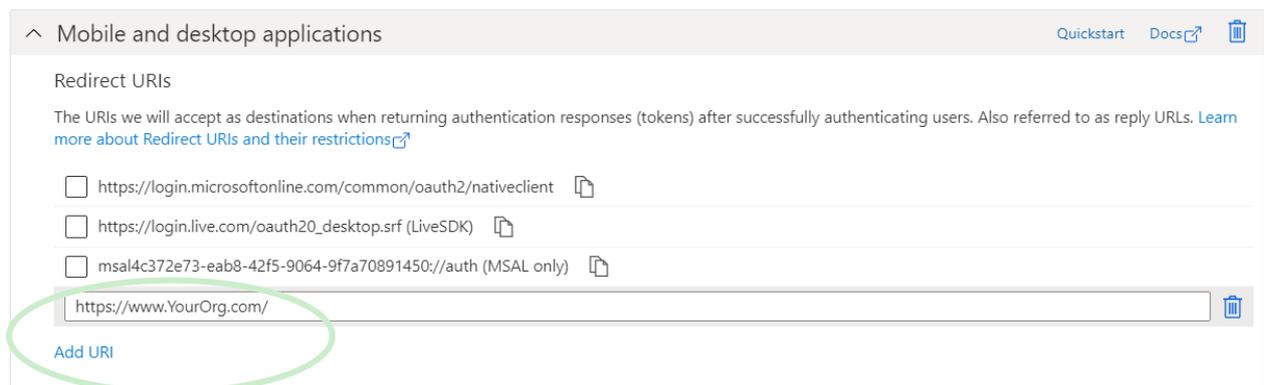


Add a mobile and desktop application for your dox42 Add-In

Now you need to add your dox42 Add-in as a “mobile and desktop application” to your app. On the top of the Authentication page, click on “Add a platform” and then on “Mobile and desktop application”.

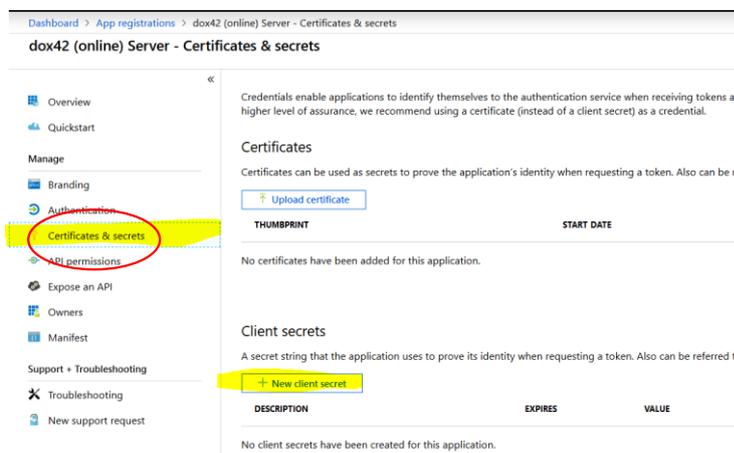


Add a custom redirect URI for your dox42 Add-in – we are using <https://www.YourOrg.com>. Then click on “Configure”.

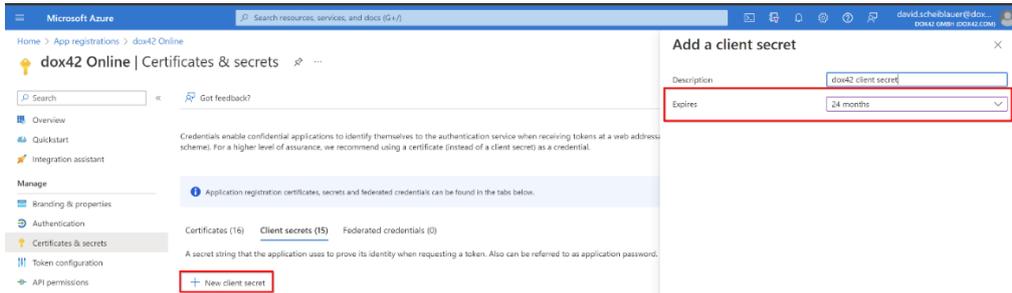


Add a Client Secret

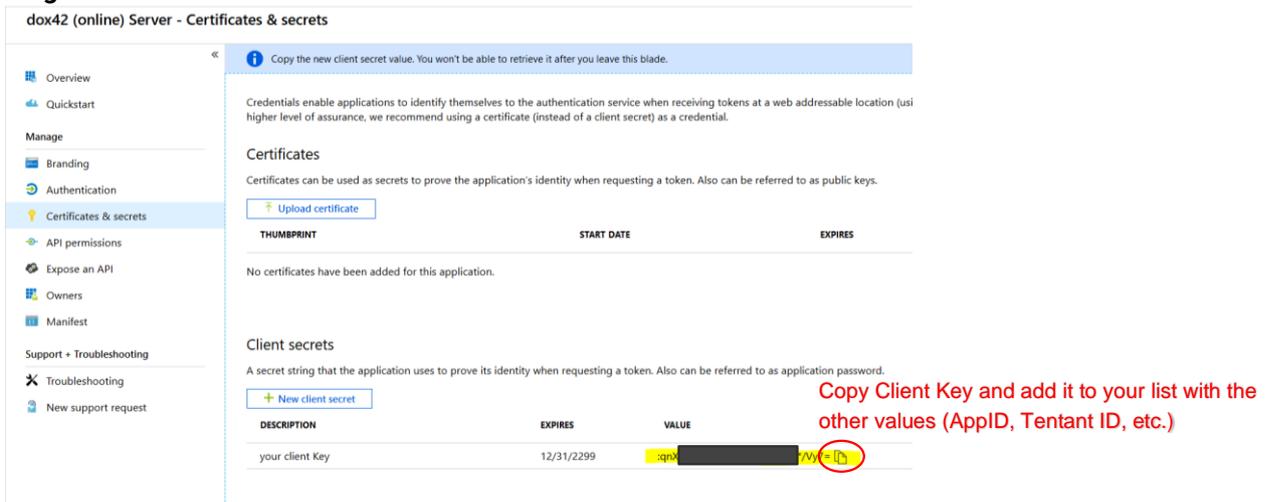
In the register [Certificates & secrets](#), you need to add a new client secret.



Select your required expiry date (we recommend using “2 years”) and click Add. It is best practice to setup a reminder when the client secret will expire. That way you can create a new client secret and replace an old one before it expires.



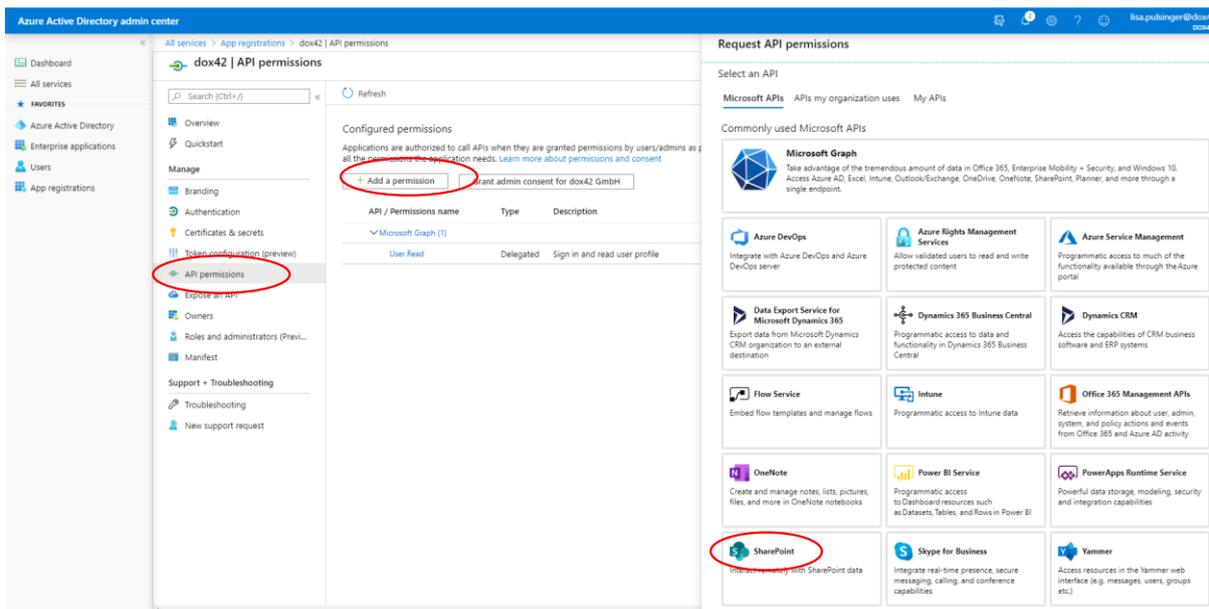
Make sure to **COPY** the Client Key, as it will be hidden afterwards and you will not be able to retrieve it again:



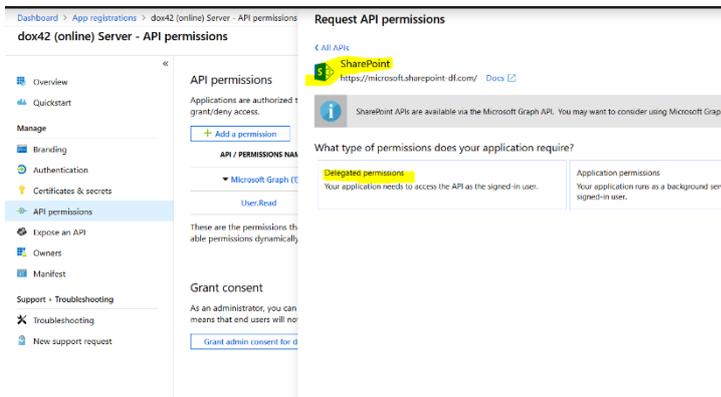
We will need the client secret in the dox42 Finance and Operations Configuration later on.

Add API Permissions

Move to the register API Permissions and click “Add a permission”. You need to grant delegated permissions for Sharepoint with AllSites.Write and AllSites.Read and application permissions for Sharepoint using Sites.ReadWrite.All.



More permissions might be necessary depending on your scenario. Please refer to the dox42 documentations of your additional modules (like CRM use the dox42 CRM documentation).



Next click on “Grant Admin Consent” for your company, to give your application the defined permissions (Alternatively, you can also later on click on “Consent” within the dox42 Add-in AAD connection):

Configured permissions

Applications are authorized to call APIs when they are granted permissions by users/admins as part of the consent process. The list of configured permissions should include all the permissions the application needs. [Learn more about permissions and consent](#)

+ Add a permission ✓ Grant admin consent for dox42 GmbH

API / Permissions name	Type	Description	Admin consent requ...	Status
▼ Microsoft Graph (1)				
User.Read	Delegated	Sign in and read user profile	No	✓ Granted for dox42 GmbH
▼ SharePoint (3)				
AllSites.Read	Delegated	Read items in all site collections	No	✓ Granted for dox42 GmbH
AllSites.Write	Delegated	Read and write items in all site collections	No	✓ Granted for dox42 GmbH
Sites.ReadWrite.All	Application	Read and write items in all site collections	Yes	✓ Granted for dox42 GmbH

If you don't want to set the Application permissions to Sites.All, you can define specific Sites with Sites.Selected. For more information please refer to this MS article: <https://devblogs.microsoft.com/microsoft365dev/updates-on-controlling-app-specific-access-on-specific-sharepoint-sites-sites-selected/>

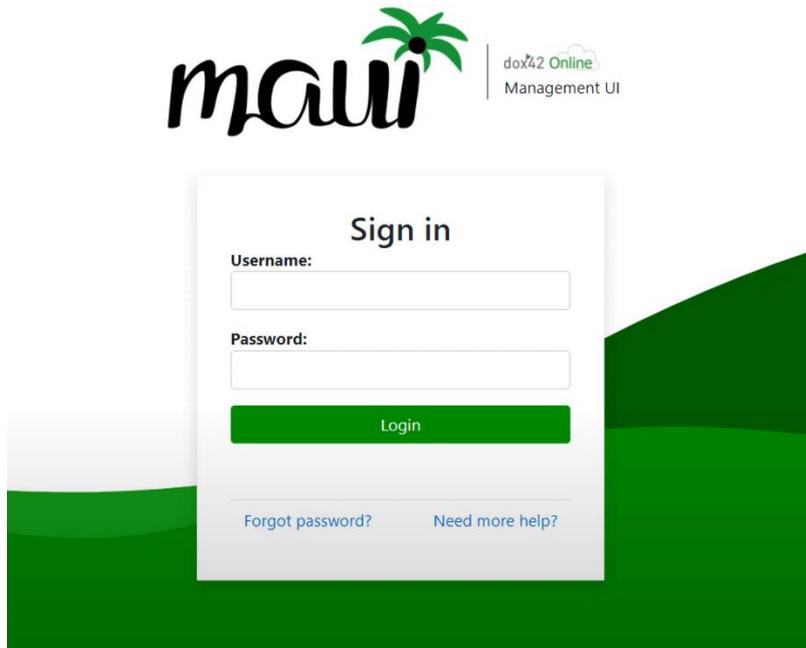
Your app registration is complete now, next you need to configure your dox42 Online accordingly.

2.6.2 dox42 Online Configuration

Once your set-up for your AAD app is finalized, you need to complete the configurations in your dox42 Server. If you work with dox42 Online, follow this chapter.

Please log into your dox42 Online Management UI (MAUI) with the user name and password received from dox42. The URL for your management app look similar to this:

<https://yourcompany.dox42.online/maui>



Add your AAD registration settings

1. Click on "Add" next to the "Sharepoint Online Sites for dox42 Templates" list and enter your SharePoint Online URL in this format:
<https://yourcompany.sharepoint.com/site/> Each URL needs to be added with the App ID, Tenant ID and the generated Client Secret of the App registered in the Azure AD Admin Center like in this documentation above.
2. Configure your trusted template locations (Your templates have to be stored on SharePoint Online, the necessary links are again the Sharepoint Site URLs as defined in the above table)
3. Upload your Aspose license (not applicable for trial installations)
4. Click on "Save and Deploy" at the top of the page

Settings Save and Deploy Cancel
Last deployed: 05.08.2022 13:29:42 WEST (UTC+01:00)

E-mail server

E-mail address

Password

Error e-mail address

Sharepoint Online Sites for dox42 Templates Add +

	Sharepoint Online URL	App ID	Tenant	Client Key
Edit Delete	https://dox42test.sharepoint.com/Dynamics365/	b51c08d1-2421-404a-a9bf-0254d9fd466d	b3b67654-21fd-4d0c-9e96-b9d38efede41
Edit Delete	https://dox42test.sharepoint.com/Employees/	b51c08d1-2421-404a-a9bf-0254d9fd466d	b3b67654-21fd-4d0c-9e96-b9d38efede41
Edit Delete	https://dox42test.sharepoint.com/DevSite/	b51c08d1-2421-404a-a9bf-0254d9fd466d	b3b67654-21fd-4d0c-9e96-b9d38efede41

For more information regarding the MAUI, please refer to the tutorial video introducing MAUI on the dox42 Resource page: [https://www.dox42.com/de/Resources?filter\[\]=tutorialvideo&search=/maui/i&](https://www.dox42.com/de/Resources?filter[]=tutorialvideo&search=/maui/i&)

2.7 Installation of dox42 in D365 FO

dox42 for Finance and Operations adds a “dox42” package to D365 FO. The package contains all the integration components needed to seamlessly create documents directly from the Dynamics web client.

You could either install the Deployable Package or the Source Code (available on request from support@dox42.com). The Deployable Package contains the binaries only, the Source Code can be useful in case you want to develop your own extensions or if you want to debug something.

Regardless of which option you chose, we recommend integrating the solution into your Azure Dev Ops Repository. This allows to deploy the dox42 package as part of your regular build and release process.

You will find further information on <https://docs.microsoft.com/en-us/dynamics365/unified-operations/dev-itpro/deployment/apply-deployable-package-system> as well as <https://docs.microsoft.com/en-us/dynamics365/unified-operations/dev-itpro/dev-tools/manage-runtime-packages>.

After successfully installing the deployable package, the next step is to configure D365 FO to work with the dox42 Server.

Under **System administration > Setup > dox42 > dox42 servers**, setup the dox42 server settings.

Under **System administration > Setup > dox42 > dox42 parameters**, select the **General** tab page.

Create a new default server setup record by clicking on **New**.

2.7.1 Installation for dox42 Server

Enter the path to the dox42 server service to the field **dox42 Server REST URL**.

The screenshot shows the 'dox42 servers' configuration page. The 'dox42 Server REST URL' field is highlighted with a red box. The page includes sections for COMMON SETTINGS, EMAIL SETTINGS, and SHAREPOINT ONLINE SETTINGS.

Set up default dox42 server.

The screenshot shows the 'dox42 parameters' configuration page. The 'Server setup' table is highlighted with a red box, showing a 'Default' server entry.

Server Name	Company	dox42 server
Default	Company	dox42 server

2.7.2 Installation for dox42 Online

Go to dox42 Online MAUI> Log & Service and copy the dox42 REST service.

Log & Service

Service data

dox42 Server Version: 4.6.4.0

Service valid until: NA

Domain: <https://dox42demo.dox42.online/>

SOAP: <https://dox42demo.dox42.online/dox42Service.asmx>

REST: <https://dox42demo.dox42.online/dox42RestService.ashx>

Your dox42 additional modules

dox42 D365 FO (Version 1.2.16)

dox42 D365 CE (Version 4.4.4.3)

dox42 D365 BC

dox42 SAP (Version 4.1.1.0)

Include all previously configured parameters in the dox42 servers (it is recommended to use the "POST (Base64)" HTTP method):

- REST URL
- dox42 Online Username / Password > The Microsoft 365 User that has access to the template
- dox42 Online Tenant ID
- dox42 Online Client ID
- dox42 Online Client Secret

Finance and Operations | System administration > Setup > dox42 > dox42 servers

Save + New Delete Options

Filter

Standard view

dox42 servers

dox42 server name: Default | dox42 Server REST URL: <https://dox42demo.dox42.online/dox42RestService.ashx>

Setup

COMMON SETTINGS	EMAIL SETTINGS
HTTP Authorization: <input type="text"/>	SMTP user name: <input type="text"/>
HTTP method: POST (Base64) ▼	SMTP password: <input type="text"/>

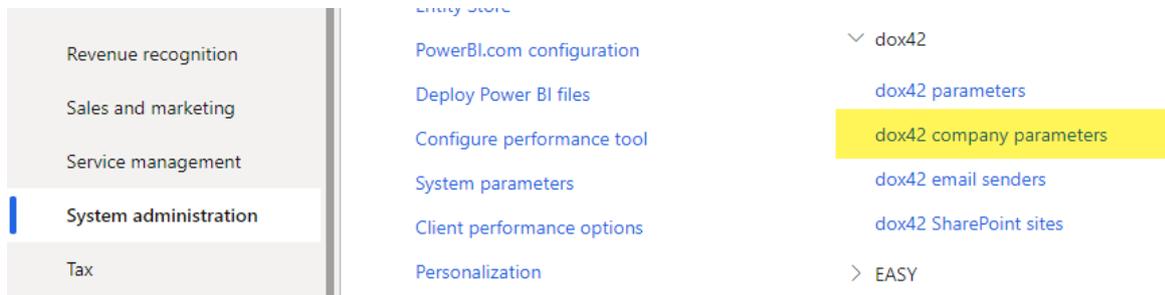
dox42 Online

Generate SharePoint Online certificate | Download SharePoint Online certificate | Restore SharePoint Online certificate

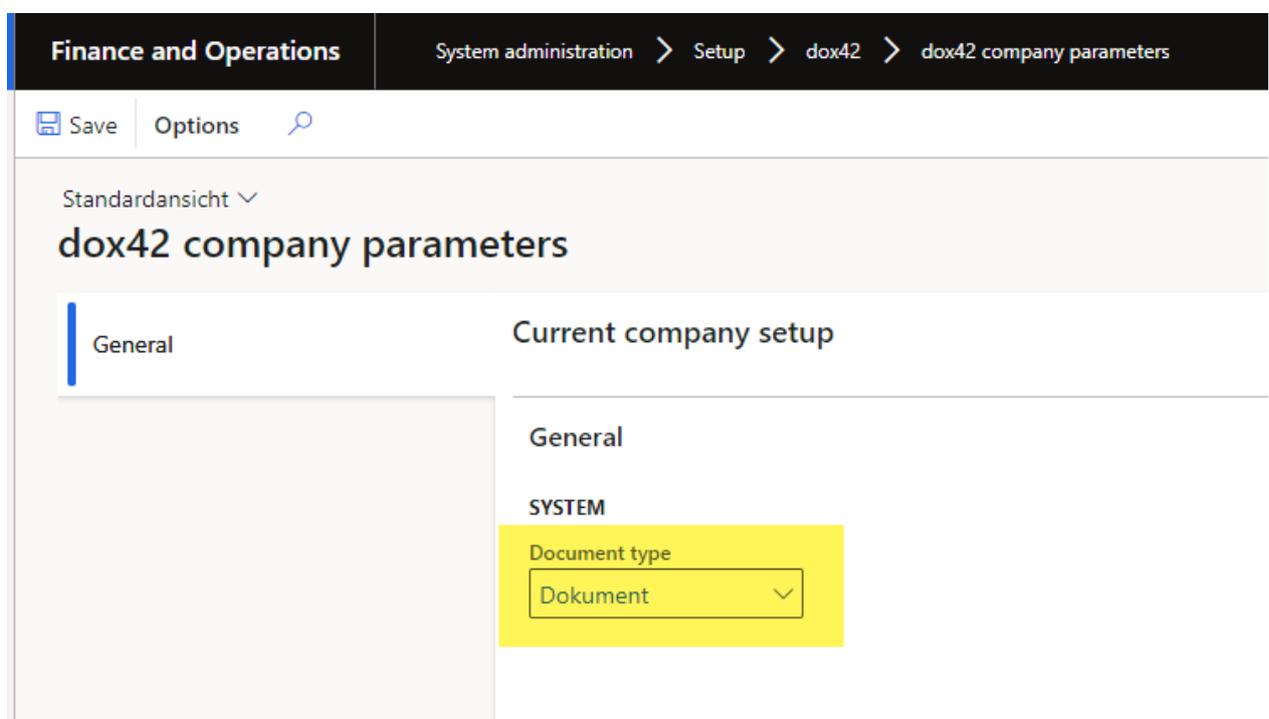
SHAREPOINT ONLINE SETTINGS	SharePoint Online username	SharePoint Online tenant id	SharePoint Online client id
Authentication method: As User with password (No M... ▼)	<input type="text"/>	<input type="text"/>	<input type="text"/>
	SharePoint Online password: <input type="text"/>		SharePoint Online client secret: <input type="text"/>

2.7.3 Document type

For registration the document type, which dox42 should use, a setup in the “dox42 company parameters” is needed.



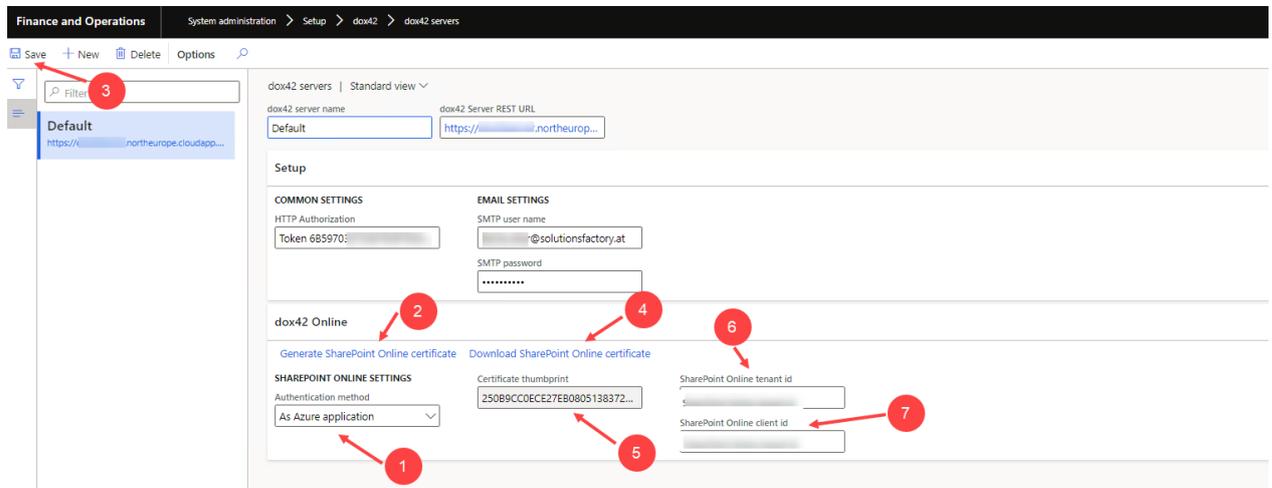
In the drop down menu, which displays all needed document types are available.



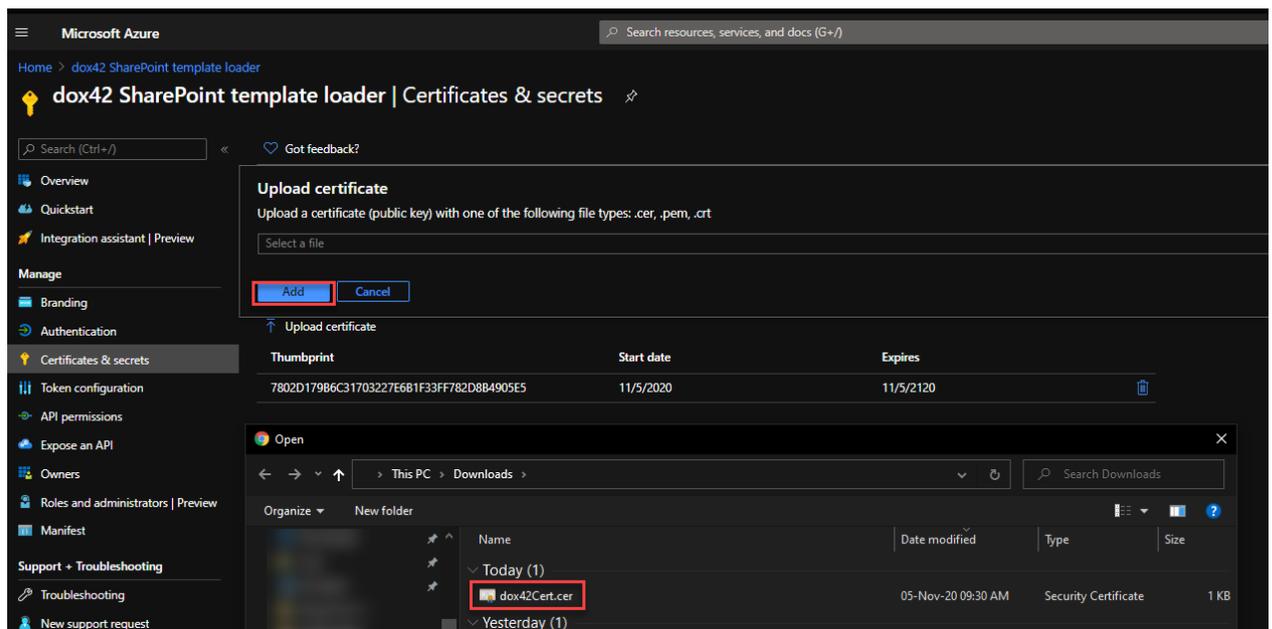
We recommend using type MS Azure blob storage for the document type.

2.7.4 SharePoint Online certificate setup

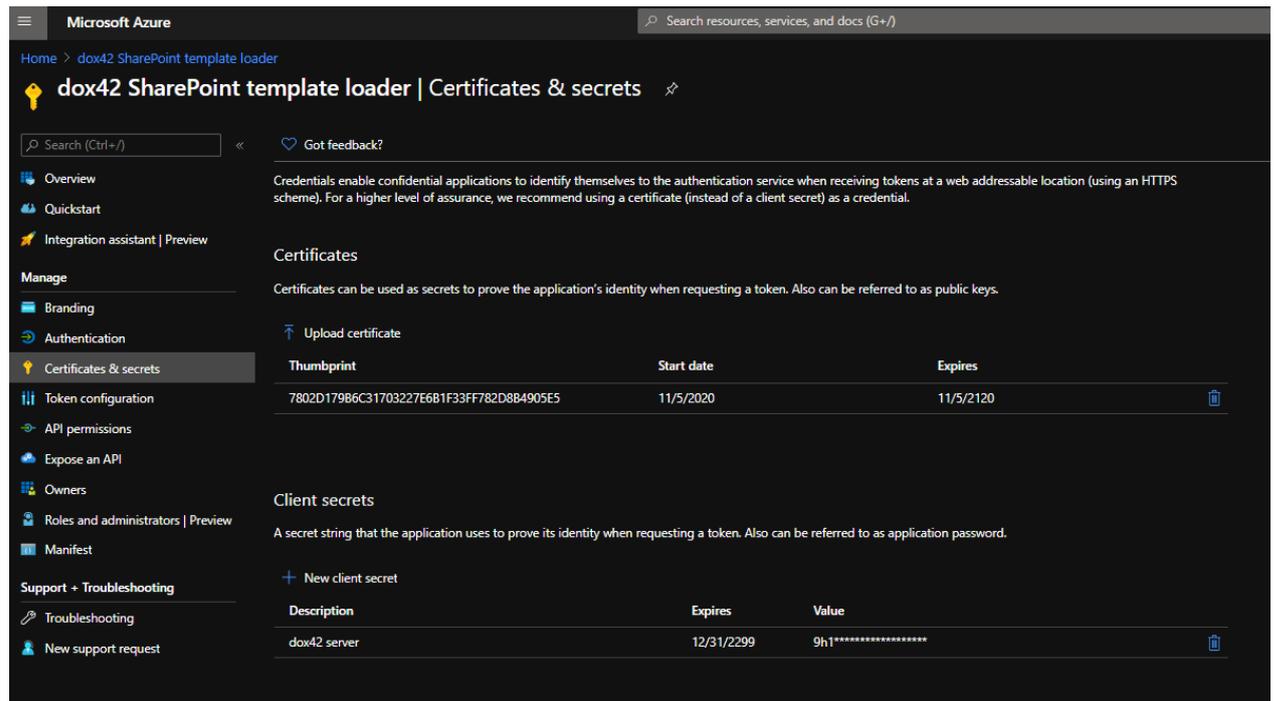
Fill the values in the order provided below using application registration parameters (take 6 and 7 from the created app registration):



Once you got the certificate downloaded (step 4 in the screenshot above), upload it to Azure AD application registration certificates.



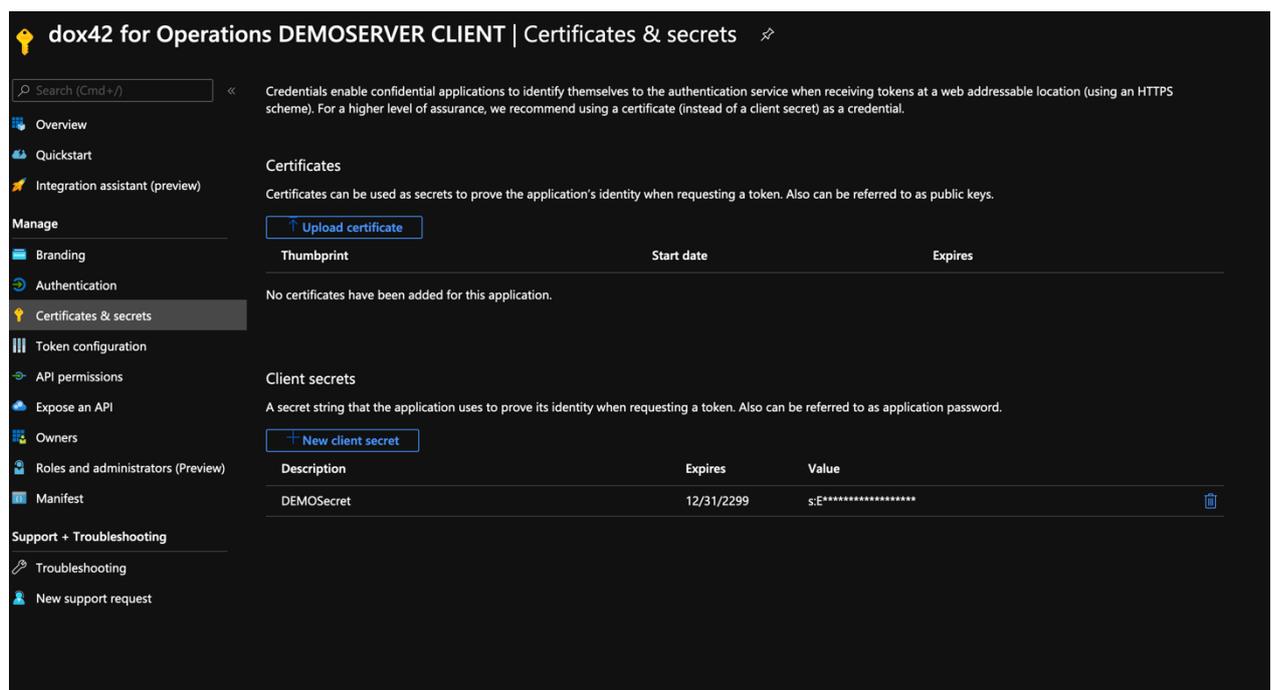
Here's how it should look like:



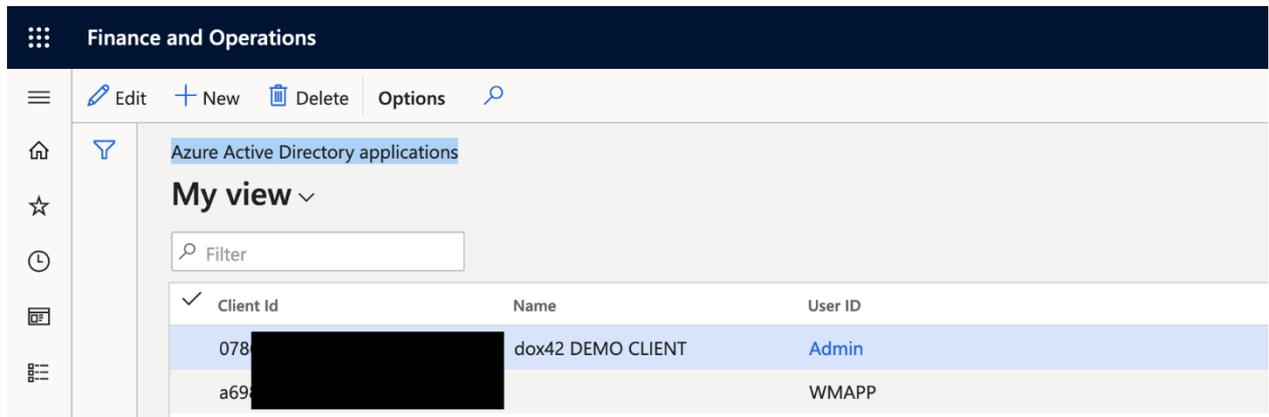
2.8 Reading data with Service User or AzureAD App (required for multifactor authentication)

For the multifactor authentication a new app in Azure is necessary. You can also use your dox42 Online app. The app will be mapped inside D365 FO to a specific (service) user and claim its roles and rights.

Create a new App Registration and Secret like in the dox42 Online Setup. These will be your sign-in credentials in the Word Add-in.



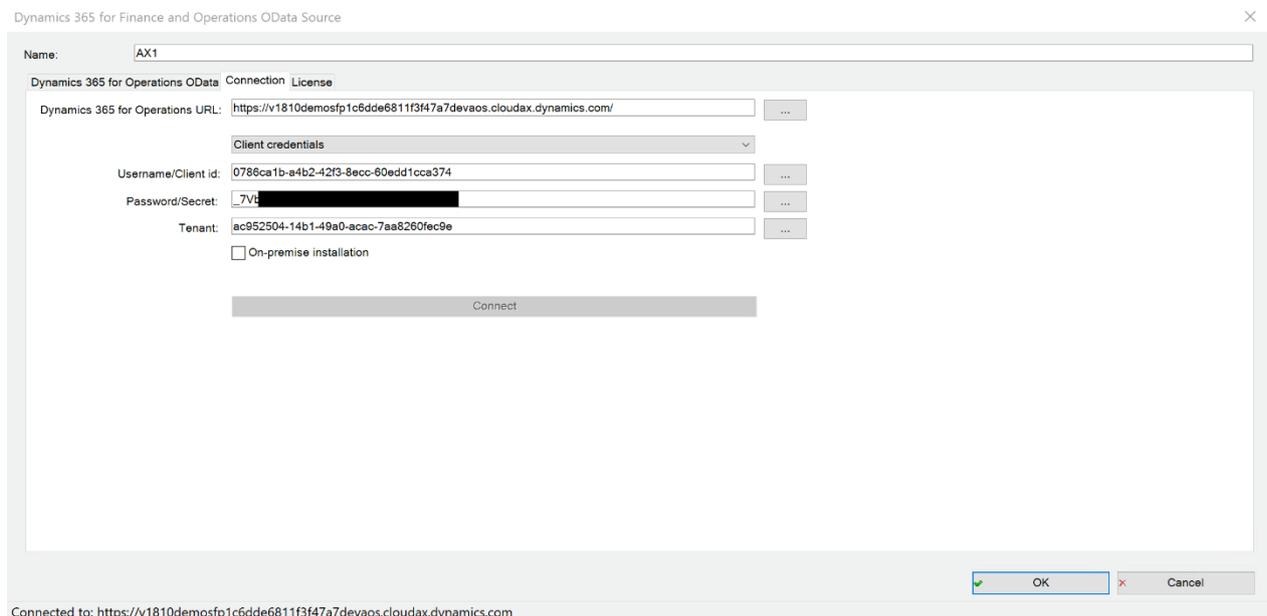
Next, add your Client ID to the D365 FO mapping configuration. The table can be found under System Administration -> Setup -> Azure Active Directory applications. Fill in your Client ID, give it a name optionally and map it to a specific (service) user inside of D365 FO.



A connection Excel file with the following components should then be created. For more details on this please see the chapter Creating a dox42 report below.

- URL
- Client ID
- Secret from the azure app
- TenantId

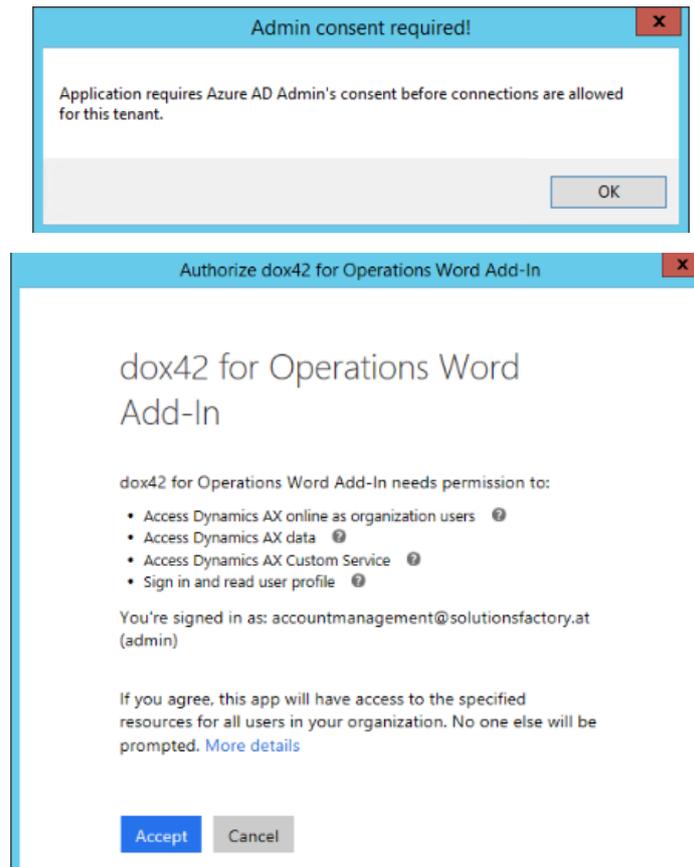
Use those newly created credentials to connect to your D365 FO instance, by either filling them in directly, or - the more recommended approach – by using your created Credentials Excel sheet.



2.9 dox42 for Finance and Operations Setup Connection to D365 FO

2.9.1 Establishing connection

To establish a new connection to your dox42 for Finance and Operations instance, simply fill out the form in the “Connection” tab. Please note, that on the first run through of the authentication process, an Azure AD Admin must approve/consent the application, to allow the sign in of users and access to the data.



You can use data fields of another data source for every value in the “Connections” tab. This way, you can enter username and password once in a central place and use it for different connection, more is

described in later chapters. If a multi factor authentication is setup the “Connection” tab contains additional information, therefore the created excel from the chapter above must be used.

Dynamics 365 for Finance and Operations OData Source

Name: AX1

Dynamics 365 for Operations OData Connection License

Dynamics 365 for Operations URL: [] ...

Client credentials: []

Username/Client id: [] ...

Password/Secret: [] ...

Tenant: [] ...

On-premise installation

Connect

OK Cancel

2.9.2 Testing setup with empty template

It is recommended at the beginning to test the needed connection setup for your new template and then start with the design of it. Here is a brief plan of how to do that:

- Setup the connection for your template
- Try to generate empty document
- If succeeded, then can continue with the design

3 Working with dox42 reports

3.1 Basic setup

3.1.1 Creating a folder structure for efficient working

- 1 Create one folder for each environment

This PC ▸ Local Disk (C:) ▸ dox42Server ▸ templates ▸

Name	Date modified
Live	5/30/2019 8:02 AM
Test	5/30/2019 8:02 AM

- 2 Create a folder for each report which should be designed in dox42

View

PC ▸ Local Disk (C:) ▸ dox42Server ▸ templates ▸ Test ▸

Name	Date modified	Type
PackingSlip	5/30/2019 7:58 AM	File folder
SalesConfirm	5/30/2019 7:58 AM	File folder
SalesInvoice	5/30/2019 7:58 AM	File folder

- 3 Insert a Word document into the report folder which will be used as a template to design the report.
- 4 Create an Excel document and save it on the root folder above the system folder, this file will be used for saving the connection information (in this case it is named "Connection")

This PC ▸ Local Disk (C:) ▸ dox42Server ▸ templates ▸ Test ▸

Name	Date modified
PackingSlip	4/2/2020 4:08 PM
SalesConfirm	5/30/2019 8:50 AM
SalesInvoice	4/2/2020 4:08 PM
Connection	1/22/2019 2:42 PM

3.1.2 Components of a report

A report consists of the following components:

- Word document with a Add In
This Word document shows the basic structure of the report, it contains all design components which are later represented in the finished report.

- **Connection Excel file:**
The connection file stores all the information which are needed to create a connection to the D365 FO
- **Data Map**
The Data Map is necessary to get access to all required information like the connection Excel file or the data sources.

3.1.3 Setup of the connection Excel file

The connection Excel file is a file which stores all needed information to create a connection to D365 FO environment. How to use it will be described in the chapter below.

Setup the connection Excel file with the columns. If you decide to go for AzureAD App Login please use the same configuration and just name the parameters accordingly (URL, Client ID, Secret, Tenant ID).

- **URL:** D365 FO URL
- **Username:** The AAD User
- **Password:** password (we recommend using an encrypted password as described later in the document)
- **Warning message:** warning message (will be shown as a watermark).
Usage: e.g. if the sales invoice is printed from the test environment, to clearly show it is not an original sales invoice from a live environment

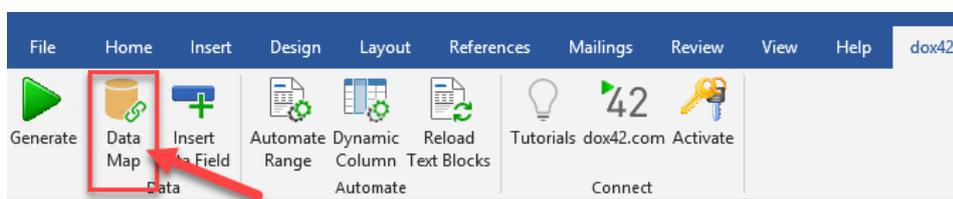
	A	B	C	D
1	URL to the D365 Enviroment	username	password	Warning
2			0815	TEST Enviroment
3				
4				
5				
6				
7				

3.1.4 Creating a standard Data Map

The advantage of having a standard Data Map is that it can be copied and used for other reports with minimal effort.

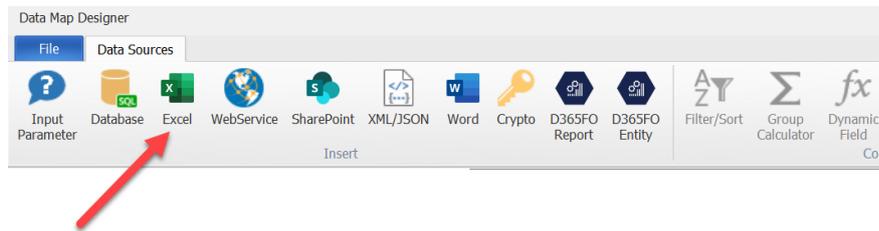
Please make sure to save your Word document on your computer before adding Data Map to it. It is recommended to have the template named the same as the Data map.

Open the Data Map of a template by going to the tab "dox42" and clicking on the button "Data Map".



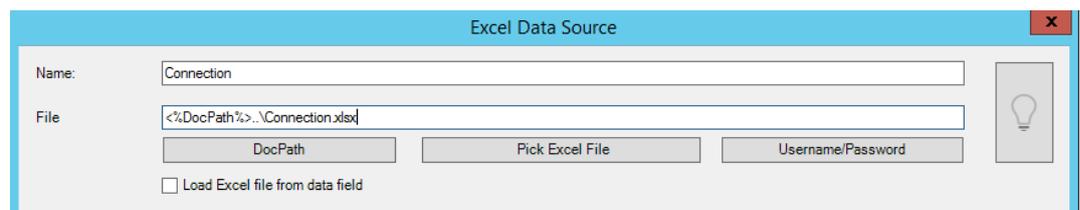
1 Setting up the connection Excel file

a. Click on the “Excel”



b. Insert a name for the connection file

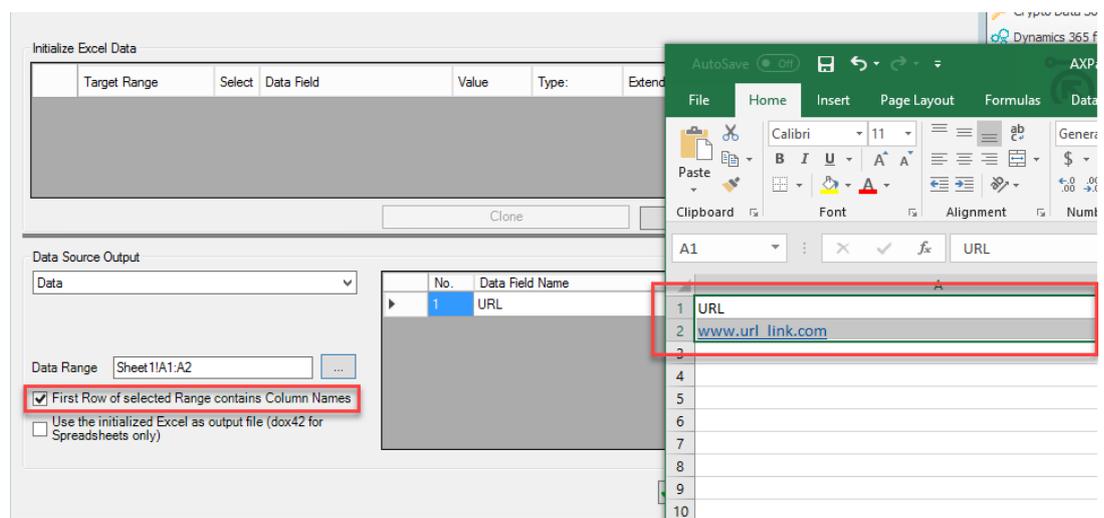
c. Insert the path from the connection file, always using the “<%DocPath%>”. The “..” tells the system to look a level above in the folder structure and there it will find an Excel file named “Connection.xlsx”. Using the “DocPath” makes it possible to copy the data map and insert it to another report folder without the need of changing the path.



d. Mark the checkbox “First Row of selected Range contains Column Names”

Click on the button with the three dots to select the fields from the Excel file.

Mark the area with all the data. An example is displayed on the picture below.

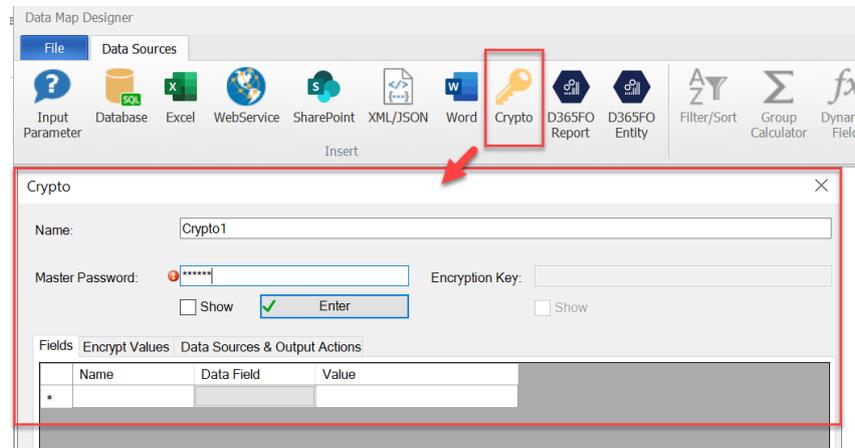


e. Click the button “ok”, now the connection file is setup.

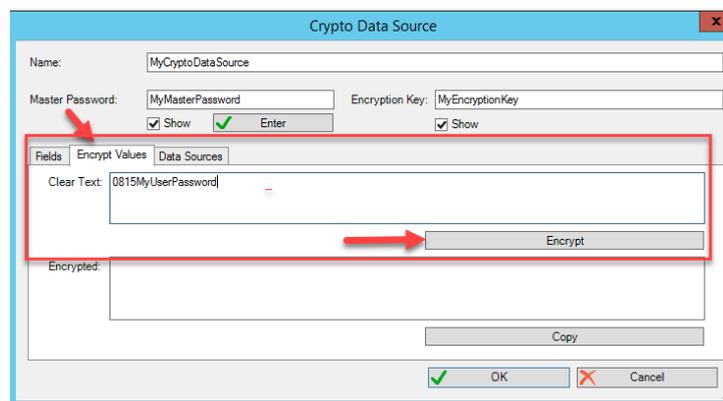
2 Creating a **Crypto Data Source**

a. Click on the button “Crypto Data Source” in the Data Map

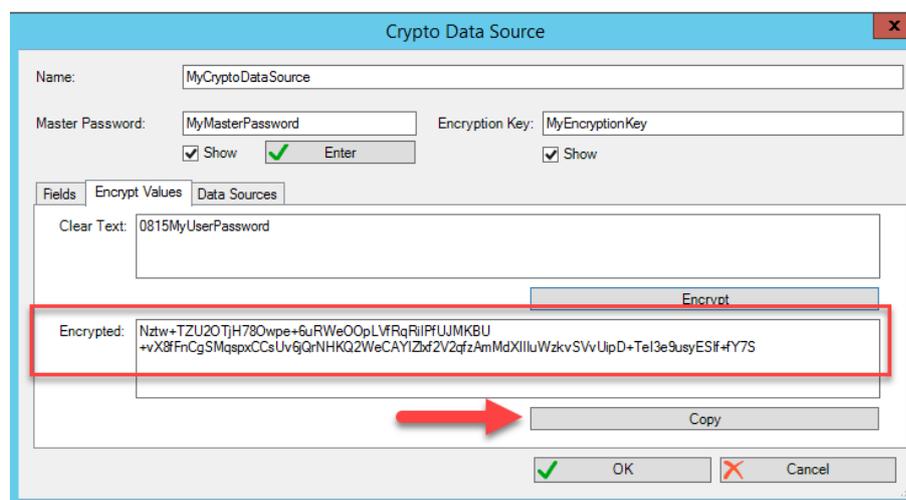
- b. Insert a name for the Crypto Data Source
- c. Enter a "Master Password" and an "Encryption Key", which will be used to encrypt the password



- d. Click on the tab "Encrypt Values" and insert the password from the ADD User inside the field "Clear Text".

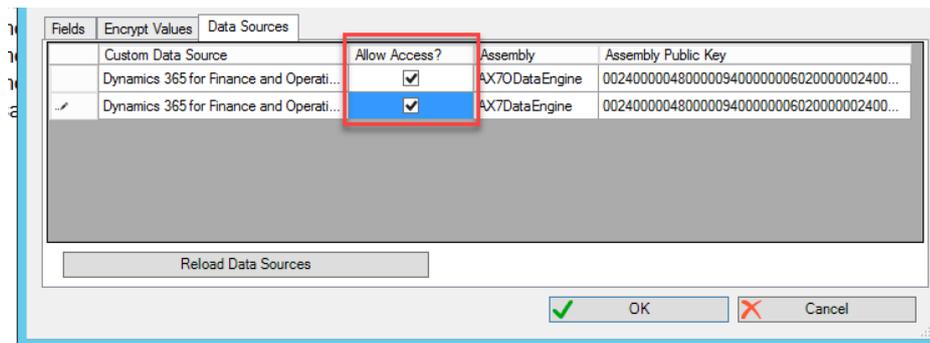


- e. Click on the button "Encrypt"
- f. Copy the displayed result in the area "Encrypted" and insert it in the connection Excel file instead of the cleartext password

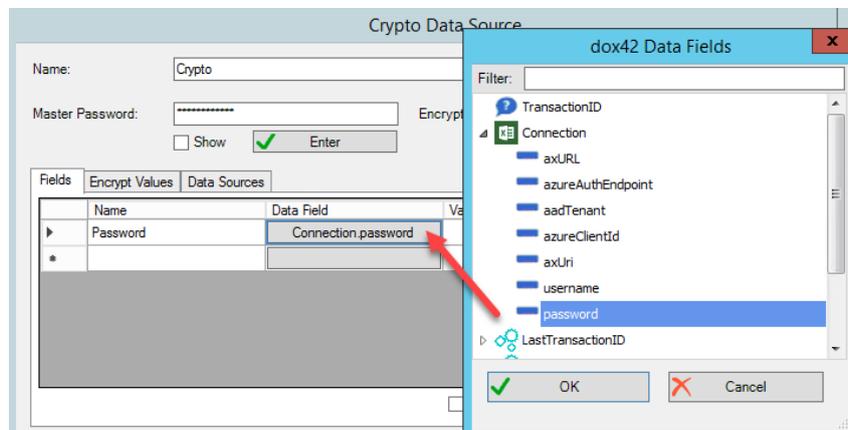


	A	B	C
1	username	password	Warning
2		Nztw+TZU....	TEST Envioment
3			
4			

- g. Click on the tab “Data Sources” and allow access to the Customer Data Sources like in the picture below.



- h. Click the button “OK”
- i. Open the new Crypto Data Source and click on the tab “Fields”
- j. Insert a password field, with a double click on the field “Data Field”, a lookup window will appear, illustrated in the picture below. Select the password field from the connection Excel file.



- k. With a click on the button “ok” the Crypto Data Source is setup

Save the Data Map in the same folder as the template. This Data Map can be copied and used in every template which works with the same D365 FO environment. Each report needs a Data Map. Copy the standard Data Map and insert it into each report folder.

PC > Local Disk (C:) > dox42Server > templates > Test > SalesConfirm		
Name	Date modified	Type
 datamap.dm	5/23/2019 8:17 AM	DM File
 SalesConfirm	5/23/2019 8:12 AM	Microsoft Word D...

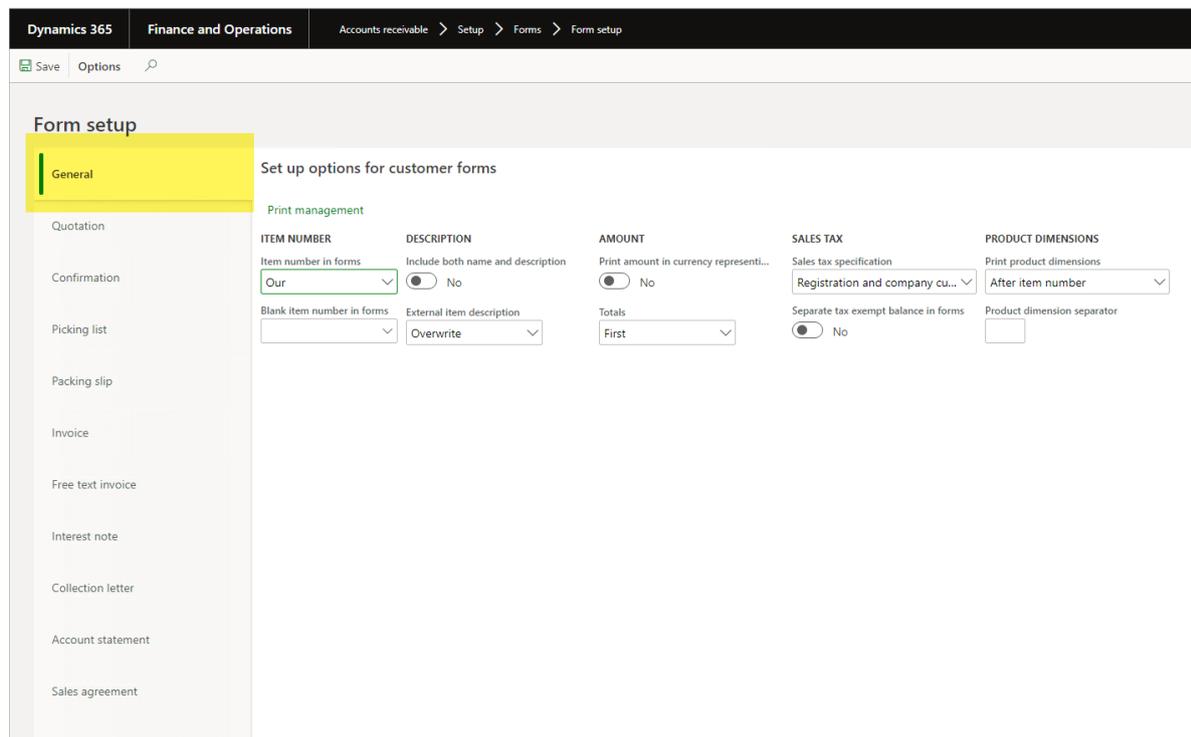
3.2 Create your first dox42 report

This chapter will describe how to setup a report from copying the standard Data Map to display it in D365 FO.

3.2.1 General facts about the DataProvider of dox42

dox42 uses the same DataProvider as a SSRS report, therefore all the necessary setup which are influencing the DataProvider from the D365 FO side are also influencing the DataProvider of dox42. An example would be the form setup in the "Accounts receivable". (Accounts receivable > Setup > Forms > Form setup).

The form setup contains the general setup (Tab "General") of a report as well as a specific one.



The screenshot shows the Dynamics 365 interface for "Form setup" under "Accounts receivable > Setup > Forms > Form setup". The "General" tab is selected in the left-hand navigation pane. The main area is titled "Set up options for customer forms" and contains several configuration sections:

- Print management:** Includes options for "Include both name and description" (radio button, currently "No") and "Print amount in currency represent..." (radio button, currently "No").
- ITEM NUMBER:** "Item number in forms" is set to "Our" (dropdown), and "Blank item number in forms" is set to "Overwrite" (dropdown).
- DESCRIPTION:** "External item description" is set to "Overwrite" (dropdown).
- AMOUNT:** "Totals" is set to "First" (dropdown).
- SALES TAX:** "Sales tax specification" is set to "Registration and company cu..." (dropdown), and "Separate tax exempt balance in forms" is set to "No" (radio button).
- PRODUCT DIMENSIONS:** "Print product dimensions" is set to "After item number" (dropdown), and "Product dimension separator" is an empty text box.

Form setup

- General
- Quotation
- Confirmation
- Picking list
- Packing slip
- Invoice
- Free text invoice
- Interest note
- Collection letter
- Account statement
- Sales agreement

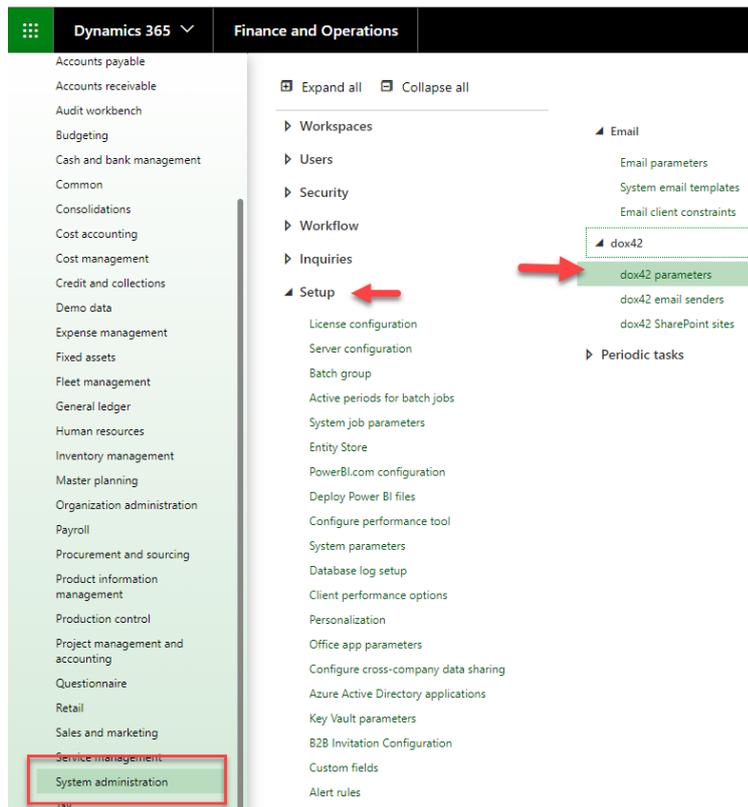
Set up options for customer invoices

LAYOUT	NOTE	SHOW IN SHEET	BACKORDER
Paper format Blank paper	Include document on sheets	<input type="checkbox"/> Configuration	Backorder tracking
Blank paper ▼	None ▼	<input type="checkbox"/> Size	No tracking ▼
<input type="checkbox"/> Print packing slip specifications	Include documents of type	<input type="checkbox"/> Color	
<input type="checkbox"/> Print tax exempt number on inv...	 ▼	<input type="checkbox"/> Style	
		<input type="checkbox"/> Site	
		<input type="checkbox"/> Warehouse	
		<input type="checkbox"/> Inventory status	
		<input type="checkbox"/> Location	
		<input type="checkbox"/> License plate	
		<input type="checkbox"/> Batch number	
		<input type="checkbox"/> Serial number	
		<input type="checkbox"/> Owner	

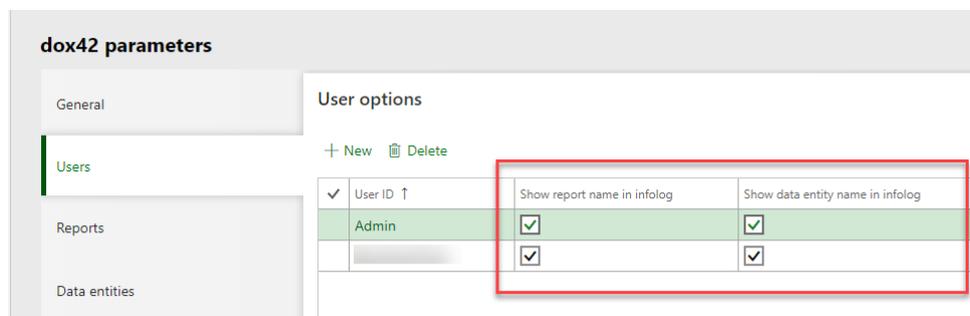
3.2.2 The basic steps for creating any dox42 report in D365 FO

This chapter describes the presetting which are required for designing a new dox42 report, in the D365 FO environment.

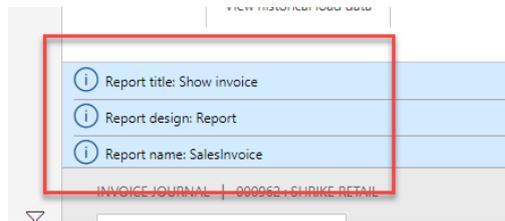
- 1 Get to know which report is called
 - a. Go to **System administration > Setup > Business intelligence > dox42 > dox42 parameters**



- b. In the tab “Users” add a new entry with the currently signed in User ID and check the “**Show report name to Infolog**” and “**Show data entity name in Infolog**” checkbox.

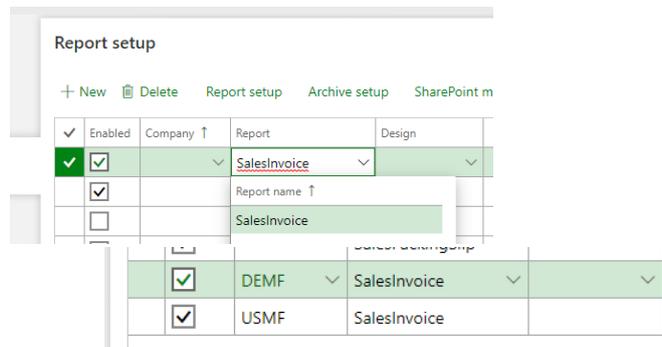


- c. Switch back to the report (in D365 FO) which should be designed in dox42 and print the report. An Infolog will appear with the name and the design name of the report. This information will be needed in the next step.

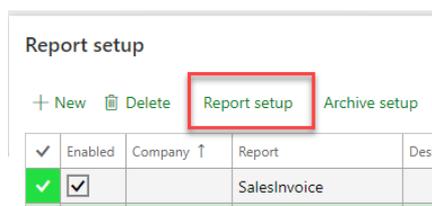


2 Setup the report

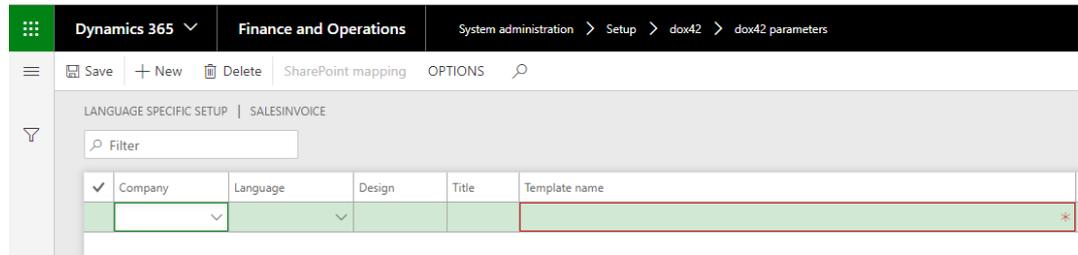
- a. In the **dox42 parameters**, select the tab “Reports”
- b. Create a new record.
- c. Select the report name which was displayed in the first step. D365 FO provides to possibility to set up the same report multiple times and divide it by the company like in the second picture below.



- d. The “Serialization type” parameter defines how the report data will be serialized during the report execution:
 - i. “Web service” – recommended value (by default, since version 1.3.1)
 - ii. “Web service (compatibility mode)” – this value is used to provide a backward compatibility with the older version report templates. Be careful changing this parameter for the existing templates, because the linked report templates may stop working after that. To restore functionality, you must set back the original value of the serialization type or regenerate the report metadata and recreate the data sources in the report template data map.
- e. Mark the report and click on the button “Report setup” and create a new record



- f. Insert the path of the template e.g.
C:\dox42Server\templates\Test\SalesInvoice\SalesInvoice.docx

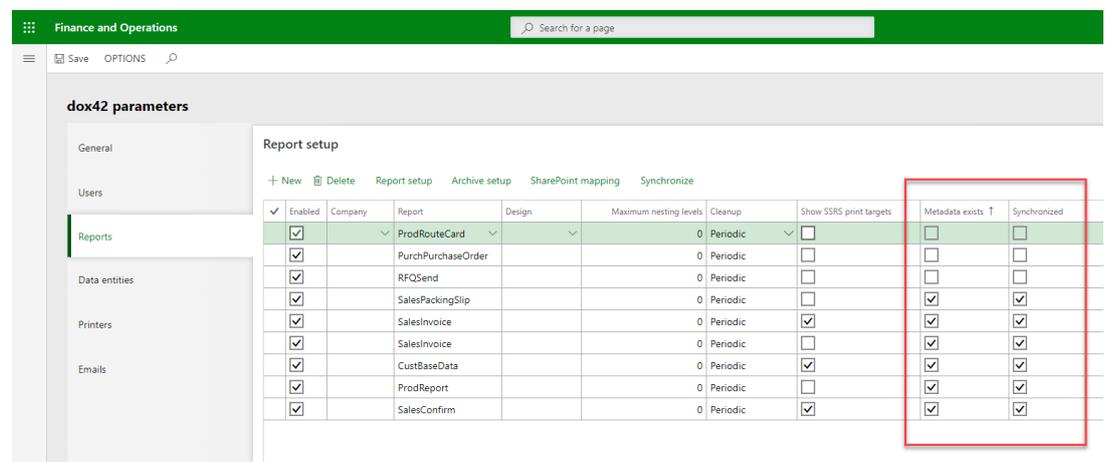


It is possible to create more than one template for the same report and divide it by company and/or by language.

Language	Design	Title	Template name
en-us			C:\dox42Server\templates\Test\SalesInvoice\SalesInvoice_EN.docx
de-at			C:\dox42Server\templates\Test\SalesInvoice\SalesInvoice_DE.docx

3 Get the Metadata for the report

- a. Print the report
- b. Check if the checkboxes by the report setup are marked like in the picture below, the system will automatically synchronize the report.



Now the report is available for the templates on the dox42 Server, which are needed below.

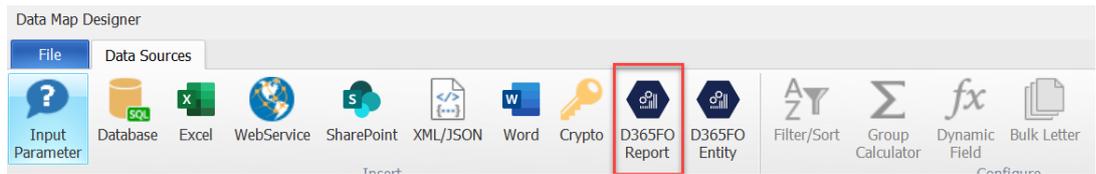
3.2.3 Setup the Data Source

This chapter will describe the basic steps to setup a Data Source as well as the first steps of designing a report. Data Sources are always setup the same way. For each table of the report is a new Data Source needed. In a chapter before a standard Data Map was created and copied into the folder of the reports.

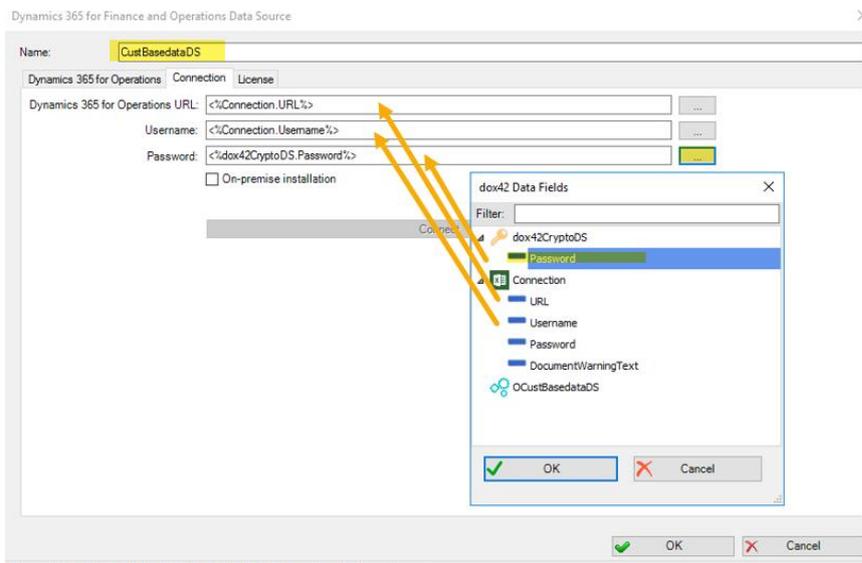
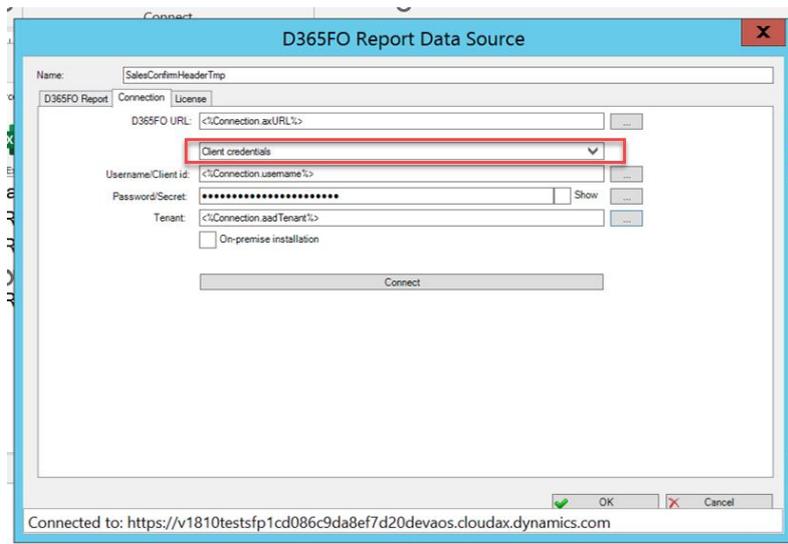
1 Setting up the Data Source

- a. Open the standard Data Map of the template which should be designed

- b. Choose the “D365 FO Report” (“Dynamics 365 for Finance and Operations Data Source” in previous versions)



- c. Choose the tab “Connection”. Click on the button with the three dots and choose the fields from the connection file for URL and Username, for the password choose the Crypto Data Source as illustrated in the picture below. It is recommended to use “Client credentials” while setting up the connection.

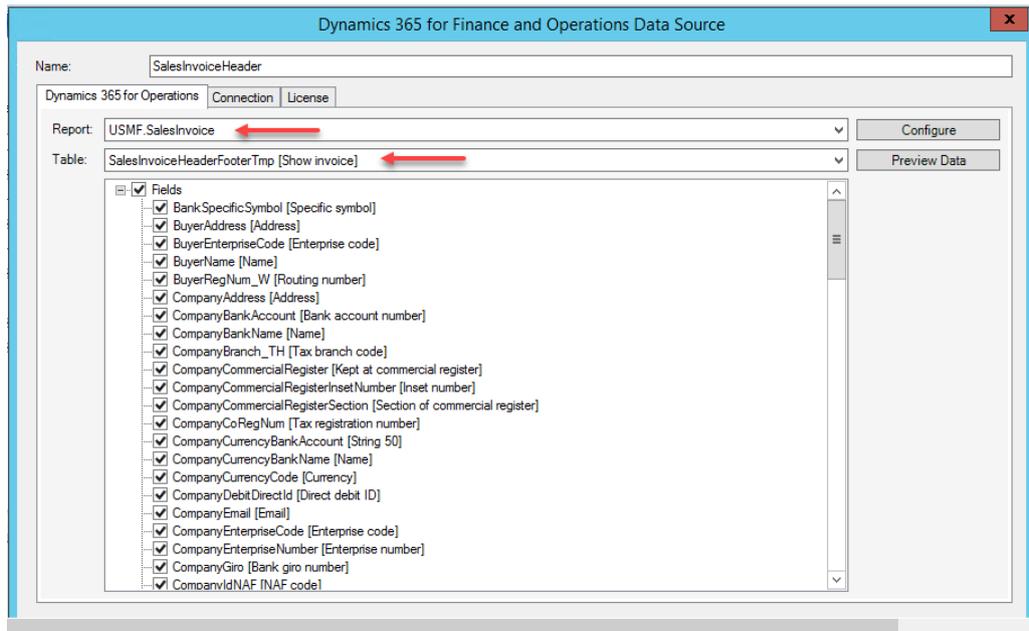


- d. Check the connection by clicking on the button “Connect”, the connected D365 FO environment will be displayed at the end of the form.

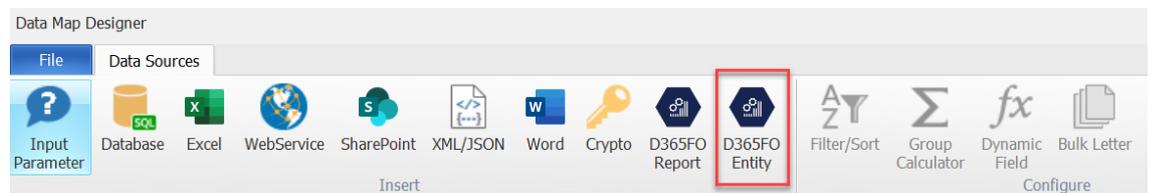


- e. Click on the tab “D365 FO Report” (“Dynamics 365 for Operations” in previous versions) and choose the desired report. Select the needed table and mark all the fields as displayed in the picture below. The fields of the table will be displayed in the box “dox42 Data Fields”, described in the third step.

Note: a report contains often more than one table, e.g. a SalesInvoice has a SalesInvoiceHeader table and SalesInvoiceLines table, for each table is a new Data Source needed.

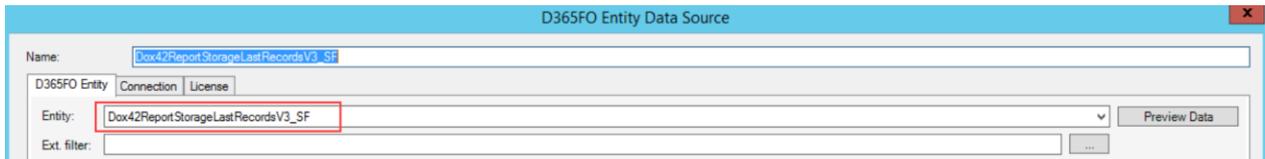


- 2 Getting always the last transaction ID, if the generate button is clicked (the generate button is described in the chapter below).
 - a. Create an Entity Data Source by clicking on the Data Source “D365 FO Entity” (“Dynamics 365 for Finance and Operations OData Source” in previous versions)



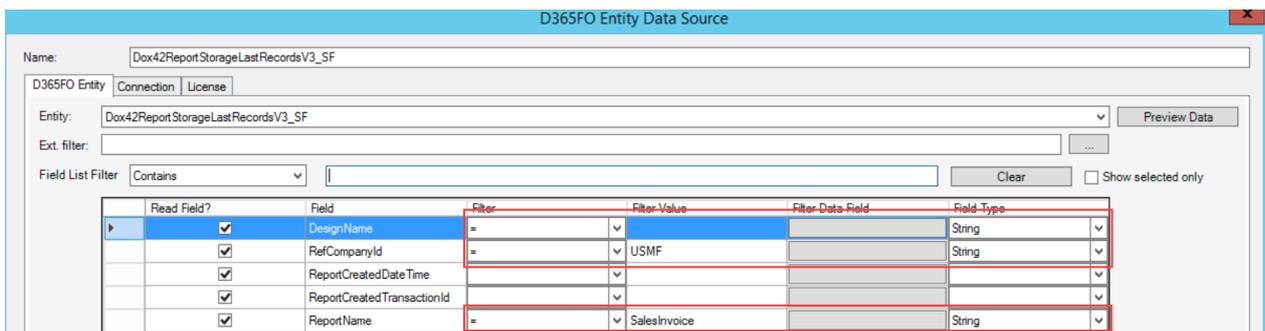
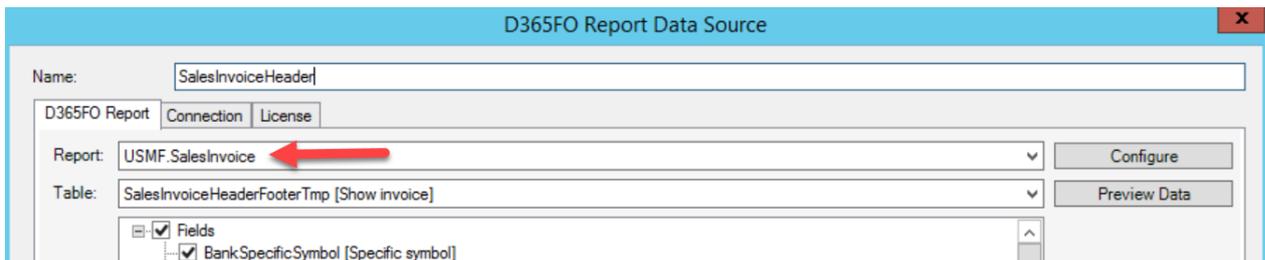
- b. Insert a name and click on the tab “Connection”, setup the connection like before by the “D365 FO Report” data source.
 - c. Search in the entity drop-down menu for the entity “Dox42ReportStorageLastRecordsV3_SF” (Dox42ReportStorageLastRecordsV2_SF and

Dox42ReportStorageLastRecords_SF entities are obsolete, and their use since the product version 1.4.0 is no longer recommended)

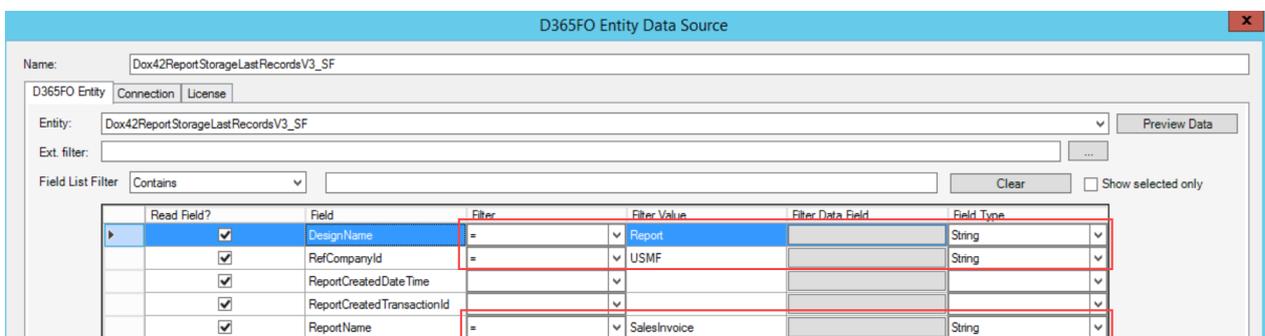
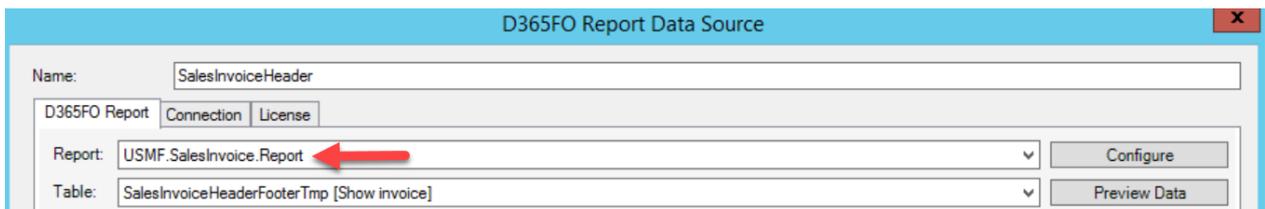


d. Setup the fields and filters. Filters should correspond to the report selected in the D365FO Report Data Source to match with the metadata properly. For example, if:

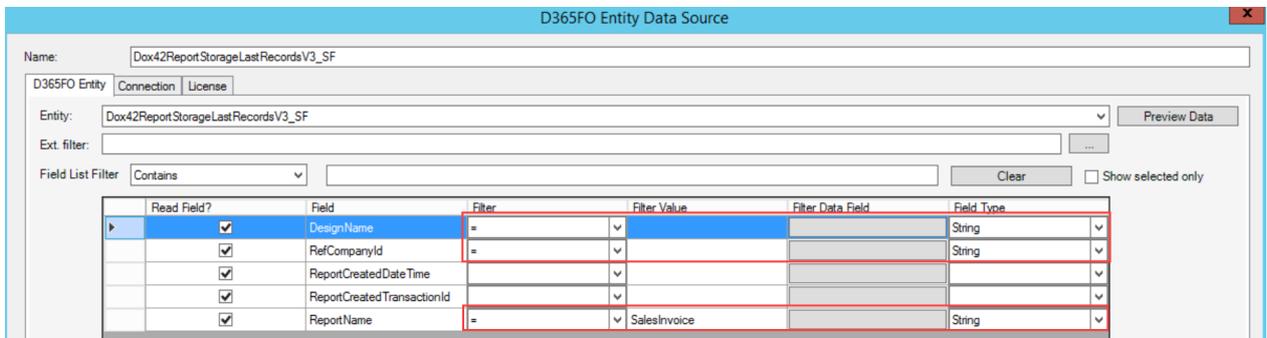
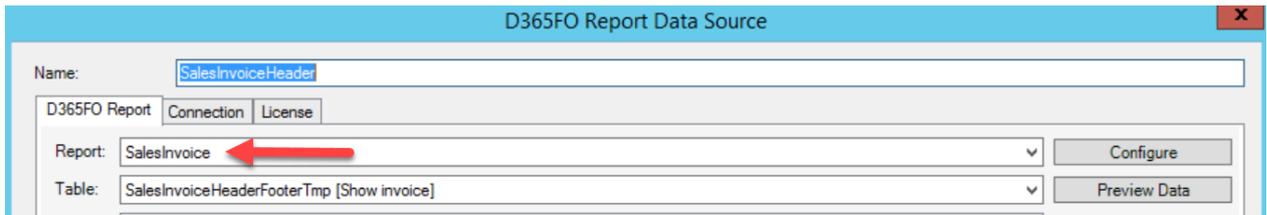
1. Company "USMF", Report "SalesInvoice" (no design):



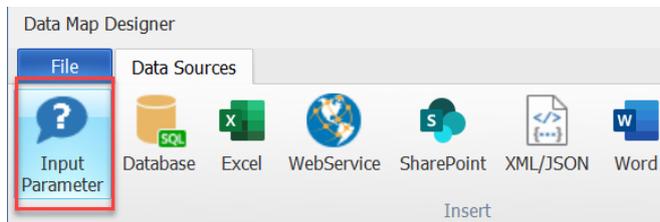
2. Company "USMF", Report "SalesInvoice", Design "Report":



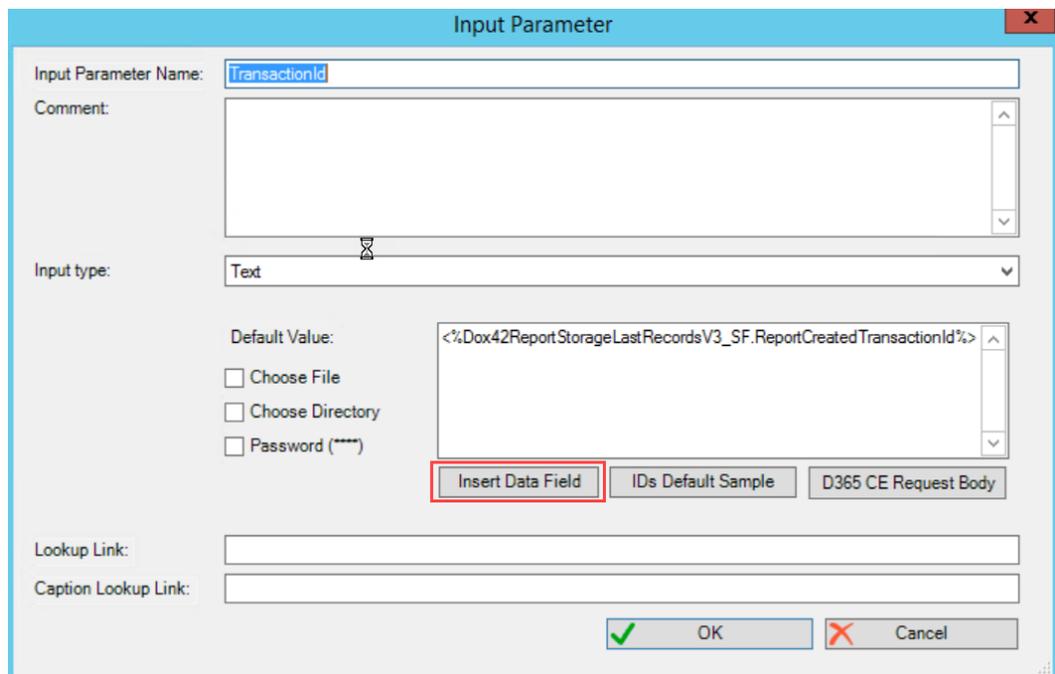
3. Report "SalesInvoice" (no company and no design):



e. Click on the button “Input Parameter”



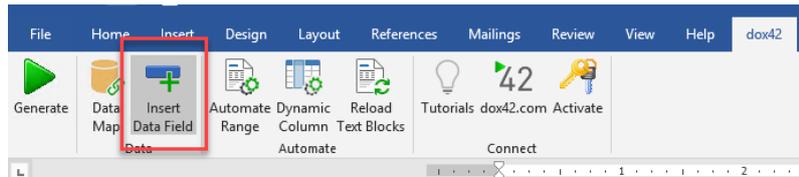
f. Insert a name. Click on the button “Insert Data Field” and choose from the “D365 FO Report” Source the field “ReportCreatedTransactionId”. The result is displayed in the “Default Value” field.



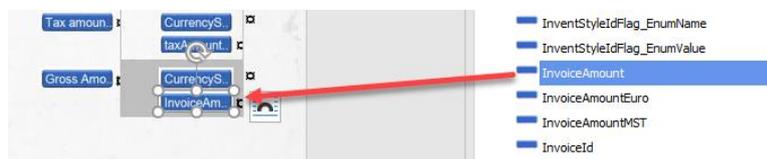
3 Insert placeholders into the template with the button “Insert Data Field”

Those placeholders represent the data fields which were marked in the first step while creating the “D365 FO Report” (“Dynamics 365 for Finance and Operations Data Source” in previous versions).

- a. Create e.g. a simple table in the template.
- b. Click on the button “Insert Data Field”, a data box will appear with all the components of the Data Map.



- c. Choose one field and drag it to the desired place.



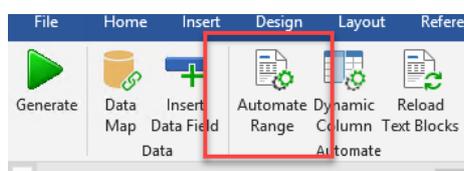
- d. Select the desired data format for the selected field, further details are described in the “Data formats” chapter.

4 Setting an automatic range to show e.g. invoice lines in a table

- a. Mark the field with the placeholder, which should be in the range.

DESCRIPTION	QTY	UNIT	PRICE	TOTAL PRICE
Name LineHeade..	Qty	SalesUnit..	CurrencyS.. SalesPric..	CurrencyS.. LineAmoun..

- b. Click on the button “Automate Range”



- c. Select the required data source from the drop-down menu “Repeat for Data Source”

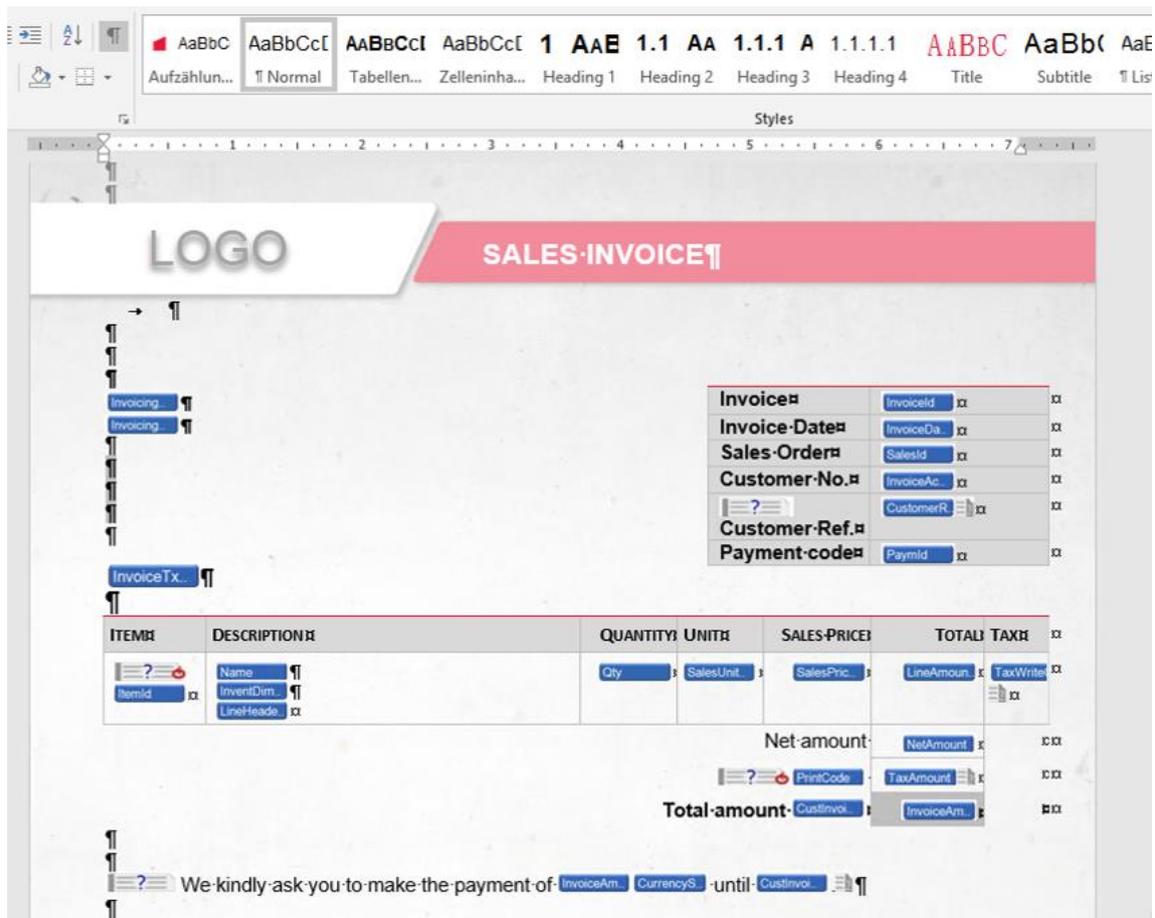
If only one condition is required and no loop with condition, no data source needs to be selected.

- d. Click on the button “Insert Data Field” and choose the field which are required for the condition.
- e. Select an operator from the drop-down menu “Insert Operator”.

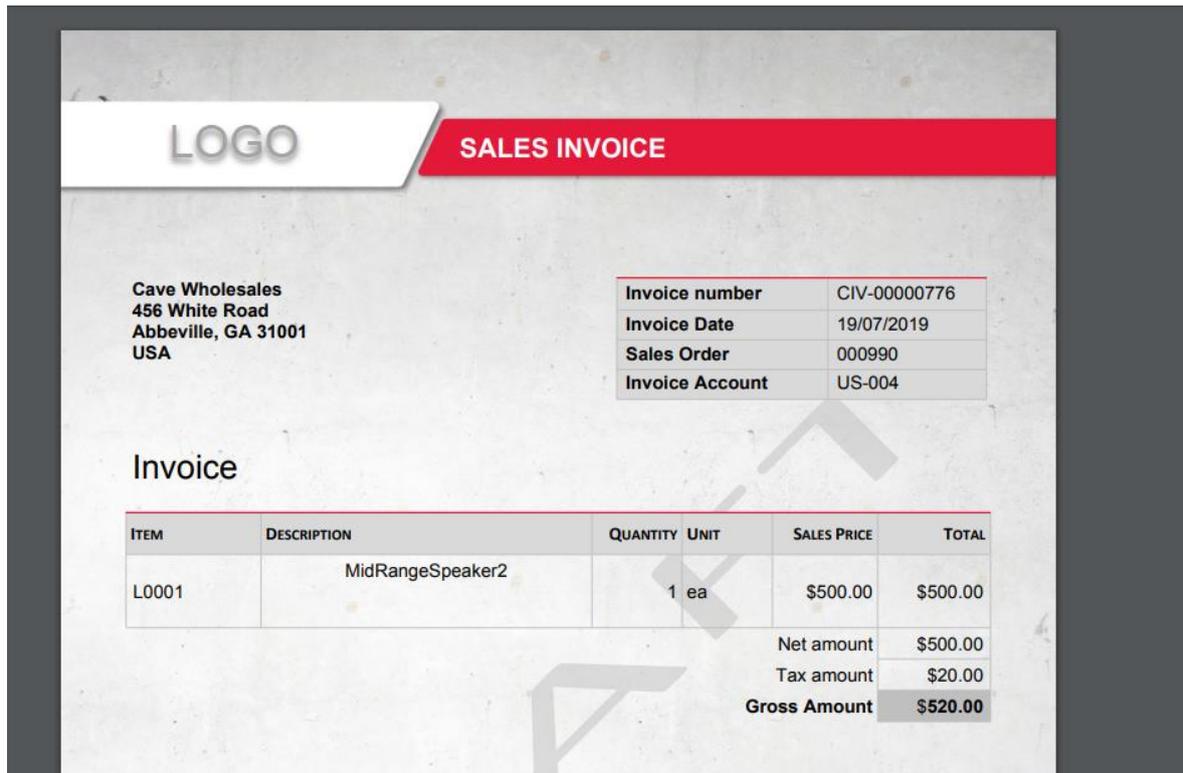
If more than one condition is need, it is possible to combine the condition with the operators from the drop-down menu “Insert Logic Operator”.

The picture below is an example for a condition loop in a SalesInvoice template, which has the meaning “as long as the ItemId is not empty, print the next line”.

A finished SalesInvoice template could look like the image below:

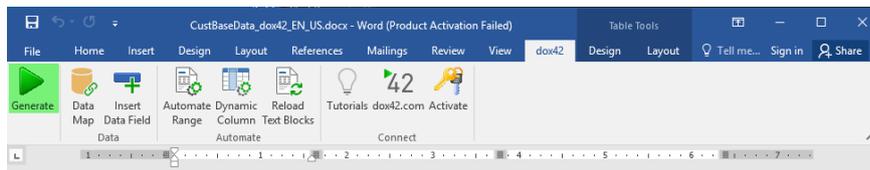


- 5 Switch to the D365 FO and print the report to the screen.
 - a. Go to the report which should be printed for example the sales invoice
 - b. Mark the sales invoice which should be posted
 - c. D365 FO will automatically choose the dox42 report, if it is setup and activate in the dox42 parameters.

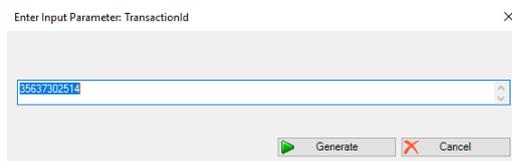


3.2.4 The button “Generate”

Word as many design tools that makes is easy to design a perfectly looking report, but it is necessary that changes are shown as quickly as possible to save time while for example testing a new layout. Therefore, dox42 provides the generate button, which will demonstrate how the report will look like in D365 FO.

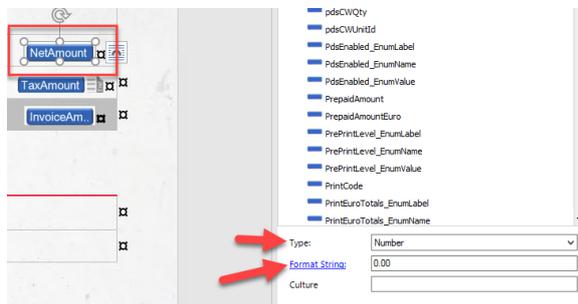


If the generate button was clicked a transaction Id appears, in this case it is the last transaction id because of the setup in the chapter before. The data from the last printed report can be reused, which allows to check changes to the layout with the same data.



3.2.5 Data formats

There are different types and formats you can select for the placeholder. The picture below illustrates where the format of the placeholder is determined.



The “Format String” is colored blue, because it is a link to a website which describes all available data formats.

Define a format

1. Choose the type which the placeholder should have by selecting it from the drop-down menu “Type”
 - a. If the placeholder is a simple text, there is no need for a type
2. Decide in which format the placeholder should be displayed
 - a. Hard-coded like “0.00” or “dd/MM/yyyy”
 - b. Predefined formats like “C”, it is used to format a currency field. A detailed description can be found in the link above.

3.2.6 Handling culture formatting based on Report Rendering Culture/ AX_RenderingCultureParameter

There is a special parameter for different formatting preferences for example the English format with a dot and the German format with a comma, it called “AX_RenderingCulture”. Possible values are en-us, de-at,

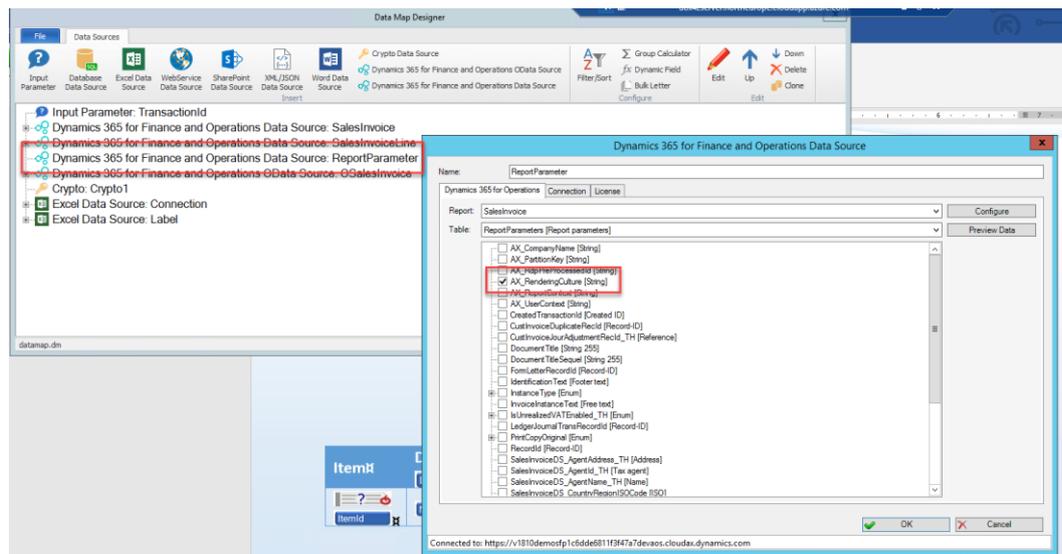
The rendering culture can be used to format data fields according to the report language. To do so, it is necessary to include the ReportParameter table in the Data Map.

The best way is to clone one of the data sources, because there is no need to fill out the connection setup again.

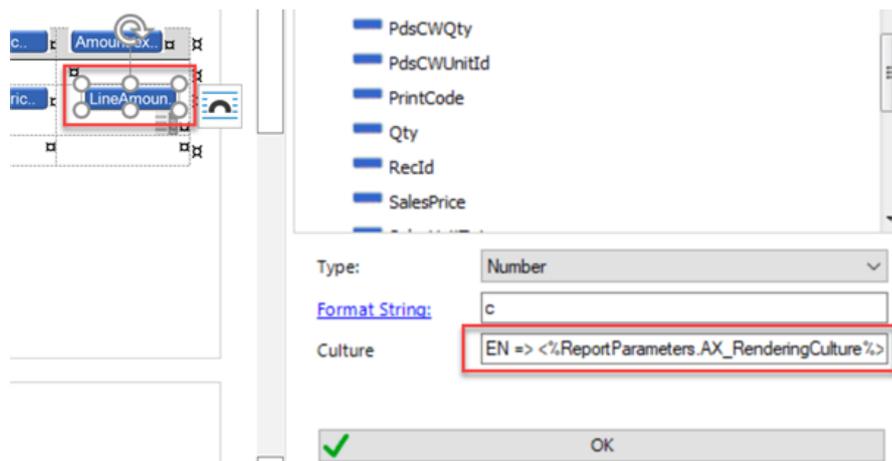
Clone a Data Source (e.g the SalesInvoice)

- a. Mark the Data Source and click on the button “Clone” (on the right side of the Data Map)
- b. Rename the Data Source and search in the drop-down menu “Table” for the ReportParameter.

- c. Mark the field “AX_RenderingCultureParameter”.



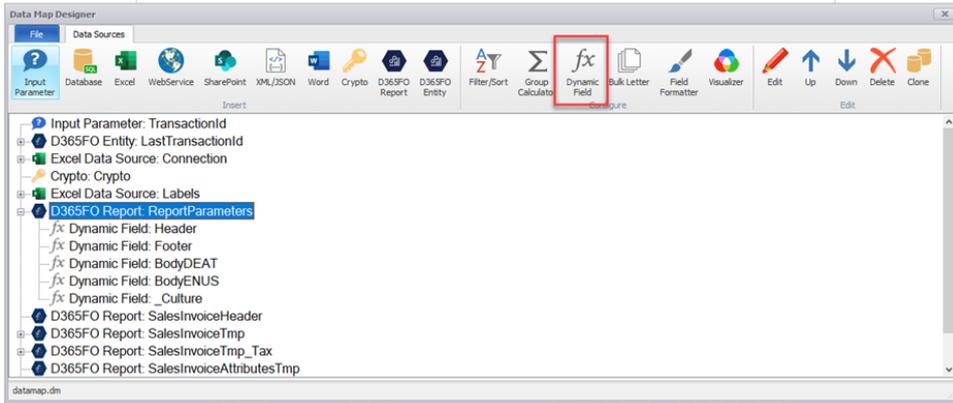
- d. Mark a placeholder with the format “Number” and insert into the field “Culture” the following text: “EN => <%ReportParameters.AX_RenderingCulture%>”. The picture below illustrates it.



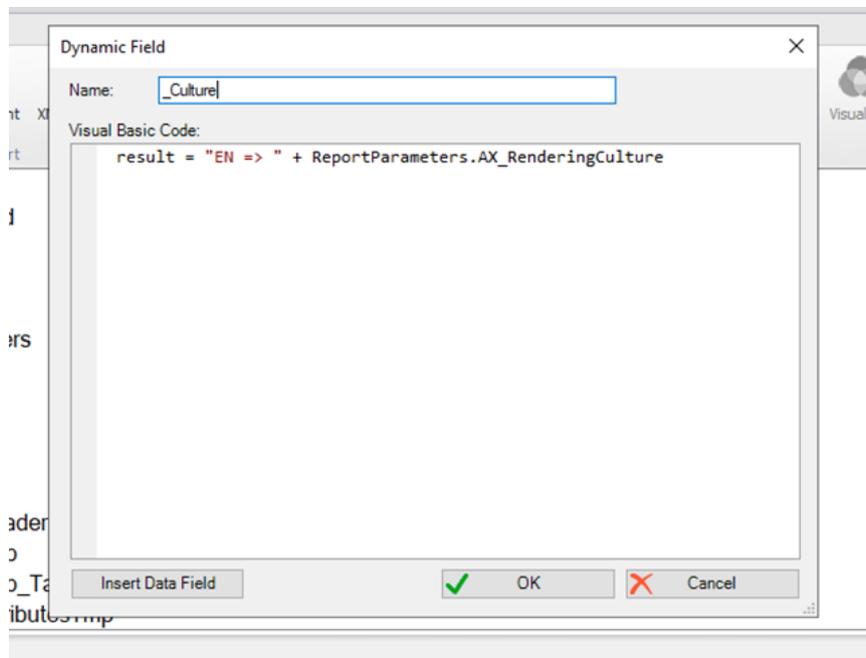
- e. Make sure you click the button “OK”, because only then the parameter gets activated.

The best practice shows that it can be useful to create a separate dynamic field for “Culture” in the data source “ReportParameters” and further use this dynamic field in all other places of a template. Therefore, if you need to make any changes in the format of data fields, you will need to modify only one field.

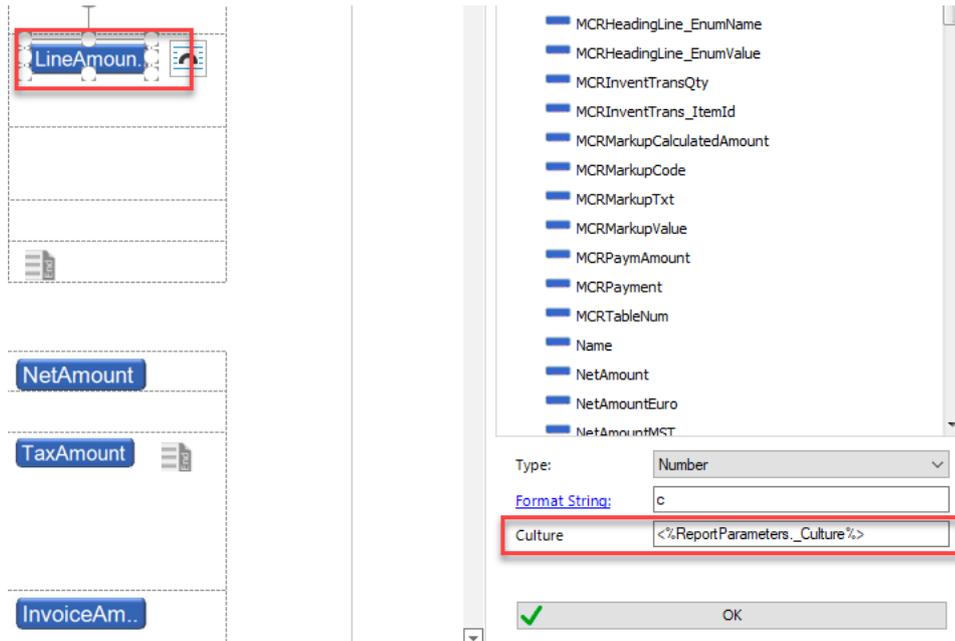
- a. In the Data Map click on the button “Dynamic Field”. How to create a dynamic field is described in the chapter “Advanced dox42 features”.



- b. Write the name of the field and insert into the field “Visual Basic Code” the following text: “result = “EN => ” + ReportParameters.AX_RenderingCulture””. The picture below illustrates it.



- c. Mark a placeholder with the format “Number” and insert into the field “Culture” the following text: “<%ReportParameters._Culture%>”. The picture below illustrates it.



d. Make sure you click the button “OK”, because only then the parameter gets activated.

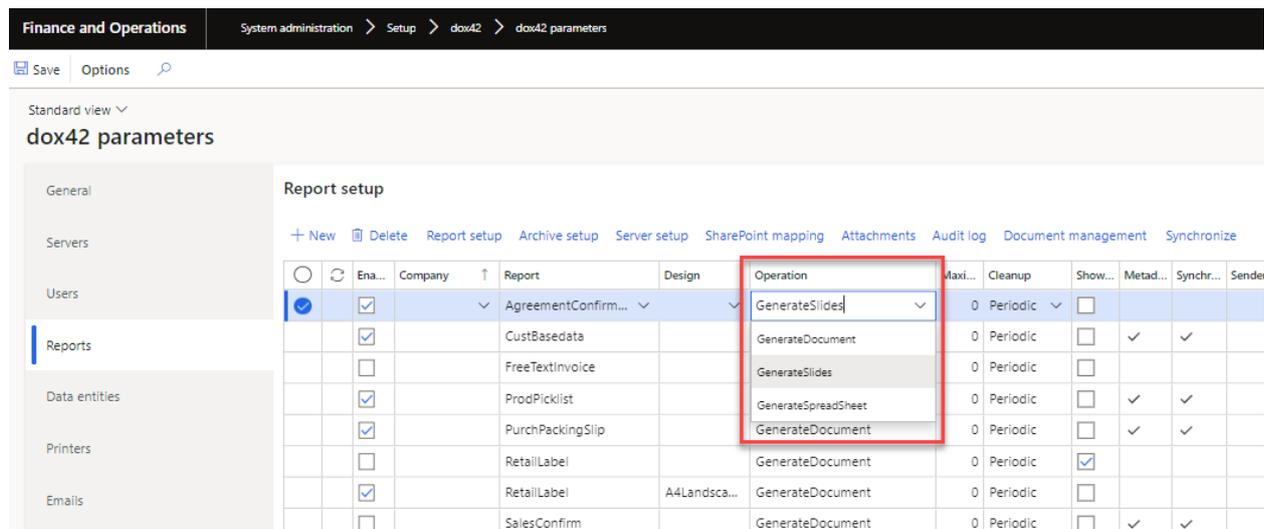
3.3 Creating Word, Excel and PowerPoint templates

There is a possibility to choose an operation while creating a template:

- GenerateDocument – for Word template
- GenerateSlides – for PowerPoint template
- GenerateSpreadSheet – for Excel template

You can setup the operation in “General” tab (System administration > Setup > dox42 > dox42 parameters), “Reports” tab or in “Report setup”. By default, the value is set to “GenerateDocument”.

For the operation “GenerateSpreadSheet” you should put in a “Template name” in Report setup the path to the DataMap of your Excel template.



For every type of a report template, you can add an email body template in a Word format only.

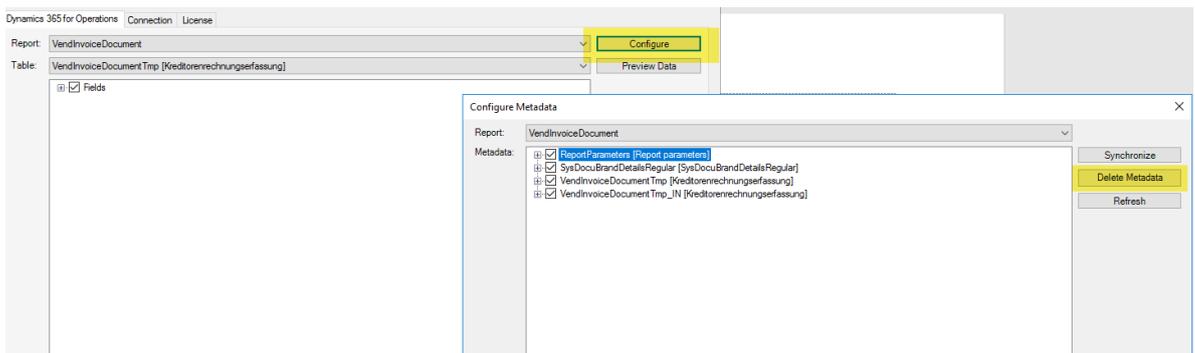
3.4 Handling changes to the DataProvider and transferring the report to production

3.4.1 Handling new adjustments in the DataProvider

If e.g. a new field was added to the DataProvider the following steps are required:

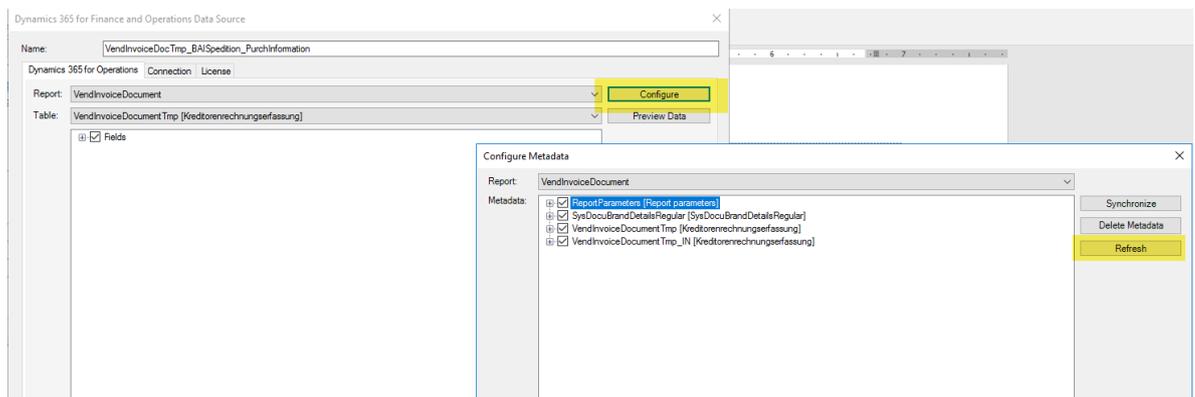
1. Deleting old metadata

The configuration setup of a DataSource in the DataMap contains the button “Delete Metadata”, which will delete the metadata of the report.



2. Creating new metadata

For creating new metadata, the report must be reprinted in the D365 FO. After printing the report in the D365 FO System, the button “Refresh” must be clicked for refreshing the metadata.



3. The last step is to click the button “Synchronize” (optional) and closing the configure setup.

The new fields or adjustments are now available in the DataProvider.

Alternative variant of deleting metadata is a bottom “Delete metadata” in dox42 parameters in D365.

If you want to refresh the metadata for the report after adding new data source or a new field for it, you need to click the button “Delete metadata” in the dox42 parameters (Tab “Reports”) and then print the report. This button in dox42 parameters is created for the developers and for the maintenance in

the scenarios when the metadata changed, and it is needed to be regenerated. For the users it is recommended to delete metadata in a Word template.

The screenshot shows the 'dox42 parameters' configuration page. The 'Report setup' tab is selected, displaying a table with columns: Enabled, Company, Report, Design, Operation, Max..., Cleanup, Show SSRS print targets, and Metadata exists. The 'Delete metadata' button is highlighted with a red box.

Enabled	Company	Report	Design	Operation	Max...	Cleanup	Show SSRS print targets	Metadata exists
<input checked="" type="checkbox"/>		CustBasedata		GenerateDocument	0	Periodic	<input type="checkbox"/>	<input checked="" type="checkbox"/>
<input type="checkbox"/>		FreeTextInvoice		GenerateDocument	0	Periodic	<input type="checkbox"/>	
<input checked="" type="checkbox"/>		ProdPicklist		GenerateDocument	0	Periodic	<input type="checkbox"/>	<input checked="" type="checkbox"/>
<input checked="" type="checkbox"/>		PurchPackingSlip		GenerateDocument	0	Periodic	<input type="checkbox"/>	<input checked="" type="checkbox"/>
<input type="checkbox"/>		RetailLabel		GenerateDocument	0	Periodic	<input checked="" type="checkbox"/>	
<input checked="" type="checkbox"/>		RetailLabel	A4Landscape3X5_It...	GenerateDocument	0	Periodic	<input type="checkbox"/>	

3.4.2 Transferring the report from the test environment to the productive environment

For transferring a report from the test environment to the productive environment the following steps are required:

1. Saving the current productive environment DataMap and Word template in an archive (could be a simple folder), to provide a certain kind of traceability.
2. Replace the currently used DataMap and Word template in the productive environment with the new versions from the test environment.
3. Export the needed dox42 setup from the test environment and import it to the productive environment.
 - a. Go to **System administration > Periodic tasks > dox42 > Export dox42 data** in the test environment and run the export of the needed dox42 setup to a file. Important, that the report metadata (metadata is set up in the template) is saved and exported together with the report settings (tab page "Reports" of the dox42 parameters form), therefore the checkbox "Reports" should be set to "Yes" if the report metadata has been changed or newly created. If you need to export only specific parameters to a file, use filters to define export parameters.

Export dox42 data

Parameters

DOX42 PARAMETERS

General No

Users No

Reports Yes

Reports setup No

Reports archive setup No

Reports server setup No

Reports attachment setup No

Reports audit log setup No

Document management No

Reports print destination extensions s... No

Data entities No

Data entities setup No

Data entities translations No

Data entities print destination extensi... No

Printers No

Emails No

Custom print destinations No

Custom print destinations translations No

Print destination extensions No

DOX42 COMPANY PARAMETERS

General No

MISCELLANEOUS

Servers No

Email senders No

Email senders translations No

SharePoint parameters No

SharePoint mapping No

Output actions No

Custom output actions No

- i. dox42 parameters: **System administration > Setup > dox42 > dox42 parameters**
1. Checkbox "General" – tab page "General"
 2. Checkbox "Users" – tab page "Users"
 3. Checkbox "Reports" – tab page "Reports"
 4. Checkbox "Reports setup" – tab page "Reports" > button "Report setup"
 5. Checkbox "Reports archive setup" – tab page "Reports" > button "Archive setup"
 6. Checkbox "Reports server setup" – tab page "Reports" > button "Server setup"
 7. Checkbox "Reports attachment setup" – tab page "Reports" > button "Attachments"
 8. Checkbox "Reports audit log setup" – tab page "Reports" > button "Audit log"
 9. Checkbox "Document management" – tab page "Reports" > button "Document management"

10. Checkbox "Reports print destination extensions setup" - tab page "Reports" > button "Print destination extensions"
 11. Checkbox "Data entities" – tab page "Data entities"
 12. Checkbox "Data entities setup" – tab page "Data entities" > button "Data entity setup"
 13. Checkbox "Data entities translations" – tab page "Data entities" > button "Translations"
 14. Checkbox "Data entities print destination extensions" – tab page "Data entities" > button "Print destination extensions"
 15. Checkbox "Printers" – tab page "Printers"
 16. Checkbox "Emails" – tab page "Emails"
 17. Checkbox "Custom print destinations" – tab page "Custom print destinations"
 18. Checkbox "Custom print destinations translations" – tab page "Custom print destinations" - > button "Translations"
 19. Checkbox "Print destination extensions" – tab page "Print destination extensions"
 20. Checkbox "SharePoint mapping" (checkbox "SharePoint parameters" should be activated)
 - a. tab page "Reports" > button "SharePoint mapping"
 - b. tab page "Reports" > button "Report setup" > button "SharePoint mapping"
 - c. tab page "Data entities" > button "SharePoint mapping"
 - d. tab page "Data entities" > button "Data entity setup" > button "SharePoint mapping"
- ii. dox42 company parameters: **System administration > Setup > dox42 > dox42 company parameters**
 1. Checkbox "General" – tab page "General"
 - iii. dox42 servers: **System administration > Setup > dox42 > dox42 servers**
 1. Checkbox "Servers" – form data
 - iv. dox42 email senders: **System administration > Setup > dox42 > dox42 email senders**
 1. Checkbox "Email senders" – form data
 2. Checkbox "Email senders translations" – button "Translations"
 - v. dox42 SharePoint sites: **System administration > Setup > dox42 > dox42 SharePoint sites**

1. Checkbox “SharePoint parameters” – form data
- vi. Output actions: **System administration > Setup > dox42 > dox42 output actions**
 1. Checkbox “output actions” – form data
- vii. Custom output actions: **System administration > Setup > dox42 > dox42 custom output actions**
 1. Checkbox “custom output actions” – form data
- b. Go to **System administration > Periodic tasks > dox42 > Import dox42 data** in the productive environment and run the import of the previously exported file.

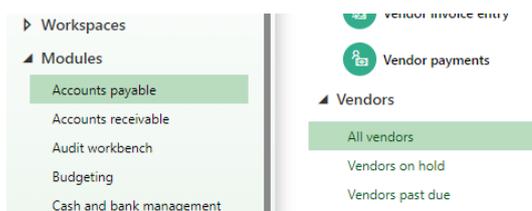
Note: During this process the report cannot be printed in the productive system.

3.5 Create your first Data Entity based (OData) report

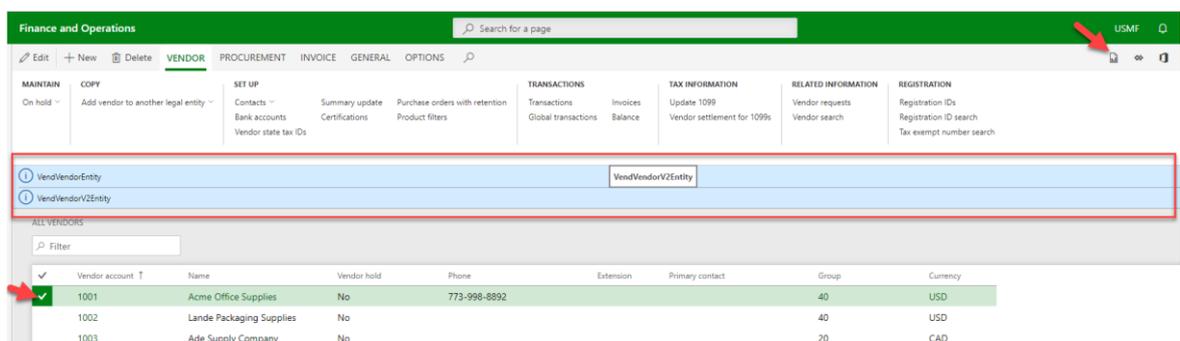
The difference between a “D365 FO report” based report and a “D365 FO entity” report is that the latter is built up by data entities retrieved via OData. Setting up an “D365 FO entity” based report is like setting up a “normal” report. A “Data Source” report can use all data which is sent to SSRS. If you require additional information you can extend the data source. However, you can also use an “D365 FO entity” data source to add information without changing the SSRS data provider. It is possible to mix data from “D365 FO entity” (OData) and SSRS data sources and use them in one template. On the other hand, for some reports it is not required to create the SSRS data source, you can just use a data entity to create a report without SSRS data provider.

Setup the “D365 FO entity” (OData) report in D365 FO

1. Switch to the desired information like “All vendors”

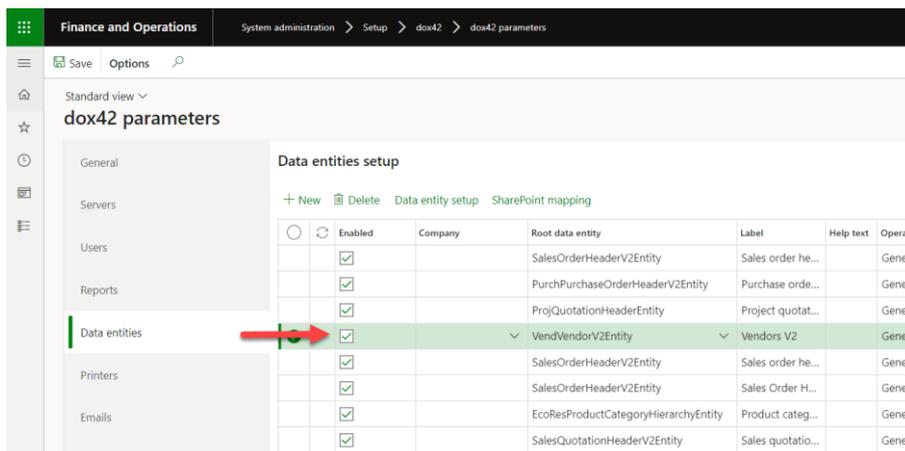


2. Mark one vendor and click the button “dox42” (on the right side), shown on the picture below. The name of the entity will be shown also illustrated on the picture below.

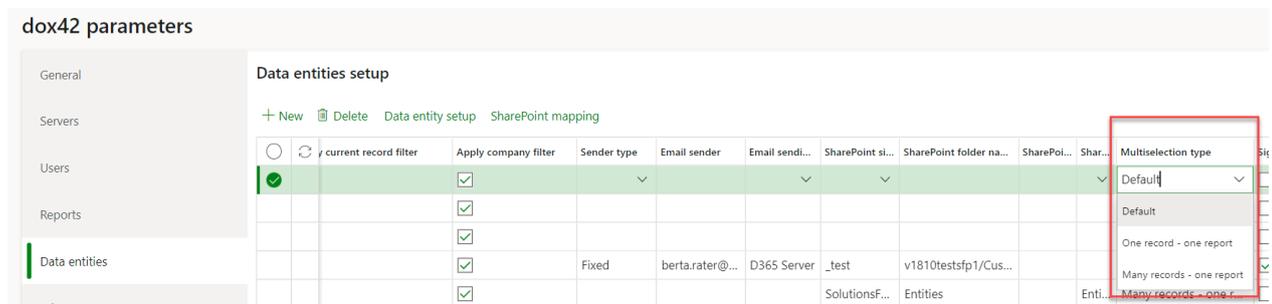


3. Switch to the dox42 parameters
4. Click on the tab “Data entities”

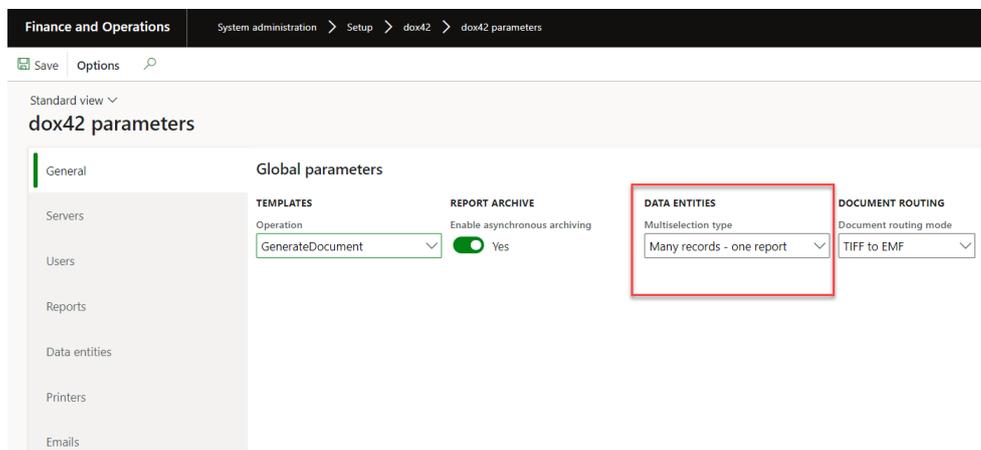
5. Choose the Root data entity (which was shown before)



6. Choose the desired report behavior in the field “Multiselection type”:



a. “Default” – global setup applied.



b. “One record – one report” – one report is printed for each selected record.

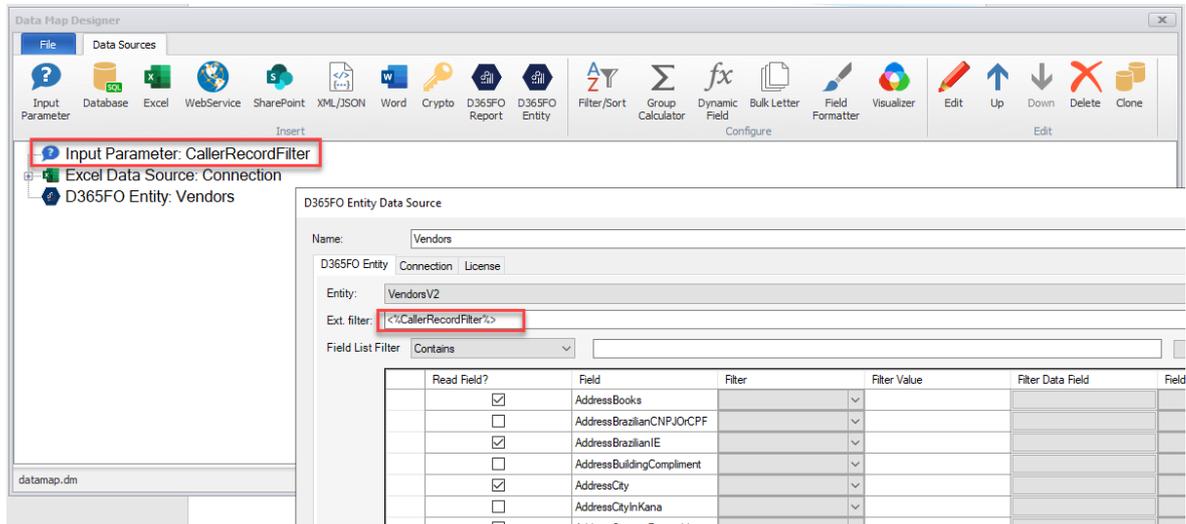
c. “Many records – one report” – one report is printed for all selected records.

When using this option, the entity key data of the selected records is packed into the html request string used to call dox42. This is a limiting factor in the number of records that can be selected and sent - especially if the key data for each record is large in size.

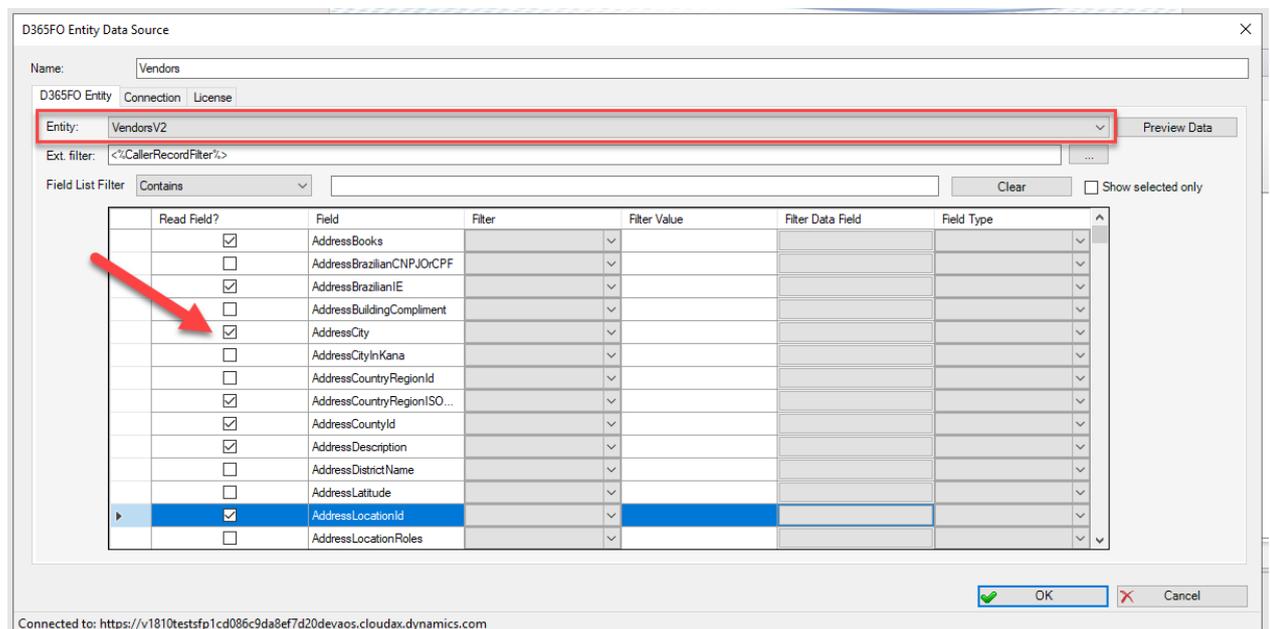
7. Click on the button “Data entity setup” and insert the path to the template.

Building a D365 FO Entity vendor factsheet

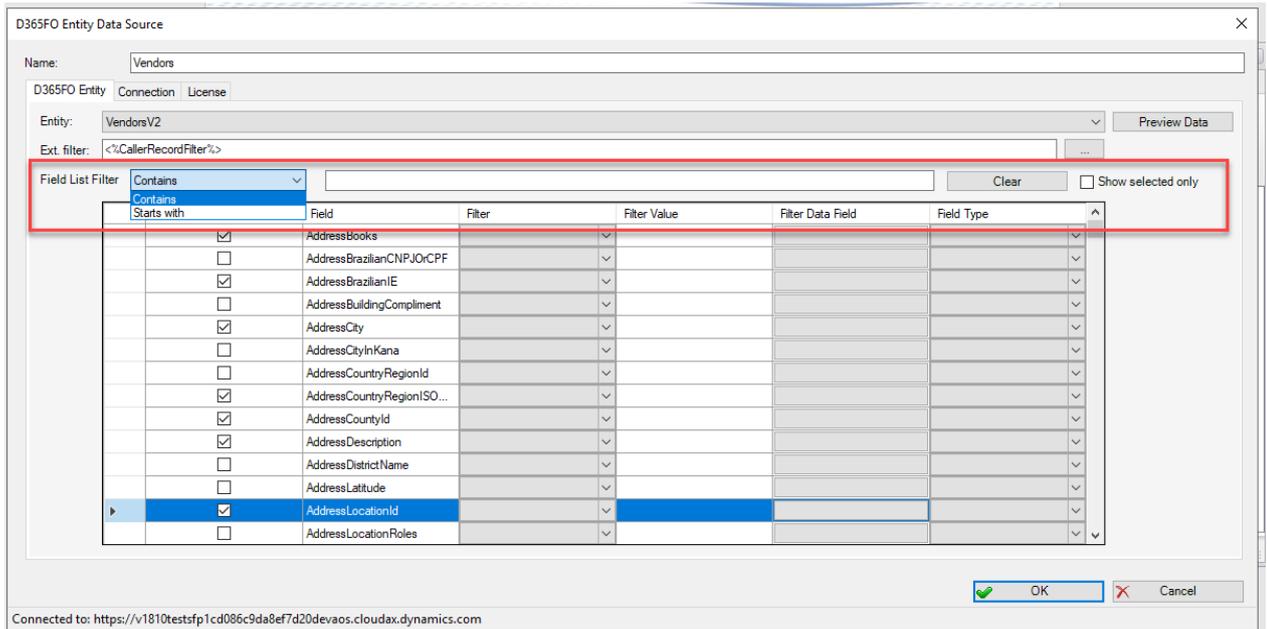
1. Create a new Word template and insert into it the Data Map a “D365 FO Entity” data source (“Dynamics 365 for Finance and Operations OData Source” in previous versions).
2. Insert a filter for the ODataSource.



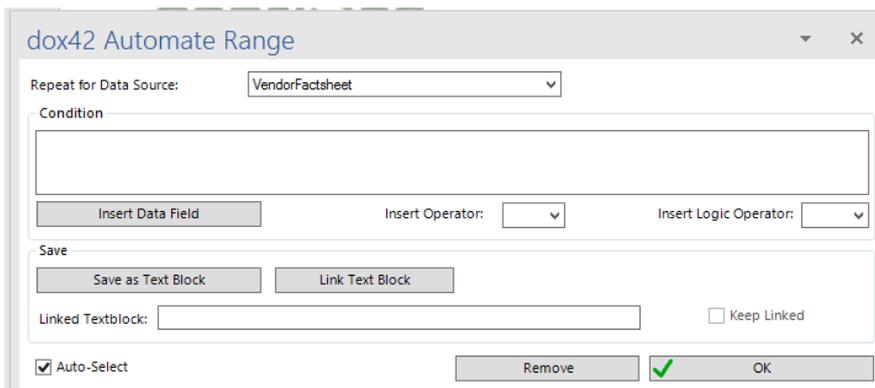
3. Select from the drop-down menu the entity “Vendor2”, in the D365 FO Entity data source and mark the fields which are required for the report.



There is special Field list filter which allows you to filter the fields in your Entity data source. You can clear all the text in the text field by clicking the button “Clear”. The checkbox “Show selected only” allows you to display only selected fields.



4. Design the template and define a loop like in the picture below.



Complete the template by inserting all required placeholders.

4 Maintain print destinations in D365 FO

Seamless integration – Regular Report, Data Entity Based report

4.1 Configure report destinations

If e.g. a sales invoice is posted there is the possibility to select different print destinations, by clicking on the button “Printer setup” as displayed in the picture below.

Posting invoice

The screenshot shows the 'Posting invoice' form. At the top, there are buttons for 'Arrange', 'Select', and 'Printer setup'. A red arrow points to the 'Printer setup' button. Below these buttons is a dropdown menu with the following options: Invoice, Invoice (copy), COD, Shipping labels, and Entry certificate. The form is divided into three main sections: 'PARAMETER', 'COMPLIANCE DOCUMENTS', and 'PRINT OPTIONS'. The 'PARAMETER' section has a 'Quantity' field set to 'All' and a 'Posting' toggle set to 'No'. The 'COMPLIANCE DOCUMENTS' section has two toggles: 'Prevent sales pack slip/invoice posting' and 'Print product safety data sheet', both set to 'No'. The 'PRINT OPTIONS' section has a 'Print' dropdown set to 'Current' and a 'Print invoice' toggle set to 'Yes'.

Print destination settings

The screenshot shows the 'Print destination settings' form. It has a header bar with 'dox42'. Below the header, there is a 'Save in print archive?' toggle set to 'No'. The 'Print medium' dropdown is open, showing the following options: Screen (selected), Printer, File, Email, File server, and SharePoint.

The behavior of the different print medium options is described below.

4.1.1 Screen

The report will be printed on the screen. This option will always be selected, if no other setup is done.

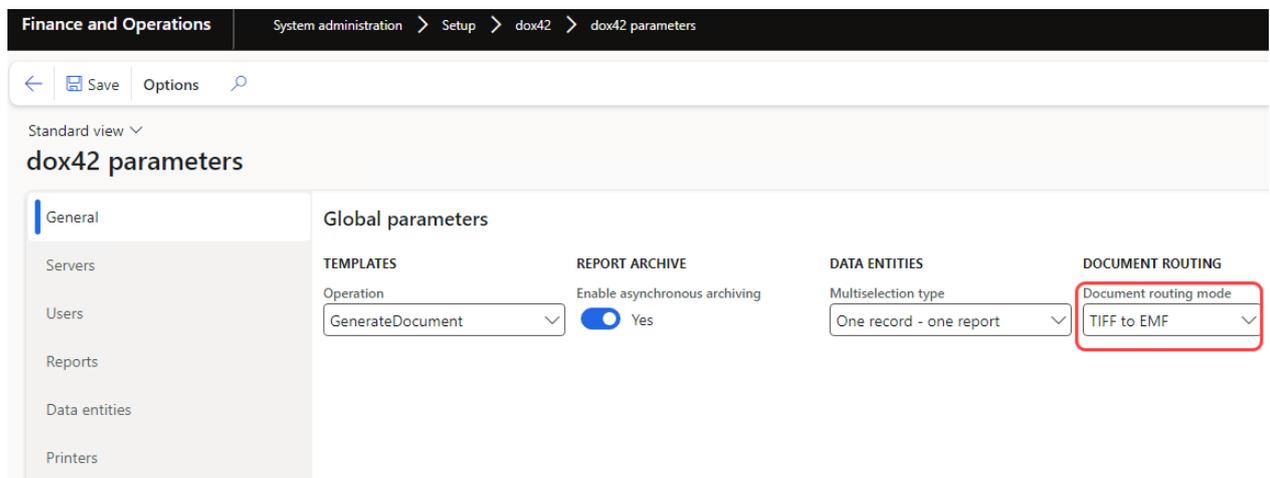
4.1.2 Printer

This option sends the document to the printer if the following printer setup was performed. As a prerequisite for using physical printers, the Document Routing Agent (DRA) is required. The setup is documented on a Microsoft docs site.

<https://docs.microsoft.com/en-us/dynamics365/unified-operations/dev-itpro/analytics/install-document-routing-agent>

Additional steps to setup the document routing for dox42

- Setup the document routing mode:
 - **PDF** – the system will generate a pdf document on the dox42 server and send it to the document routing agent (in this case the DRA capabilities can be limited, for example the DRA cannot be used as a service)
 - **PDF V2** – the same as PDF, but the system does not send separate PDF files to a printer for each document copy if number of copies is greater than one, it sends one PDF with all requested document copies in it. For example, it might be helpful in case of printing labels to print the label and its copies in one printing job.
 - **TIFF to EMF** – the system will generate a tiff document on the dox42 server, then convert it to the emf format in D365 F&O and send the emf to the document routing agent.
 - **EMF (recommended)** – the system will generate a document in the emf format on the dox42 server and send it to the document routing agent.



- Register the printer in the tab “Printers”, which were defined during the setup of the document routing agent:

Finance and Operations | System administration > Setup > dox42 > dox42 parameters

Save | Options

Standard view

dox42 parameters

- General
- Servers
- Users
- Reports
- Data entities
- Printers**
- Emails

Printer setup

+ New | Delete

	Company	Printer name	Destination	Document Routing Agent active
<input checked="" type="checkbox"/>		P001SFA01	P001SFA01	

- Select the printer as the Print medium and then select the desired printer from the drop-down menu "Printer name".

Print destination settings

dox42

Save in print archive?
No

Print medium
Printer

- Screen
- Printer**
- File
- Email
- File server

Print destination settings

dox42

Save in print archive?
No

Print medium
Printer

Printer name
P001SFA01

P001SFA01

1

4.1.3 File

If this option is selected, the report will be downloaded in the predefined format. Select "File" as print medium and enter a name as well as a format.

Print destination settings

dox42

Save in print archive?
 No

Print medium
 File

Name
 NameFile

File format
 PDF

PDF
 Word 97-2003
 HTML
 XML
 TXT
 Excel 97-2003
 CSV
 Word
 Excel

4.1.4 E-Mail

D365 FO provides the feature to send reports via email. If this option was chosen a window like in the picture below appears.

Print destination settings

dox42

Save in print archive?
 No

Print medium
 Email

To
 Edit

Cc
 Edit

Bcc
 Edit

Subject

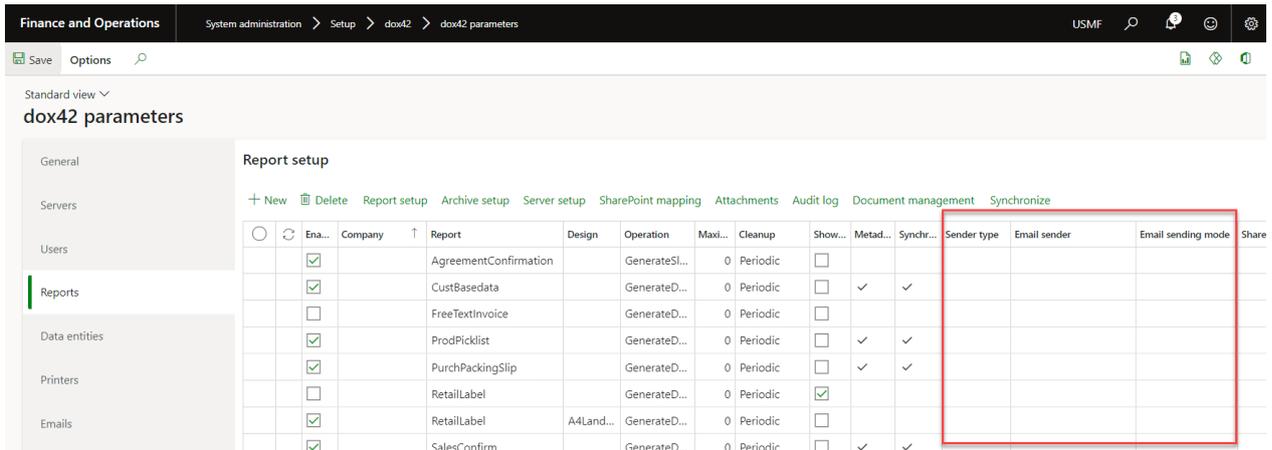
File format
 PDF

How to setup the email parameters is explained this section. Switch to the dox42 parameters.

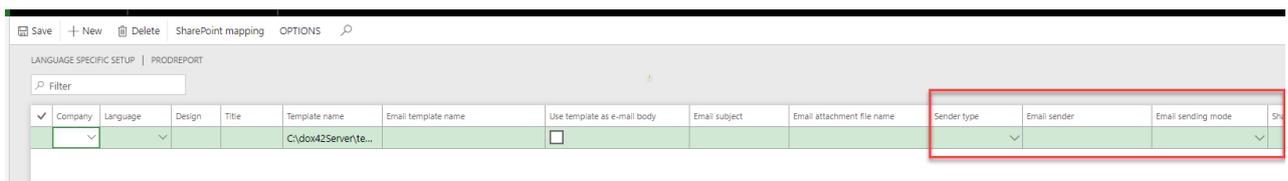
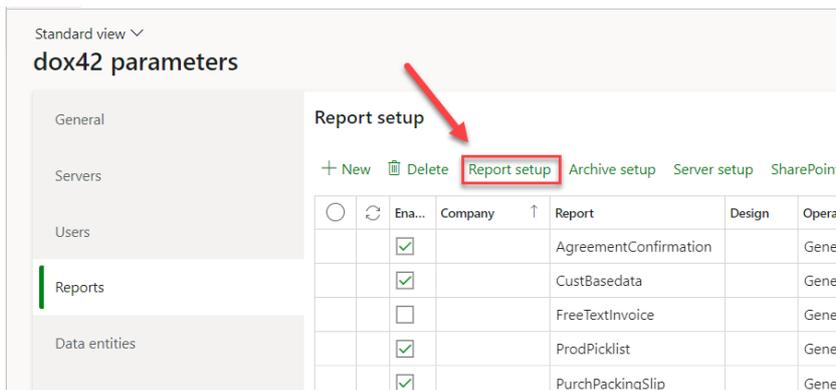
Module "System administration" > "Setup" > "dox42" > "dox42 parameters" > tab "Reports"

There are two ways to setup emailing parameters for a report.

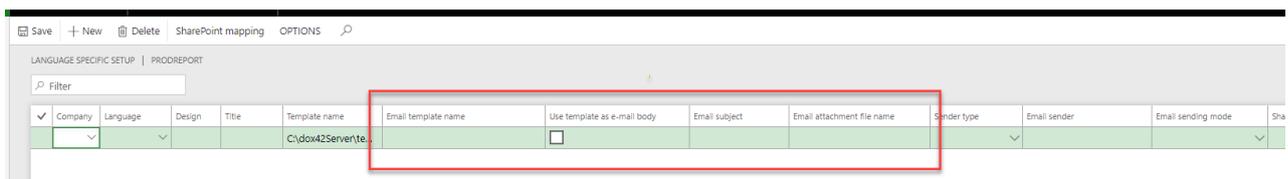
The first option is to setup the emailing in the general report setup, illustrated in the picture below.



The second option is to setup the sending of emails in the report specific setup. The form of the specific report setup can be accessed by marking a report and clicking on the button "Report setup", illustrated on the picture below.



The difference between the two ways of setting up the emailing is that in the general report setup is it not possible to insert a "Email template", "Email subject" or an "Email attachment file". Those fields are only available in the specific report setup (displayed in the picture below).



The different setups of the fields "Sender type", "Email sender" and "Email sending mode" are explained in this section. It does not matter if the setup of those fields is in the general report setup area or in the specific report setup area.

The field “Sender type”

Standard view ▼
dox42 parameters

General

Servers

Users

Reports

Data entities

Printers

Emails

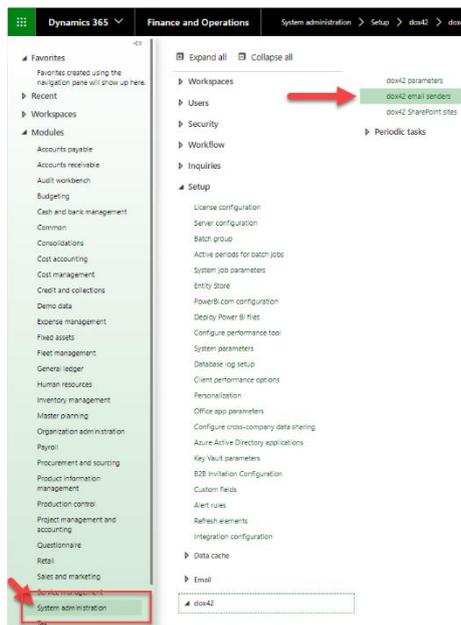
Report setup

+ New Delete Report setup Archive setup Server setup SharePoint mapping Attachments Audit log Document management Synchroni...

Ena...	Company	Report	Design	Operation	Maxi...	Cleanup	Show...	Metad...	Synchr...	Sender type
<input checked="" type="checkbox"/>		AgreementConfirm...		Genera...	0	Periodic	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Fixed
<input checked="" type="checkbox"/>		CustBasedata		GenerateD...	0	Periodic	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	Current user
<input type="checkbox"/>		FreeTextInvoice		GenerateD...	0	Periodic	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
<input checked="" type="checkbox"/>		ProdPicklist		GenerateD...	0	Periodic	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	
<input checked="" type="checkbox"/>		PurchPackingSlip		GenerateD...	0	Periodic	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
<input type="checkbox"/>		RetailLabel		GenerateD...	0	Periodic	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
<input checked="" type="checkbox"/>		RetailLabel	A4Land...	GenerateD...	0	Periodic	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	

There are two types available “Fixed” and “Current user”. If the “fixed” option was selected, then a fixed email must be selected in the field “Email sender”. The available email addresses are registered in the “dox42 email senders”. How an email address is registered in the “dox42 email senders” is illustrated in the following screenshots.

Module “System administration” > “Setup” > “dox42 email senders”



With a simple click on the button “+New” it is possible to register a new email address.

Dynamics 365 ▼ Finance and Operations System administration > Setup > dox42 > dox42

Save **+ New** Delete Translations OPTIONS

DOX42 EMAIL SENDERS

Filter

✓ Email ↑	Name	Description
<input checked="" type="checkbox"/> max.mustermann@muster.at	Max Mustermann	

This email address will be used as sender.

If the “current” option was selected the email of the currently logged in user will be used.

The field “Email sender”

The field “Email sender” will only be used, if the field “Sender type” has the value “Fixed”.

Standard view ▾
dox42 parameters

Report setup

+ New Delete Report setup Archive setup Server setup SharePoint mapping Attachments Audit log Document management Synchronize

Ena...	Company	Report	Design	Operation	Maxi...	Cleanup	Show...	Metad...	Synchr...	Sender type	Email sender	Email sending mode
<input checked="" type="checkbox"/>		AgreementConfirm...		Genera...	0	Periodic	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	Fixed	berta.rater@...	
<input checked="" type="checkbox"/>		CustBasedata		GenerateD...	0	Periodic	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>			
<input checked="" type="checkbox"/>		FreeTextInvoice		GenerateD...	0	Periodic	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>			
<input checked="" type="checkbox"/>		ProdPicklist		GenerateD...	0	Periodic	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>			
<input checked="" type="checkbox"/>		PurchPackingSlip		GenerateD...	0	Periodic	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>			
<input type="checkbox"/>		RetailLabel		GenerateD...	0	Periodic	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>			
<input checked="" type="checkbox"/>		RetailLabel	A4Land...	GenerateD...	0	Periodic	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>			
<input checked="" type="checkbox"/>		SalesConfirm		GenerateD...	0	Periodic	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>			
<input checked="" type="checkbox"/>		SalesPackingSlip		GenerateD...	0	Periodic	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>			

The field “Email sending mode”

The field “Email sending mode” defines which of the setups is used for sending the email. In order to decide which value should be set in the field “Email sending mode”, it is necessary to know how each sending mode behaves. There are three sending modes/transmitter types:

- EML – A file is downloaded in EML Format, which can then be sent via email.
- SMTP – just sends the email
- Exchange – just sends the email

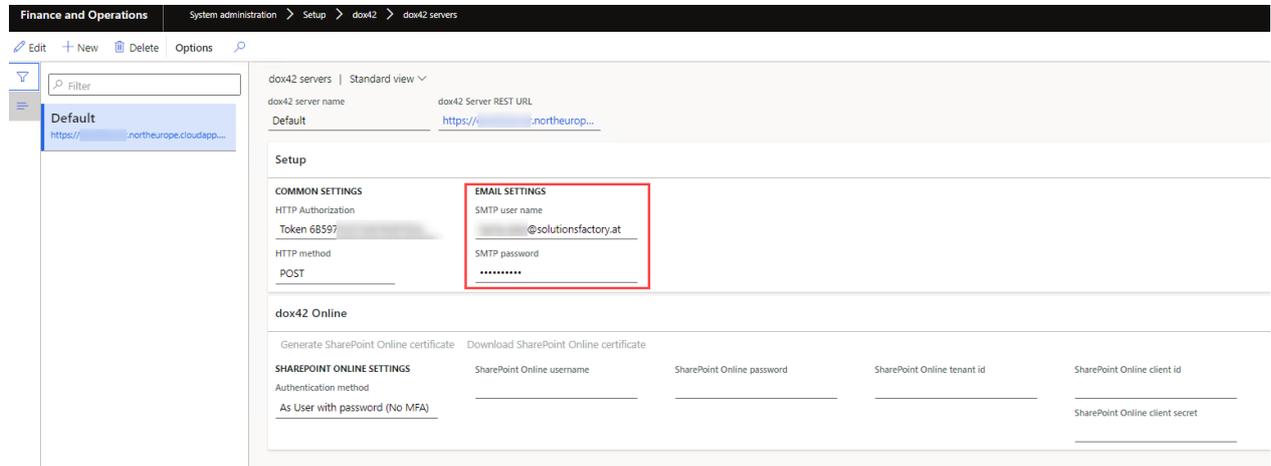
The options for the field “Email sending mode” are:

- dox42 Server
- D365 Server
- D365 User

The “dox42 Server” uses SMTP to send emails, the setup for SMTP parameters are on the dox42 parameters. How to get to the dox42 parameters is illustrated below.

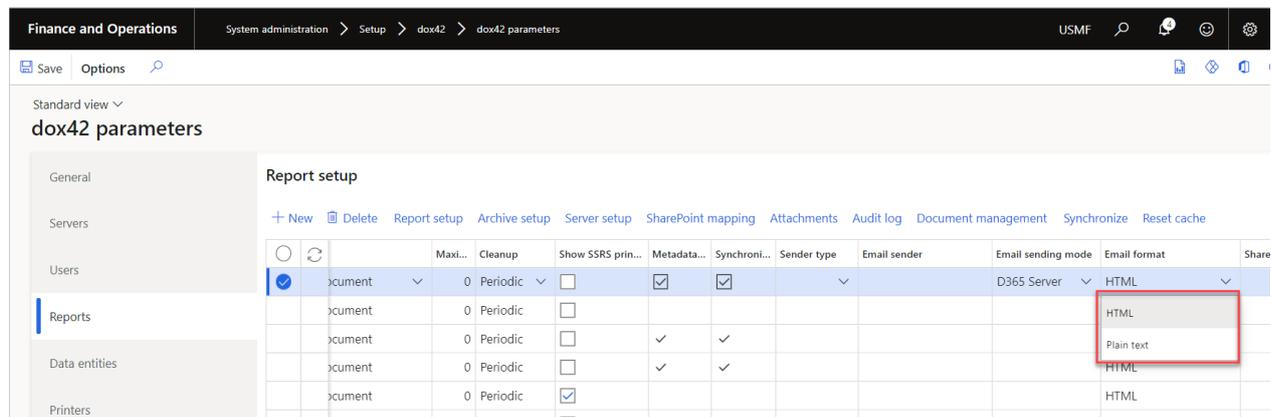
“System administration” > “Setup” > “dox42” > “dox42 servers”

Insert the email address in the field “SMTP user name” and insert the password in the field “SMTP password” as displayed in the image below.

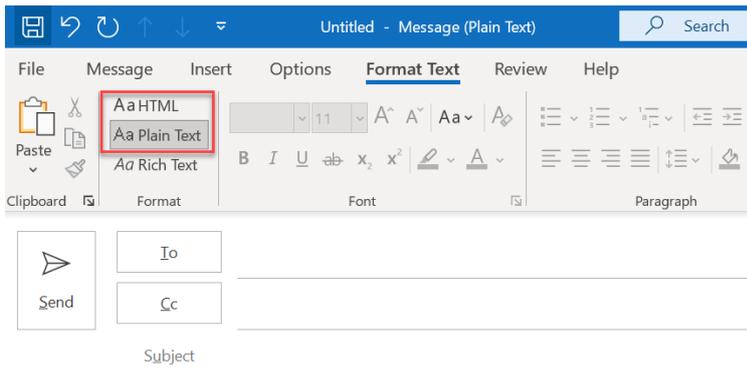


If the option “D365 Server” is chosen, the D365 FO uses the setup which is defined in the “Email parameters”.

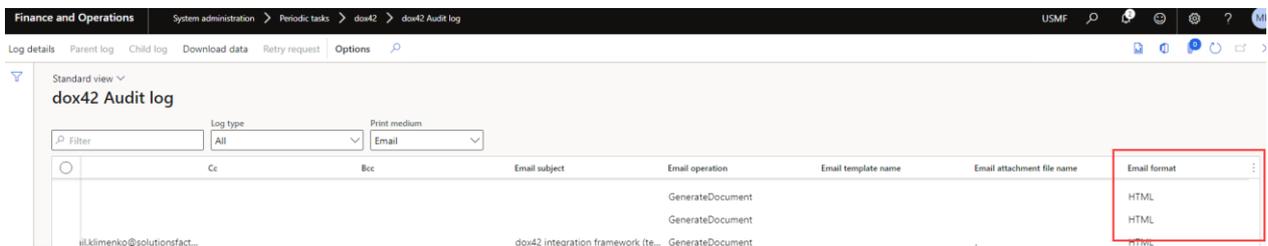
There are 2 available options for “Email format” of your email body- HTML and Plain text. This setup is available on the General level of dox42 parameters, “Reports”, “Data entities” levels as well as “Report setup” and “Data entity setup” tabs.



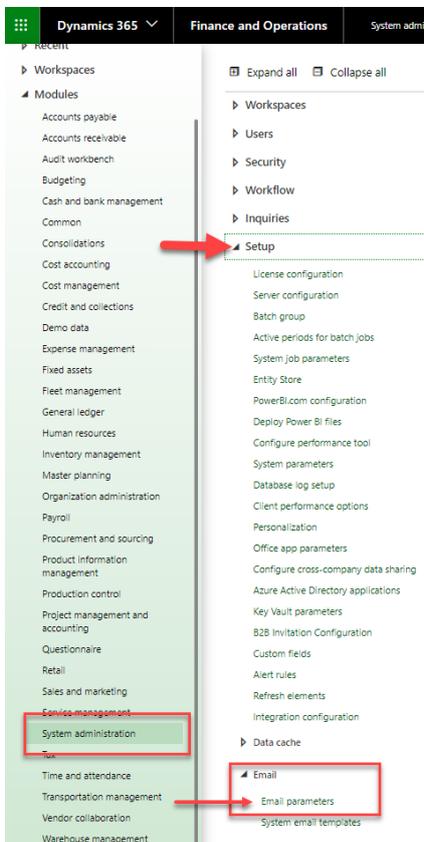
So the Format Test of the email you send will be either “HTML” or “Plain Text”.



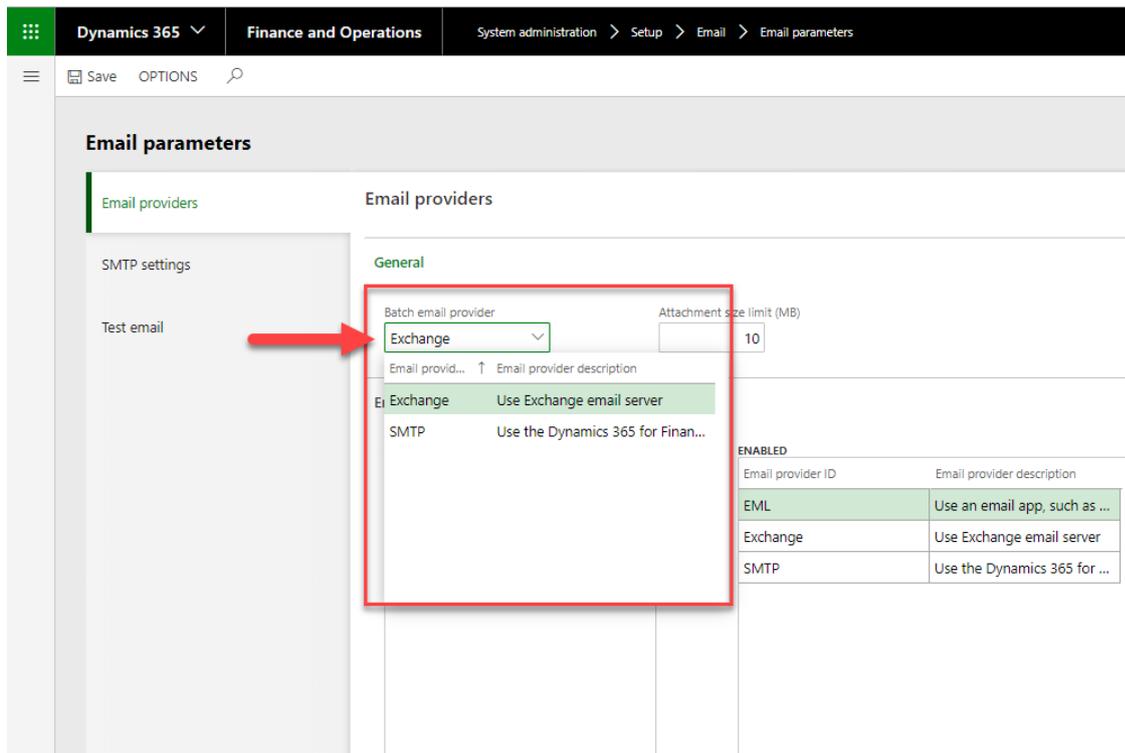
Dox42 audit log (System administration – Periodic tasks – dox42 – dox42 audit log) shows the email format for every printed report.



The form of the “Email parameters” is in the module “System administration” > “Setup” > “Email” > “Email parameters”, illustrated in the picture below.

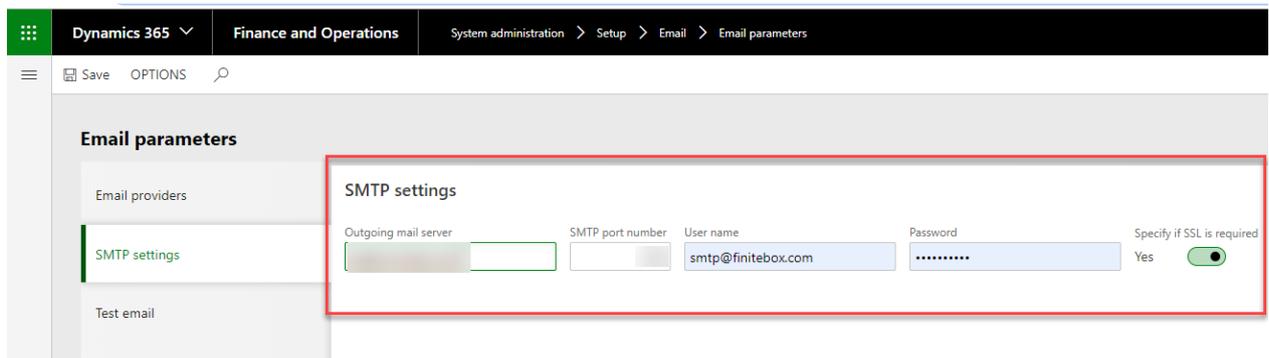


There are two options available “Exchange” and “SMTP”, displayed in the picture below.

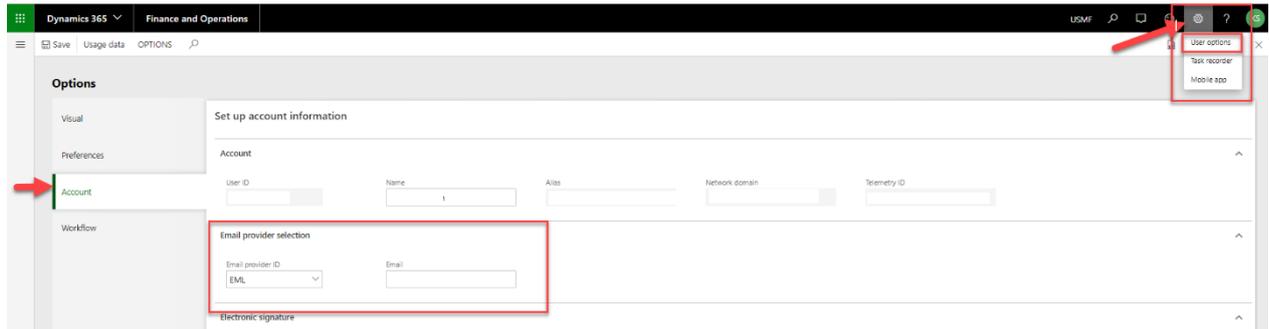


If SMTP is selected, a correct setup in the Email parameters is needed as described below, this is valid for the “D365 Server” as well as for the “D365 User” Email sending mode.

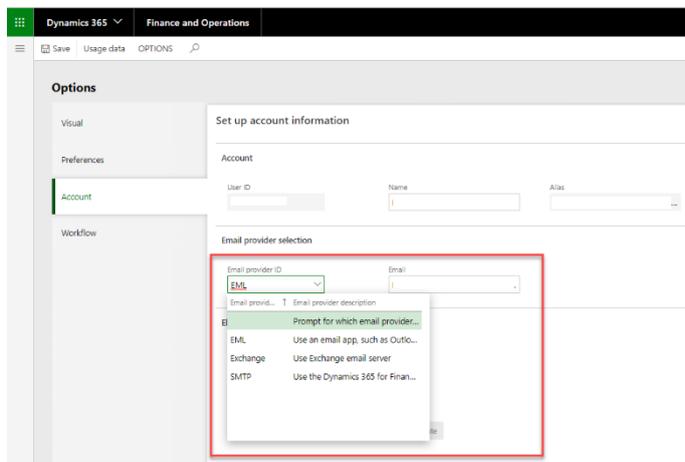
Switch to the module “System administration” > “Setup” > “Email” > “Email parameters”
Click on the tab “SMTP settings” and fill in all parameters. Make sure the checkbox “Specify if SSL is required” is set to true.



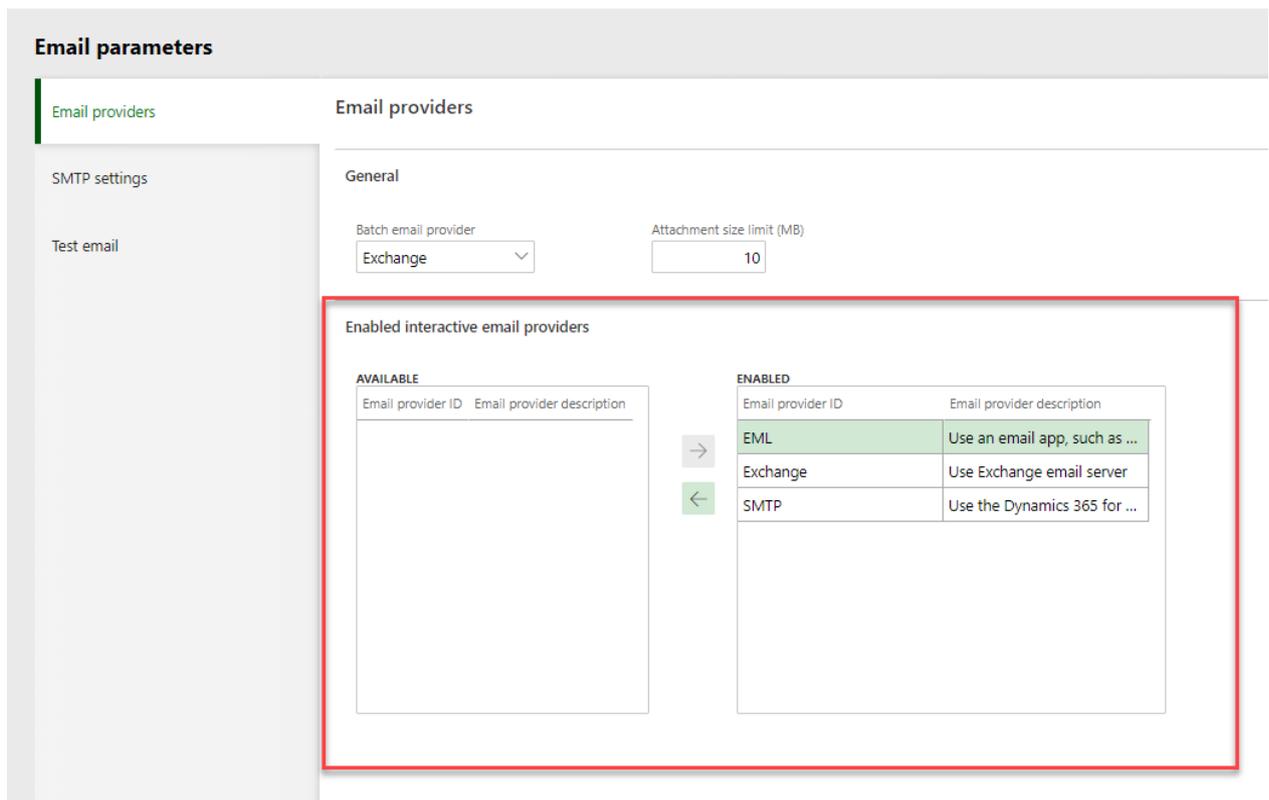
If the option “D365 User” is chosen, then D365 FO will use the setup at the D365 FO user account. How to get to the mask of the user account is illustrated in the picture below.



The drop-down menu “Email provider ID” displays all available option.



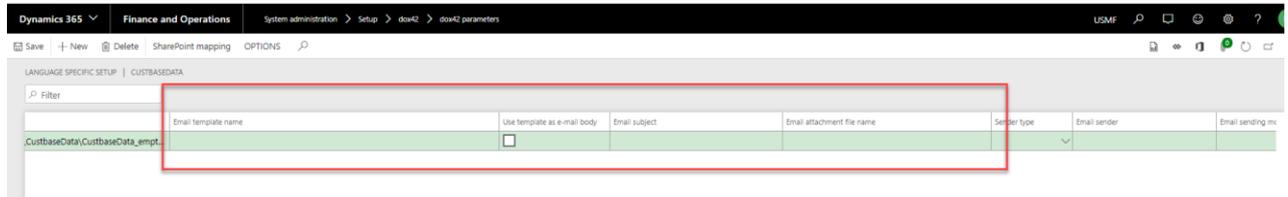
Which options are displayed is predefined in the “Email parameters” in the area “Enabled interactive email providers”.



Everything that is moved to the “ENABLED” side will be displayed at the user options.

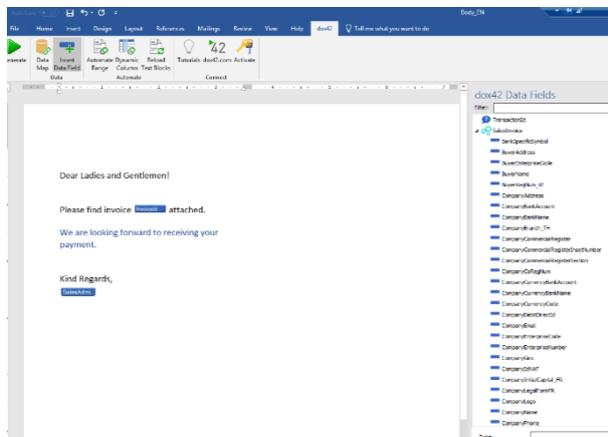
Setting up the additional parameters in the specific report setup

As mentioned before, there are additional fields in the specific report setup.

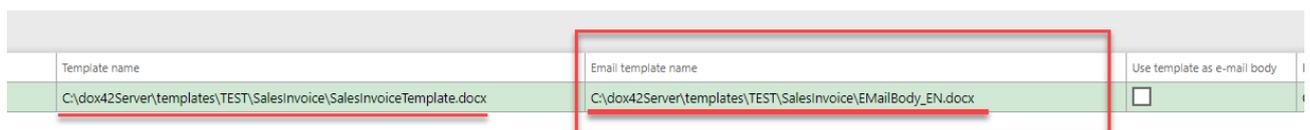


In the field “**Email template name**” it is possible to setup a body for the email. How to do that is explained below:

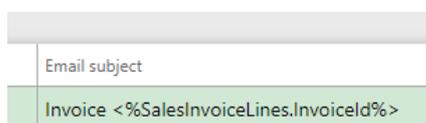
Create a simple report like in the picture below. How to setup dox42 templates is illustrated in the chapter “Create your first dox42 report”.



Save it in the same folder as the template of the report and insert the path in the field “Email template name”. An example is illustrated below.



In the field “**Email subject**” it is possible to setup a subject for the email, mixing hard-coded texts with fields from the data provider (<%DataSource.Field%>):



The field **“Email attachment file name”** provides the option to name the attachment file, which will be sent via Email.

Setup the field:

Insert the desired name for the e.g. invoice report. All formats, which are explain by the email subject, can be use by the email attachment file name as well. -coded text.

Email attachment file name

<%SalesInvoiceLines.InvoiceId%>.pdf

This will result in an attachment filename like this:



The difference, for the user, between the option “D365 Server” and the option “D365 User”

If the “D365 User” is selected it is possible for the user to customize each email. The picture below displays which areas are possible to modify.

The screenshot shows the 'Send email' interface with several red boxes highlighting customizable areas:

- From:** A dropdown menu.
- Cc:** A text input field.
- Subject:** A text input field containing 'Invoice CIV-00000737'.
- To:** A text input field.
- Bcc:** A text input field.
- Body:** A rich text editor with a toolbar (Bold, Italic, Underline, Format, Font, Color, Background Color, Bulleted List, Numbered List, Indent, Outdent, Link, Unlink, Image, Video, Code) and a text area containing:


```
Dear Ladies and Gentlemen!

Please find invoice CIV-00000737 attached.

Kind regards,
Your Contoso Team
```
- Attachments:** A table with columns 'File name' and 'File size'. It contains one entry:

File name	File size
Invoice_CIV-00000737.pdf	1183578

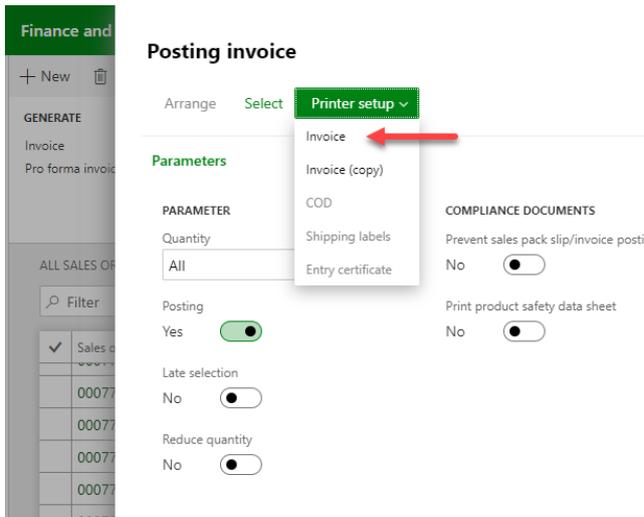
At the bottom right, there are 'Send' and 'Cancel' buttons.

If the “D365 Server” option is selected, D365 FO simply sends the email, there is no possibility to change the email.

4.1.5 File Server

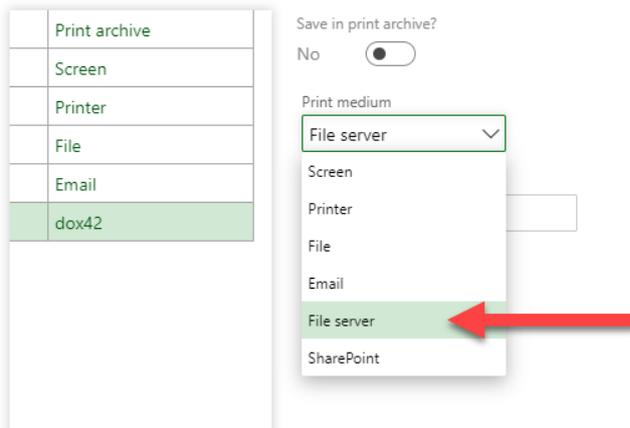
If this option is selected, the report will be archived in the predefined format. If a sales invoice is posted, it is possible to select the option "File Server" in the Printer setup. The report is then archived

in the specified path. The setup to save a report in multiple formats in the background is described in the chapter "Archiving of documents".



In the drop-down menu "Print medium" choose the "File Server".

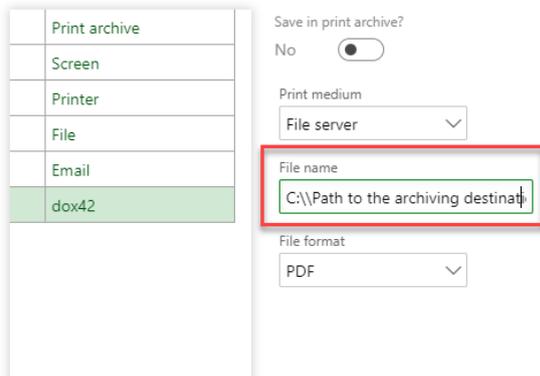
Print destination settings



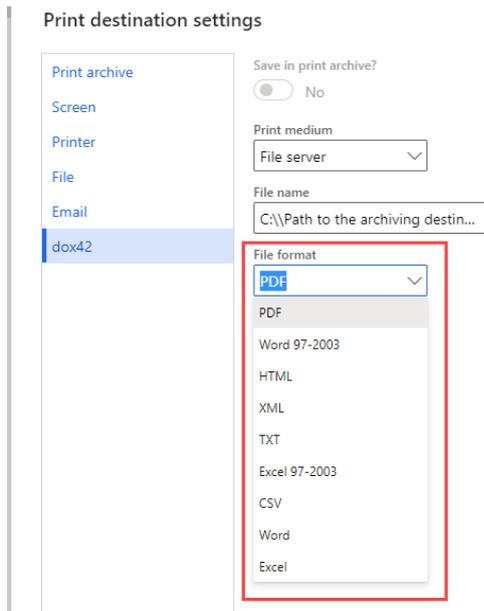
Insert the path to the folder in which the report should be archived, at the end of the path write the name which the report should get.

Example: C:\\Path to the archiving destination\ <% SalesInvoiceLines.InvoiceID%>

Print destination settings



Next step is to choose a format from the drop-down menu "File format".



Print destination settings

Print archive

Screen

Printer

File

Email

dox42

Save in print archive?
 No

Print medium
File server

File name
C:\Path to the archiving destin...

File format

PDF

Word 97-2003

HTML

XML

TXT

Excel 97-2003

CSV

Word

Excel

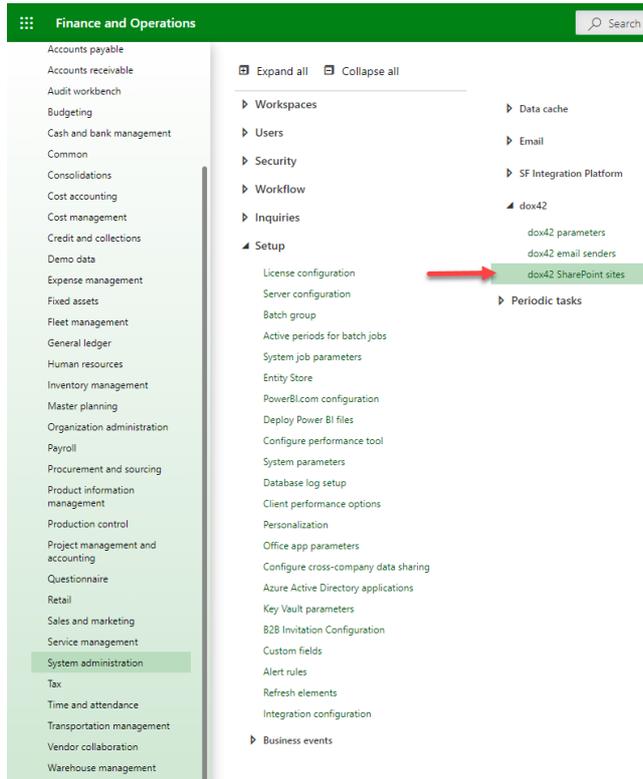
That's all you need, the report is now available in the specified folder, but is not displayed on the screen.

4.1.6 SharePoint

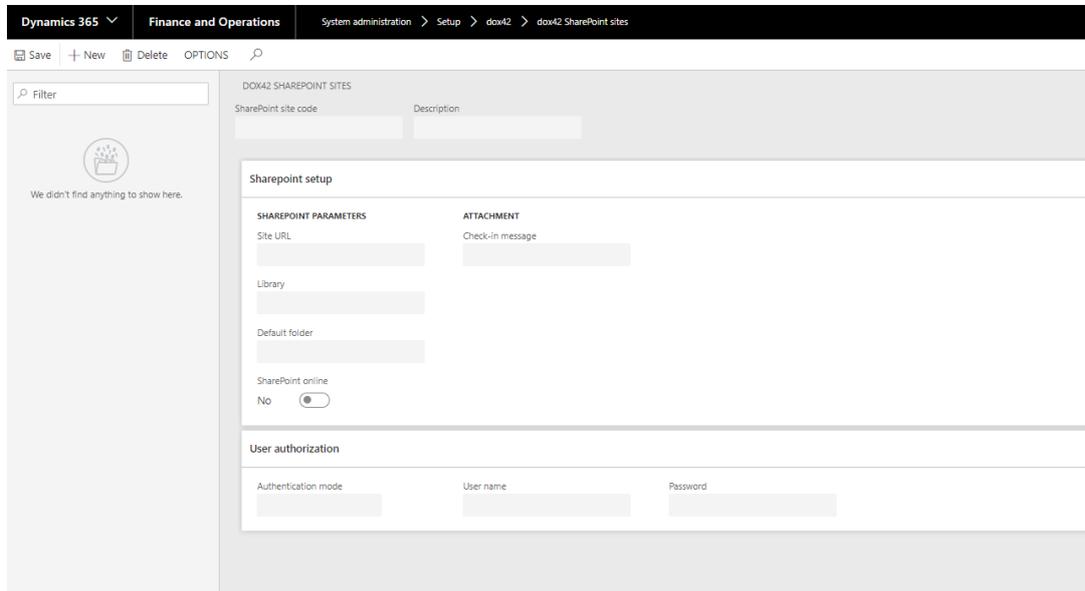
The option SharePoint provides the possibility to archive the reports on the SharePoint. The required setup steps are described below.

Note: It is not possible to use it as a regular print destination, the following setup must be done.

Determine library and folder in Sharepoint. Open dox42 Sharepoint sites in D365 FO. Module “System administration” > “Setup” > “dox42” > “dox42 SharePoint sites”



The mask displayed in the image below opens.



Switch to the Sharepoint folder where the report should be saved and copy the link.

The link will look similar to this example:

https://company.sharepoint.com/SPlayground/dox42%20Sharepoint%20Archiving%20V1810DemoSF1Eins

The link consists of the following components:

- Link to the Sharepoint: *https://company.sharepoint.com*
- Name of the Site: */SPlayground*

- Name of the Library: *dox42%20Sharepoint%20Archiving%20V1810DemoSF1Eins*

Now create a new Sharepoint site in D365 FO by clicking on the button “New” and fill in the parameters as follows:

- Site URL: *https://company.sharepoint.com/SPlayground/*
- Library: *dox42%20Sharepoint%20Archiving%20V1810DemoSF1Eins*
- Check-in message: just an information
- User authorization: User parameters of a user with is authorized to write on the SharePoint. We recommend the authentication mode “Inherit”.

Make sure that the field “SharePoint online” is set to “Yes”.

The screenshot shows the Dynamics 365 Finance and Operations interface for configuring a new SharePoint site. The breadcrumb navigation is: System administration > Setup > dox42 > dox42 SharePoint sites. The page title is "dox42 SharePoint sites".

The configuration fields are as follows:

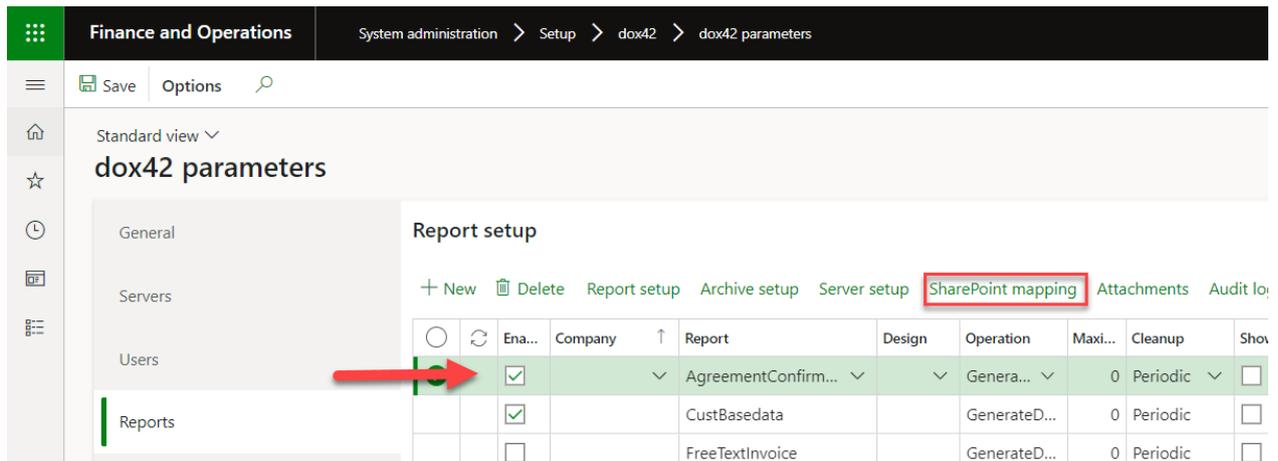
- SharePoint site code:** SharePointSideCode
- Description:** dox42 document library
- Sharepoint setup:**
 - SHAREPOINT PARAMETERS:**
 - Site URL:** [Redacted]
 - Library:** dox42%20sharepoint%20Archive
 - Default folder:** [Empty]
 - SharePoint online:** Yes (highlighted with a red box)
 - ATTACHMENT:**
 - Check-in message:** check in message
- User authorization:**
 - Authentication mode:** Inherit
 - User name:** [Empty]
 - Password:** [Empty]

NOTE: There is no “ - ” allowed in the Libraryname

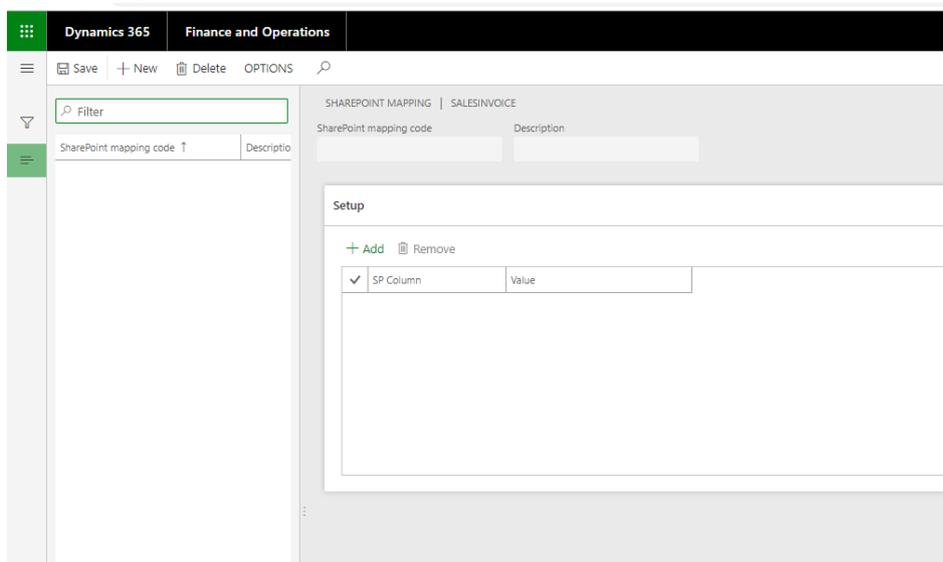
Switch to the dox42 parameters to setup a SharePoint mapping.

(System administration > dox42 > dox42 parameters)

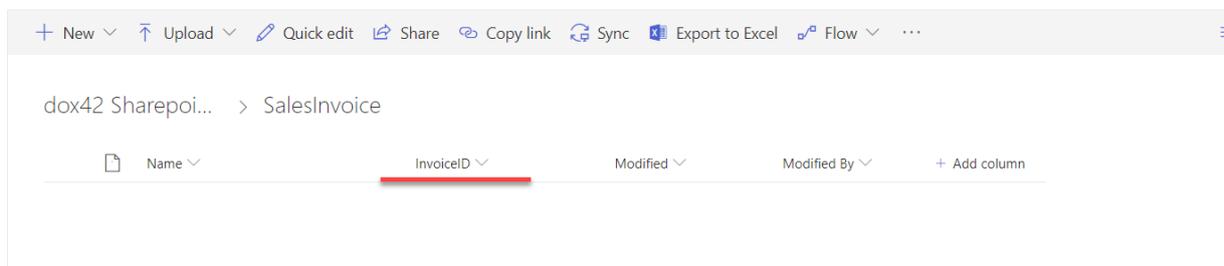
Mark the desired report and click on the button “SharePoint mapping”.

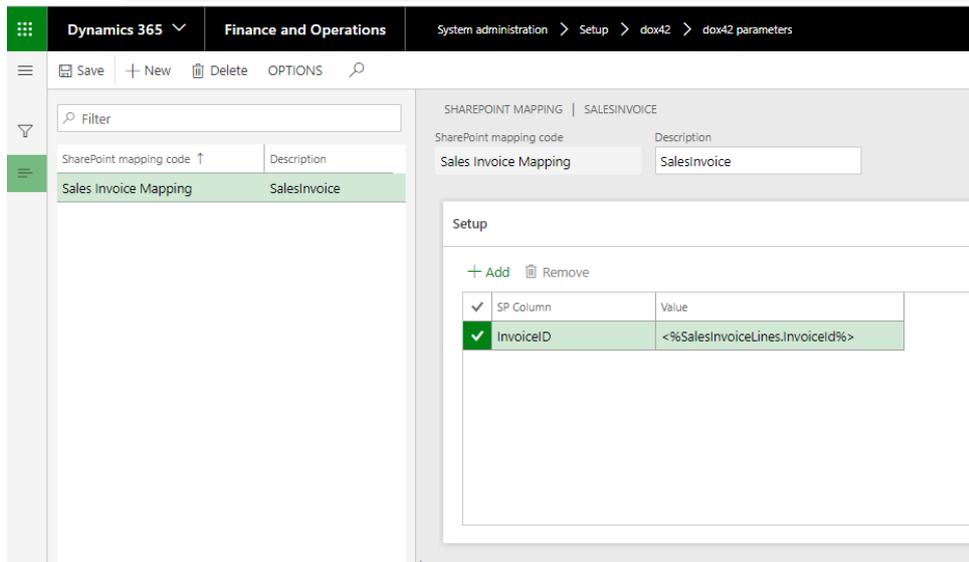


The mask displayed in the image below opens.



Add the columns which should be filled on the Sharepoint, in the “Setup” area. The column “Name” on the Sharepoint will be automatically filled, but for example the columns “InvoiceID” have to be inserted at the setup-area in the Sharepoint mapping.

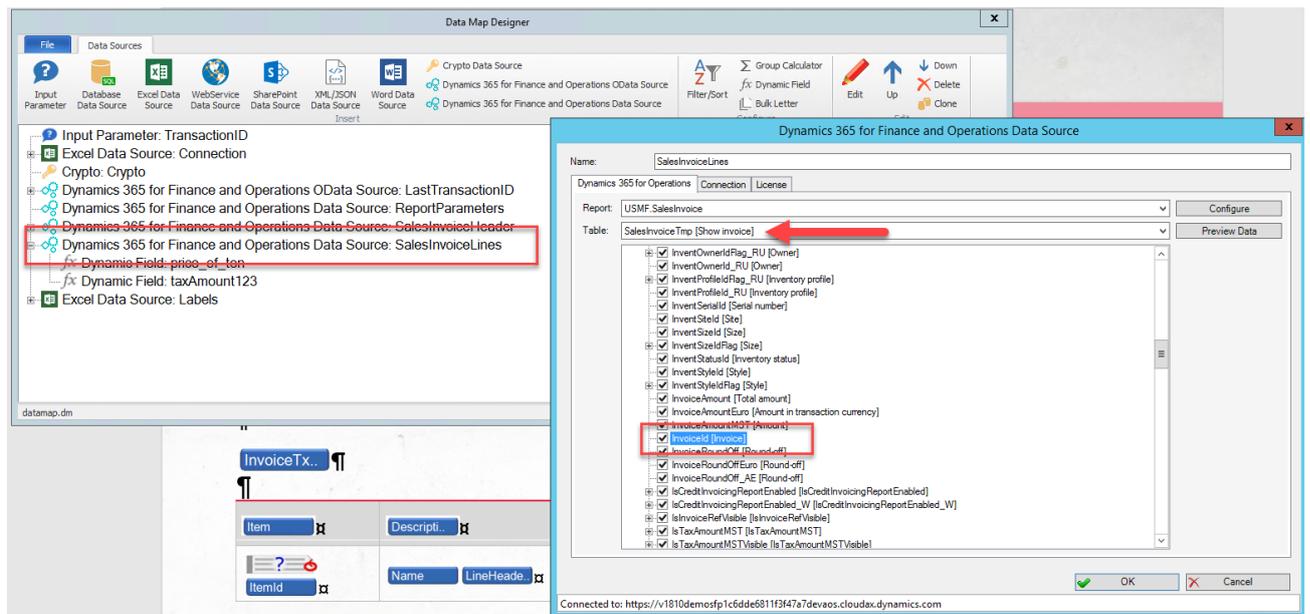




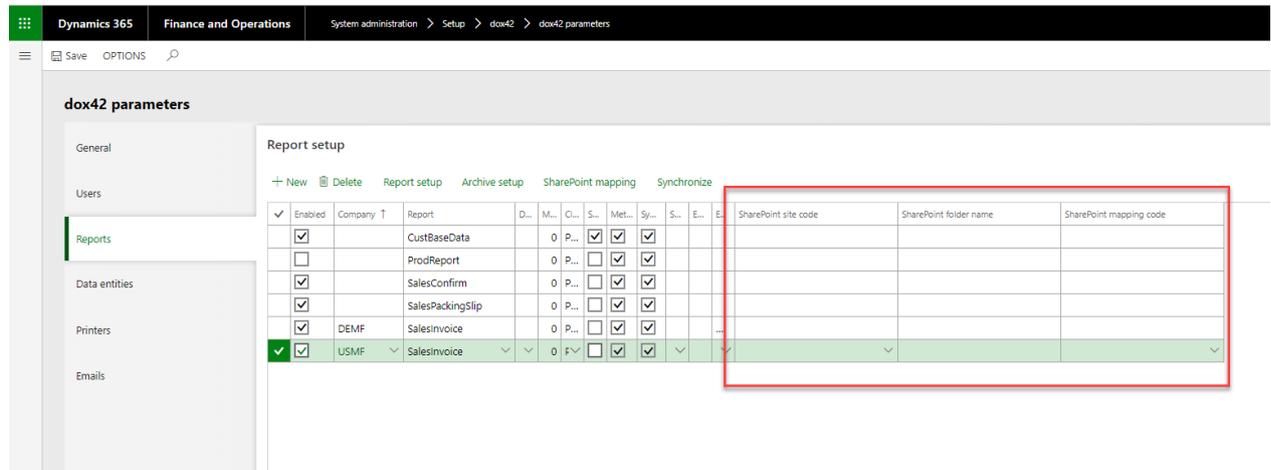
If the column "InvoiceID" on the Sharepoint should be filled, the value field looks like this:

`<%SalesInvoiceLines.InvoiceId%>`

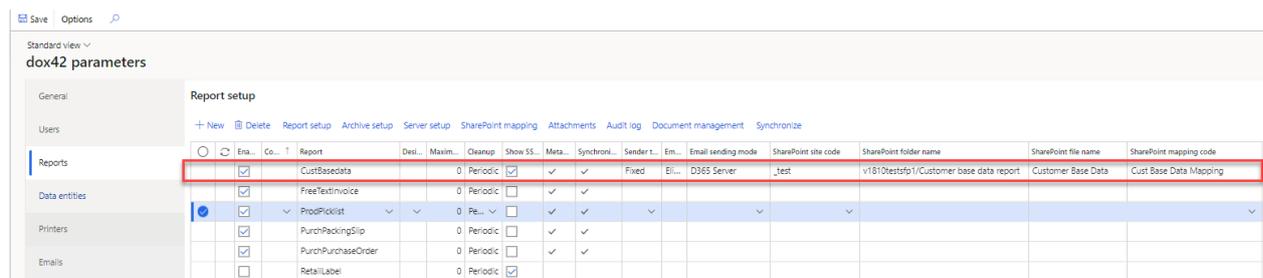
"SalesInvoiceLines" is the table in which the "InvoiceId" is stored. The name of the table as well as the name of the field can be looked up in the Datamap of the report.



Save the Sharepoint mapping and switch to the dox42 parameters. The linking of the report with the Sharepoint setup is done in the dox42 parameters.



Insert the "SharePoint site code", which contains the location as well as the library of the SharePoint. The field "SharePoint folder name" defines in which folder, on the SharePoint, the report should be saved. The SharePoint mapping code contains the information how the columns on the SharePoint are filled. The SharePoint file name contains the name you want to give to the report file.

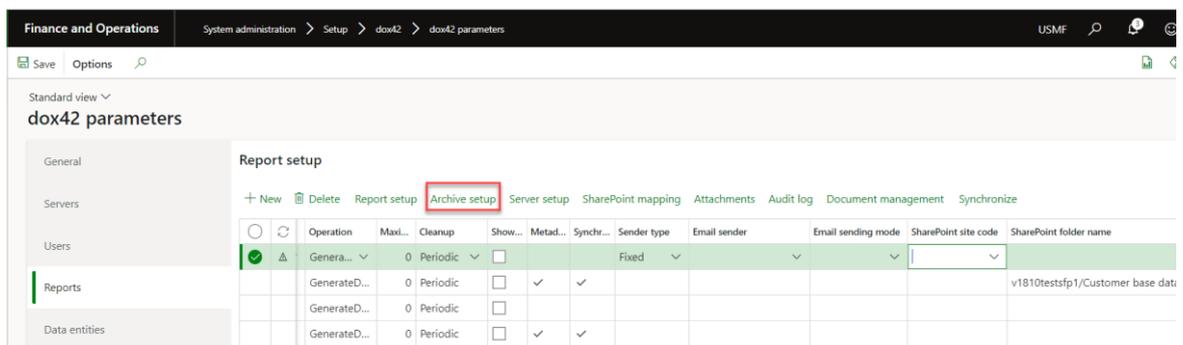


It is possible to setup the file name mixing a hard-coded text with the fields from the data provider using placeholders (e.g. <%YourDataSourceName.YourFieldName%>). An example of how the dynamic name of a SharePoint file name can look like is illustrated in the screenshot below.

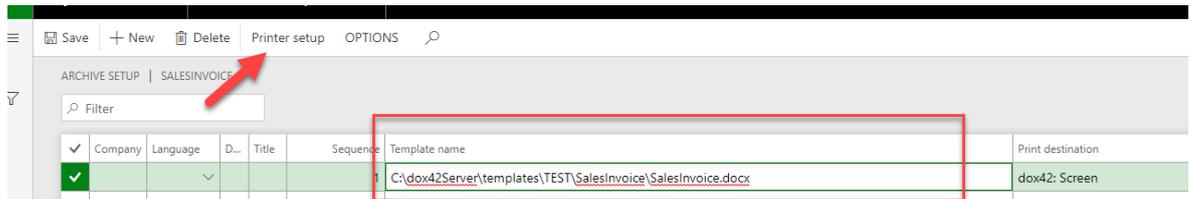
SharePoint site code	SharePoint folder name	SharePoint file name	SharePoint mapping code
_test	v1810testsp1/Customer base data report	<%CustBaseData.AccountNum%>	Cust Base Data Mapping

The next step is to setup the printer management for the SharePoint.

- Mark the desired report and click on the button "Archive setup"



- Click on the button “new” and insert the path of the template in the field “Template name”, then click on the button “Printer setup”



- Select the option “SharePoint” in the drop-down menu “Print medium” and fill in the field “site code”.

Print destination settings

dox42

Save in print archive?
No

Print medium
SharePoint

Site code
SharepointSiteCode

Folder name

File name

File format
PDF

The field “File name” provides the possibility to give the files a dynamic name (e.g. the InvoiceID).

Print destination settings

dox42

Save in print archive?
No

Print medium
SharePoint

Site code
SharepointSiteCode

Folder name

File name
<%SalesInvoiceLines.InvoiceId%>

File format
PDF

Set the value of the field “Archiving enabled” to “yes”, in the “Archive setup”.



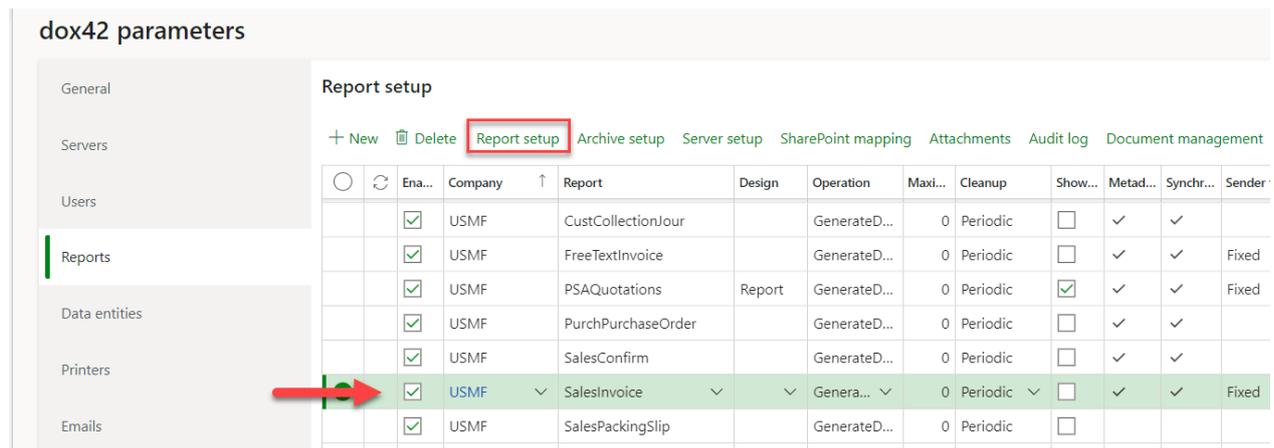
Now the setup for the archiving on the Sharepoint is finished. If a sales invoice is printed it will automatically be archived on the SharePoint.

Note: If side code and report setup have different folders, D365 FO chooses the folder from report setup

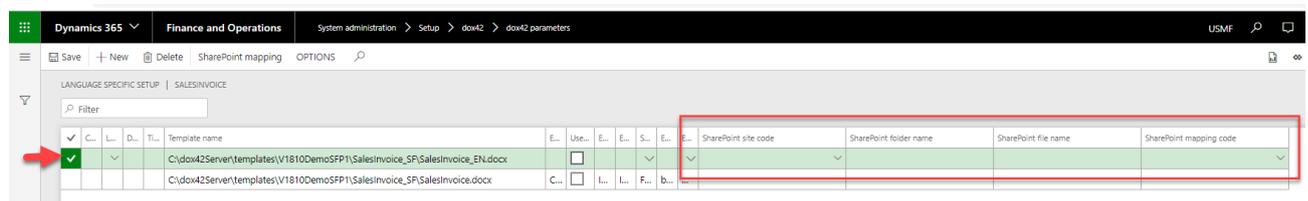
Setting up the SharePoint archiving for different templates

In the specific setup form of a report it is possible to create several templates for different companies/languages and setup different site codes, folders and mappings for archiving. The images below illustrate how to get to the specific report setup.

Mark the desired report and click on the button “Report setup”.



The setup in the report itself has the highest priority and will used even if outside the report is also a SharePoint setup:



Archiving an “D365 FO entity” report (OData report)

There is not really a different between archiving reports based on “D365 FO entity” and “normal” reports based on “D365 FO report”. Everything is available at the Data entities setup.

Note: It is unavailable to show data entity report on screen and archive it in SharePoint. It only possible to archive it or show it on the screen.

4.2 Print management

The print management is an important feature, it is one way to define how the report will be handled.

How to get there?

In every module with a form setup it is possible to use the print management. How to get to the print management is illustrated in the pictures below.

The screenshot shows the dox42 navigation menu. On the left, the 'Accounts receivable' module is highlighted with a red arrow. In the main content area, the 'Setup' menu is expanded, and 'Form setup' is highlighted with a red arrow. The 'Form setup' option is located under the 'Forms' sub-menu.

Form setup

General

Quotation

Confirmation

Picking list

Packing slip

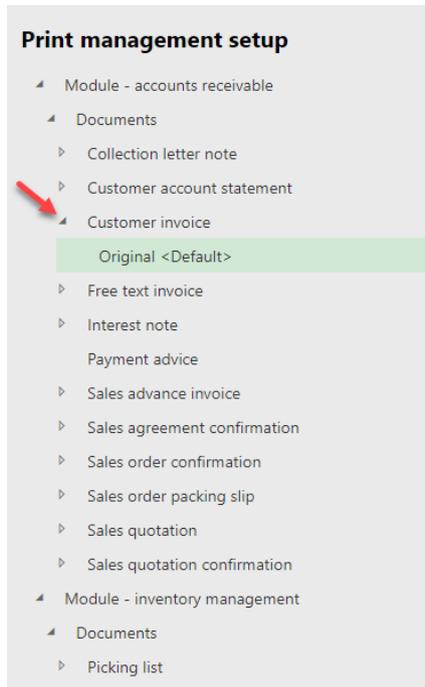
Invoice

Set up options for customer forms

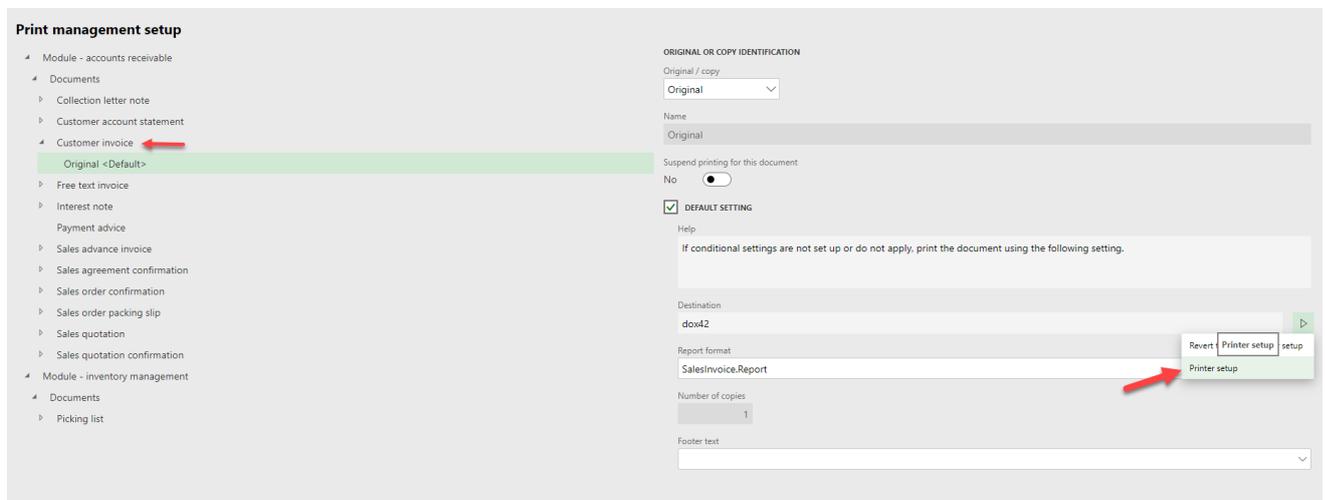
Print management (highlighted with a red arrow)

ITEM NUMBER	DESCRIPTION	AMOUNT	SALES TAX	PRODUCT DIMENSIONS
Item number in forms	Include both name and description	Print amount in currency represent...	Sales tax specification	Print product dimensions
Both	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	Registration and company cu...	Under item line
Blank item number in forms	External item description	Totals	Separate tax exempt balance in forms	Product dimension separator
	Append	First	No <input type="checkbox"/>	:

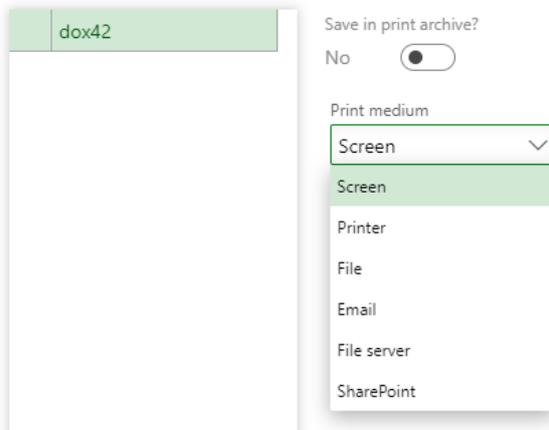
A form like in the picture will appear, it displays all the reports which are available for the printer setup. A click on the little triangle will display the different instances of the reports.



A click on the “Printer setup” button will lead to the printer destination settings, in which it is possible to decide how the report should be processed.

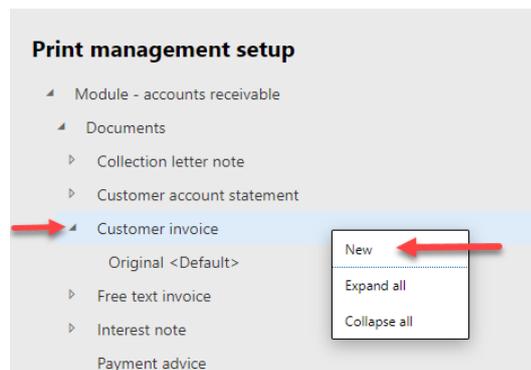


Print destination settings



The behavior of the different print mediums is explained below.

D365 FO provides the functionality to add more than one instance (right click on the report name, the report will be processed in all the defined ways).



Possible print mediums in the print management:

- **Printer**

If the “printer” is selected, a printer must be chosen on which the report should be printed.

- **Screen**

The report will be printed on the screen in D365 FO.

- **File**

The report will be downloaded in the chosen format.

- **Email**

This setup is needed for the feature of sending reports via email. Sending reports via email is described in the chapter “Send documents via email”.

- **File server**

The file server setup is required if the report should be stored in a folder, described in the chapter “Configure report destination”.

- **SharePoint**

To store reports on the SharePoint the SharePoint setup is needed, described in the chapter “Configure report destination”.

4.2.1 Emails

D365 FO provides the feature to send reports via Email. In this section the following parts will be explained:

- the ways of defining a recipient
- send emails via print management

Defining a recipient

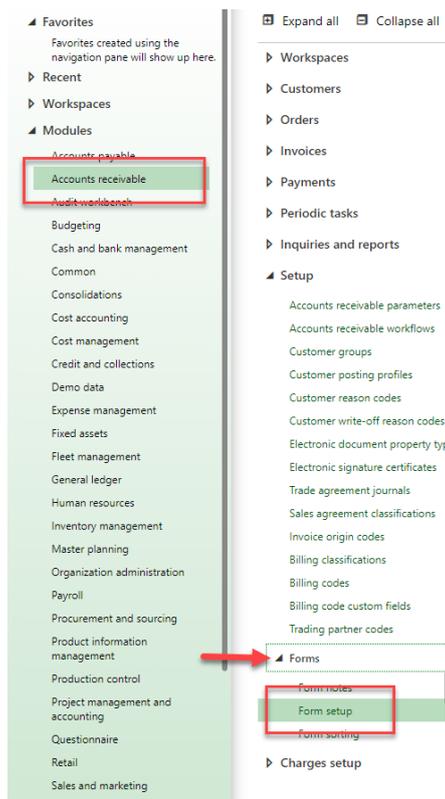
There are two different ways to setup the recipient of an email, the manual way and the dynamic way.

The manual way – using a fixed email address as the recipient

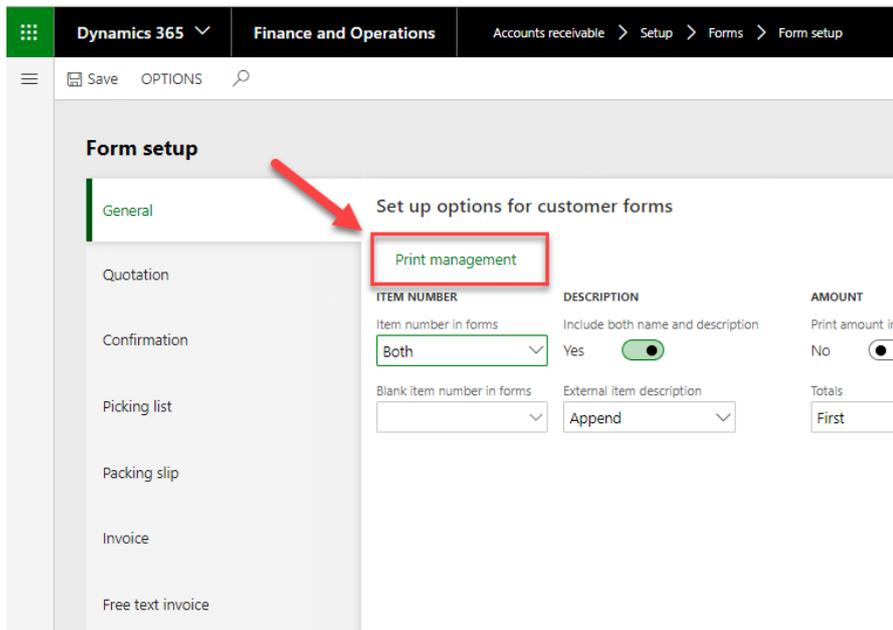
The recipient of the email is always specified in the print management, regardless of whether the manual or dynamic way is selected.

Switch to the print management of the desired report (e.g. SalesInvoice):

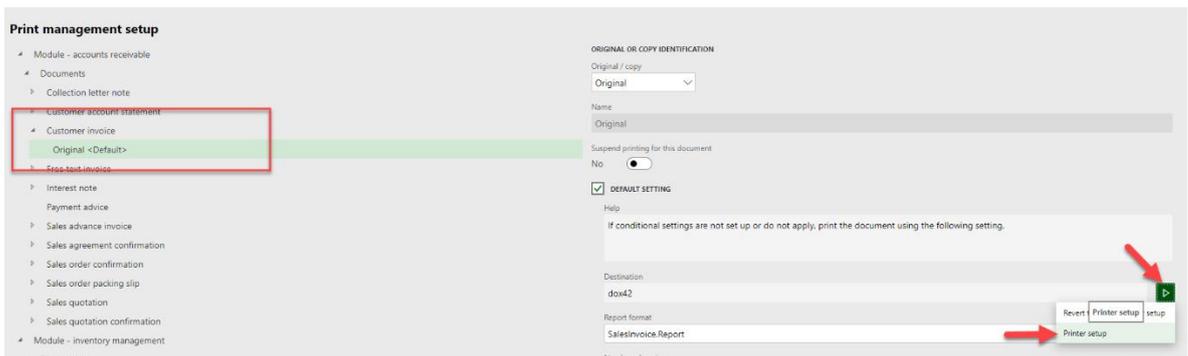
- Choose the module e.g. “Accounts receivable” > “Setup” > “Forms” > “Form setup”



- Select the desired report and click on the button “Print Management”



- Select the desired report and click on the “Arrow” button. Select the option “Printer setup”



- Select from the drop-down menu “Print medium” the element “Email” and insert the email addresses.

D365 FO will now send every email to this email address.

The dynamic way – using different purposes (best practice for form letters)

D365 FO provides the feature to set different purposes in the email address setup. Those purposes are used to decide to which email address the report will be sent. For example, there might be an email address for sales invoices and an email address for confirmations, as shown in the picture below. This setup is ideal for form letters like the sales invoice.

Contact information

+ Add Remove Edit contact information

Description	Type	Contact number/address	Extension	Primary ↓	
Phone	Phone	111 555 8877		<input checked="" type="checkbox"/>	
Email Invoices	Email address	max.mustermann@muster.at		<input checked="" type="checkbox"/>	
Email Business (Confirmations)	Email address	maxima.musterfrau@muster.at		<input type="checkbox"/>	

Setup the purpose of an email address:

- switch to the contact information of a customer or vendor

- click on the “Add” button

Contact information

+ Add Remove Edit contact information

Description	Type	Contact number/address	Extension	Primary ↓	
Phone	Phone	111-555-8877		<input checked="" type="checkbox"/>	☎

- Insert all required information (description, type, email address)

Contact information

+ Add Remove Edit contact information

Description	Type	Contact number/address	Extension	Primary ↓	
	Email address			<input type="checkbox"/>	☎
Phone	Phone	111-555-8877		<input checked="" type="checkbox"/>	☎

Email address
URL
Telex

- Click on the button “Edit contact information”

Contact information

+ Add Remove Edit contact information

Description	Type	Contact number/address	Extension	Primary ↓	
Email Invoices	Email address	max.mustermann@muster.at		<input type="checkbox"/>	☎
Phone	Phone	111-555-8877		<input checked="" type="checkbox"/>	☎

- Select the desired purpose for the email address (in this case “Invoice”)

Edit contact information

Description
Email Invoices

Type
Email address

Email address
max.mustermann@muster.at

Purpose
Business

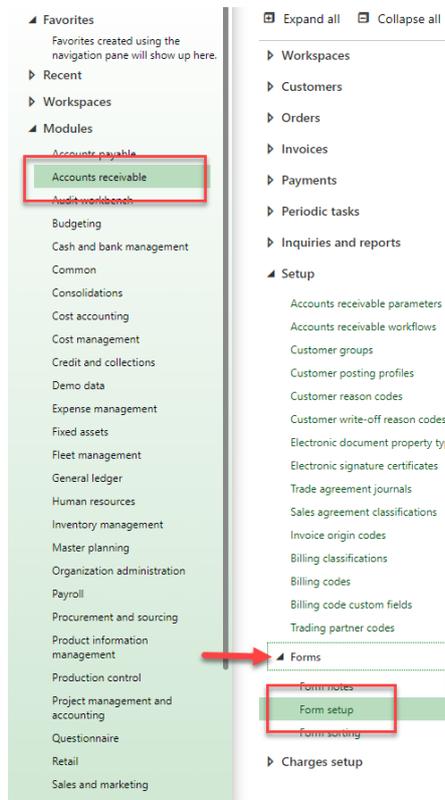
Role ↑	Description
<input type="checkbox"/>	Business
<input type="checkbox"/>	Home
<input checked="" type="checkbox"/>	Invoice
<input type="checkbox"/>	Other
<input type="checkbox"/>	Recruit
<input type="checkbox"/>	SKL
<input type="checkbox"/>	SMS

Select

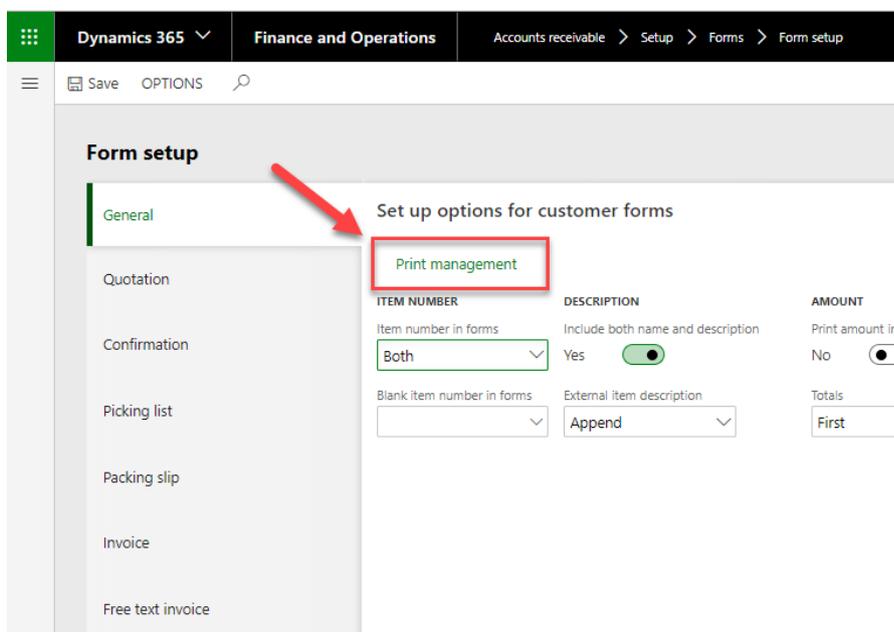
Note: it is possible to select multiple purposes for one email address.

Setting up the print management for using the purposes of the email addresses:

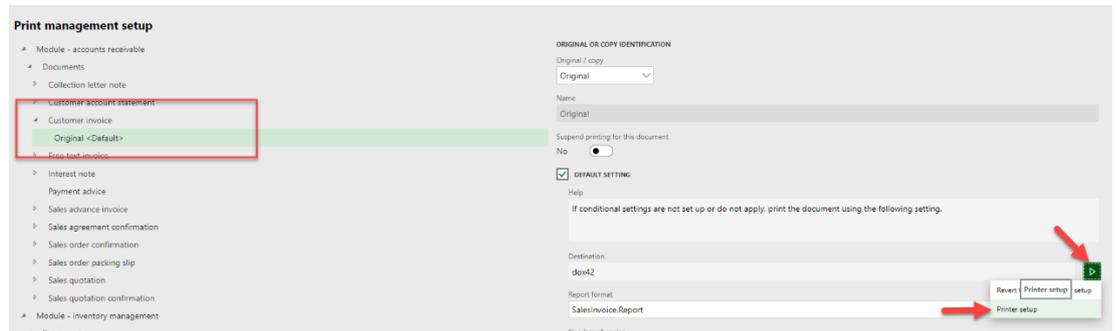
- Switch to the form setup of the desired report (e.g. SalesInvoice)



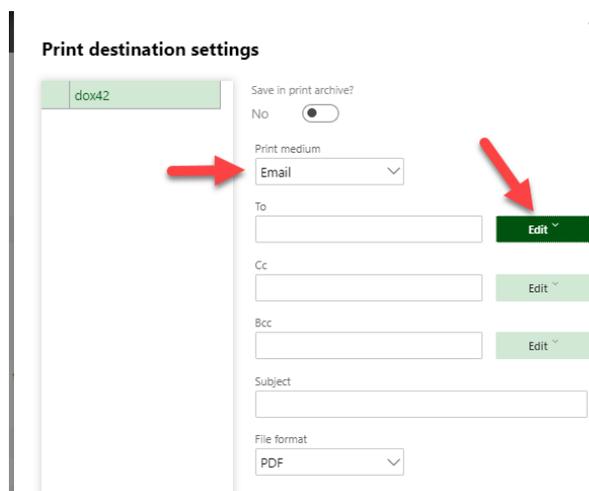
- Click on the button "Print management"



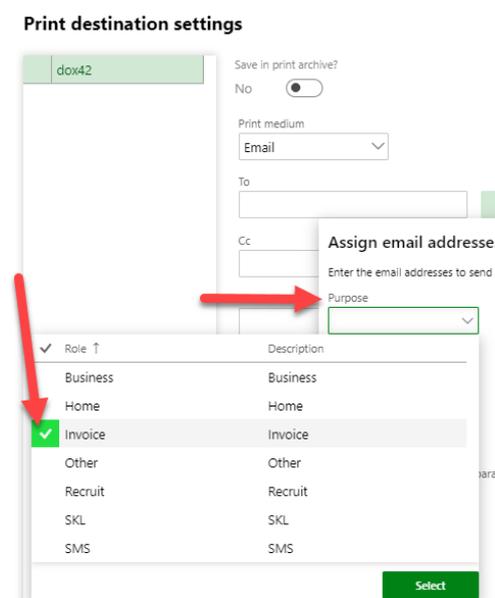
- Select the desired report and click on the “Arrow” button. Select the option “Printer setup”.



- Choose the print medium “Email” and click on the button “Edit”.



- Select the desired purpose



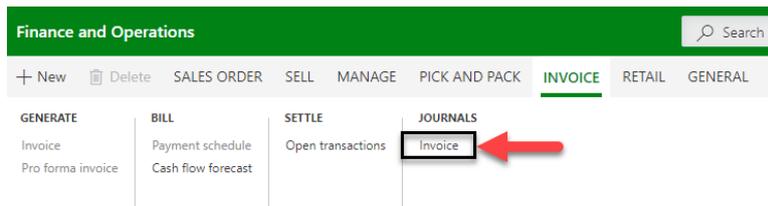
If an email is sent, then the D365 FO will check which email addresses are assigned to this purpose. How to send emails will be explained at the end of this chapter.

4.2.2 Using the print management as print destination

The next section describes how to use the print management as print destination while e.g. posting a sales invoice.

Journals

Mark e.g. the sales invoice which should be printed to the print destination which is setup in the print management.

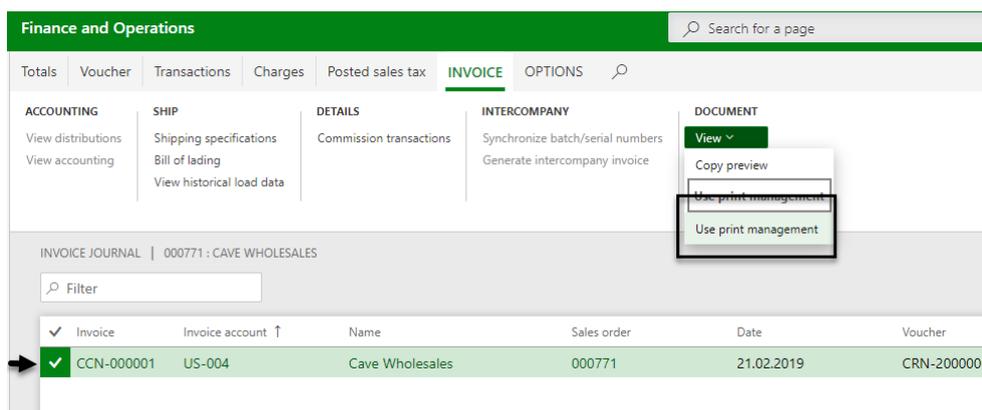


ALL SALES ORDERS

Filter

✓ Sales order ↑	Customer account	Customer name	Order type
000768	US-001	Contoso Retail San Diego	Returned order
000769	US-002	Contoso Retail Los Angeles	Returned order
000770	US-004	Cave Wholesales	Returned order
000771	US-004	Cave Wholesales	Returned order
000772	US-006	Contoso Retail Portland	Returned order
000773	DE-001	Contoso Europe	Sales order
000776	US-027	Birch Company	Sales order
000783	US-001	Contoso Retail San Diego	Sales order
✓ 000784	US-003	Forest Wholesales	Sales order
000785	US-019	Sunflower Wholesales	Sales order
000810	US-003	Forest Wholesales	Sales order

Click on the drop-down menu “View” and choose the “Use print management”



Using the print management while posting

Mark the invoice which should be posted and click on the button “Invoice”. Set the checkbox “Use print management” to yes.

Posting invoice

Parameters

COMPLIANCE DOCUMENTS

PRINT OPTIONS

SETUP

SUMMARY ORDER

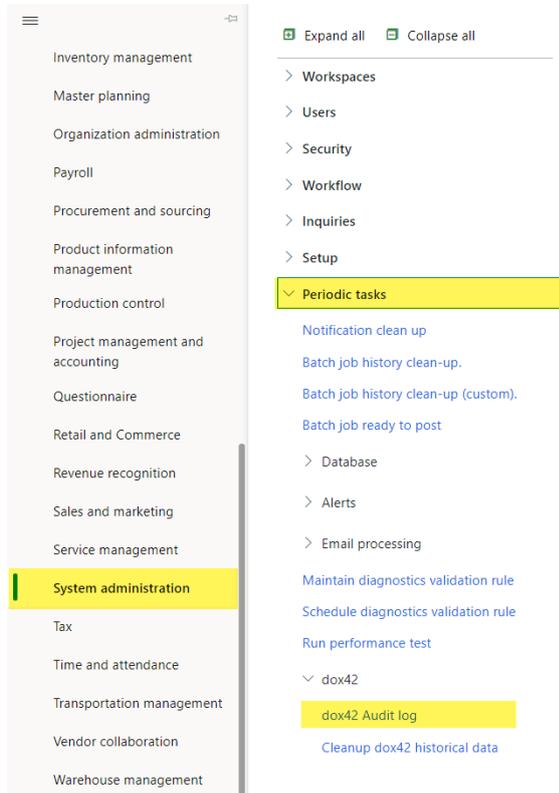
Overview

Invoice	Customer party	Sales order	Name	Quantity
<input checked="" type="checkbox"/>	001001	001001	Earth Impregnation	1000

5 Traceability – dox42 audit log

It is important to know how the reports have been processed. The dox42 Audit Log register all processed dox42 reports.

The “dox42 Audit Log” can be found in the module “System administration” > “Periodic tasks” > “dox42”, as illustrated in the picture below.



The most important information of a processed report will be registered in the dox42 Audit log, shown in the picture below.

Log details Parent log Child log Download data Retry request Options

Standard view

dox42 Audit log

Log type: All Print medium: All

Trace ID	Log type	Created date and time	Created by	Report type	Language	Report	Design	Root data entity	Title	Data id
✓ [D0C4793C-19D5-4FE3-8269-AA52F98C7F9]	dox42 server call			SSRS report	en-us	SalesConfirm	Report		View original	
✓ [D0C4793C-19D5-4FE3-8269-AA52F98C7F9]	dox42 print destination request			SSRS report	en-us	SalesConfirm	Report		View original	
✓ [D0C4793C-19D5-4FE3-8269-AA52F98C7F9]	dox42 output processing			SSRS report	en-us	SalesConfirm	Report		View original	
✓ [D0C080FD-D2C6-4E8B-96A8-7E331972A94C]	dox42 data serialization			SSRS report	en-us	SalesConfirm	Report		View original	
✓ [D0C080FD-D2C6-4E8B-96A8-7E331972A94C]	dox42 server call			SSRS report	en-us	SalesConfirm	Report		View original	
✓ [D0C080FD-D2C6-4E8B-96A8-7E331972A94C]	dox42 print destination request			SSRS report	en-us	SalesConfirm	Report		View original	

One Report/Entity run creates several lines with the same Trace ID which are divided into different Log types.

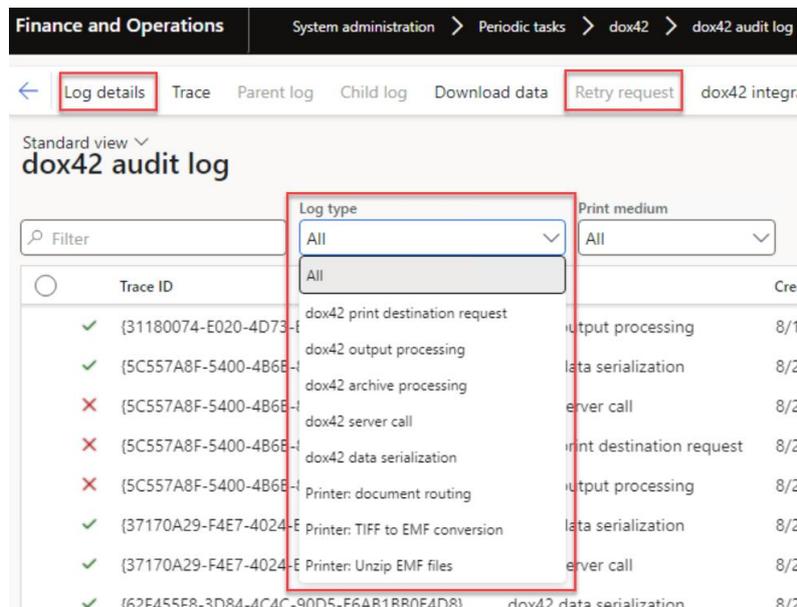
Log types used for reports:

- dox42 output processing – total execution of the dox42 logic
- dox42 data serialization – serializing report’s data, it is a part of “dox42 output processing”.
- dox42 print destination request – release to print destination (screen, file, printer, etc.), it is a part of “dox42 output processing”.
- dox42 server call – interaction with dox42 server, it is a part of “dox42 print destination request” or “dox42 archive processing”.

- Printer: document routing – document routing processing (only when printing to a printer with “Document Routing Agent” active), it is a part of “dox42 print destination request”.
- Printer: TIFF to EMF conversion – total execution of the conversion logic (only when printing to a printer with “Document Routing Agent” active and “Document routing mode” = “TIFF to EMF”), it is a part of “Printer: document routing”.
- Printer: Unzip EMF files – total execution of the unzipping logic (only when printing to a printer with “Document Routing Agent” active and “Document routing mode” = “EMF”), it is a part of “Printer: document routing”.
- dox42 archive processing – total execution of the dox42 archiving logic, it is a part of “dox42 output processing” in case of synchronous archiving.

Log types used for data entities:

- dox42 output processing – total execution of the dox42 logic.
- dox42 print destination request – release to print destination (screen, file, printer, etc.), it is a part of “dox42 output processing”.
- dox42 server call – interaction with dox42 server, it is a part of “dox42 print destination request”.
- Printer: document routing – document routing processing (only when printing to a printer with “Document Routing Agent” active), it is a part of “dox42 print destination request”.
- Printer: TIFF to EMF conversion – total execution of the conversion logic (only when printing to a printer with “Document Routing Agent” active and “Document routing mode” = “TIFF to EMF”), it is a part of “Printer: document routing”.
- Printer: Unzip EMF files – total execution of the unzipping logic (only when printing to a printer with “Document Routing Agent” active and “Document routing mode” = “EMF”), it is a part of “Printer: document routing”.



Clicking on the button **Log details** in dox42 Audit log form you can see detailed audit log entry view.

Retry request button is available for log type - dox42 print destination request.

Enabled **Data cache used** for “dox42 data serialization” log type means that the data was not generated newly while report running but was taken from the cache. **Document cache used** checkbox

is used for “dox42 server call” log type means the document was taken from the cache instead of sending a request to the dox42 server.

If you do the setup of “Archive setup” (File server or SharePoint) in dox42 parameters for the report, extra lines per each archive process will be added in dox42 audit log. **Trace ID** will be different in case of asynchronous archiving is enabled. Clicking on **Parent log** button you will find the **Trace ID** of the initial run of the report (output processing). The same works vice versa with checking the **Child log** of the output processing.

Trace ID	Log type	Created date and time
{3AD08929-3756-4FB6-A05B-F26937A47B73}	dox42 server call	9/30/2022 10:21:38 PM
{3AD08929-3756-4FB6-A05B-F26937A47B73}	dox42 print destination request	9/30/2022 10:21:38 PM
{3AD08929-3756-4FB6-A05B-F26937A47B73}	dox42 output processing	9/30/2022 10:21:38 PM
{09AD0A0D-2670-4BD9-9783-4F84ED8CB241}	dox42 data serialization	9/30/2022 10:28:43 PM
{09AD0A0D-2670-4BD9-9783-4F84ED8CB241}	dox42 server call	9/30/2022 10:30:26 PM
{09AD0A0D-2670-4BD9-9783-4F84ED8CB241}	dox42 print destination request	9/30/2022 10:30:26 PM
{09AD0A0D-2670-4BD9-9783-4F84ED8CB241}	dox42 output processing	9/30/2022 10:30:27 PM
{708374E6-C7E4-4999-843D-DC876664E670}	dox42 server call	9/30/2022 10:30:37 PM
{708374E6-C7E4-4999-843D-DC876664E670}	dox42 print destination request	9/30/2022 10:30:37 PM
{708374E6-C7E4-4999-843D-DC876664E670}	dox42 archive processing	9/30/2022 10:30:37 PM

The column **Cache enabled** shows if the caching function was enabled for the Report/Entity run.

Finance and Operations | System administration > Periodic tasks > dox42 > dox42 Audit log

Log details | Parent log | Child log | Download data | Retry request | Options

Standard view

dox42 Audit log

Filter: [] Log type: All Print medium: All

	Data identifier	Print medium type	Source transaction	Non-interactiv...	Status	Duration (s)	Parent trace ID	Cache enabled
original		File server	5637296986	✓	Okay	9.94	{09AD0A0D-2670-48D9-9783-4...	
original		Screen	5637296986		Okay	1.55	{00000000-0000-0000-0000-00...	
original		Screen	5637296986		Okay	1.59	{00000000-0000-0000-0000-00...	
original		Screen	5637296987		Okay	0.17	{00000000-0000-0000-0000-00...	✓
original		Screen	5637296987		Okay	3.56	{00000000-0000-0000-0000-00...	✓
original		Screen	5637296987		Okay	3.58	{00000000-0000-0000-0000-00...	✓
original		Screen	5637296987		Okay	4.25	{00000000-0000-0000-0000-00...	✓
original		File server	5637296987	✓	Okay	1.34	{FBA16198-D53D-4B73-A63E-F3...	✓
original		File server	5637296987	✓	Okay	1.38	{FBA16198-D53D-4B73-A63E-F3...	✓
original		File server	5637296987	✓	Okay	1.48	{FBA16198-D53D-4B73-A63E-F3...	✓

Additionally, you can set up log levels for each log type in the dox42 company parameters form:

Finance and Operations | System administration > Setup > dox42 > dox42 company parameters

Save Options

Standard view

dox42 company parameters

General | Audit log | Integration audit log

Audit log setup

General

DOX42 PRINT DESTINATION REQUEST	DOX42 OUTPUT PROCESSING	DOX42 ARCHIVE PROCESSING	DOX42 SERVER CALL	DOX42 DATA SERIALIZATION
Log level: Always	Log level: Always	Log level: Always	Log level: Always	Log level: Always

Printer

PRINTER: DOCUMENT ROUTING	PRINTER: TIFF TO EMF CONVERSION	PRINTER: UNZIP EMF FILES
Log level: Always	Log level: Always	Log level: Always

5.1 Preview serialized report data

In D365 FO, it is possible to see the raw report data in JSON-format regardless of whether the report design was successfully generated or not. To do this, click the button “Download data” on the dox42 audit log form.

Log details | Parent log | Child log | Download data | Retry request | Options

Standard view

dox42 Audit log

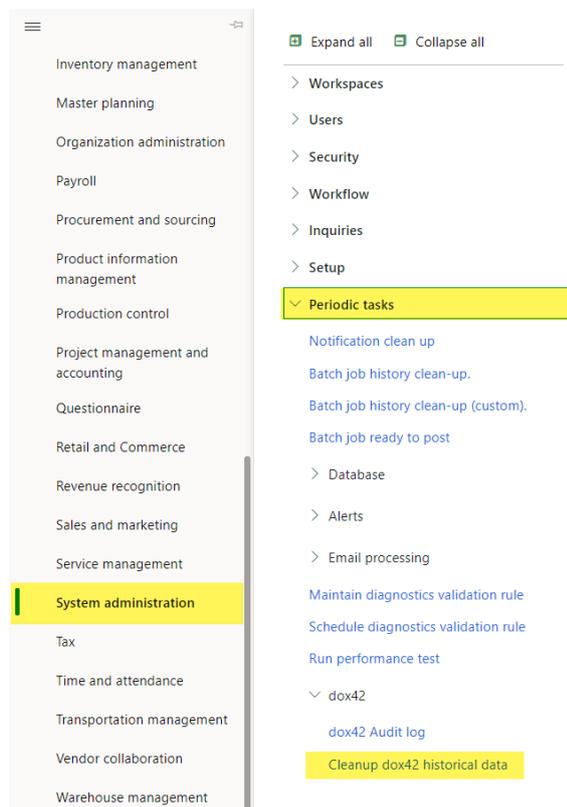
Filter: [] Log type: All Print medium: All

	Trace ID	Log type	Created date and time	Created by	Report type	Language	Report	Design	Root data entity	Title	Data size
✓	{D0C4792C-19D5-4FE3-8269-AA52F98CC7F9}	dox42 server call			SSRS report	en-us	SalesConfirm	Report		View original	
✓	{D0C4792C-19D5-4FE3-8269-AA52F98CC7F9}	dox42 print destination request			SSRS report	en-us	SalesConfirm	Report		View original	
✓	{D0C4792C-19D5-4FE3-8269-AA52F98CC7F9}	dox42 output processing			SSRS report	en-us	SalesConfirm	Report		View original	
✓	{C0808DF0-D2C6-4E8B-96A8-7E331972A94C}	dox42 data serialization			SSRS report	en-us	SalesConfirm	Report		View original	
✓	{C0808DF0-D2C6-4E8B-96A8-7E331972A94C}	dox42 server call			SSRS report	en-us	SalesConfirm	Report		View original	
✓	{C0808DF0-D2C6-4E8B-96A8-7E331972A94C}	dox42 print destination request			SSRS report	en-us	SalesConfirm	Report		View original	

5.2 Keep it lean and clean

D365 FO provides a function to clean up the dox42 audit log. This function can be found in the “System administration” > “Periodic tasks” > “dox42” > “Cleanup dox42 historical data”. The “Cleanup dox42 historical data” will open the form which is illustrated in the picture below. This function makes it possible to delete data from the dox42 audit log in your current company until a specific date.

It is recommended to set up this function in the batch processing mode (run once a day), with a days of limitation period > 0 (e.g. 30)



There is a possibility to select reports and/or data entities to be cleaned up and set up additional filters.

Cleanup dox42 historical data

Parameters

PERIOD
Days of limitation period

REPORT TYPE
dox42 reports cleanup
 Yes
dox42 data entities cleanup
 Yes

Records to include (dox42 reports cleanup)

DOX42 REPORTS
Cleanup

Records to include (dox42 data entities cleanup)

DOX42 DATA ENTITIES
Cleanup

Run in the background
[Recurrence](#) [Alerts](#)

Batch processing
 No

Task description

Batch group

Private
 No

OK Cancel

5.3 Identifying the right audit log entry

For a better understanding which entry in the dox42 audit log is the correct document in the D365 FO, a identifier setup can be done.

Finance and Operations | System administration > Periodic tasks > dox42 > dox42 Audit log

USMF

Retry request | Options

Standardsansicht

dox42 Audit log

Filter View

	Report	Design	Title	Print medium type	Data identifier	Source transaction	Server request status	Request durat
<input checked="" type="radio"/>	SalesConfirm		SalesConfirm.Report	Screen	CCF-0000350	5637195605	Okay	1.

5.3.1 Setting up the identifier

1. Mark the desired report and click on the button "Audit log"

Standard view ▾

dox42 parameters

Report setup												
+ New Delete Report setup Archive setup Server setup SharePoint mapping Attachments Audit log Document manage												
○	↺	Ena...	Company	↑	Report	Design	Operation	Maxi...	Cleanup	Show...	Metad...	Synchr...
		<input checked="" type="checkbox"/>			AgreementConfirmation		GenerateSI...	0	Periodic	<input type="checkbox"/>		
		<input checked="" type="checkbox"/>			CustBasedata		GenerateD...	0	Periodic	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
		<input type="checkbox"/>			FreeTextInvoice		GenerateD...	0	Periodic	<input type="checkbox"/>		
		<input checked="" type="checkbox"/>			ProdPicklist		GenerateD...	0	Periodic	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
		<input checked="" type="checkbox"/>			PurchPackingSlip		GenerateD...	0	Periodic	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
		<input type="checkbox"/>			RetailLabel		GenerateD...	0	Periodic	<input checked="" type="checkbox"/>		
		<input checked="" type="checkbox"/>			RetailLabel	A4Land...	GenerateD...	0	Periodic	<input type="checkbox"/>		
<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>	▾		SalesConfirm	▾	Genera... ▾	0	Periodic ▾	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
		<input checked="" type="checkbox"/>			SalesPackingSlip		GenerateD...	0	Periodic	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
		<input checked="" type="checkbox"/>			VendAgingReport		GenerateD...	0	Periodic	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
		<input type="checkbox"/>	GLMF		PurchPurchaseOrder		GenerateD...	0	Periodic	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

2. Create a new record.

Finance and Operations | System administration > Setup > dox42 > dox42 parameters

Save + New Delete Related data Options

Filter

Sales Confirm
Yes

Audit log | Standardansicht ▾ | SALESCONFIRM

Setup

Enable Yes Audit log Sales Confirm Name Sales Confirm Test

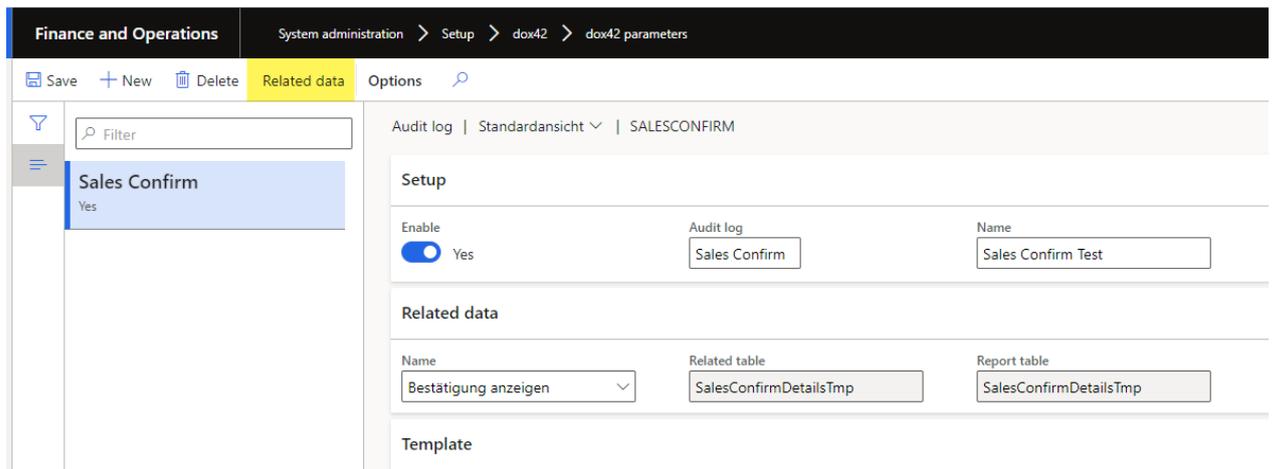
Related data

Name Bestätigung anzeigen ▾ Related table SalesConfirmDetailsTmp Report table SalesConfirmDetailsTmp

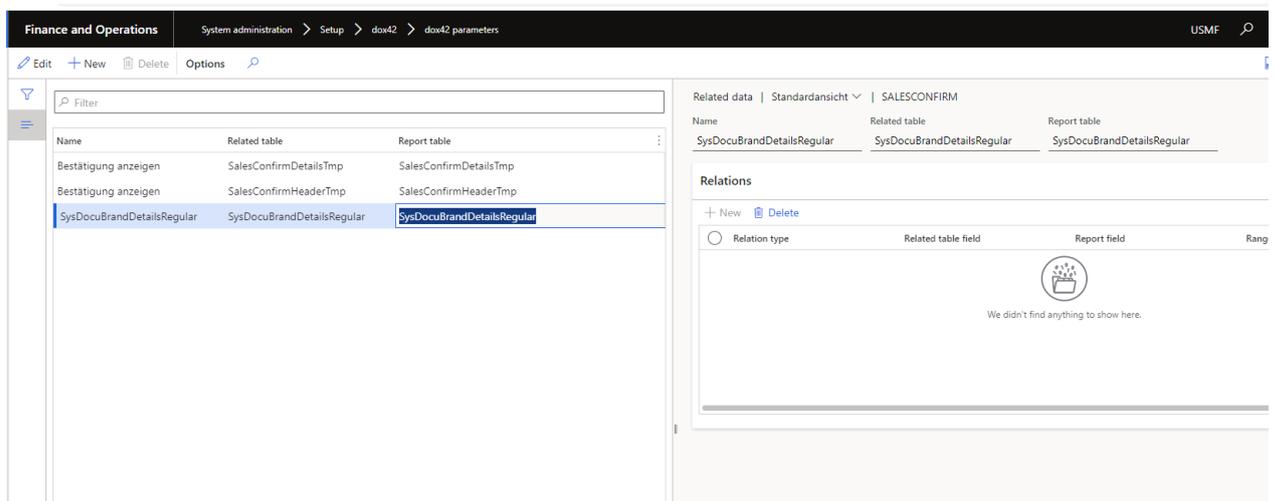
Template

Template

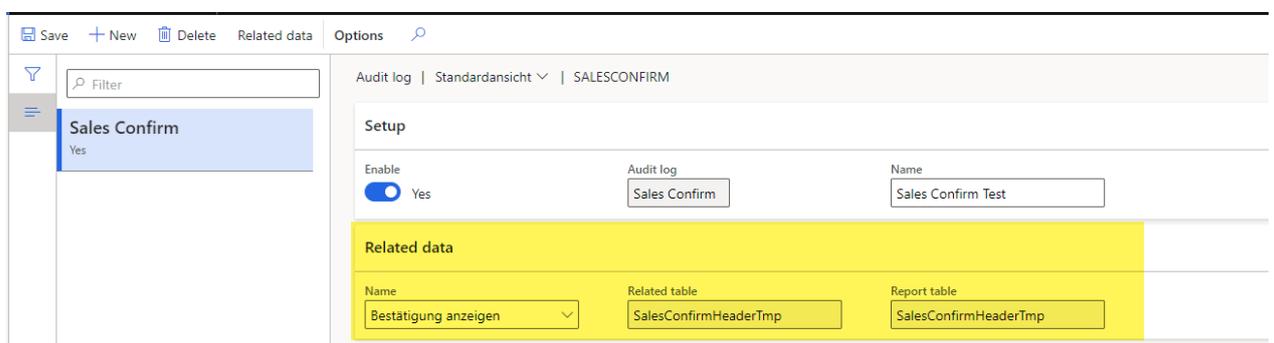
3. Next step is to click on the "related data" button and



The related data are displaying the relationships between the tables and the reports tables. It is also possible to create a new relationship, if needed (if there are no records by default, see [FAQ](#))



4. The desired relationship should be selected in the setup form



The data identifier is set up in the area "Template" and contains of the following components: `<% related table.Desired field %>`

Save + New Delete Related data Options

Audit log | Standardansicht | SALESCONFIRM

Setup

Enable Yes Audit log: Sales Confirm Name: Sales Confirm Test

Related data

Name: Bestätigung anzeigen Related table: SalesConfirmHeaderTmp Report table: SalesConfirmHeaderTmp

Template

Confirmation ID:
 <%SalesConfirmHeaderTmp.ConfirmId%>

If a document is generated the column "data identifier" in the audit log will be filled with the previously set up data.

Finance and Operations System administration > Periodic tasks > dox42 > dox42 Audit log USMF

Retry request Options

Standardansicht

dox42 Audit log

Filter View: All

Report	Design	Title	Print medium type	Data identifier	Source transaction	Server request status	Request duration
SalesConfirm		SalesConfirm.Report	Screen	CCF-00000350	5637195605	Okay	1

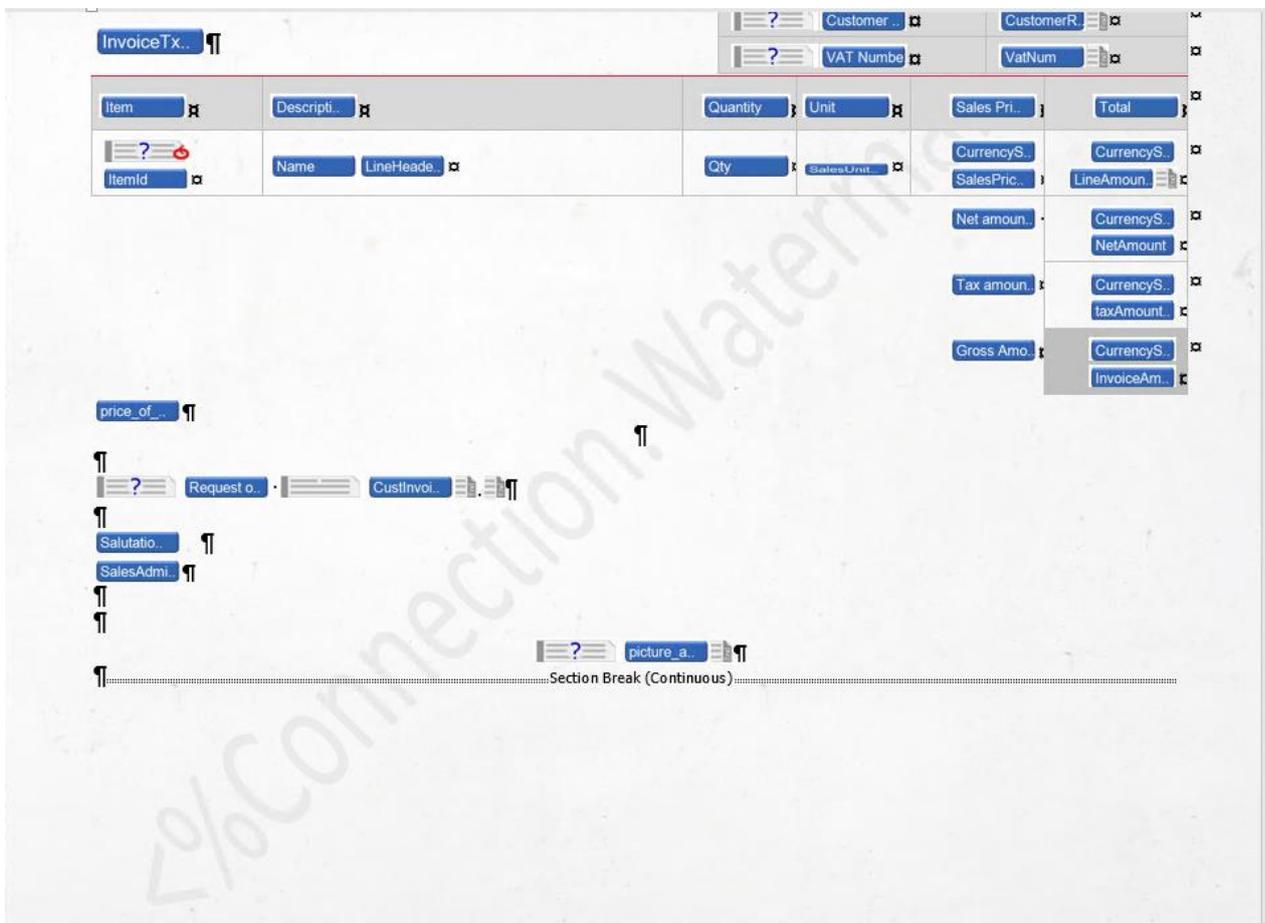
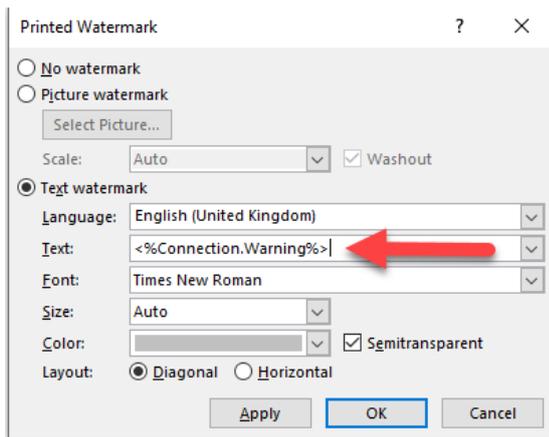
6 Tipps & Tricks

6.1 Creating the warning text as a watermark

Create a normal Word “Custom_Watermark”.

Insert into the text field the following: “<%Connection.Warning%>” and click “ok”.

“Connection” stands for the name of the connection Excel file and “Warning” for the column.



6.2 Use Labels from an Excel document

Normally the headlines of the placeholders are written hard-coded into the report. This has the big advantage of the template being easy-to-read. However, if you need to support multiple language that has the disadvantage of needing a separate report for each language. The solution is to use labels instead of hard-coded text.

1. Create an Excel file with the required languages like in the picture below. Make sure the Excel file has a column "Language" with the abbreviation.

Language	Item	Description	Quantity	Unit	Sales Price	Total	Tax	InvoiceID	Invoice Date	Sales Order	Invoice Account	VAT Number	Customer Referenz
us-en	Item	Description	Quantity	Unit	Sales Price	Total	Tax	InvoiceID	Invoice Date	Sales Order	Invoice Account	VAT Number	Customer Referenz
de-at	Artikel	Beschreibung	Menge	Einheit	Preis	Gesamt	Steuer	Rechnungs	Rechnungsdatum	Verkaufsauftrag	Rechnungskonto	UID Nummer	Kundennummer

2. The Excel language file is integrated to the Data Map the same way as the connection file

- a. Click on the button "Excel Data Source"
- b. Name the file and use the DocPath
- c. Mark the checkbox "First Row of selected Range contains Column Names"
- d. Click on the button with the three dots and select the data like in the picture below.

The dialog shows the following configuration:

- File: %DocPath%\Labels_SalesInvoice.xlsx
- DocPath: [empty]
- Load Excel file from data field:
- Initialize Excel Data: [empty]
- Data Source Output: [empty]
- Data Range: sheet1!a1:v3
- First Row of selected Range contains Column Names:
- Use the initialized Excel as output file (dox42 for spreadsheets only):
- Data Field Name list: Language (selected), Item, Description, Quantity, Unit, Sales Price

- e. Filter the Excel language file like in the picture below.

Data Field	Type	Sort	Filter	Filter Value	Filter Field
Language	Text		=		ReportParameter AX_RenderingCulture
*					

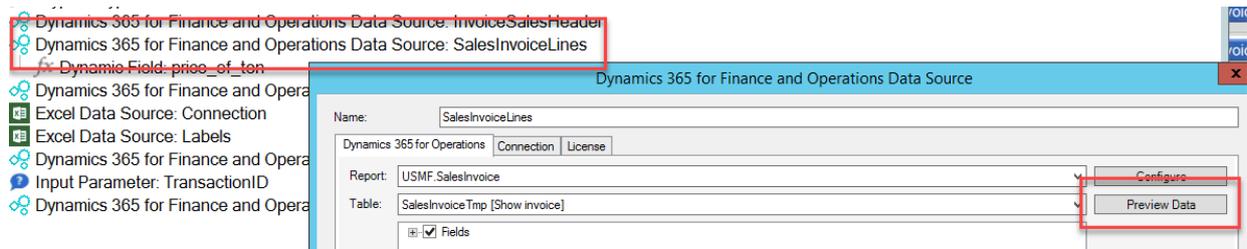
- f. Change the hard-coded text label in the report with the label placeholder.

The report shows placeholders for 'NetAmount' and 'TaxAmount'. The legend indicates that 'NetAmount' is linked to the 'Net amount' data field.

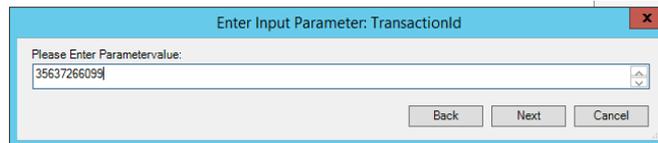
6.3 Display the tax groups in a sales invoice

This chapter will describe how to display the tax groups on the sales invoice. Therefore, its needed to look at the data which are sent by D365 FO to dox42. This is possible with the button "Preview data".

1. Take a look at the data last printed
 - a. Double click on the Data Source, tab "D365 FO Report" ("Dynamics 365 for Operations" in previous versions)



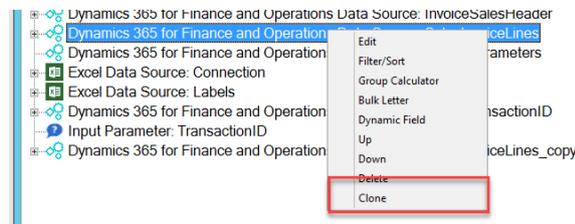
- b. Click the button "Preview Data" and then click the button "next". The data of the next report will be shown.



- c. Look for the field which contains the tax group

2. Clone the Data Source

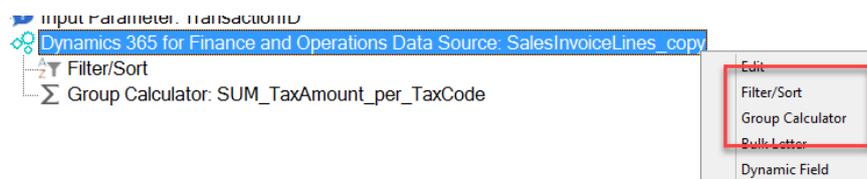
- a. Right click on the Data Source



The reason why the Data Source have to be cloned is, that a special filter is needed which will then only displays the tax groups.

3. Filtering the Data Source

- a. Right click on the Data Source, select the "Filter/Sort" button

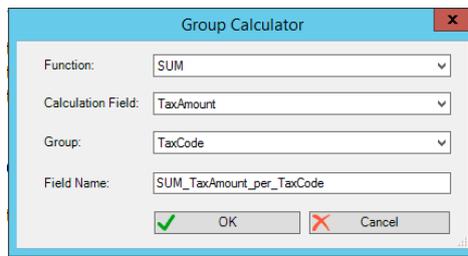


- b. Insert the values which are shown on the picture below. The "<>" stands for the filter value of "not empty".



PICTURE 1: SETUP THE FILTER OF THE DATA SOURCE

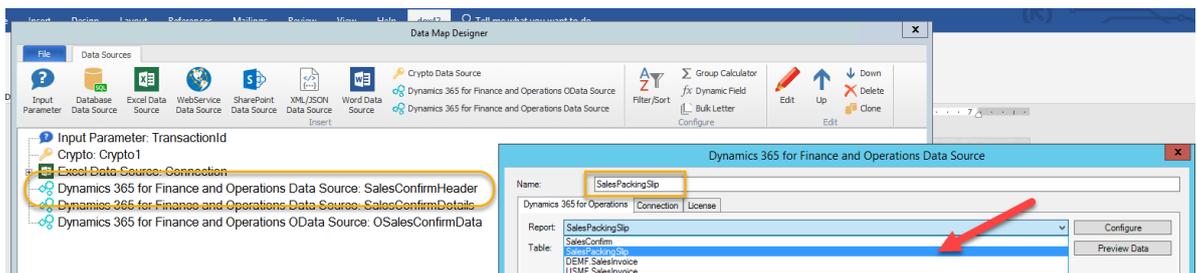
4. Create a group calculator to sum up the amount of every tax group
 - a. Right click on the Data Source
 - b. Select the group calculator
 - c. Insert the values like in the picture below



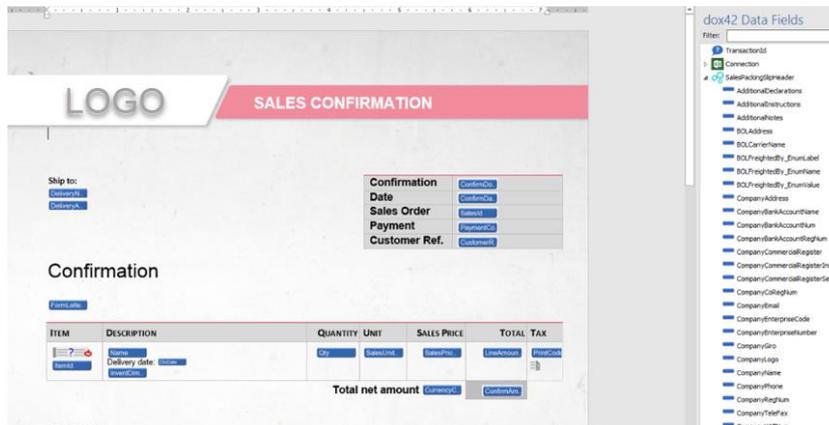
6.4 Reuse a layout for a different report

This chapter is an illustration on how easy it is to adapt a e.g. sales confirmation to a packing slip.

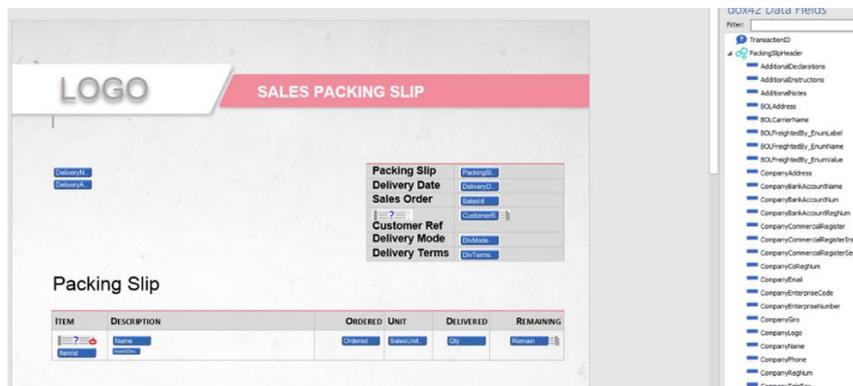
1. Copy the template and the Data Map
2. Change the Data Sources of the template



3. Replace the components from the sales confirm with the components of the sales packing slip components



4. Redefine the layout of the template



6.5 Additional table to existing form letter reports

Typically, form letter reports are using the Preprocessing logic in their data providers, extending the SrsReportDataProviderPreProcess class. Example – SalesPackingSlip:

```

/// <summary>
/// The <c>SalesPackingSlipDP</c> class is the report Data Provider class
/// <c>SalesPackingSlip</c>Microsoft SQL Server Reporting Services report.
/// </summary>
[SRSReportParameterAttribute(classStr(SalesPackingSlipContract))]
public class SalesPackingSlipDP extends SrsReportDataProviderPreProcess
{

```

As one result of this, all changes in temporary data source tables in the data provider class should be carried out with a separate database connection – just as in standard code.

This separate database connection object is defined in the preprocessing base class and is used by the standard code for each report table. Example – SalesPackingSlip:

```
SalesPackingSlipDP
874     /// </param>
875     /// <returns>
876     /// The initialized <c>SalesPackingSlipDetailsTmp</c> sales packing slip line record.
877     /// </returns>
878     protected SalesPackingSlipDetailsTmp initializeSalesPackingSlipLine(
879         SalesPackingSlipHeaderTmp _salesPackingSlipHeaderTmp,
880         SalesPackingSlipDPPackingSlipLineQuerySelection _packingSlipLineSelection)
881     {
882         const RefTableId CustPackingSlipTransTable = 1;
883
884         SalesPackingSlipDetailsTmp salesPackingSlipTmp;
885
886         this.setTransactionConnection(salesPackingSlipTmp);
887
888         salesPackingSlipTmp.clear();
889     }
```

If this concept is not used for extensions to the data providers, several issues (especially around locking) can arise.

7 Advanced dox42 features

7.1 Generate report on a specific dox42 server

Report-specific dox42 server

It is possible to assign the dox42 server on the report level. To override the default setup and define the dox42 server where the report should be generated, click the button “Server setup” for the report needed:

Standard view ▼
dox42 parameters

General
Servers
Users
Reports
Data entities
Printers

Report setup

+ New Delete Report setup Archive setup **Server setup** SharePoint mapping Attachments Audit log Document management Synchronize

	Ena...	Company	Report	Design	Operation	Maxi...	Cleanup	Show...	Metad...	Synchr...	Sender type	Email sende
	<input checked="" type="checkbox"/>		AgreementConfirmation		GenerateSL...	0	Periodic	<input type="checkbox"/>				
	<input checked="" type="checkbox"/>		CustBasedata		GenerateD...	0	Periodic	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>		
<input checked="" type="checkbox"/>	<input type="checkbox"/>	▼	FreeTextInvoice	▼	Genera...	0	Periodic	<input type="checkbox"/>			▼	
	<input checked="" type="checkbox"/>		ProdPicklist		GenerateD...	0	Periodic	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>		
	<input checked="" type="checkbox"/>		PurchPackingSlip		GenerateD...	0	Periodic	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>		
	<input type="checkbox"/>		RetailLabel		GenerateD...	0	Periodic	<input checked="" type="checkbox"/>				

Assign the dox42 server which should be used to generate the report:

Finance and Operations | System administration > Setup > dox42 > dox42 parameters

Save + New Delete Options

Server setup | FREETEXTINVOICE : REPORT

Standard view ▼

Filter

	Company	Language	Design	Title	dox42 server
<input checked="" type="checkbox"/>	▼	▼			Default

User-specific dox42 server

It is possible to assign the dox42 server to a specific user. If this assignment is done, then the system will ignore the default dox42 server assignment and the dox42 server assignment on the report level. The user-specific assignment has the highest priority to find the dox42 server to generate the report (it is valid for reports as well as for data entities).

Finance and Operations | System administration > Setup > dox42 > dox42 parameters

Save Options

Standard view ▼
dox42 parameters

General
Users
Reports
Data entities
Printers
Emails

User options

+ New Delete

	User ID	Show report n...	Show data entity name in infolog	dox42 server
	Admin	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	
<input checked="" type="checkbox"/>		<input type="checkbox"/>	<input type="checkbox"/>	Test
		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	
		<input type="checkbox"/>	<input type="checkbox"/>	

7.2 Archiving of documents

D365 FO provides the feature to archive a dox42 report, in folders or on SharePoint.

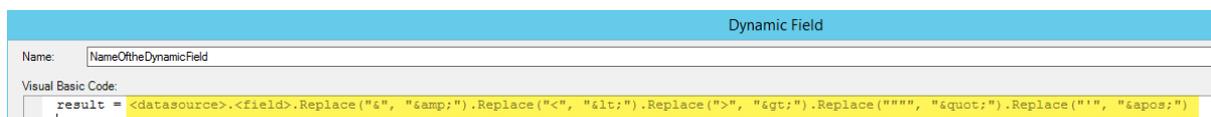
Archiving means to save a report to an additional destination to have the original printout available in the future. E.g. if a document is usually not required on paper, it can be printed to the screen and additionally archived as a file.

There are two ways to archive a dox42 report, both are described below.

Note: If an XML file with special character is archived, these special characters must be replaced. A dynamic field provides the functionality to replace these special characters. Insert the following in the dynamic field:

```
"<datasource>.<field>.Replace("&", "&amp;").Replace("<", "&lt;").Replace(">", "&gt;").Replace(""", "&quot;").Replace("'", "&apos;")"
```

The result is illustrated in the picture below:



How to create a dynamic field is described in the chapter "Advanced dox42 features".

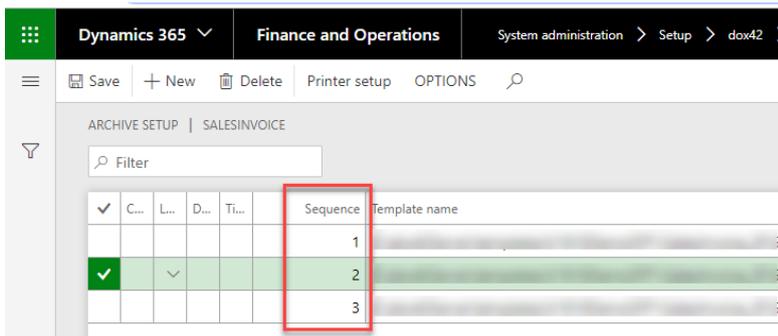
7.2.1 Folder (File Server)

This part describes how to archive reports in the background in different formats in a folder while posting a e.g. a sales invoice. Switch to the dox42 parameters and mark the report which should be archived. Click on the button "Archive setup".

	Ena...	Company	Report	Design	Operation	Maxi...	Cleanup	Show...	Metad...	Sy
	<input checked="" type="checkbox"/>	USMF	CustCollectionJour		GenerateD...	0	Periodic	<input type="checkbox"/>	<input checked="" type="checkbox"/>	✓
	<input checked="" type="checkbox"/>	USMF	FreeTextInvoice		GenerateD...	0	Periodic	<input type="checkbox"/>	<input checked="" type="checkbox"/>	✓
	<input checked="" type="checkbox"/>	USMF	PSAQuotations	Report	GenerateD...	0	Periodic	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	✓
	<input checked="" type="checkbox"/>	USMF	PurchPurchaseOrder		GenerateD...	0	Periodic	<input type="checkbox"/>	<input checked="" type="checkbox"/>	✓
	<input checked="" type="checkbox"/>	USMF	SalesConfirm		GenerateD...	0	Periodic	<input type="checkbox"/>	<input checked="" type="checkbox"/>	✓
	<input checked="" type="checkbox"/>	USMF	SalesInvoice		Genera... ✓	0	Periodic	<input type="checkbox"/>	<input checked="" type="checkbox"/>	✓
	<input checked="" type="checkbox"/>	USMF	SalesPackingSlip		GenerateD...	0	Periodic	<input type="checkbox"/>	<input checked="" type="checkbox"/>	✓
	<input checked="" type="checkbox"/>	USMF	SalesQuotation		GenerateD...	0	Periodic	<input type="checkbox"/>	<input checked="" type="checkbox"/>	✓

Create a new line in the "Archive setup" by clicking on the button "new".

The field "Sequence" determines which archiving setup will be executed first.

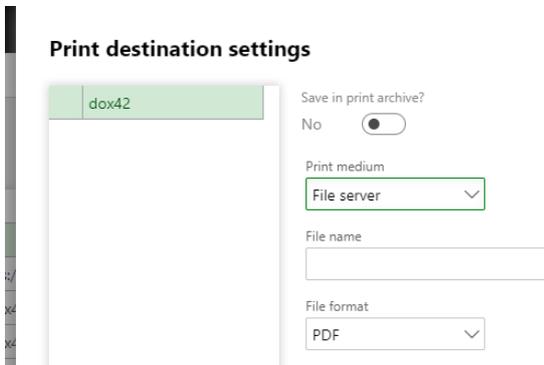


Note: It is always an advantage to have the XML-file also, it is created the same way., but make sure the ranking of the lines is right. The ranking is determined with the sequence number in the picture. The PDF-file should always be the first row.

Insert the path of the template.



Click on the button "Printer setup" and select from the drop-down menu "Print medium" the "File server".



Insert the path of the storage folder and add at the end of the path, how the file should be named, e.g.:

C:\dox42Server\templates\TEST\SalesInvoice\Storage\Invoice <%SalesInvoiceLines.InvoiceID%>

The field "File format" defines in which format the file will be saved. Click on the button "ok".

Scroll to the right and set up the fields "Archiving enabled" and "Archiving field name" as followed:

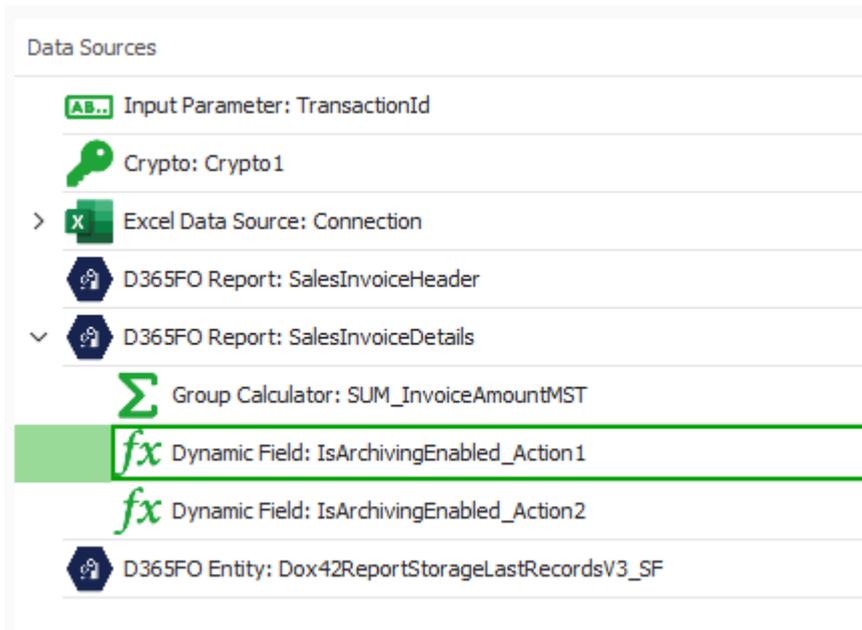
- If "Archiving enabled" is set to "No", then the archiving action is inactive, skipped and not used.
- If "Archiving enabled" is set to "Yes", then the report will be unconditionally archived.
- If "Archiving enabled" is set to "Depending on the field value (metadata)" then D365 FO will check the report data source field value specified in the field "Archiving field

name”. For example, when only posted sales invoices should be archived (when the invoice number is not empty), the setup may look like this:

Archiving enabled	Archiving field name
Depending on the field value (metadata) ▾	SalesInvoiceTmp.InvoiceId

There is no “<% %>” required because the value is processed via D365 FO according to the report metadata structure and not via dox42. Strictly only one report data source field can be specified as the parameter, any other conditions or expressions are not allowed in the setup. The archiving action is only then executed when the specified data source field has a value, and it is skipped when the data source field value is empty (null value based on the field type).

- If “Archiving enabled” is set to “Depending on the field value (template)” then D365 FO will check the dox42 template field value specified in the field “Archiving field name”. Any dox42 template field from the report template can be used to set up an archiving condition. For example, when only invoices with the invoice amount greater than 100 in the company currency should be archived, the setup may look like this:



Data Sources

- AB Input Parameter: TransactionId
- 🔑 Crypto: Crypto1
- > X Excel Data Source: Connection
- 🔗 D365FO Report: SalesInvoiceHeader
- ▾ 🔗 D365FO Report: SalesInvoiceDetails
- Σ Group Calculator: SUM_InvoiceAmountMST
- fx** Dynamic Field: IsArchivingEnabled_Action1
- fx Dynamic Field: IsArchivingEnabled_Action2
- 🔗 D365FO Entity: Dox42ReportStorageLastRecordsV3_SF

Dynamic Field

Name:

Visual Basic Code:

```

if SalesInvoiceDetails.SUM_InvoiceAmountMST > 100 then
' Return any string to archive
result = "SendToArchive"
else
' Return an empty string to avoid archiving
result = ""
end if

```

Archiving enabled	Archiving field name
Depending on the field value (template) ▾	<%SalesInvoiceDetails.IsArchivingEnabled_Action1%>

There is "<% %>" required because the field placeholder is processed via dox42. Strictly only one template field can be specified as the parameter, any other conditions or expressions are not allowed in the setup. The archiving action is only then executed when the specified template field has a value, and it is skipped when the field value is empty. **It is important that all template fields are considered as text fields in this mode, so only an empty string is treated as an empty template field value.**

Set the checkbox "Asynchronous archiving" to "Yes" if you like this archiving setup to be executed asynchronously. This feature can speed up processing for the user in some scenarios (e.g., printing on screen). Otherwise, the archive action is processed sequentially, and the report generation process is waiting for the archiving action to be executed.

Note: Asynchronous archiving is only applied when it is activated in the global parameters:

Standard view ▾

dox42 parameters

General

Servers

Users

Reports

Data entities

Printers

Global parameters

TEMPLATES

Operation ▾

REPORT ARCHIVE

Enable asynchronous archiving Yes

DATA ENTITIES

Multiselection type ▾

DOCUMENT ROUTING

Document routing mode ▾

7.2.2 SharePoint

There is also the possibility to archive Server reports on the SharePoint, the required setup is described in the SharePoint setup section.

7.3 Signing pdf documents

There is possibility to sign dox42 pdf reports with digital signature.

The description of how you can setup the signature you can find in Adobe Acrobat documentation: <https://helpx.adobe.com/acrobat/using/certificate-based-signatures.html>

In dox42 parameters you need to activate checkbox "sign pdf" for your report or Entity data source.

Report:

dox42 parameters

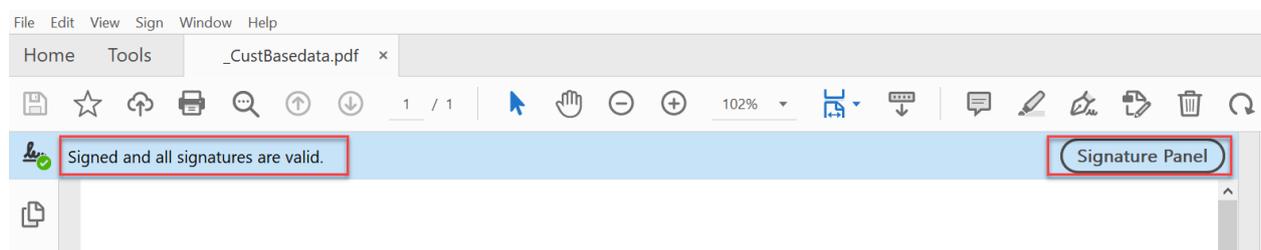
Report	Design	Maxim...	Cleanu...	Show SS...	Meta...	Synchroni...	Sender type	Ema...	Email sending mode	SharePoint...	Sha...	SharePoint f...	SharePoint map...	Serialization type	Sign PDF
Report															<input checked="" type="checkbox"/>
CustBasedata			0	Periodic	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Fixed	Eliz...	D365 Server	_test	v1...	<%CustBa...	Cust Base Dat...	Web service (compatibility...	<input checked="" type="checkbox"/>
FreeTextInvoice			0	Periodic	<input type="checkbox"/>	<input checked="" type="checkbox"/>								Web service (compatibility...	<input type="checkbox"/>
ProdPicklist			0	Periodic	<input type="checkbox"/>	<input checked="" type="checkbox"/>								Web service (compatib...	<input checked="" type="checkbox"/>
PurchPackingSlip			0	Periodic	<input type="checkbox"/>	<input checked="" type="checkbox"/>								Web service (compatibility...	<input type="checkbox"/>
RetailLabel			0	Periodic	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>								Web service (compatibility...	<input type="checkbox"/>

Entity:

dox42 parameters

Data entity	Label	Help text	Cleanu...	Apply cur...	Apply...	Sender type	Email sender	Email send...	SharePoint si...	ShareP...	SharePol...	Shar...	Multiselection...	Sign PDF	
Root data entity														<input type="checkbox"/>	
PurchPurchaseOrderHeaderV2Entity	Purchase orde...		P...	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>								Default	<input type="checkbox"/>	
ProjQuotationHeaderEntity	Project quotat...		Perio...	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>								Default	<input type="checkbox"/>	
VendVendorV2Entity	Vendor SF		Perio...	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	Fixed	berta.rater@...	D365 Server	_test				Default	<input checked="" type="checkbox"/>	
SalesOrderHeaderV2Entity	Sales order he...		Perio...	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>				SolutionsF...	Entities			Enti...	Many record...	<input type="checkbox"/>
SalesOrderHeaderV2Entity	Sales Order H...		Perio...	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>				SolutionsF...				Many record...	<input type="checkbox"/>	
EcoResProductCategoryHierarchyEntity	Product categ...		Perio...	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>								Default	<input type="checkbox"/>	
SalesQuotationHeaderV2Entity	Sales quotatio...		Perio...	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>								Default	<input type="checkbox"/>	

When opening the pdf document in Adobe Acrobat, it will be shown that this file is signed and verified, and it will be possible to see the details of whom signed this document.



The functionality is available for different print mediums: screen, file, email, file server.

7.4 Attach files to dox42 report

It is possible to attach a document or an image, for example to a sales order in D365 FO. This attachment can then be printed on the dox42 report or added to a generated email. To do this, the following setup is needed:

7.4.1 D365 FO Setup

1- Mark the desired dox42 report and click on the button “Attachments”.

The screenshot shows the 'dox42 parameters' page in Dynamics 365 Finance and Operations. The 'Attachments' button is highlighted with a red box. Below it is a table of report parameters.

	Ena...	Company	Report	Design	Operation	Maxi...	Cleanup	Show...	Metad...	Synchr...	Sender type	Email sende
	<input checked="" type="checkbox"/>		AgreementConfirmation		GenerateSL...	0	Periodic	<input type="checkbox"/>				
	<input checked="" type="checkbox"/>		CustBasedata		GenerateD...	0	Periodic	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>		
	<input type="checkbox"/>		FreeTextInvoice		GenerateD...	0	Periodic	<input type="checkbox"/>				
	<input checked="" type="checkbox"/>		ProdPicklist		GenerateD...	0	Periodic	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>		
	<input checked="" type="checkbox"/>		PurchPackingSlip		GenerateD...	0	Periodic	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>		
	<input type="checkbox"/>		RetailLabel		GenerateD...	0	Periodic	<input checked="" type="checkbox"/>				
	<input checked="" type="checkbox"/>		RetailLabel	A4Land...	GenerateD...	0	Periodic	<input type="checkbox"/>				

2- Create a new attachment and fill out the following fields:

- It is possible to enable and disable an attachment type.
- The related data defines where the attachment will be attached. For example, in this case on the header (to setup the related tables, use the button “Related data”). If there are no records by default, see [FAQ](#).
- The file type defines the file type of the attachment.
- If the checkbox “Add to report data source” is set to “Yes”, the files will be available in the report data source.
- If the checkbox “Attach to email” is set to “Yes”, the files will be attached to a generated email when using the “Email” printing destination.

The screenshot shows the 'Attachments' setup page in Dynamics 365 Finance and Operations. The 'File' type is selected in the dropdown menu. The setup fields are as follows:

Setup			
Enable	Attachment	Name	Add to report data source
<input checked="" type="checkbox"/> Yes	File	File	<input checked="" type="checkbox"/> Yes
Related data			
Name	Related table	Report table	
Sales order	SALESTABLE	SALESFIRMHEADERTMP	
Reference			
Type			
File			

3- Create an attachment.

Finance and Operations | Sales and marketing > Sales orders > All sales orders | USMF

[New](#) [Delete](#) [Sales order](#) [Sell](#) [Manage](#) [Pick and pack](#) [Invoice](#) [Retail](#) [General](#) [Warehouse](#) [Transportation](#) [Credit management](#) [Options](#)

[Credit note](#) [Charges](#) [Tax](#) [Calculate](#) [Generate](#) [Process](#) [Apply](#) [Journals](#) [Prepayment](#)
[Credit note](#) [Maintain charges](#) [Sales tax](#) [Confirmed delivery dates](#) [Supplementary items](#) [Confirmation](#) [Event kanbans](#) [Service agreement](#) [Sales order confirmations](#) [Prepayment](#)
[Allocate charges](#) [Multiline discount](#) [Total discount](#) [Pro forma confirmation](#) [Quotation confirmation journal](#)

All sales orders

Standard view

Filter

Sales order	Customer account	Customer name	Order type	Invoice account	Channel	Status	Release status	Do not process	H...	Sales taker
001092	IMA1	IMaresch AG	Sales order	IMA1		Open order	Open			
001110	US-001	Contoso Retail San Diego	Sales order	US-001		Open order	Open			
001112	RSK02	RSK_Testdebitor_II	Sales order	RSK02		Canceled	Open			
001113	RSK02	RSK_Testdebitor_II	Sales order	RSK02		Open order	Open			
001135	RSK01	RSK_Testdebitor	Sales order	RSK01		Open order	Open			
001136	DE-001	Contoso Europe	Sales order	DE-001		Open order	Open			
001160	RSK02	RSK_Testdebitor_II	Sales order	RSK02		Open order	Open			
001186	Test_III	Test_III	Sales order	Test_III		Open order	Open			
001210	Cust1	CustName	Sales order	Cust1		Invoiced	Open			
001235	US-003	Forest Wholesales	Sales order	US-003		Open order	Open			
001260	US-001	Contoso Retail San Diego	Sales order	US-001		Open order	Open			
001261	US-003	Forest Wholesales	Sales order	US-003		Open order	Open			
001285	DE-001	Contoso Europe	Sales order	DE-001		Open order	Open			
001286	US-001	Contoso Retail San Diego	Sales order	US-001		Open order	Open			
001310	US-001	Contoso Retail San Diego	Sales order	US-001		Invoiced	Open			
001335	DE-001	Contoso Europe	Sales order	DE-001		Invoiced	Open			
001360	DE-001	Contoso Europe	Sales order	DE-001		Open order	Open			

Finance and Operations | Sales and marketing > Sales orders > All sales orders

[Edit](#) [New](#) [Delete](#) [Open](#) [View history](#) [Created by](#) [Settings](#) [References](#) [Options](#)

Attachments for Sales orders - Sales order: 001335, Contoso Europe | Standard view

Description	Type	Attached
dox42_Server_V35_EN	File	Yes

General

DETAILS

Notes

Created by

Created date and time

Restriction

Internal

Attachment

FILE INFORMATION	File type	FILE LOCATION
File name	pdf	File location
dox42_Server_V35_EN	Original file name	
	dox42_Server_V35_EN.pdf	

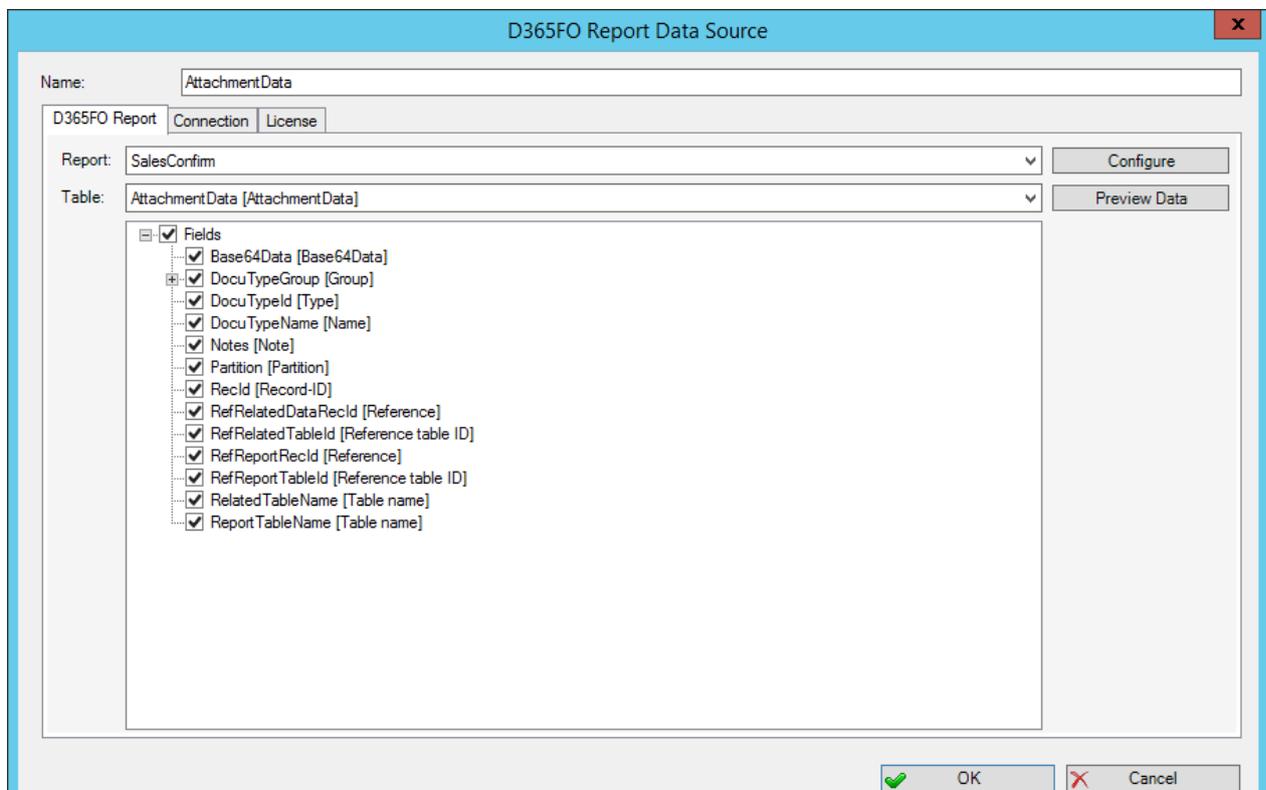
Preview

4- If the report is now printed, the attachment will be shown in the dox42 report.



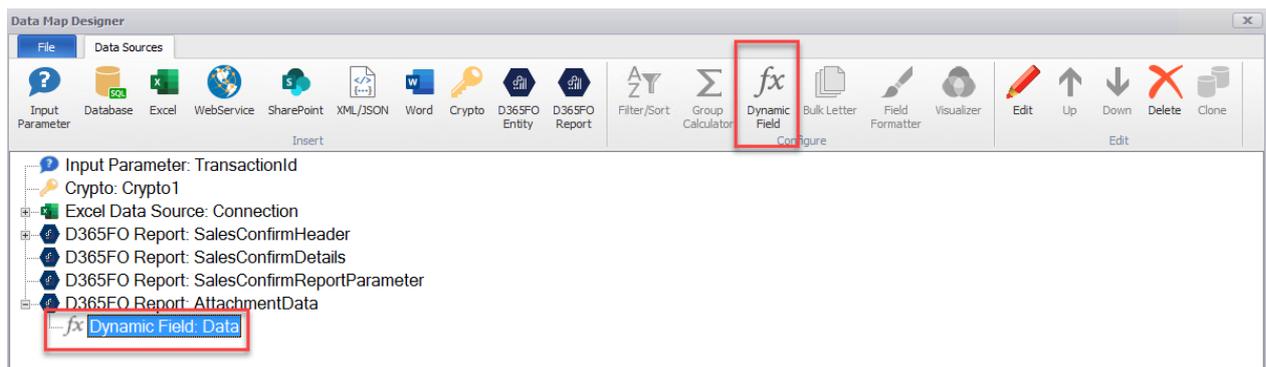
7.4.2 Dox42 setup

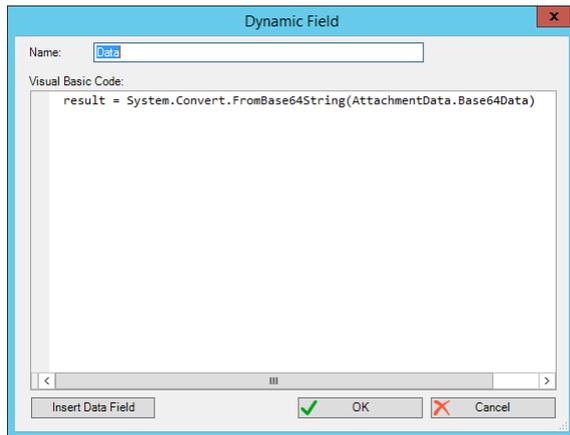
A new data source will be available for the report, named "Attachment data".



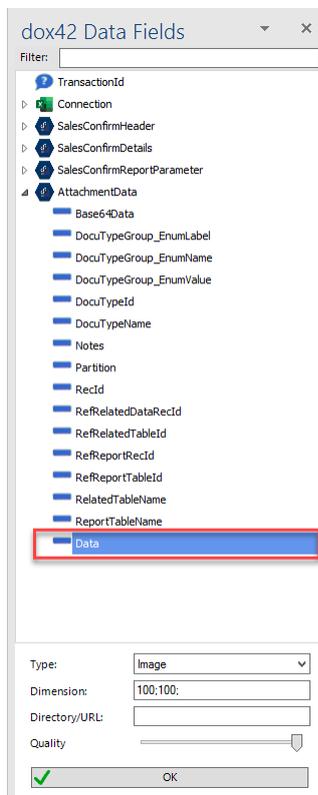
The field "Base64Data" contains the attached file for the report as a Base64 encoded string.

To show the file in the report design, the new dynamic field should be added to the data source as following:

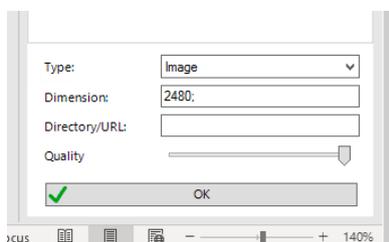




Then, the dynamic field can be handled as a “normal” dox42 field.



The format for the field should be aligned with the report design, for example:



7.5 Save printed report in Document Management

It is possible to save the printed document in D365 FO. The printed document can be attached to the record and then can be accessed in D365 FO at any time. The following setup is needed:

7.5.1 D365 FO Setup

1- Mark the desired dox42 report and click on the button “Document management”.

dox42 parameters

General

Servers

Users

Reports

Data entities

Printers

Emails

Report setup

[+ New](#) [Delete](#) [Report setup](#) [Archive setup](#) [Server setup](#) [SharePoint mapping](#) [Attachments](#) [Audit log](#) Document management [Synchronize](#)

<input type="radio"/>	<input type="checkbox"/>	Ena...	Company	Report	Design	Operation	Maxi...	Cleanup	Show...	Metad...	Synchr...	Sender type	Email sen
<input type="radio"/>	<input checked="" type="checkbox"/>			AgreementConfirmation		GenerateSl...	0	Periodic	<input type="checkbox"/>				
<input type="radio"/>	<input checked="" type="checkbox"/>			CustBasedata		GenerateD...	0	Periodic	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>		
<input type="radio"/>	<input type="checkbox"/>			FreeTextInvoice		GenerateD...	0	Periodic	<input type="checkbox"/>				
<input type="radio"/>	<input checked="" type="checkbox"/>			ProdPicklist		GenerateD...	0	Periodic	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>		
<input type="radio"/>	<input checked="" type="checkbox"/>			PurchPackingSlip		GenerateD...	0	Periodic	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>		
<input type="radio"/>	<input type="checkbox"/>			RetailLabel		GenerateD...	0	Periodic	<input checked="" type="checkbox"/>				
<input type="radio"/>	<input checked="" type="checkbox"/>			RetailLabel	A4Land...	GenerateD...	0	Periodic	<input type="checkbox"/>				
<input type="radio"/>	<input checked="" type="checkbox"/>			SalesConfirm		GenerateD...	0	Periodic	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>		
<input checked="" type="radio"/>	<input checked="" type="checkbox"/>			SalesPackingSlip		Genera...	0	Periodic	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>		
<input type="radio"/>	<input checked="" type="checkbox"/>			VendAgingReport		GenerateD...	0	Periodic	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>		

2- Create a new document management record and fill out the following fields:

- a. It is possible to enable and disable a document management setup record.
- b. The related data defines where the printed report will be attached. For example, in this case on the header (to setup the related tables, use the button “Related data”. If there are no records by default, see [FAQ](#)).

Finance and Operations

[Edit](#) [+ New](#) [Delete](#) [Options](#)

Filter

Name	Related table	Report table
Show sales packing slip	SalesPackingSlipDetailsTmp	SalesPackingSlipDetailsTmp
Sales Packing slip header	CustPackingSlipJour	SalesPackingSlipHeaderTmp
Show sales packing slip	SalesPackingSlipHeaderTmp	SalesPackingSlipHeaderTmp
Show sales packing slip	SalesPackingSlipPackageDetailTmp	SalesPackingSlipPackageDetailT...
SysDocuBrandDetailsRegular	SysDocuBrandDetailsRegular	SysDocuBrandDetailsRegular

SALESPACKINGSLIP | Standard view

Related data

Name	Related table	Report table
Sales Packing slip header	CustPackingSlipJour	SalesPackingSlipHeaderTmp

Relations

[+ New](#) [Delete](#)

Relation type	Related table field	Report field	Range	Field type
<input checked="" type="radio"/> Normal	Recid	JournalRecid		int64

- c. The file type defines the file type of the attachment. It is possible to define different file type for each company.

d. Attach mode defines which printed report will be attached:

- All printed reports will be attached to the record
- Only the first one printed report will be attached to the record
- Only the last one printed report will be attached to the record

3- Print the report. The generated document will be attached to the record and available in document management form.

7.6 Printing with and without a blank paper

Often there is a problem with printing on preprinted paper, for example some printing papers contain the logo and some printing papers are blank. It should be decided automatically if the e.g. the logo will be printed on the report or not. D365 FO provides the possibility to define on which paper the report should be printed, it is decided by using the parameter "PrePrintLevel_Enum".

- Blank paper has the value "0"
- Partly preprinted has the value "1"
- Preprinted has the value "2"

Printing the sales invoice on a preprinted paper

1. Click on the module "Accounts receivable" then on the submodule "Setup", in this submodule is the forms setup.

- Choose the tab “Invoice” and decide on which paper format the invoice should be printed, illustrated in the picture below.

- Switch to the template and define a condition on the element which should only be printed if the paper is partly printed or blank.

7.7 Creating a Barcode

There is also the option to display the placeholder as a barcode by simple inserting the type “BarCode” in the type-definition field. How the barcode is displayed can be determined in the fields below, an example is illustrated on the picture below.

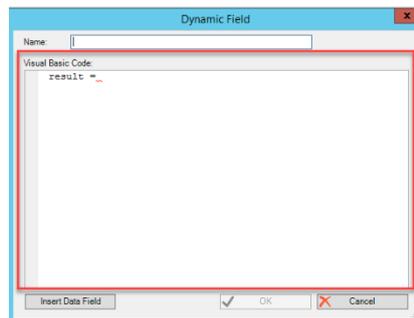
The dimension of the barcode is determined in the field “Dimension” make sure a “;” is used to separate the dimension numbers.

7.8 Dynamic field

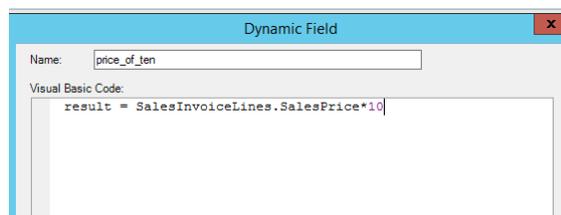
A dynamic field in which it is possible to program e.g. some conditions or add a link. The programming language used in the “Visual Basic Code” field is VB.net.

Note: D365 FO and dox42 have different rounding setups. D365 FO has the standard rounding setup, always using D365 FO for business calculations.

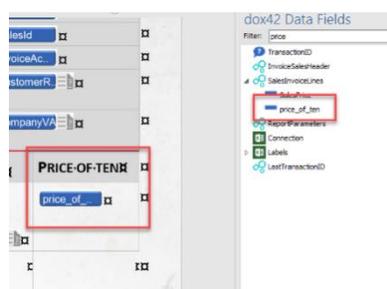
1. Creating a dynamic field
 - a. Right click on the Data Source
 - b. Selecting the field “Dynamic Field”, a window will pop up like displayed in the picture below.



- c. Insert a name. Select a data field from the Data Sources with the button “Insert Data Field” e.g. the sales price and multiple it with 10.



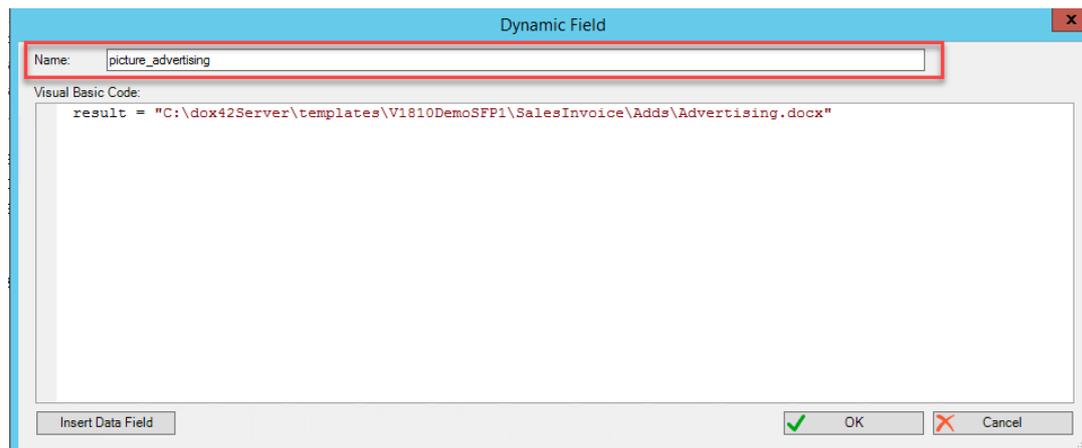
- d. Select the dynamic field from the data box and drag it in the desired place.



Adding a picture with a dynamic field

1. Create a Word document and add a picture, which should be shown later in the report
2. Copy the link of the path

3. Create a dynamic field. Name it and insert the link of the field



4. Select the dynamic field from the data box and define the type "WordDoc".



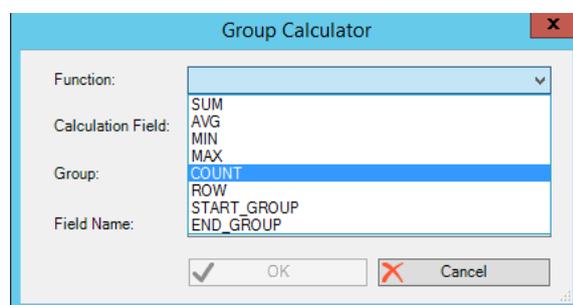
A dynamic field is like a normal placeholder, there is for example also the possibility to set conditions.

7.9 Group calculator

It is a feature with provides different kinds of calculations tools.

1. Creating a Group Calculator field

- a. Right click on a Data Source.
- b. Selecting the desired function for example "COUNT" for counting



- c. Decide which field should be counted.

The screenshot shows the 'Group Calculator' dialog box. The 'Function' dropdown is set to 'COUNT'. The 'Calculation Field' dropdown is empty. The 'Group' dropdown is set to 'ItemId'. The 'Field Name' list is expanded, showing a scrollable list of fields including 'BackOrderConfirmedDiv', 'BackOrderItemId', 'BackOrderName', 'BackOrderQtyBackOrderSales', 'CartonsQty', 'CustPackingSlipTrans', 'dataAreaId', 'ExternalItemId', 'GrossWeight', 'InventDimPrint', 'InventDimProduct', 'ItemId' (which is highlighted), 'JournalRecId', 'LineHeader', and 'MCRFModifiedLine_FnumLabel'.

- d. Insert a field name.

Count the lines of a packing slip

1. Create a group calculator which counts the ItemID
2. Create a second group calculator and insert in the field "Calculation Field" the before created group calculator field like in the picture below.

The screenshot shows the 'Group Calculator' dialog box. The 'Function' dropdown is set to 'SUM'. The 'Calculation Field' dropdown is set to 'COUNT_per_Qty'. The 'Field Name' text box contains 'SUM_COUNT_per_Qty'. The 'OK' button has a green checkmark icon, and the 'Cancel' button has a red X icon.

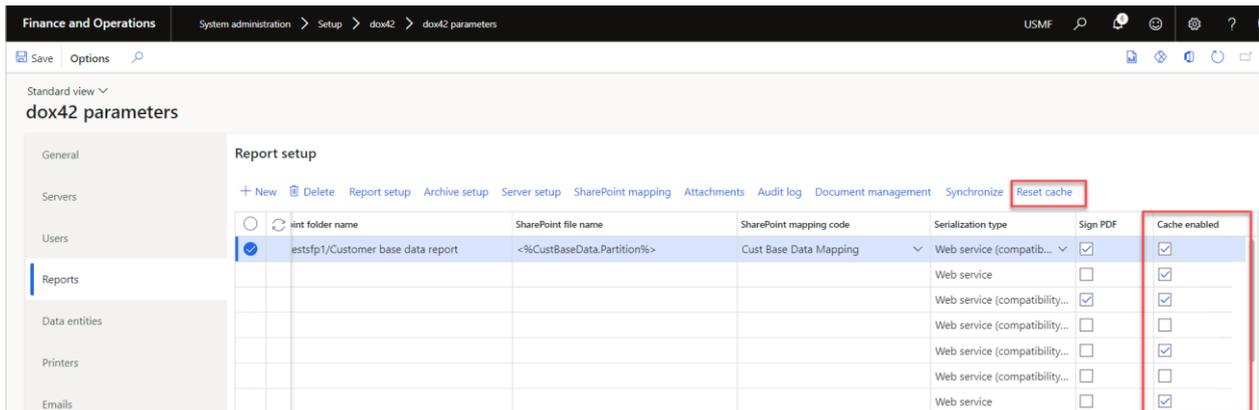
3. Insert the group calculator field in the desired place on the report.

7.10 Caching printed reports (optional) [BETA]

There is a possibility to reprint already printed documents without generating them newly on the dox42 server. It can significantly speed up the document printing process in some business-critical scenarios. If the report with the same set of the report parameters has once been printed, this report serialized data and/or generated report files can be taken from the cache when the report is printed next time.

For being able to reprint already printed documents you should open System administration > Setup > dox42 > dox42 parameters and activate the checkbox for the Report/Entity in the column **Cache enabled**.

If you click on **Reset cache** the existing cache will be cleared.



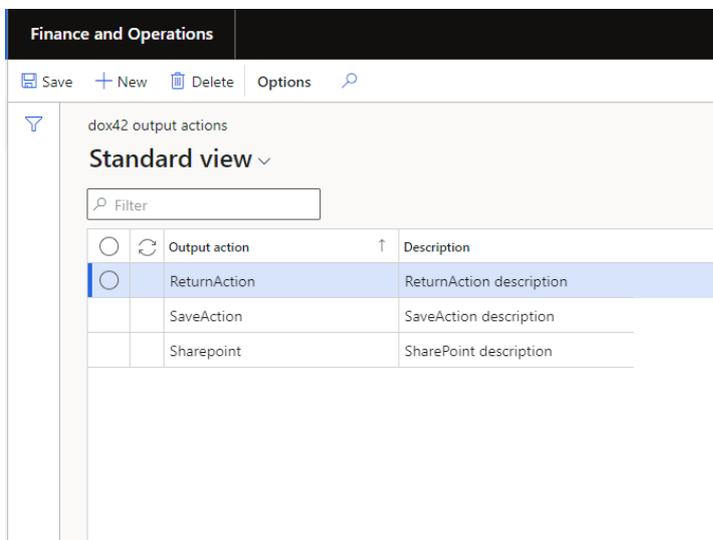
Important: This is a beta version of the caching functionality. It is not guaranteed that the caching works properly out of the box for absolutely all the reports (standard or custom). You can test and use this feature at your own risk – but at the same time, using this feature can be very powerful, you can achieve a significant performance boost in your business-critical scenarios where standard performance does not meet your requirements. Nevertheless, the use of standard performance (cache disabled) remains recommended. This feature should only be used as a last resort when all other possible optimizations have already been implemented. If you face issues with this feature getting wrong cached reports, you can check and adjust the report caching key (used to search and extract report serialized data and generated report files from the cache) subscribing to this delegate (development needed):

```

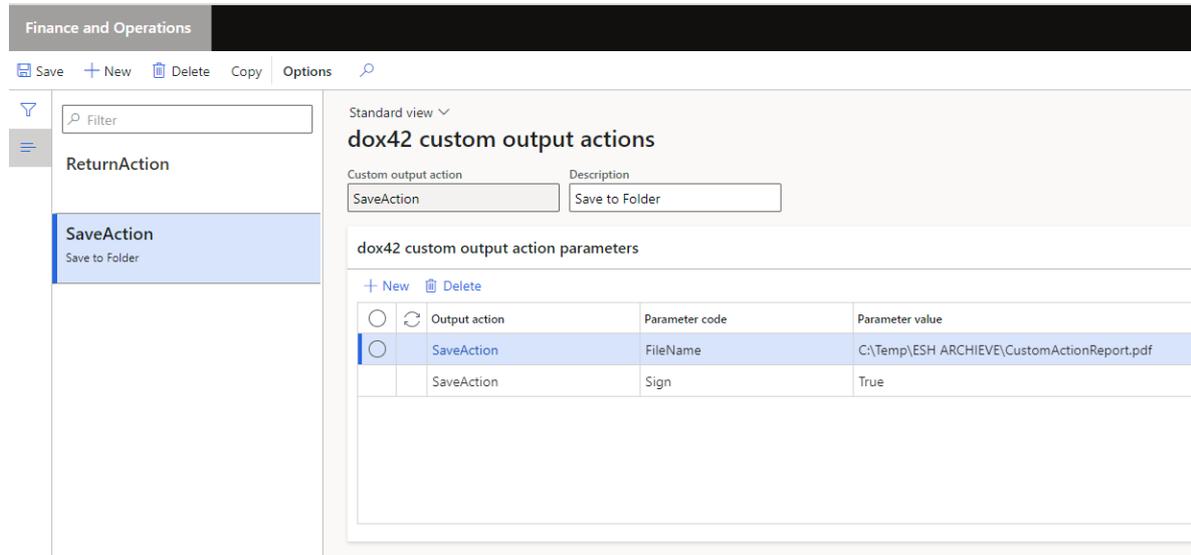
Dox42SerializationDelegates_SF
1 public final class Dox42SerializationDelegates_SF
2 {
3     /// <summary>
4     /// subscribe to this delegate to change cache key
5     /// </summary>
6     /// <param name = "_cacheKeyMap"> map containing cache key components </param>
7     /// <param name = "_reportDataContract"> report contract class </param>
8     delegate void buildReportCacheKey(Map _cacheKeyMap, Object _reportDataContract)
9     {
10    }
11 }
12
13 public void onBuildReportCacheKey(Map _cacheKeyMap, Object _reportDataContract)
14 {
15     this.buildReportCacheKey(_cacheKeyMap, _reportDataContract);
16 }
17
18 private void new()
19 {
20 }
    
```

7.11 Custom report print destinations

In the form “dox42 output actions” you can add all the output actions you need and supported by the dox42 server.

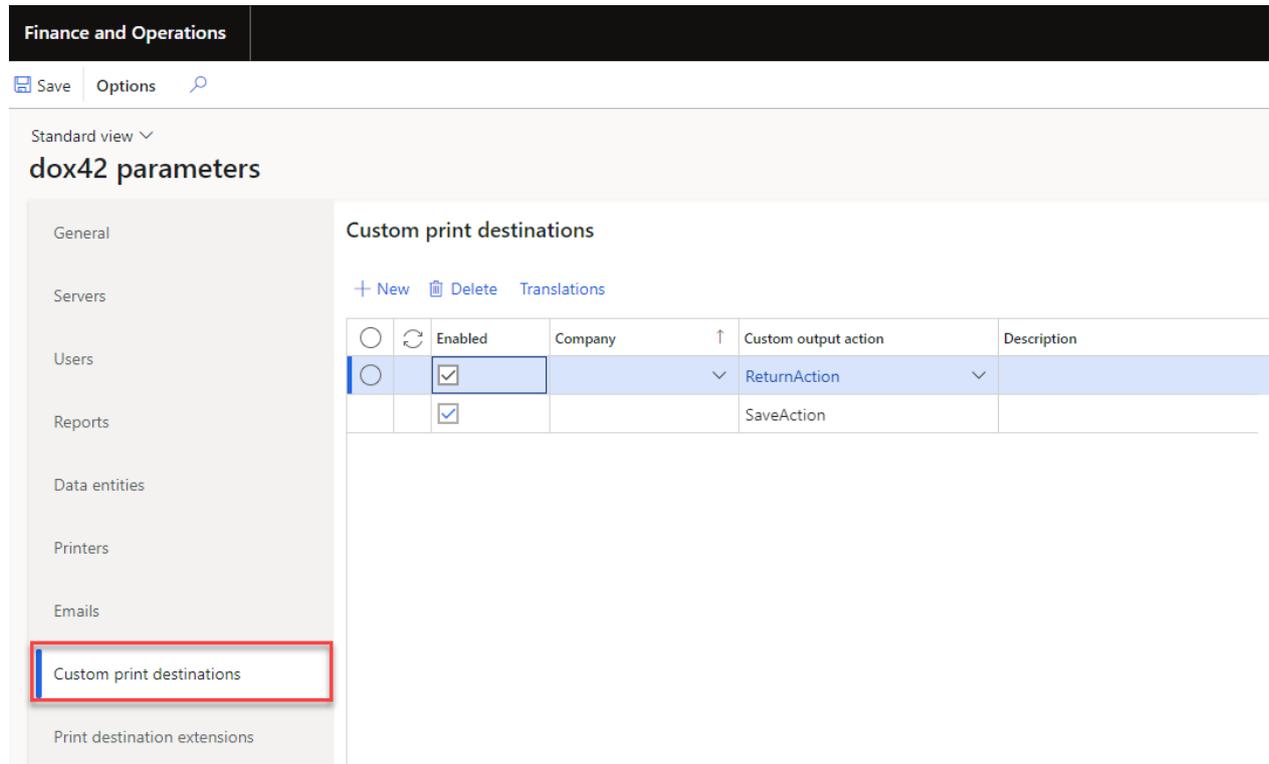


In the form “dox42 custom output actions” you can create your own custom output actions combining necessary output actions, their parameter codes and parameter values.



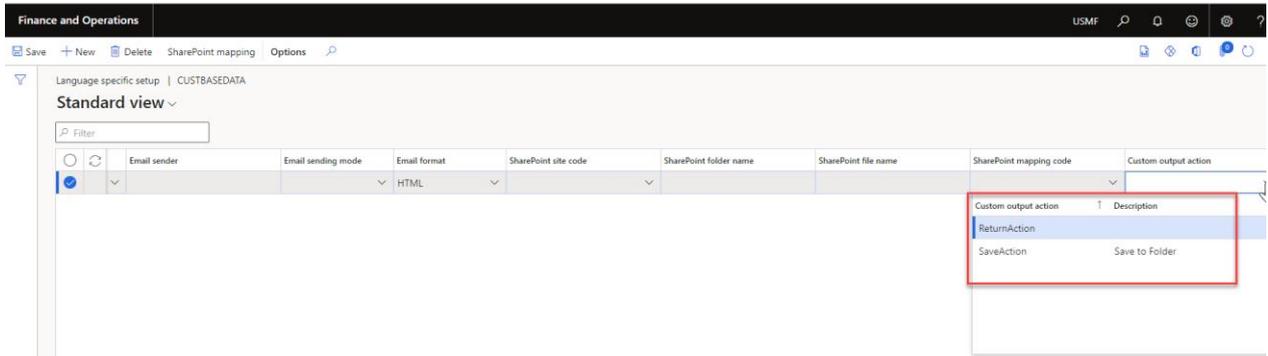
7.11.1 Custom print destinations

Afterwards, you can set up your custom print destinations globally, which will be available to be selected for all printed Reports/Entities.

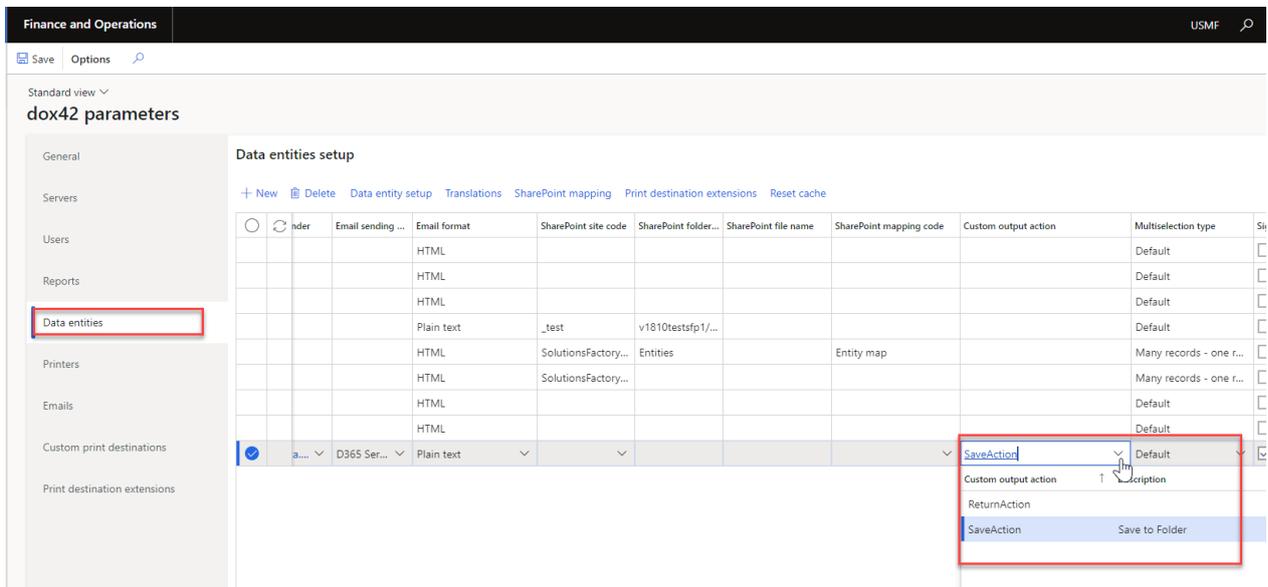
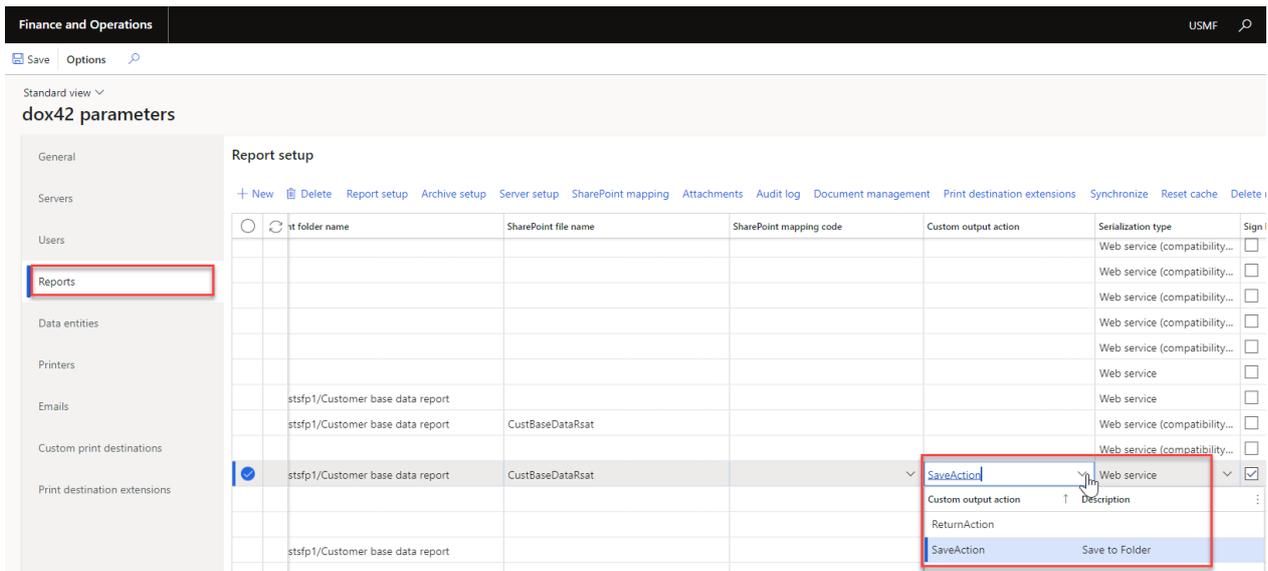


Default custom output action values can be set up on the “Report setup”/“Data entity setup” level as well as on the global Report/Entity level. It will be used when the custom output action is not specified while running reports.

“Report setup”/“Data entity setup” level:

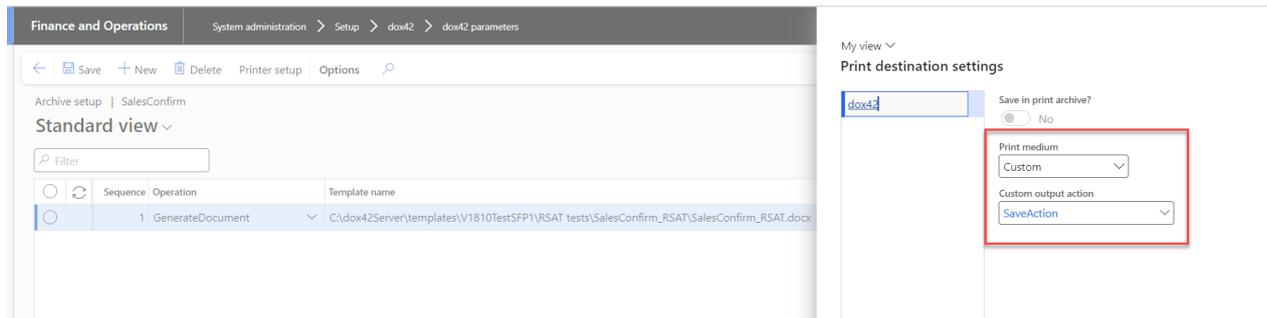


Global Report/Entity level:



For example, you setup for your report Custom output action “SaveAction” (as in screenshots above). That means that when you choose for the report print destination “Custom”, the report will be saved to the folder and signed.

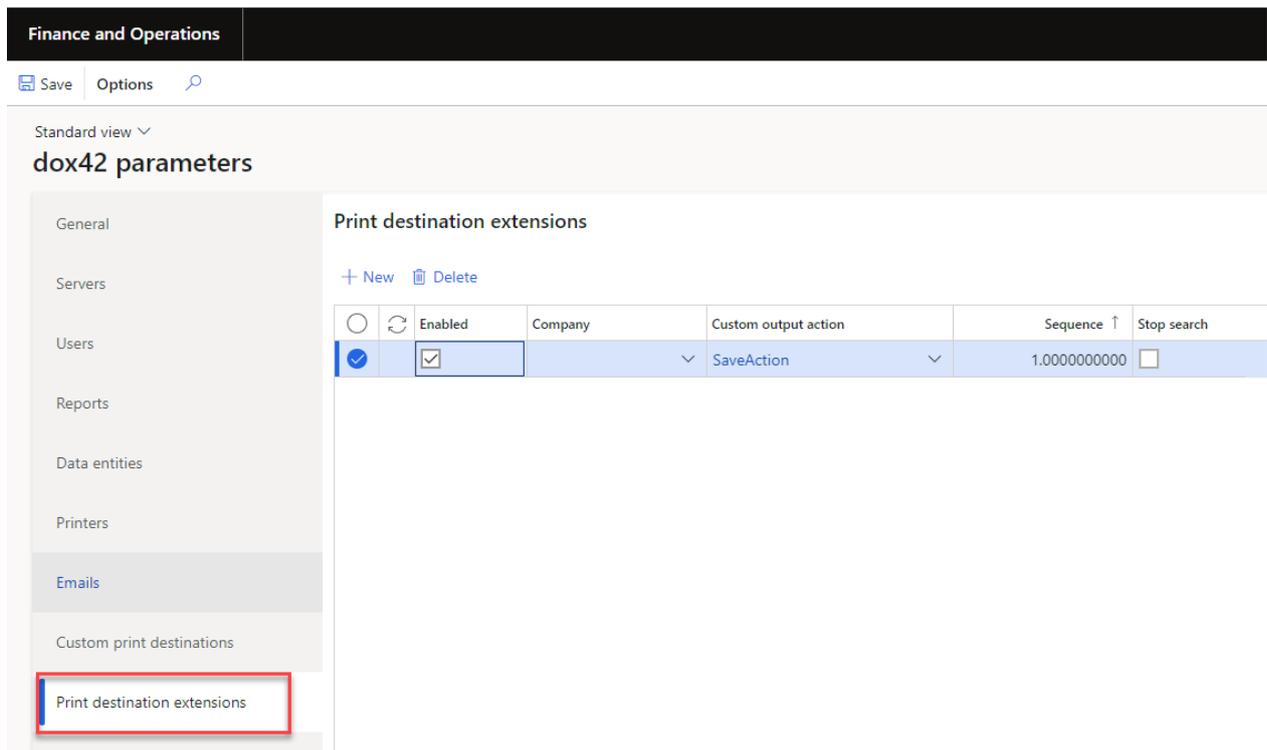
Moreover, you can use custom print destination for “Archive setup”. You will need to do a standard setup for archiving, choose “Custom” as print medium and select appropriate custom output action.



7.11.2 Print destination extensions

Print destination extensions allow you to set up custom output actions which will be applied additionally to the main print destination the report is printed to. Print destination extensions are applied in the order according to the “Sequence” field until the record with the activated checkbox “Stop search” is found. You can add your print destination extensions on a global level applying it for all printed Reports/Entities as well as you can do the setup per each Report/Entity.

Global Report/Entity level:



Setup per each Report/Entity:

Finance and Operations

Save Options

Standard view

dox42 parameters

- General
- Servers
- Users
- Reports**
- Data entities
- Printers
- Emails

Report setup

+ New Delete Report setup Archive setup Server setup SharePoint mapping Attachments Audit log Document management **Print destination extensions**

Report	Design	Operation	Maxi...	Cleanup	Show SSRS print targets	Metadata exists	Syn
<input checked="" type="checkbox"/> CustBasedata		GenerateDocument	0	Periodic	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
FreeTextInvoice		GenerateDocument	0	Periodic	<input type="checkbox"/>		
ProdPicklist		GenerateDocument	0	Periodic	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
PurchPackingSlip		GenerateDocument	0	Periodic	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
RetailLabel		GenerateDocument	0	Periodic	<input checked="" type="checkbox"/>		
RetailLabel	A4Landscape3X5_Jt...	GenerateDocument	0	Periodic	<input type="checkbox"/>		
SalesConfirm	Report	GenerateDocument	0	Periodic	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
SalesPackingSlip		GenerateDocument	0	Periodic	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

Finance and Operations

Save Options

Standard view

dox42 parameters

- General
- Servers
- Users
- Reports
- Data entities**
- Printers

Data entities setup

+ New Delete Data entity setup Translations SharePoint mapping **Print destination extensions** Reset cache

Enabled	Company	Root data entity	Label
<input checked="" type="checkbox"/>		SalesOrderHeaderV2Entity	Sales order headers V2
<input checked="" type="checkbox"/>		PurchPurchaseOrderHeaderV2Entity	Purchase order headers V2
<input checked="" type="checkbox"/>		ProjQuotationHeaderEntity	Project quotation headers
<input type="checkbox"/>	USMF	VendVendorV2Entity	Vendors V2
<input checked="" type="checkbox"/>		SalesOrderHeaderV2Entity	Sales order headers V2
<input checked="" type="checkbox"/>		SalesOrderHeaderV2Entity	Sales Order Headers v2 Test

For example, you setup for your report Print destination extension with SaveAction (as in screenshots above). That means that when you choose for the report print destination "Screen", the report will be printed on the screen and additionally saved to the folder and signed.

8 Integration with external apps

8.1 What is dox42 integration framework in D365 FO?

This integration framework is intended to make it easier for architects and developers implementing integration scenarios, namely, getting access to D365 FO reports from external systems as well as generating D365 FO reports on fly from external systems. It contains a set of options and features for implementing recommended integration patterns and scenarios allowing you to reduce implementation costs considering integration best practices.

The following table lists the integration patterns that are available.

Pattern	Description	Documentation (links)
OData	Getting access to reports via OData entity actions (for example, accessing/generating reports from Microsoft Power Automate)	Open Data Protocol (OData)
Custom service	Getting access to reports via custom service methods (any third-party app can call web-services)	Custom service development

The framework configuration process is independent on the integration pattern used. Once your framework configuration is done, you can use all integration patterns simultaneously and independently on each other or just some of them you need.

All patterns support synchronous and asynchronous integration scenarios. A synchronous pattern blocks the caller until the callee has finished running and gives a response (report). An asynchronous pattern is intended just to trigger processing (report) and resume the caller not waiting for the callee process finishing even if the API itself can be synchronous at its core.

There are also built-in request tracing and error handling capabilities in the framework. When you use a synchronous pattern, success or failure responses are returned to the caller. By using an asynchronous pattern, the caller receives an immediate response that indicates whether the process triggering call was successful (the status/result of the processing is not pushed to the caller; polling for the result of the corresponding process by the caller is also not supported – you cannot get the result in the asynchronous scenario so far in the current framework version).

8.2 Configuring dox42 integration framework settings

8.2.1 Integration profiles

An integration profile is used as an identifier of the external system where the request is sent from (System administration → Setup → dox42 integration framework → dox42 integration profiles).

Finance and Operations | System administration > Setup > dox42 integration framework > dox42 integration profiles

Save + New Delete dox42 integration audit log Options

dox42 integration profiles

Standard view

Filter

	Profile	Description	Profile group	Contract format	Integration request id	Default configuration
<input checked="" type="checkbox"/>	WH_Vienna1	Warehouse "Vienna 1"	WMS	JSON	Automatic	SalesInv
	WH_Vienna2	Warehouse "Vienna 2"	WMS	JSON	Automatic	

- "Profile" – integration profile identifier.
- "Description" – description of the integration profile.
- "Profile group" – a group of the profiles can be managed together (System administration → Setup → dox42 integration framework → dox42 integration profile)

groups). For example, different, warehouses can be combined into one profile group called “WMS”, etc.

The screenshot shows the 'dox42 integration profile groups' page in a system administration interface. The breadcrumb trail is: Finance and Operations > System administration > Setup > dox42 integration framework > dox42 integration profile groups. The page title is 'dox42 integration profile groups' and the view is 'Standard view'. There is a search filter box. A table with two columns, 'Profile gro...' and 'Description', is shown. The first row is 'WMS' with the description 'Warehouse management'.

Profile gro...	Description
WMS	Warehouse management

- Profile group – integration profile group identifier.
- Description – description of the integration profile group.
- “Contract format” – integration request/response data format (by default is “JSON”, it can be extended with custom formats).
- “Integration request id” – request identifier for tracing purposes (GUID):
 - “Manual” – meaning that the request id must be always provided in the request by external systems, otherwise the system stops processing and causes an error message.
 - “Automatic” – if the request id is not provided in the request by external systems, it is initialized with a random value and processing continues.
- “Default configuration” – default value of the configuration used when the configuration is not specified explicitly in the request. If the field is empty, then the system will stop processing and cause an error message if no configuration is specified in the request for some reason.

It is recommended to specify the integration profile in the request. But, if you do not want to send the integration profile in the request (for example, you have only one external system), then you can set a default value for the integration profile in the parameters (System administration → Setup → dox42 integration framework → dox42 integration parameters), this value will be used if no profile is

specified in the request. If no default value is specified and no profile is specified in the request, then the system will stop processing cause an error message.

The screenshot shows the 'dox42 integration parameters' configuration page in a web application. The breadcrumb navigation at the top reads: 'Finance and Operations > System administration > Setup > dox42 integration framework > dox42 integration parameters'. Below the breadcrumb, there are 'Save' and 'Options' buttons. The main heading is 'dox42 integration parameters' with a 'Standard view' dropdown. A 'General' tab is selected, and the sub-heading is 'Set up parameters for the dox42 integration'. Under the 'DEFAULTS' section, there is a 'Profile' dropdown menu with 'WH_Vienna1' selected. A red rectangular box highlights the 'Profile' dropdown menu.

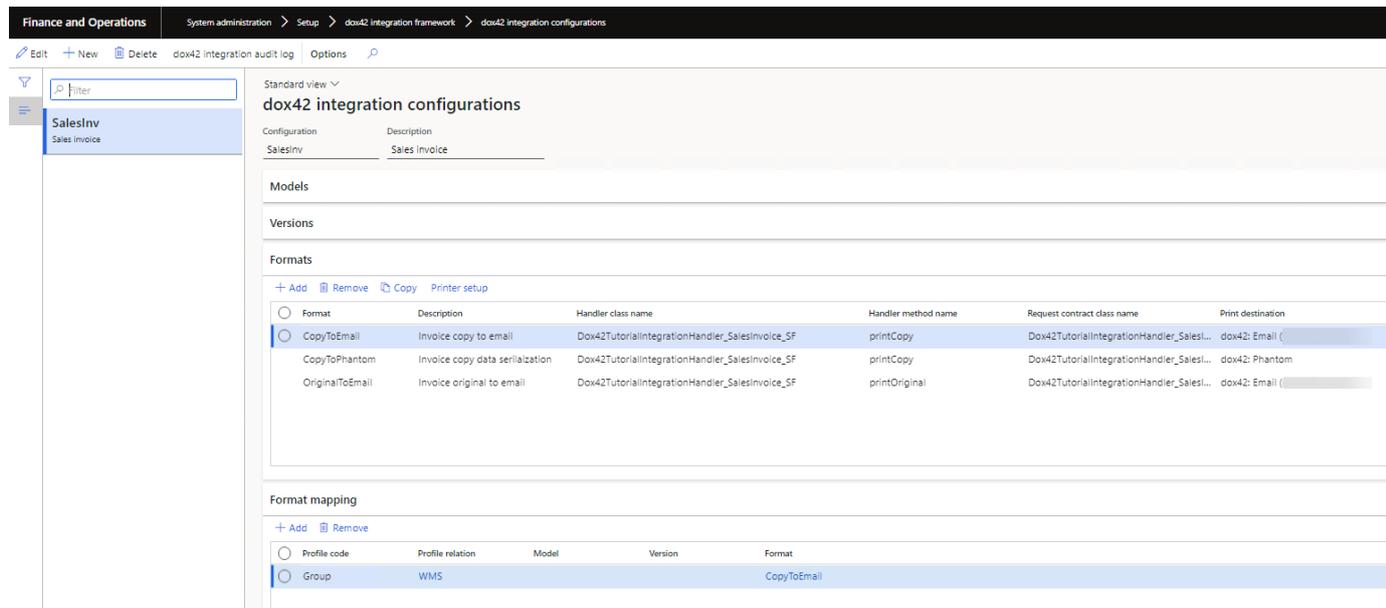
8.2.2 Integration configurations

An integration configuration is intended to be a representation of the report for the external systems (System administration → Setup → dox42 integration framework → dox42 integration configurations). The configuration contains models, versions, and formats. As well as format mapping, which determines which format will be used in each specific case (depending on the requested model and

version of the configuration). External systems do not request formats directly, they request a combination of:

- Configuration
- Model
- Version

, subsequently the appropriate format is found and called then based on the format mapping.



- “Configuration” – integration configuration identifier.
- “Description” – description of the integration configuration.
- “Models” - models (optional) can be used to differentiate the integration configuration according to a certain attribute, depending on your needs. For example, you can differentiate the integration configuration by country if the processing logic depends on it (AT, BE, DE, FR, NL, etc.). External systems will be able to request a specific configuration model in this scenario.
 - “Model” – integration configuration model identifier.
 - “Description” – description of the integration configuration model.
- “Versions” – versions (optional) can be used to register different versions of the configuration can obtain simultaneously (for example, v1.0, v1.1, v1.2, v2.0, etc.). It can be a powerful feature to synchronize configuration updates in D365 FO with the

external systems. External systems will be able to request a specific configuration version in this scenario.

- “Version” – integration configuration version identifier.
- “Description” – description of the integration configuration version.
- “Formats” – formats are used to define the processing logic of the configuration.
 - “Format” – integration configuration format identifier.
 - “Description” – description of the integration configuration format.
 - “Handler class name” – a handler class implementing the processing logic (see the “Dox42TutorialIntegrationHandler_SalesInvoice_SF” tutorial class implementing an example of the processing logic for sales invoices to understand the development concept.
 - “Handler method name” – a handler class method which will be called to process this format.
 - “Request contract class name” – a contract class defining request parameters for this format (pulled up automatically based on the handler selection).
 - Button “Copy” – allows to create a new format by copying an existing one.
 - Button “Printer setup” – allows to set up a print destination for the format where the report should be printed to. Here it is also possible to choose the “Phantom” destination meaning that the report will not be really printed and

the dox42 server will not be even requested for printing, only the data serialization for the report will be performed in this scenario.

- “Format mapping” – determines possible scenarios and formats used.
 - “Profile code”:
 - “Table” – this mapping line is valid only for the profile selected.
 - “Group” – this mapping line is valid only for the profile group selected.
 - “All” – this mapping line is valid for all profiles.
 - “Profile relation” – choose the profile or the profile group depends on the profile code selected.
 - “Model” – the configuration model this mapping line is valid for (optional).
 - “Version” – the configuration version this mapping line is valid for (optional).
 - “Format” – the format is used to process configuration.

8.2.3 Integration settings overview

An overview form is available to see all configured integration scenarios in one place (System administration → Inquiries → dox42 integration framework → dox42 integration overview).

Configuration	Profile code	Profile relation	Model	Version	Format	Handler class name	Handler method name	Request contract class name	Print destination
SalesInv	Group	WMS			CopyToEmail	Dox42TutorialIntegrationHandle...	printCopy	Dox42TutorialIntegrationHandle...	dox42: Email

8.3 Performing tests of integration

It is possible to test integration requests before a real connection with external system is established (System administration → Periodic tasks → dox42 integration framework → dox42 integration request processing). Enter requests parameters and click “OK” to process the integration request (it will be run in context of the current D365 FO company).

dox42 integration request processing

Parameters

Profile:

Configuration:

Model:

Version:

Integration request id:

Request contract format:

Request parameters (string):

```
{
  "InvoiceId": "CIV-00000741",
  "InvoiceDate": "\Date(1616976000000)/",
}
```

Run handler async: No

Run in the background

Recurrence Alerts

Batch processing: No

Task description:

Batch group:

Private: No

Critical Job: No

Monitoring category:

Start date: 1/3/2023 (10:25:41 am) (GMT) Coordinated Universal Time

- “Profile” – integration profile.
- “Configuration” – integration configuration.
- “Model” – integration configuration model.
- “Version” – integration configuration version.
- “Integration request id” – integration request identifier.
- “Request contract format” – the format used to pass request parameters.
- “Request parameters (string)” – string containing request parameters in the selected format. Set of available parameters is specified in the contract class you can see in

the field “Request contract class name” of the configuration format. For example, it can be a JSON string:

```
{
  "InvoiceId": "CIV-00000741",
  "InvoiceDate": "\/Date(1616976000000)\/",
  "InvoiceAccount": "DE-001",
}
```

- “Run handler async” – specifies whether processing should be asynchronous or synchronous.

8.4 Tracing requests and error handling

It is possible to monitor request statuses, error messages, processing duration and other request processing details in the integration audit log form per D365 FO company (System administration → Periodic tasks → dox42 integration framework → dox42 integration audit log).

Trace ID	Log type	Start date/time	End date/time	Created by	Profile	Configuration	Model	Version	Integration request Id
[A1E5EFA3-086A-4339-9859-46...	Custom service request			Admin					
[9CAB7AE2-DDF5-4DCF-8C29-8...	Execute handler			Admin	WH_Vienna1	SalesInv			[8AA1C3A2-4408-44FC-8C3C-E

- “Trace ID” – unify records belonging to one integration request.
- “Log type”:
 - “Execute handler” – handler execution log (request processing logic).
 - “Request processing” – request processing triggered.
 - “OData action request” – OData action request received.
 - “Custom service request” – custom service request received.
- Button “Retry request” – allows to rerun request processing.
- Button “dox42 audit log” – shows related entries in the dox42 audit log.

You can configure the error logging tolerance per log type and D365 FO company (System administration → Setup → dox42 → dox42 company parameters).

Finance and Operations | System administration > Setup > dox42 > dox42 company parameters

Save Options

Standard view

dox42 company parameters

General

Audit log

Integration audit log

Integration audit log setup

ODATA ACTION REQUEST	CUSTOM SERVICE REQUEST	REQUEST PROCESSING	EXECUTE HANDLER
Log level	Log level	Log level	Log level
Always	Always	Always	Always

Old log entries may be automatically cleaned up on a periodical basis (System administration → Periodic tasks → dox42 integration framework → Cleanup dox42 integration audit log). This function runs in context of the current D365 FO company.

Cleanup dox42 integration audit log

Parameters

PERIOD

Days of limitation period

7

Run in the background

Recurrence Alerts

Batch processing

No

Task description

Cleanup dox42 integration audi...

Batch group

Private

No

Critical Job

No

Monitoring category

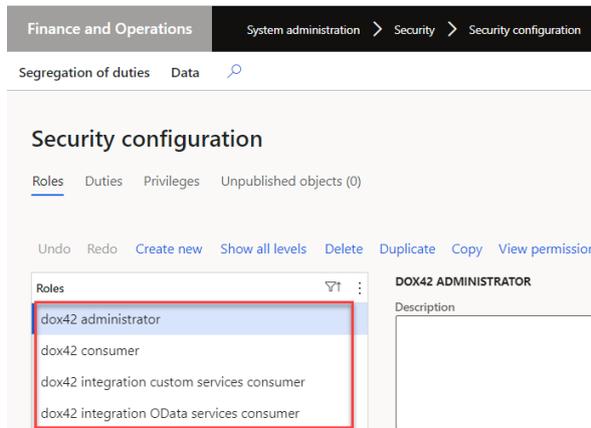
Undefined

Start date: 1/3/2023 (12:06:19 pm) (GMT) Coordinated Universal Time

- “Days of limitation period” – entries older than this number of days are removed.

8.5D365 F&O Security Configuration

There are 4 standard dox42 security roles in D365:



To be able to maintain configuration, dox42 parameters and settings, the security role “dox42 administrator” should be applied.

To be able to call Reports and Entities, the security role “dox42 administrator” should be applied.

To be able to call the entity actions, the security role “dox42 integration OData services consumer” (Dox42IntegrationODataServiceConsumer_SF) should be applied.

To be able to call the custom service methods, the security role “dox42 integration custom services consumer” (Dox42IntegrationCustomServiceConsumer_SF) should be applied.

8.6 Integration patterns

8.6.1 Integration based on OData

OData entity actions can be used to integrate with external apps. There are following OData entity actions available:

- “Dox42IntegrationProfileEntity_SF” data entity (public name Dox42IntegrationProfiles_SF):
 - “runRequest” – runs request with no result returned (allows to run request synchronously and asynchronously).
 - “runRequestAndGetReportFileUrl” – runs request synchronously and returns the report file URL.
 - “runRequestAndGetReportFileUrlList” – runs request synchronously and returns the report files as a list of URLs (allows to return more than one file if needed).
 - “runRequestAndGetReportFileBase64” – runs request synchronously and returns the report file as Base64 encoded string.
 - “runRequestAndGetReportFileBase64List” – runs request synchronously and returns the report files as a list of Base64 encoded strings (allows to return more than one file if needed).
 - “runRequestAndGetReportTransaction” – runs request synchronously and returns the report transaction id used as an input parameter in the dox42 template.
 - “runRequestAndGetReportTransactionList” – runs request synchronously and returns a list of the report transaction ids (allows to return more than one report transaction id if needed).

To be able to call the entity actions, the security role “dox42 integration OData services consumer” (Dox42IntegrationODataServiceConsumer_SF) should be applied.

For example, this approach can be used to integrate with Microsoft Power Automate:

The screenshot shows the 'Execute action' dialog box with the following fields and values:

- * Instance: cloudax.dynamics.com
- * Action: Dox42IntegrationProfiles_SF-RunRequest
- _profileId: (empty)
- _configurationId: (empty)
- _configurationModelId: (empty)
- _configurationVersionId: (empty)
- _requestId: (empty)
- _requestContractFormat: (empty)
- _requestContractString: {


```

      "InvoiceId": "CIV-00000741",
      "InvoiceDate": "\Date(1616976000000)\",
      "InvoiceAccount": "DE-001"
      }
      
```
- _runHandlerAsync: No
- _companyId: usmf

8.6.2 Integration based on custom services

Custom service methods can be used to integrate with external apps. There are following custom service methods available:

- “Dox42IntegrationServices_SF” service group, “Dox42IntegrationService_SF” service name, operations:
 - “runRequest” – runs request with no result returned (allows to run request synchronously and asynchronously).
 - “runRequestAndGetReportFileUrl” – runs request synchronously and returns the report file URL.
 - “runRequestAndGetReportFileUrlList” – runs request synchronously and returns the report files as a list of URLs (allows to return more than one file if needed).
 - “runRequestAndGetReportFileBase64” – runs request synchronously and returns the report file as Base64 encoded string.
 - “runRequestAndGetReportFileBase64List” – runs request synchronously and returns the report files as a list of Base64 encoded strings (allows to return more than one file if needed).
 - “runRequestAndGetReportTransaction” – runs request synchronously and returns the report transaction id used as an input parameter in the dox42 template.
 - “runRequestAndGetReportTransactionList” – runs request synchronously and returns a list of the report transaction ids (allows to return more than one report transaction id if needed).

To be able to call the custom service methods, the security role “dox42 integration custom services consumer” (Dox42IntegrationCustomServiceConsumer_SF) should be applied.

For example, calling JSON-based custom service:



```

POST {{resource}}/api/services/Dox42IntegrationServices_SF/Dox42IntegrationService_SF/runRequest ...

Params Authorization Headers (9) Body Pre-request Script Tests Settings
● none ● form-data ● x-www-form-urlencoded ● raw ● binary ● GraphQL JSON ▼

1  [DataContractAttribute]
2  ..... "_profileId": "",
3  ..... "_configurationId": "",
4  ..... "_configurationModelId": "",
5  ..... "_configurationVersionId": "",
6  ..... "_requestId": "",
7  ..... "_requestContractFormat": "Auto",
8  ..... "_requestContractString": "{ \"InvoiceId\": \"CIV-00000741\", \"InvoiceDate\": \"\"/Date(1616976000000)\\/\", \"InvoiceAccount\": \"DE-001\" }",
9  ..... "_runHandlerAsync": false,
10 ..... "_companyId": "usmf"
11 ]

```

8.7 Developing integration handlers

To create a new integration handler, there should be a few classes developed:

- Integration handler contract class – determines parameters, which should be passed in the integration request. It should be a classic contract class. As an example, see the class “Dox42TutorialIntegrationHandler_SalesInvoiceContract_SF”, developed for the sales invoice request.

```

1  [DataContractAttribute]
2  internal final class Dox42TutorialIntegrationHandler_SalesInvoiceContract_SF
3  {
4      CustInvoiceId invoiceId;
5      TransDate invoiceDate;
6      CustInvoiceAccount invoiceAccount;
7
8      [DataMemberAttribute('InvoiceId')]
9      public CustInvoiceId parmInvoiceId(CustInvoiceId _invoiceId = invoiceId)
10     {
11         invoiceId = _invoiceId;
12         return invoiceId;
13     }
14
15     [DataMemberAttribute('InvoiceDate')]
16     public TransDate parmInvoiceDate(TransDate _invoiceDate = invoiceDate)
17     {
18         invoiceDate = _invoiceDate;
19         return invoiceDate;
20     }
21
22     [DataMemberAttribute('InvoiceAccount')]
23     public CustInvoiceAccount parmInvoiceAccount(CustInvoiceAccount _invoiceAccount = invoiceAccount)
24     {
25         invoiceAccount = _invoiceAccount;
26         return invoiceAccount;
27     }
28
29 }

```

- Integration handler class – contains the processing logic. It should implement the logic to run a report as well as any other processing logic needed. As an example, see

the class "Dox42TutorialIntegrationHandler_SalesInvoice_SF", developed for the sales invoice request.

- Handler class should have "Dox42IntegrationHandlerAttribute_SF" attribute.

```
[Dox42IntegrationHandlerAttribute_SF("@SYS191694")]  
internal final class Dox42TutorialIntegrationHandler_SalesInvoice_SF  
{
```

- There should be a static handler method added which having "Dox42IntegrationHandlerMethodAttribute_SF" attribute with the integration handler contract class specified. This handler method must have a parameter

of the class "Dox42IntegrationHandlerDataContract_SF" and return an object of the class "Dox42IntegrationHandlerExecutionResult_SF".

```
[Dox42IntegrationHandlerMethodAttribute_SF(classStr(Dox42TutorialIntegrationHandler_SalesInvoiceContract_SF), "@SYS105081")]
public static Dox42IntegrationHandlerExecutionResult_SF printOriginal(Dox42IntegrationHandlerDataContract_SF _dataContract)
{
    Dox42TutorialIntegrationHandler_SalesInvoiceContract_SF requestSalesInvoiceContract =
        _dataContract.parmRequestContract() as Dox42TutorialIntegrationHandler_SalesInvoiceContract_SF;
    Dox42IntegrationHandlerExecutionResult_SF handlerExecutionResult;
    CustInvoiceJour custInvoiceJour;

    if (!requestSalesInvoiceContract)
    {
        throw error(Error::wrongUseOfFunction(funcName()));
    }

    custInvoiceJour = CustInvoiceJour::findFromCustTrans(
        requestSalesInvoiceContract.parmInvoiceId(),
        requestSalesInvoiceContract.parmInvoiceDate(),
        requestSalesInvoiceContract.parmInvoiceAccount());

    if (!custInvoiceJour.RecId)
    {
        throw error("@SYP4860680");
    }

    SrsReportDataContract reportDataContract = Dox42TutorialIntegrationHandler_SalesInvoice_SF::printInvoice(
        custInvoiceJour.RecId,
        _dataContract.parmPrintSettings());

    handlerExecutionResult = Dox42IntegrationHandlerExecutionResult_SF::newHandlerExecutionResult(
        con2List(reportDataContract.dox42ReportTransaction),
        con2List(reportDataContract.dox42DocuRef),
        strFmt("@SYS26868", custInvoiceJour.InvoiceId, custInvoiceJour.InvoiceDate));

    return handlerExecutionResult;
}
```

```
[Dox42IntegrationHandlerMethodAttribute_SF(classStr(Dox42TutorialIntegrationHandler_SalesInvoiceContract_SF), "@SYS105080")]
public static Dox42IntegrationHandlerExecutionResult_SF printCopy(Dox42IntegrationHandlerDataContract_SF _dataContract)
{
    Dox42TutorialIntegrationHandler_SalesInvoiceContract_SF requestSalesInvoiceContract =
        _dataContract.parmRequestContract() as Dox42TutorialIntegrationHandler_SalesInvoiceContract_SF;
    Dox42IntegrationHandlerExecutionResult_SF handlerExecutionResult;
    CustInvoiceJour custInvoiceJour;

    if (!requestSalesInvoiceContract)
    {
        throw error(Error::wrongUseOfFunction(funcName()));
    }

    custInvoiceJour = CustInvoiceJour::findFromCustTrans(
        requestSalesInvoiceContract.parmInvoiceId(),
        requestSalesInvoiceContract.parmInvoiceDate(),
        requestSalesInvoiceContract.parmInvoiceAccount());

    if (!custInvoiceJour.RecId)
    {
        throw error("@SYP4860680");
    }

    SrsReportDataContract reportDataContract = Dox42TutorialIntegrationHandler_SalesInvoice_SF::printInvoice(
        custInvoiceJour.RecId,
        _dataContract.parmPrintSettings(),
        PrintCopyOriginal::Copy);

    handlerExecutionResult = Dox42IntegrationHandlerExecutionResult_SF::newHandlerExecutionResult(
        con2List(reportDataContract.dox42ReportTransaction),
        con2List(reportDataContract.dox42DocuRef),
        strFmt("@SYS26868", custInvoiceJour.InvoiceId, custInvoiceJour.InvoiceDate));

    return handlerExecutionResult;
}
```

```

public static SrsReportDataContract printInvoice(
    RecId _invoiceRecId,
    SRSPrintDestinationSettings _printDestinationSettings,
    PrintCopyOriginal _printCopyOriginal = PrintCopyOriginal::Original)
{
    PrintMgmtReportFormatName printMgmtReportFormatName = PrintMgmtDocType::construct(PrintMgmtDocumentType::SalesOrderInvoice).getDefaultReportFormat();
    SalesInvoiceContract salesInvoiceContract = new SalesInvoiceContract();

    salesInvoiceContract.parmRecordId(_invoiceRecId);
    salesInvoiceContract.parmPrintCopyOriginal(_printCopyOriginal);

    SrsReportRunController srsReportRunController = new SrsReportRunController();
    srsReportRunController.parmReportName(printMgmtReportFormatName);
    srsReportRunController.parmExecutionMode(SysOperationExecutionMode::Synchronous);
    srsReportRunController.parmShowDialog(false);
    srsReportRunController.parmReportContract().parmRdpContract(salesInvoiceContract);
    srsReportRunController.parmReportContract().parmPrintSettings(_printDestinationSettings);

    srsReportRunController.startOperation();

    if (!srsReportRunController.parmReportContract().parmReportExecutionInfo().parmIsSuccessful())
    {
        throw error("@DOX54");
    }

    return srsReportRunController.parmReportContract();
}

```

8.8 Transfer settings to productive D365 F&O environment

It is recommended to make/change settings and test integration scenarios in the test D365 F&O environment before running the integration in the productive D365 F&O environment.

To transfer settings from the test environment to the productive environment, there is a special functionality available:

1. Export settings from the test environment (System administration → Periodic tasks → dox42 integration framework → Export dox42 integration data). In the dialog you can choose what kind of settings you would like to export. You can also set up a filter

for the configurations to be exported. As a result, a file with the settings will be created.

2. Import settings from the file to the prod environment (System administration → Periodic tasks → dox42 integration framework → Import dox42 integration data).

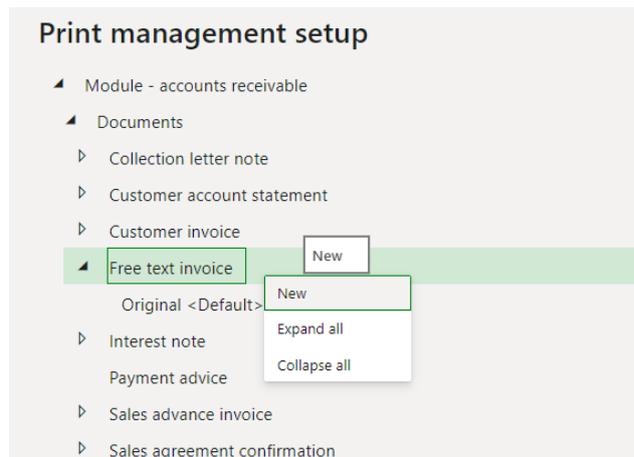
9 FAQ

9.1 Using different print mediums with a single call

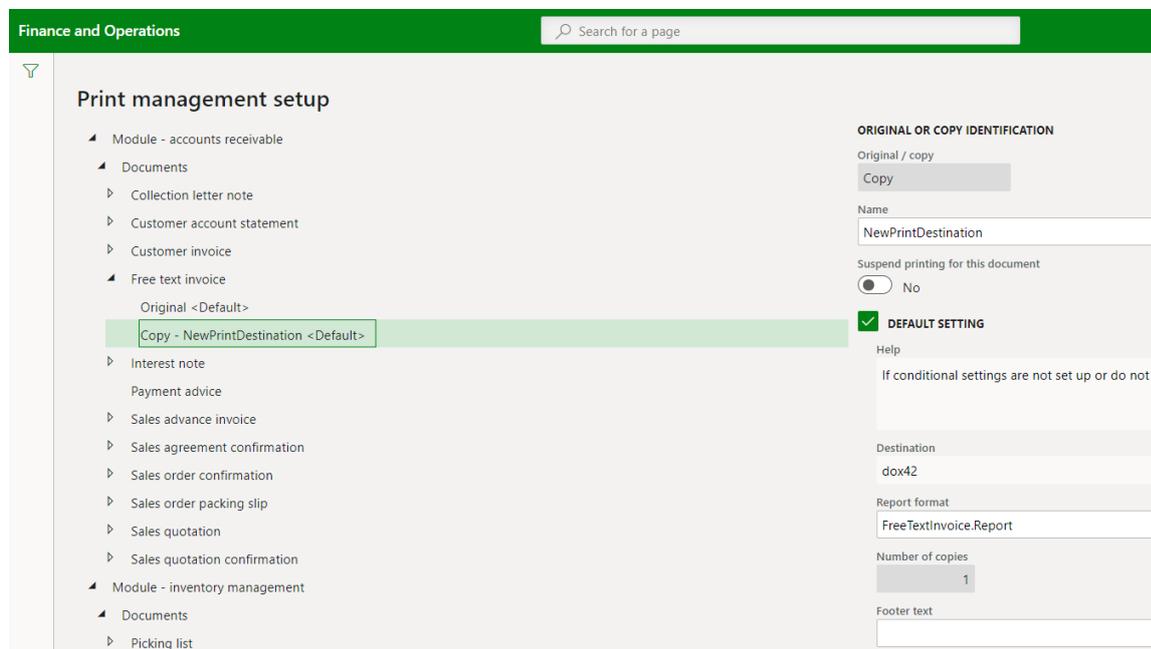
Scenario: The report should be sent as email, printed and displayed on the screen.

The print management provides the possibility to register not only one but as many print destinations as desired.

Right click on the report name will display a menu which provides the button "new", this button creates a new print destination setup.



The D365 FO will sequentially process all the lines (print destinations) which are registered.



9.2 Performance

Scenario: Generating a report takes a long time.

In this scenario the first step would be to check the request duration time in the “dox42 Audit log”, to know the printing time of each print medium and which report has a bad performance.

dox42 Audit log									
Filter		dox42 type							
Company	Language	Report	Design	Title	Server request status	Request duration (s)	Print medium	Template name	
usmf	en-us	SalesInvoice		Show invoice	Error	2,05	SharePoint	C:\dox42Server\templates\	
usmf	en-us	SalesInvoice		Show invoice	Okay	1,51	File server	C:\dox42Server\templates\	
usmf	en-us	SalesInvoice		Show invoice	Okay	2,54	File server	C:\dox42Server\templates\	
usmf	en-us	SalesInvoice		Show invoice	Okay	49,05	Email	C:\dox42Server\templates\	
usmf	en-us	SalesInvoice		Show invoice	Okay	1,38	File	C:\dox42Server\templates\	
usmf	en-us	SalesInvoice		Show invoice	Okay	1,63	File server	C:\dox42Server\templates\	
usmf	en-us	SalesInvoice		Show invoice	Okay	2,64	File server	C:\dox42Server\templates\	
usmf	en-us	SalesInvoice		Show invoice	Okay	2,69	Screen	C:\dox42Server\templates\	
usmf	en-us	SalesInvoice		Show invoice	Okay	1,52	File server	C:\dox42Server\templates\	

The following factors can influence the performance of a report:

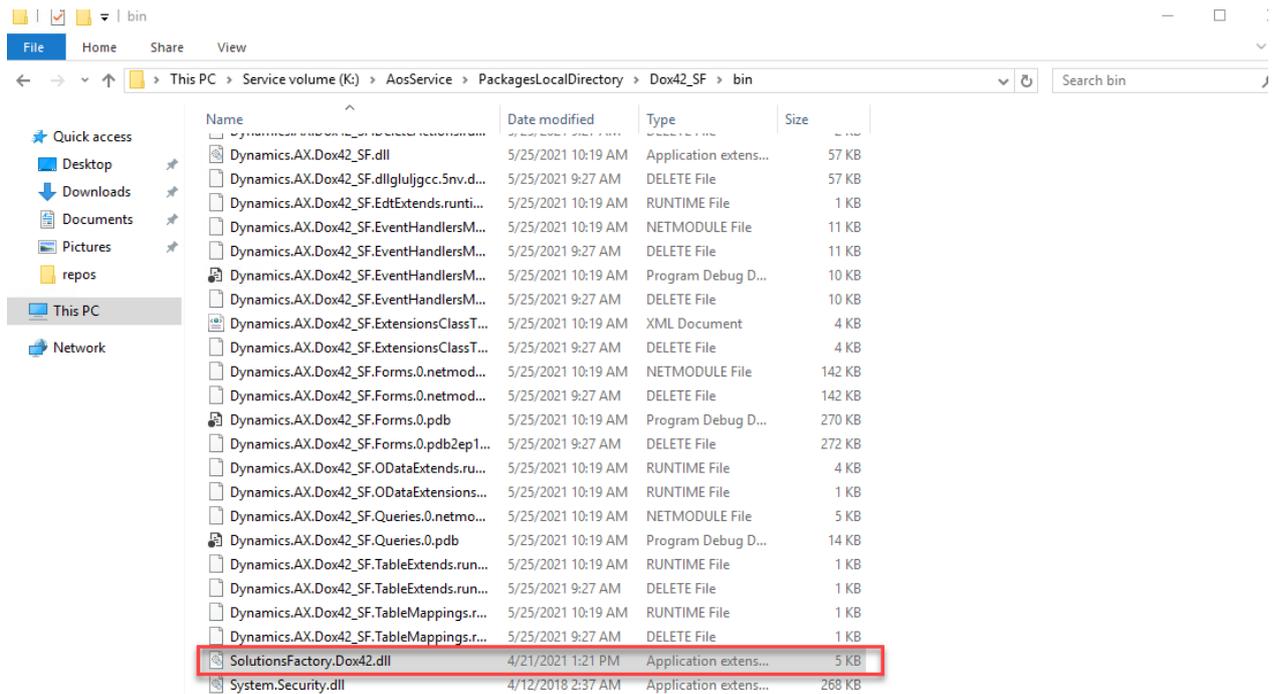
- Using “D365 FO Entity” data sources (previously named OData data sources), the responding time from D365 FO is longer than for “D365 FO Report”. Ideally, data providers or queries in D365 FO are enhanced instead of using a “D365 FO Entity” data source.
- Parallelism: The dox42 server processes all requests sequentially.
- Nested filtering of DataSources like filtering one DataSource and using the output of the filtered DataSource to filter another DataSource.
- Deactivating unnecessary fields in the “Configure Metadata” window of the dox42 Data Map in the template resulted in noticeable performance gains in several tests.
- It is also a good approach to extend the report logic in D365 FO as much as possible instead of using any grouping, transformation, or calculation logic in the dox42 template.
- In case of timeouts, please refer to the dox42 server documentation on timeout settings of the IIS.
- Ensure that the “Cleanup dox42 historical data” batch job is set up.
- If Archive setup for the report is used, you can activate Asynchronous archiving

9.3 Could not load file or assembly “SolutionsFactory.Dox42”

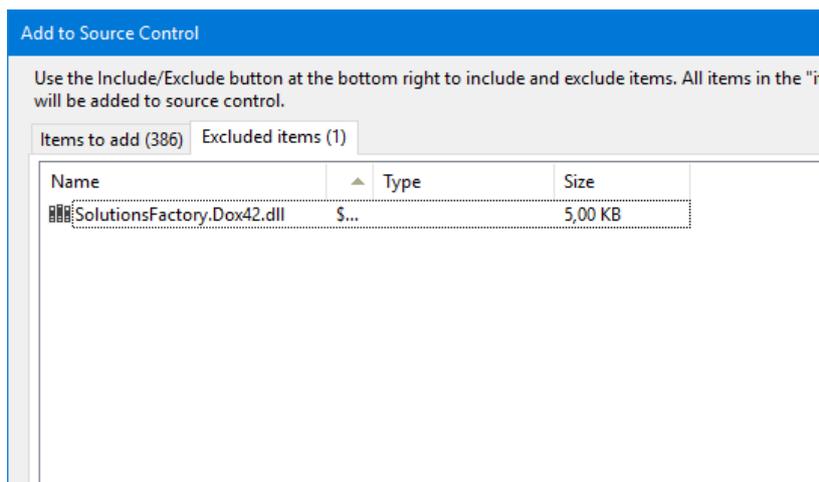
Scenario: Generating a report is aborted with the error message on the screenshot below.



Check that the folder contains the specified DLL and the DLL is checked in.



Reinstall the package if needed and check in the DLL.



9.4 No records in related data for dox42 reports

Scenario: It can happen, that after upgrading to a newer version (D365 FO X++ 1.2.13 or latest), there are no records in the related data form for the existing reports:

- **System administration -> Setup dox42 dox42 parameters -> button "Attachments" -> button "Related data"**
- **System administration -> Setup dox42 dox42 parameters -> button "Audit log" -> button "Related data"**
- **System administration -> Setup dox42 dox42 parameters -> button "Document management" -> button "Related data").**

Run the job Dox42FillReportDataSourcesJob_SF to fix the issue. The job fixes the problem immediately for all legal entities once it has been executed.

https://<AXURL>/?mi=SysClassRunner&cls=Dox42FillReportDataSourcesJob_SF

9.5 Throttling issues

Scenario: Sometimes requests from dox42 server can be throttled by D365 FO server:

<https://docs.microsoft.com/en-us/dynamics365/fin-ops-core/dev-itpro/data-entities/priority-based-throttling>

<https://docs.microsoft.com/en-us/dynamics365/fin-ops-core/dev-itpro/data-entities/throttling-faq>

It is possible to avoid most of the calls from dox42 server to D365 FO server while generating reports by using HTTP method "POST" or "POST (Base64)". HTTP method "POST (Base64)" is recommended. It should be defined in the dox42 server parameters.

The screenshot shows the 'dox42 servers' configuration page in the Dynamics 365 Finance and Operations System Administration console. The page is titled 'dox42 servers' and includes a 'Setup' section with the following settings:

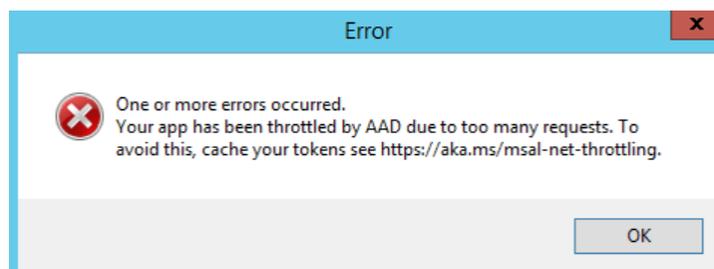
COMMON SETTINGS		EMAIL SETTINGS	
HTTP Authorization	Token 6859	SMTP user name	solutionsfactory.at
HTTP method	POST (Base64)	SMTP password	*****

Below the 'Setup' section, there is a 'dox42 Online' section with the following settings:

SHAREPOINT ONLINE SETTINGS		SharePoint Online username	SharePoint Online password	SharePoint Online tenant id	SharePoint Online client id
Authentication method	As User with password (No MFA)				

9.6 Throttling issues with AAD requests

Scenario: Authorization requests from dox42 to AAD are throttled. It may happen if the report template uses "User credentials" for the authorization when designing report templates or running reports in D365 FO.



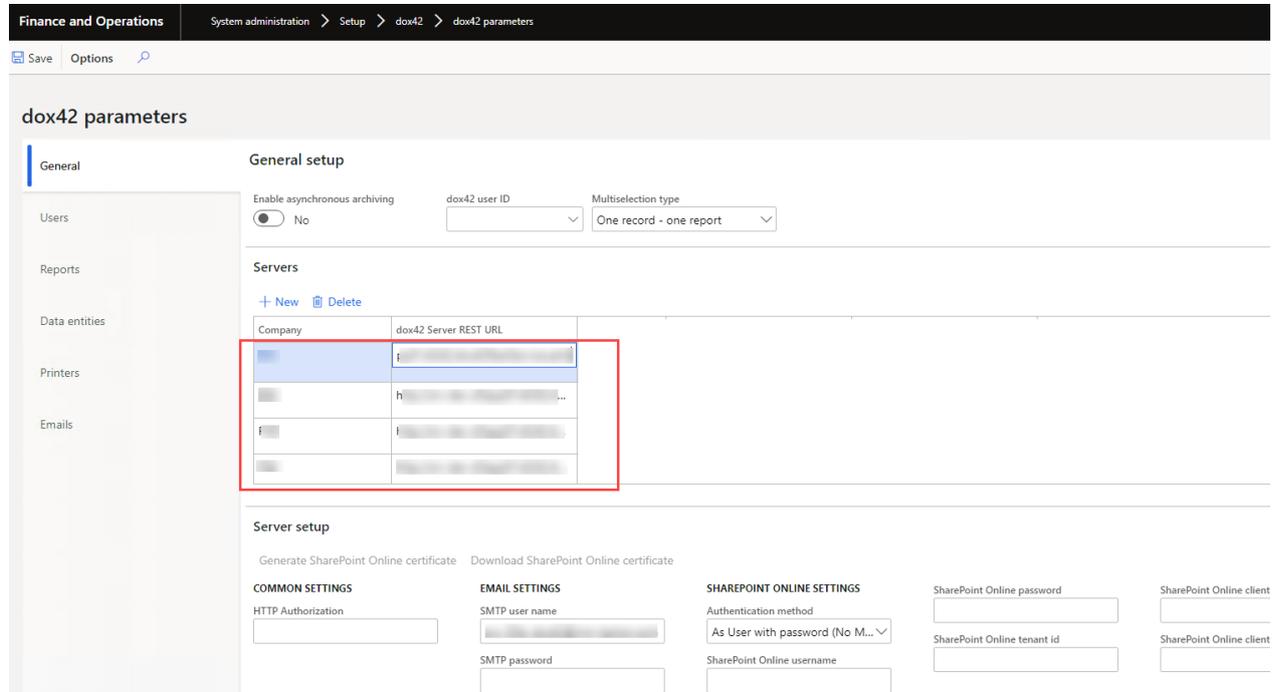
It is recommended to switch the template to use "Client credentials" instead of "User credentials" for the authorization if possible. Another way is to upgrade to the product version 1.4.0 (dox42 server must be version 4.6 or higher).

9.7 DB synchronization issue upgrading to D365 FO X++ 1.2.14, D365 FO X++ 1.2.14.1 or 1.4.0 and higher

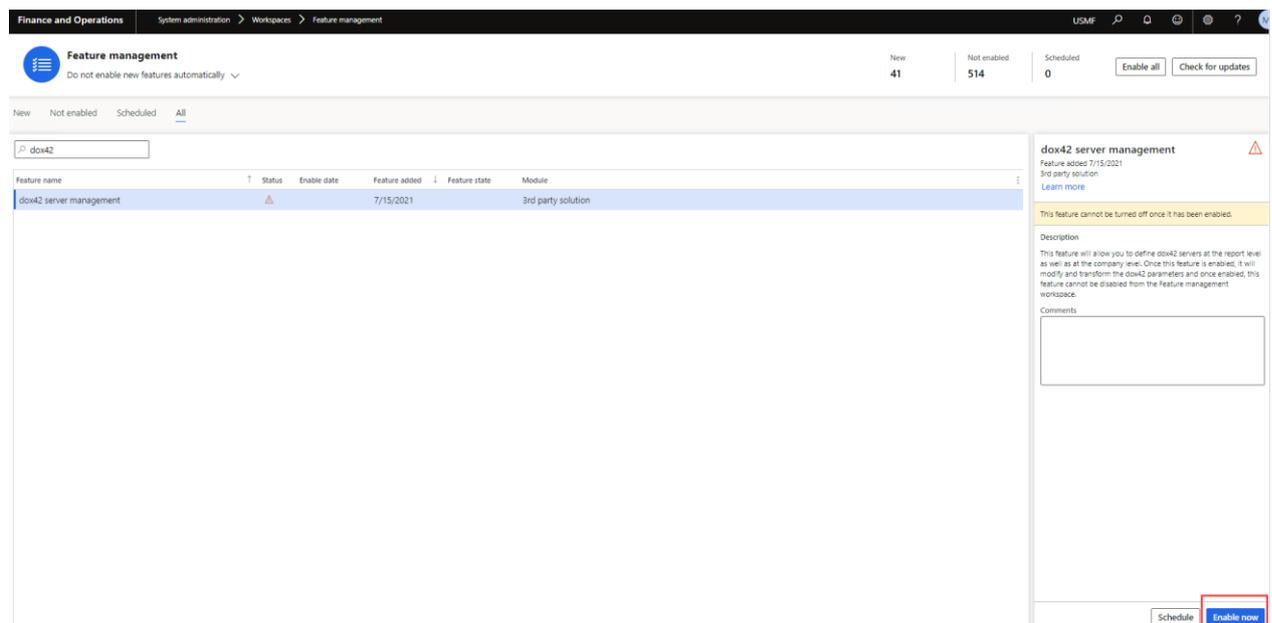
Scenario: There can happen a DB synchronization issue on some environments upgrading from **the version older than D365 FO X++ 1.2.14** to the versions D365 FO X++ 1.2.14, 1.2.14.1 or 1.4.0 and higher.

There is a data transformation script running automatically while upgrading the version. There are 2 options how to solve it:

Option 1: It is needed to delete dox42 general parameters records (“Servers” tab as it is shown on the screenshot) before installing the new dox42 model. After the new dox42 model is installed, you should newly create them.



Option 2: At first, it is needed to upgrade to any version between D365 FO X++ 1.2.14.2 and D365 FO X++ 1.3.3 inclusive. After the upgrade, you should activate the new “dox42 server management” feature manually in the “Future management” form. It can be done at any time later after the delivery of the new version. As soon as it is done, you can upgrade to the version D365 FO X++ 1.4.0 or higher.



9.8 dox42 server log grows too fast

Scenario: In some cases, dox42 server log can grow too fast and it can take too much disk space.

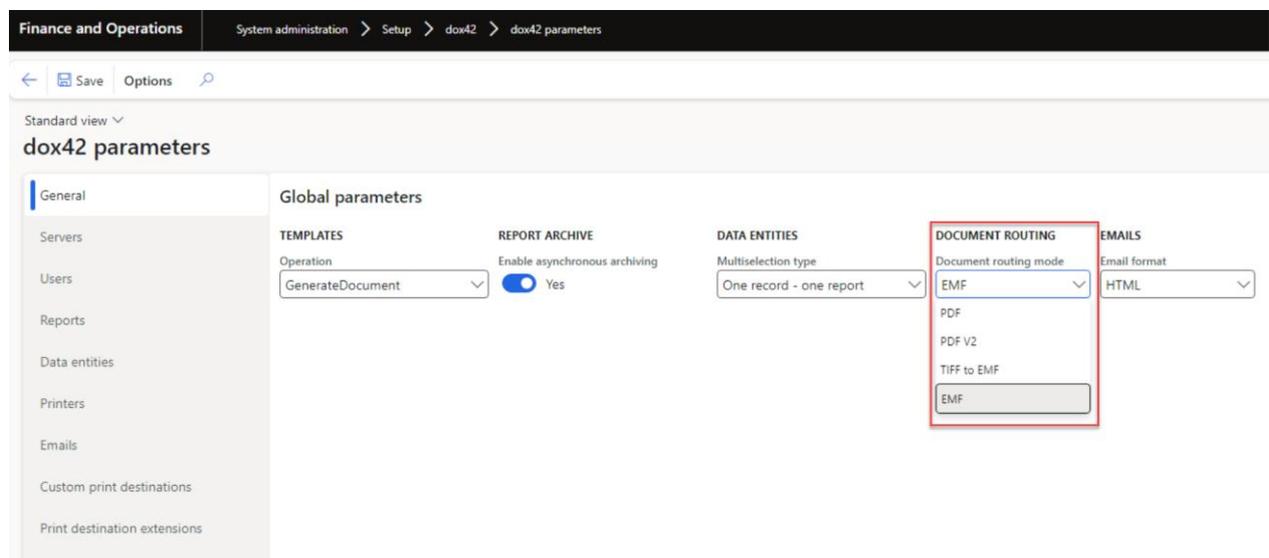
Most likely, the reason is that the logging is set up in the way to be too detailed which is most often not really needed.

For example, when switching to “POST” or “POST (Base64)” HTTP mode, ensure that the dox42 server trace mode is not set to “debug” or “trace”. If it is set to “debug” or “trace”, the log can grow fast, and it can contain some sensitive data.

Configure log settings in the file NLog.config. For further details also look at the dox42 Server Documentation: <https://www.dox42.com/Modules/dox42-Server>.

9.9 Issues with Document Routing Agent (DRA)

If you run into issues using the DRA (running as a service, using redirected printers, etc.), check that the document routing mode parameter is set to “TIFF to EMF” or “EMF” (recommended). When the parameter is set to “PDF” or “PDF V2” the DRA has only limited functionality supported (e.g., “Run as Windows Service” is not supported in this mode).

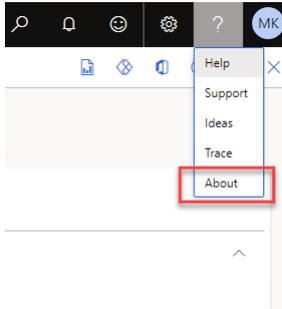


9.10 How to check my dox42 for Finance and Operations version

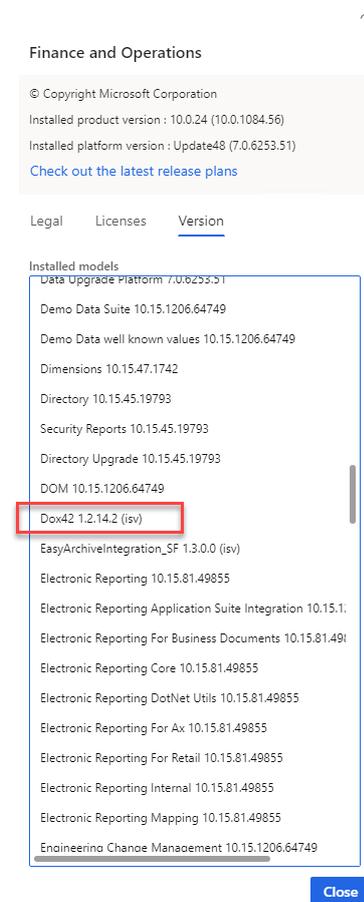
Ensure that, the build numbers of all dox42 for Finance and Operations solution components you use match against your product version. [Version history](#) contains the correspondence between the build numbers and the product version.

9.10.1 D365 FO X++ build number

Enter D365 FO and click “Help & Support” > “About”.

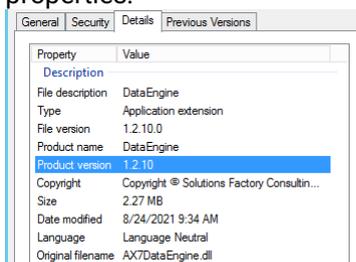


Then open the “Version” tab page and check the version of your dox42 model installed.



9.10.2 dox42 Data Source build number

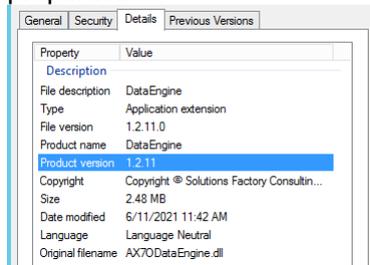
Find the file AX7DataEngine.dll in the dox42 server /Bin directory and check its version in the file properties.



The same should be checked for the dox42 for Finance and Operations Office Add-Ins files:
 AX7ConfigDialog.dll
 AX7DataEngine.dll

9.10.3 dox42 OData Source build number

Find the file AX70DataEngine.dll in the dox42 server /Bin directory and check its version in the file properties.



The same should be checked for the dox42 for Finance and Operations Office Add-Ins files:
 AX70DataConfigDialog.dll
 AX70DataEngine.dll

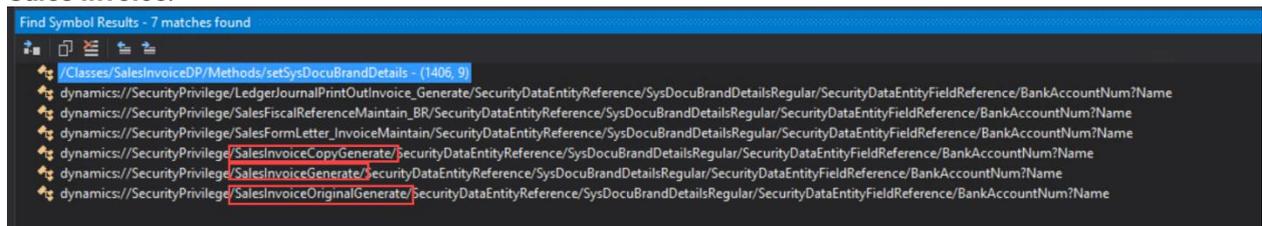
9.11 Error accessing a table field while generating a report after D365 FO update

Scenario: Generating a report is aborted with the error message on the screenshot below.

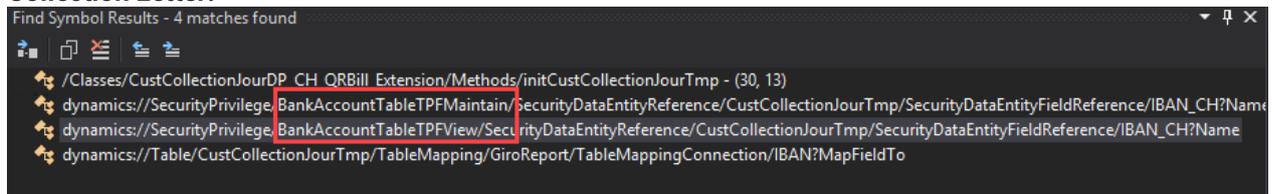


Check standard D365 security privileges related to the field. These privileges should be considered in the user role to be able to print the report.

Sales Invoice:



Collection Letter:



9.12 Error that file type cannot be attached

Scenario: Generating a report is aborted with the error message "File with this file type cannot be attached".



Message details

Document processing

dox42 output processing

dox42 print destination request

dox42 server call

- Files with this file type cannot be attached.
- 'dox42 server call' failed.
- 'dox42 print destination request' failed.
- Error occurred while printing report

Check what exactly the file type you are trying to print. For example, if you print to printer and the document routing mode is set to “TIFF to EMF” in the dox42 parameters, then the system requests dox42 server to get a TIFF file. If you print to printer and the document routing mode is set to “EMF” in the dox42 parameters, then the system requests dox42 server to get a zip-archive with EMF files in it.

Standard view ▼

dox42 parameters

General

Users

Reports

Data entities

Printers

General setup

Global parameters

REPORT ARCHIVE

Enable asynchronous archiving

Yes

DATA ENTITIES

Multiselection type

Many records - one report ▼

DOCUMENT ROUTING

Document routing mode

TIFF to EMF ▼

Servers

Check in the document management parameters (Organization administration -> Document management -> Document management parameters) that the file type you use is added to the file types that can be uploaded.

Finance and Operations | Organization administration > Document management > Document management parameters

Save Options

Standard view ▼

Document management parameters

General

Number sequences

File types

SharePoint

Migrate files

Default document types

Configure file types that can be uploaded

[+ Add](#) [Remove](#) [Reload defaults](#)

File type	Description	Natively web renderable
AVI	Video clip	No
BMP	Bitmap image	Yes
CSV	Microsoft Excel comma separate...	No
DOC	Microsoft Word document	No
DDOCX	Microsoft Office Word 2007 doc...	No
GIF	Graphics interchange format im...	Yes
HTM	HTML file	Yes
HTML	HTML file	Yes
JPEG	JPEG image	Yes
JPG	JPG image	Yes
MHT	MHT file	Yes
MHTML	MHTML file	Yes
MSG	Microsoft Outlook message	No
PDF	Adobe acrobat document	Yes
PNG	PNG image	Yes
PPT	Microsoft PowerPoint presentati...	No
PPTX	Microsoft Office PowerPoint 200...	No
RTF	Rich text format	No
SGML	SGML file	Yes
TIF	Microsoft office document imag...	Yes
TIFF	TIFF image	Yes <input checked="" type="checkbox"/>
TXT	Text document	Yes

9.13 Potentially dangerous values when using HTTP method POST

Scenario: Generating a report is aborted with the error message “...A potentially dangerous Request.Form value was detected from the client...” in the dox42 server logs and the HTTP method is set to “POST” for the dox42 server in the “dox42 servers” form.

Switch to the HTTP method “POST (Base64)”. Available since version 1.3.2.

The screenshot shows the 'dox42 servers' configuration page. The 'HTTP method' is set to 'POST (Base64)', which is highlighted with a red box. The page also shows 'COMMON SETTINGS' and 'EMAIL SETTINGS' sections.

COMMON SETTINGS		EMAIL SETTINGS	
HTTP Authorization	Token 6B59	SMTP user name	@solutionsfactory.at
HTTP method	POST (Base64)	SMTP password	*****

Below the settings, there are sections for 'dox42 Online' and 'SHAREPOINT ONLINE SETTINGS'.

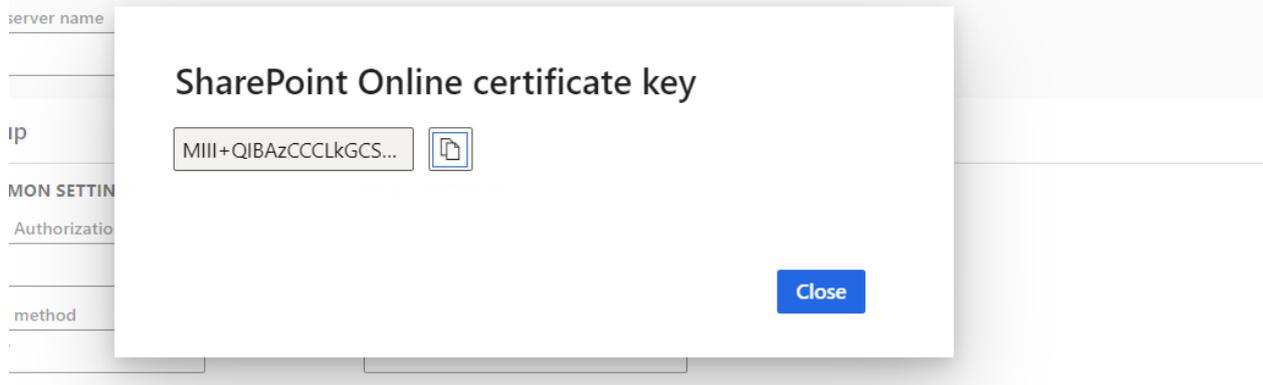
SHAREPOINT ONLINE SETTINGS		SharePoint Online username	SharePoint Online password	SharePoint Online tenant id	SharePoint Online client id
Authentication method	As User with password (No MFA)				

9.14 Invalid dox42 Online certificate after database copy

Scenario: After an update of the environment (restoring the database from a different environment) an error occurs while generating a report “Client assertion contains an invalid signature. The key was not found”.

1. When setting up the environment, you click on “Generate SharePoint Online certificate” in System administration > setup > dox42 > dox42 servers. After that, you should copy this certificate key and securely save it somewhere for being able to use the key further.

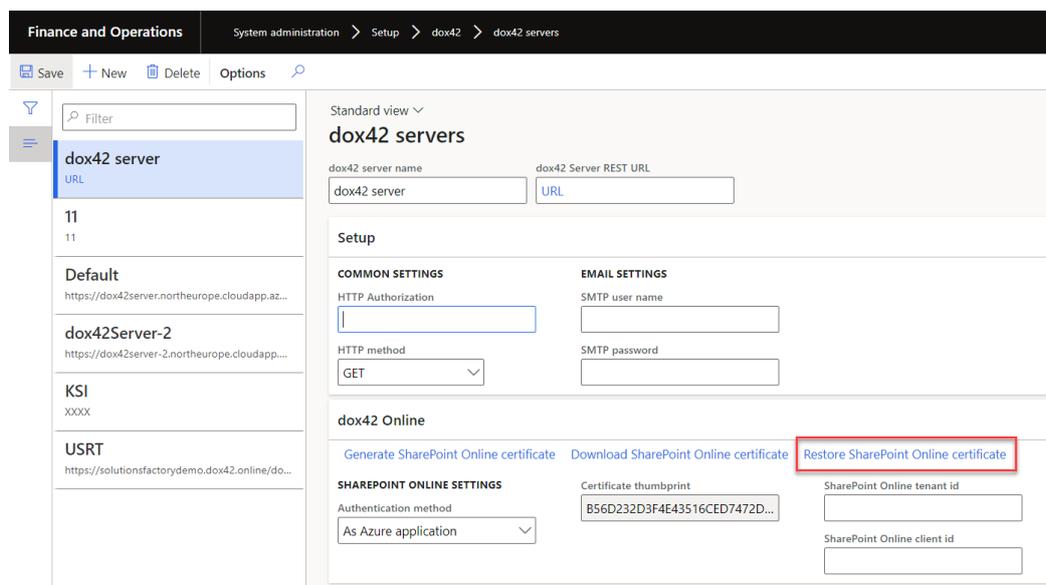
dox42 servers



dox42 Online

[Generate SharePoint Online certificate](#)
[Download SharePoint Online certificate](#)
[Restore SharePoint Online certificate](#)

- After the database is restored, you should click on “Restore SharePoint Online Certificate” in dox42 servers (System administration > setup > dox42 > dox42 servers) and apply there the certificate key that you copied before.



Here is a summary of necessary steps for inserting certificate to authenticate SharePoint online for the dox42 server:

Finance and Operations | System administration > Setup > dox42 > dox42 servers

Save + New Delete Options

Filter 3

Default
https://...northeurope.cloudapp...

dox42 servers | Standard view

dox42 server name: Default | dox42 Server REST URL: https://...northeurop...

Setup

COMMON SETTINGS
HTTP Authorization: Token 685970: [redacted]

EMAIL SETTINGS
SMTP user name: [redacted]@solutionsfactory.at
SMTP password: [redacted]

dox42 Online

Generate SharePoint Online certificate (2) | Download SharePoint Online certificate (4)

SHAREPOINT ONLINE SETTINGS
Authentication method: As Azure application (1)
Certificate thumbprint: 250B9CC0CE27EB0805138372... (5)

SharePoint Online tenant id: [redacted] (6)
SharePoint Online client id: [redacted] (7)

9.15 No dox42 output in print destination settings dialog for custom report

Scenario: There is no dox42 output visible in the print destination settings dialog for the custom report.

Print destination settings

Print archive
Screen
Printer
File
Email

Save in print archive?
 No

To: [redacted] Edit

Cc: [redacted] Edit

Subject: [redacted]

File format: HTML4.0

Make sure that the following variables initialized properly in the "SRSPrintDestinationSettings" class with your custom code when you call the print destination settings dialog:

1. dox42ReportName – report name
2. dox42ReportDesignName – report design name

```
SRSPrintDestinationSettings printDestinationSettings = new SRSPrintDestinationSettings(printerSettings);

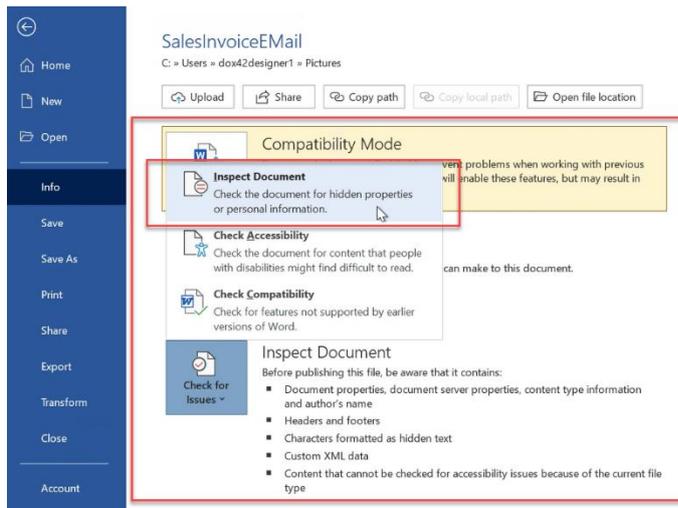
if (!printDestinationSettings.dox42ReportName)
{
    [printDestinationSettings.dox42ReportName, printDestinationSettings.dox42ReportDesignName] =
        SrsReportRunUtil::getReportAndDesignName(ssrsReportStr(CustomReportName, CustomReportDesignName));

    printerSettings = printDestinationSettings.pack();
}
```

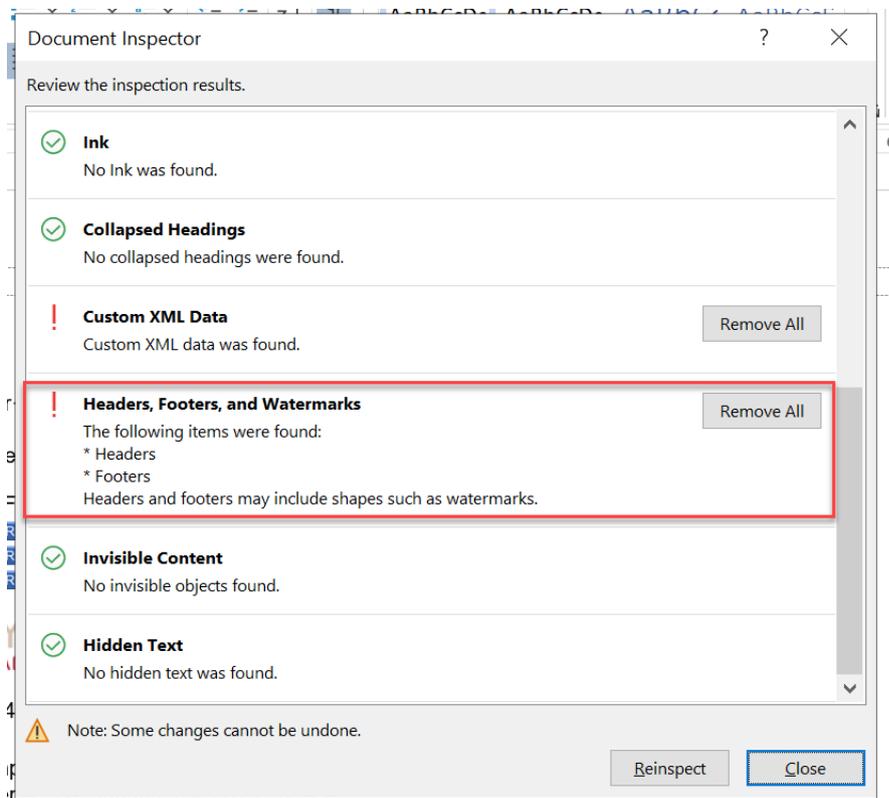
9.16 Inspection of the word template on dox42 server for hidden/invisible content

Scenario: Generating a report is aborted with the error message/report is created not in the correct way

You can inspect and fix the template using the inspection tool functionality in Word



Document Inspector after the analysis will show you the results:



9.17 Report is printed successfully but not displayed on screen

Scenario: Under certain conditions, after upgrading to a new version, there may be a problem displaying reports when printing to screen. This issue may affect Tier-1 (Single-box) environments due to a specific deployment process.

We can't find that page

Sorry, we can't find the page that you requested.

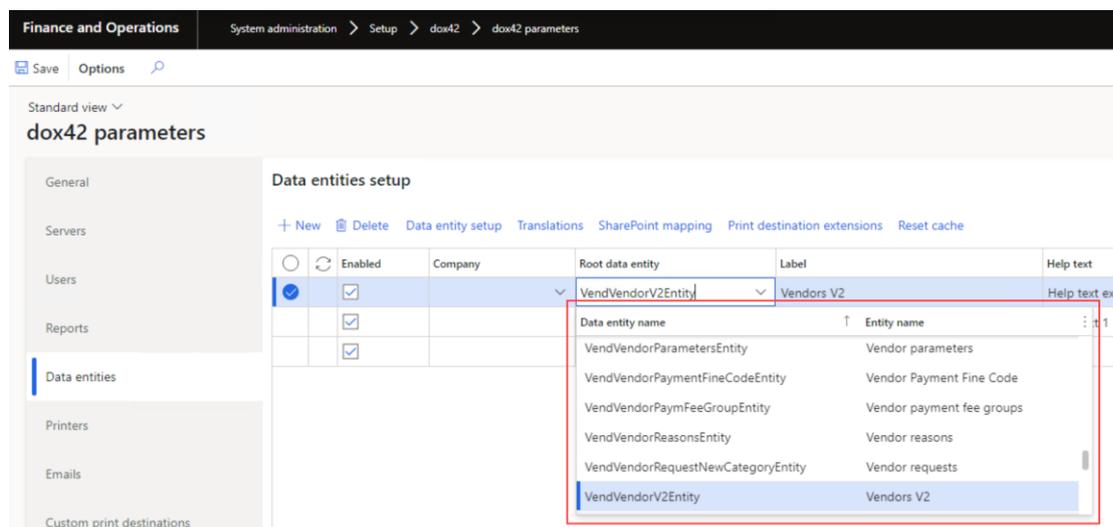
Things to try:

- Verify that the URL that you entered is correct.
- Return to the home page and use the navigation pane to find what you are looking for.
- Go to the App links page to find the page that you are looking for.

To solve the issue, replace the resource file `Dox42ReportViewer_SF.htm` manually in your `WebRoot` directory of the IIS-server (for example, `K:\AosService\WebRoot\Resources\Html\Dox42ReportViewer_SF.htm`) with the latest version of the file from your `PackagesLocalDirectory` (for example, `K:\AosService\PackagesLocalDirectory\Dox42_SF\Dox42_SF\AxResource\ResourceContent\Html\Do x42ReportViewer_SF.htm`).

9.18 Data entity cannot be selected in dox42 parameters

Scenario: Data entity is not present in the lookup of the available data entities in the dox42 parameters form.



Make sure the data entity you are looking for is public. Only public data entities can be used for the integration with dox42 using OData services.

For more information about public data entities, see the D365 F&O documentation:

Property	Value	Description
IsPublic	Yes	When this property is set to Yes, the entity is visible by using the OData application programming interface (API).
Public Entity Name	FleetRental	The name that will be used in the OData APIs for <code>EntityType</code> .
Public Collection Name	FleetRentals	The name that will be used for the OData collection entity.

10 Version history

Product version	Availability	Build number			What's new
		D365 FO X++	dox42 Data Source	dox42 OData Source	
1.5.0	16.02.2024	1.5.0	1.2.17	1.2.18	<p>dox42 server must be version 4.6.4 or higher</p> <p>D365 FO:</p> <ul style="list-style-type: none"> Extended conditional archiving capabilities (depending on the field value in the dox42 report template) Improvements in the dox42 audit log form Bug fix for handling some special characters when sending reports via e-mail Various improvements, bug fixes and technical updates <p>dox42 server/client:</p> <ul style="list-style-type: none"> Query length is no longer limited when using the D365 F&O entity data source (OData)
1.4.1.1	30.08.2023	1.4.1.1	1.2.17	1.2.17	<p>D365 FO:</p> <ul style="list-style-type: none"> Hotfix for the asynchronous archiving
1.4.1	25.08.2023	1.4.1	1.2.17	1.2.17	<p>dox42 server must be version 4.6.2 or higher</p> <p>D365 FO:</p> <ul style="list-style-type: none"> "EMF" mode for the Document Routing Agent (DRA) Using custom print destinations for archiving Sending document copies in one printing job when using PDF format for the Document Routing Agent (DRA) Supporting special characters in the email subject for the "D365 Server" and "D365 User" sending modes Various improvements, bug fixes and technical updates <p>dox42 server/client:</p> <ul style="list-style-type: none"> Add-Ins: Selecting/deselecting all fields on the entity data source setup form in one click Various improvements, bug fixes and technical updates
1.4.0	17.02.2023	1.4.0.2	1.2.16	1.2.16	<p>dox42 server must be version 4.6 or higher</p> <p>D365 FO:</p> <ul style="list-style-type: none"> "dox42 integration framework" – calling D365 F&O reports from external systems (e.g., Power Automate, etc.) Supporting dox42 custom output actions as print destinations or to extend existing dox42 print destinations [BETA] Expanded and enhanced audit log capabilities Email body format (HTML or plain text) Setting up translations for buttons to call data entity reports New OData entity to get latest report transaction id Button to delete report metadata in D365 F&O Various improvements, bug fixes and technical updates <p>dox42 server/client:</p> <ul style="list-style-type: none"> Potential AAD throttling issues when using client credentials
1.3.3	05.10.2022	1.3.3	1.2.15	1.2.15	<p>D365 FO:</p> <ul style="list-style-type: none"> Excel and PowerPoint report templates Expanded and enhanced audit log capabilities Ability to use/restore existing SharePoint Online certificates Caching printed reports (optional) [BETA] Various improvements, bug fixes and technical updates <p>dox42 server/client:</p> <ul style="list-style-type: none"> Migration from the Azure Active Directory Authentication Library (ADAL) to the Microsoft Authentication Library (MSAL)
1.3.2	07.07.2022	1.3.2	1.2.14	1.2.14	<p>D365 FO:</p> <ul style="list-style-type: none"> Sign PDF documents Save printed report in document management enhancements

					<ul style="list-style-type: none"> • Cleanup historical data function improved • Audit log form improved • Potential errors when using HTTP method POST • Various improvements, bug fixes and technical updates dox42 server/client: <ul style="list-style-type: none"> • Add-Ins: Filtering entity columns on the entity data source setup form • Potential errors when using HTTP method POST • Various improvements, bug fixes and technical updates
1.3.1	22.04.2022	1.3.1	1.2.13	1.2.13	D365 FO: <ul style="list-style-type: none"> • Full support of Document Routing Agent (DRA) • Save printed report in document management enhancements • Set up SharePoint file names on the report level • "nl-be" and "da" labels • Various improvements, bug fixes and technical updates dox42 server/client: <ul style="list-style-type: none"> • Caching bug fix • Bug fix for using "#" in OData filters
1.3.0	19.01.2022	1.3.0	1.2.12	1.2.12	D365 FO: <ul style="list-style-type: none"> • Attach files to dox42 report (adding to layout / sending per email) • Preview serialized report data directly in D365 FO • Various improvements, bug fixes and technical updates
1.2.14.2	18.10.2021	1.2.14.2	1.2.12	1.2.12	D365 FO: <ul style="list-style-type: none"> • Fix for deployable package error • "de-ch" labels
1.2.14.1	07.10.2021	1.2.14.1	1.2.12	1.2.12	D365 FO: <ul style="list-style-type: none"> • Improvements to save printed report in document management • Various improvements, bug fixes and technical updates
1.2.14	01.10.2021	1.2.14	1.2.12	1.2.12	D365 FO: <ul style="list-style-type: none"> • Improvements of roles and permissions
1.2.13.3 [BETA]	08.09.2021	1.2.13.3	1.2.12	1.2.12	D365 FO: <ul style="list-style-type: none"> • Improvements of advanced dox42 server management
1.2.13.2 [BETA]	30.08.2021	1.2.13.2	1.2.12	1.2.12	D365 FO: <ul style="list-style-type: none"> • Save printed report in document management • Advanced dox42 server management • Push report data to dox42 server • Allow start email subject with backslash • Special characters in email subject • Allow to print report if e-mail password cannot be decrypted • Lookup to select report design
1.2.13.1	04.08.2021	1.2.13	1.2.11	1.2.12	dox42 server/client: <ul style="list-style-type: none"> • Throttling handling
1.2.13	18.06.2021	1.2.13	1.2.10	1.2.11	D365 FO: <ul style="list-style-type: none"> • Print to "docx" files • Use Excel templates to print reports to "xlsx" files • Improvements to multiselect on forms for OData reports • Improvements to attach files to dox42 report (adding to layout) [BETA]
1.2.12	31.05.2021	1.2.12	1.2.9	1.2.11	D365 FO: <ul style="list-style-type: none"> • Manage document type for attachments • Attach files to dox42 report (adding to layout) [BETA] • Reference to report source in dox42 audit log • Print to "csv" files • Multiselect on forms for OData reports (print one report) • Increased report printing timeout • Performance - parallel dox42 calls when archiving dox42 server/client: <ul style="list-style-type: none"> • Performance optimization through caching for dox42 Data Source
1.2.11	30.03.2021	1.2.11	1.2.8	1.2.11	D365 FO: <ul style="list-style-type: none"> • Bug fixes for email subject

1.2.10	05.02.2021	1.2.10	1.2.8	1.2.11	D365 FO: <ul style="list-style-type: none"> • Multiselect on forms for OData reports (print multiple reports) • Bug fixes for email subject • Various improvements, bug fixes and technical updates
1.2.9	22.01.2021	1.2.9	1.2.8	1.2.11	D365 FO: <ul style="list-style-type: none"> • Reversed packing slips printing • Print multiple copies • Bug fixes for email subject
1.2.8	17.12.2020	1.2.8	1.2.8	1.2.11	D365 FO: <ul style="list-style-type: none"> • Skip downloaded file when not in GUI • Print picking list from transfer order • Improvements for roles and permissions
1.2.7	30.11.2020	1.2.7	1.2.8	1.2.11	D365 FO: <ul style="list-style-type: none"> • Use Excel templates to print reports to "xls" files • Provide additional extensibility in D365 FO X++ code • Various improvements, bug fixes and technical updates dox42 server/client: <ul style="list-style-type: none"> • Add "Show/Hide" checkbox for secrets • Performance improvements for dox42 OData Source • Various improvements, bug fixes and technical updates
1.2.6	26.06.2020	1.2.6	1.2.5	1.2.5	--
1.2.5	01.04.2020	1.2.5	1.2.5	1.2.5	--
1.2.4	12.03.2020	1.2.4	1.2.3	1.2.3	--
1.2.3	01.07.2019	1.2.3	1.2.3	1.2.3	--
1.2.1	17.05.2018	1.2.0	1.2.2	1.2.2	--
1.2.0	04.04.2018	1.2.0	1.2.0	1.2.0	--
1.1.3	30.10.2017	1.1.4	1.1.1	1.1.2	--
1.1.2	12.06.2017	1.1.1	1.1.0	1.1.1	--
1.1.1	02.06.2017	1.1.1	1.1.0	1.1.0	--
1.0.1	20.12.2016	1.0.1	1.0.1	1.0.1	--

11 Upgrade/Update

It is strongly recommended to upgrade dox42 server and client components first and only after that to start upgrading D365 FO. This is because the dox42 server and client libraries are usually guaranteed to be backwards compatible. In case of exceptions to the rule, there will be further announcements.

11.1 Upgrade/Update of the dox42 Office Add-Ins

The download files for the dox42 Enterprise Add-Ins are available on the dox42 website:

<https://www.dox42.com/Modules/Download>

Upgrade dox42 Word Add-Ins according to the dox42 documentation.

11.2 Upgrade/Update of the dox42 for Finance and Operations Office Add-Ins

Replace the files in the directory, where the dox42 for Finance and Operations Office Add-Ins is installed, with the new version:

- AX7ConfigDialog.dll
- AX7DataEngine.dll
- AX7DataSourceImport.config
- AX70DataConfigDialog.dll
- AX70DataEngine.dll
- AX70DataSourceImport.config
- D3650_logo.png

11.3 Upgrade/Update of the dox42 Server

Upgrade the dox42 Server according to the documentation on the dox42 Website:

<https://www.dox42.com/Modules/dox42-Server>

11.4 Upgrade/Update of dox42 for Finance and Operations for dox42 Server

Replace the dox42 for Finance and Operations files in the /Bin directory on the dox42 Server with the new version:

- AX7DataEngine.dll
- AX70DataEngine.dll

11.5 Upgrade/Update of dox42 in D365 FO

Upgrade D365 FO with the new version of the "dox42" package. You could either install the Deployable Package or the Source Code (available on request from support@dox42.com). The Deployable Package contains the binaries only, the Source Code can be useful in case you want to develop your own extensions or if you want to debug something.

You will find further information on <https://docs.microsoft.com/en-us/dynamics365/unified-operations/dev-itpro/deployment/apply-deployable-package-system> as well as

<https://docs.microsoft.com/en-us/dynamics365/unified-operations/dev-itpro/dev-tools/manage-runtime-packages>.

After successfully upgrading the “dox42” package, the next step is to configure D365 FO to work with the dox42 Server.

12 Support

Should you have any questions, please do not hesitate to contact support@dox42.com. We are happy to help you!

Good luck with dox42!

Your dox42 Team