



Documentation:  
**Core - Connect**

Document version: 23.0.9

Date: 12/04/2024

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# 1 Introduction

Welcome to the official Connect module manual.

The Dynavision Connect Module includes a number of smaller features that are used by a lot of different Dynavision apps. To make this generic and available on the different modules these features are grouped in one Connect module.

These features include:

- Sales price simulation (linked to Advanced pricing module),
- Print Node,
- FTP,
- Validation Rules,
- Queue monitor
- Webquest framework,
- Execute object,
- Message Framework & Rulesets,
- Power App Connect,
- Extension Discount Cash (Payment discount),
- Text Blocks,
- Filter items by attribute, and
- Mail framework.

## 2 Installation

The Dynavision Connect app will automatically be installed when installing a Dynavision app who has dependencies on this Connect module.

Upon installation of the Dynavision Core-Connect application, a new permission set, **ESCA\_DYN\_READ\_ALL**, will be assigned to all (non-blocked) users.

*This permission set will include a view permission for the other installed Dynavision apps.*

If the user has permission sets without company name, the Dynavision permission set will be added for all companies for the user. If the user has permission sets with company name, the Dynavision permission set will be added for those companies only.

The assignation of these permission sets can be manually executed, using the action **Add to All Users** on the page **Permission Sets**.

## 3 Sales Price Simulation

The Sales Price Simulation functionality is related to the **Dynavision Advanced Pricing** module (see *Dynavision Advanced Pricing manual*).

In the **Dynavision Advanced Pricing module** a number of functionalities are added to the sales price list and it is made possible to choose a hierarchical price calculation method instead of the standard lowest price calculation method.

There are also a number of new discount options added that can be used in the price lists and sales documents (e.g. *amount per quantity*)

To have an insight into which price will be offered to a particular customer, for a specific item, on a particular date, the Sales Price Simulation function is implemented.

This simulation will list, based on filters, all prices that are retrieved and which price will be used.

*This functionality was designed primarily to have an overview of which prices/discounts were applied and for testing purposes.*

### 3.1 Run the simulation

Choose the search icon, enter **Sales Price Simulation**, and then choose the related link.

#### 1. Customer Setup Tab

##### a. Customer No.

Specifies the customer No. for which the price will be simulated.

##### b. Customer Name

The Name of the selected customer will be displayed in this field.

##### c. Order Date

Indicates the order date that will be used for simulating the price.

##### d. Calculate Margin

*Only visible when advanced pricing is installed.*

Indicates if the margin must be calculated for the simulated lines.

#### 2. Asset Type

Specifies the type for which the price simulation will be performed. The options types that can be used in the simulation are: G/L Account, Item and resource.

*The Asset Types Fixed Asset and Charge (Item) cannot be used in the simulation.*

##### a. G/L Account Information Tab

*When the asset type G/L Account is selected, this tab will become available.*

##### i. G/L Account No.

Specify the G/L Account for which the simulation needs to be performed.

##### ii. G/L Account Name

The Account Name of the selected G/L Account No. will be displayed.

##### iii. Quantity

The quantity for which the simulation needs to be performed.

##### iv. Unit of Measure Code

The Unit of Measure Code that has to be used to calculate the simulated price.

**b. Item information Tab**

*When the asset type Item is selected, this tab will become available.*

**i. Item No.**

Specify the Item Number for which the simulation needs to be performed.

**ii. Item Description**

The description of the selected item will be displayed.

**iii. Quantity**

The quantity of the item that needs to be taken into account when calculating the simulated price.

**iv. Unit of Measure Code**

The Item Unit of Measure Code that will be used to calculate the simulated price.

**v. Variant Code**

In case the selected item has variants, an Item Variant can be chosen to use when performing the simulation.

**vi. Allow Blocked Item**

If enabled, the simulation can also be performed for blocked items

**vii. Item Discount Group**

The Item Discount Group of the selected item will be displayed in this field

**c. Resource Information Tab**

*When the asset type Resource is selected, this tab will become available.*

**i. Resource No.**

Specify the Resource Number for which the simulation needs to be performed.

**ii. Resource Name**

The name of the selected resource will be displayed.

**iii. Quantity**

The quantity that needs to be taken into account when calculating the simulated price.

**iv. Unit of Measure Code**

The Resource Unit of Measure Code that will be used to calculate the simulated price.

3. After entering the parameters that are needed, the simulation can be run. Choose the action **Price Simulation** in the Action bar. *This action will execute the light version of the price simulation.*

4. In the **Price information Tab** the Unit price and invoicing unit price will be shown that will be used for the selected parameters. If there is a discount found for the selected parameters, this will also be shown in the fields.

The unit cost, the total amount, the VAT % and the amount incl. VAT are also noted.

**a. Simulated Sale** will show how the line would look on a sales document when the same parameters are added.

*If the action **Price Simulation (extensive)** is chosen, The page will also show the prices that were taken into account when determining the sales price and the discounts that were found and chosen.*

## 3.2 Example

Start a new simulation.

1.

| Price information    |        |                 |          |                  |          | Show less             |
|----------------------|--------|-----------------|----------|------------------|----------|-----------------------|
| Unit Price           | 50.00  | Discount %      | 5        | VAT %            | 25       |                       |
| Unit Discount Amount | 2.50   | Discount Amount | 62.50    | Amount incl. VAT | 1,484.38 |                       |
| Unit Cost            | 506.60 | Amount          | 1,187.50 |                  |          | Show Sales Simulation |

Prices | New Line | Delete Line

2.

| App... | Price List Code ↑ | Product Type | Product No. (custom) | Description | Unit of Measure Code (custom) | Minimum Quantity | Defines        | Unit Price | Starting Date | Ending Date | Variant Code (custom) | Cost Factor | Allow Line Disc.                    | Line Discount % | Allow Inv. Disc.                    |
|--------|-------------------|--------------|----------------------|-------------|-------------------------------|------------------|----------------|------------|---------------|-------------|-----------------------|-------------|-------------------------------------|-----------------|-------------------------------------|
| →      | S00001            | Item         | 1896-S               | ATHENS Desk | PCS                           | 20               | Price & Dis... | 50.00      |               |             |                       | 0.00        | <input checked="" type="checkbox"/> | 5.00            | <input checked="" type="checkbox"/> |

Discounts | New Line | Delete Line

3.

| App... | Price List Code ↑ | Product Type | Product No. (custom) | Description | Unit of Measure Code (custom) | Minimum Quantity | Defines        | Unit Price | Starting Date | Ending Date | Variant Code (custom) | Cost Factor | Allow Line Disc.                    | Line Discount % | Allow Inv. Disc.                    |
|--------|-------------------|--------------|----------------------|-------------|-------------------------------|------------------|----------------|------------|---------------|-------------|-----------------------|-------------|-------------------------------------|-----------------|-------------------------------------|
| →      | S00001            | Item         | 1896-S               | ATHENS Desk | PCS                           | 20               | Price & Dis... | 50.00      |               |             |                       | 0.00        | <input checked="" type="checkbox"/> | 5.00            | <input checked="" type="checkbox"/> |

In this screenshot there are different zones:

- 1. Price Information:** This contains the most important information about the price and discount.
- 2. Prices:** This contains the Price list line that was applied as the price on the sales line.
- 3. Discounts:** This contains the Price list line that was applied as the discount on the sales line.
- 4. Simulated Price Info:** This is a factbox, containing +- the same information as part 1.
- 5. Simulated Sale:** This contains the simulated Temporary Sales Line. You can use this part to inspect other values on the sales line if required.

If no price is found, standard Business Central takes the price on the item card (if an item is chosen as type). The user will get a notification and the price list line tab is not visible on the page. Only the Sales line tab will be visible.

## 4 Payment Discount

The standard operation for processing the payment discount has been expanded to include following functionalities:

- Check if the VAT applies to the payment discount or not.
- The ability to specify the items, resources or general ledger accounts that should be excluded from the calculation of the payment discount.

### 4.1 Payment discount excl. VAT

Choose the search icon, enter **General Ledger Setup**, and then choose the related link. On the page, the option **Pmt. Disc. Excl. VAT** is added, which specifies if the payment discount is calculated based on amounts including or excluding VAT (*applies in Belgium*).

Business Centrals standard operation will also by default charge the VAT tolerance. The calculation will cap the payment discount percentage at this VAT tolerance percentage, which can lead to confusing situations.

*E.g.: payment discount = 5%; VAT tolerance percentage = 2. The payment reduction will be capped at 2% without notifying the users.*

To prevent these situations, an additional option is provided: **Limit Pmt. Disc. at VAT Tolerance**.

*This setting will automatically be enabled when **Pmt. Disc. Excl. VAT** is enabled but it can still be disabled. If disabled, the standard Business Central calculation will be applied, and it can result in VAT variances.*

When this setting is enabled, it will prevent the payment discount from exceeding the maximum VAT Tolerance %.

This happens at different levels:

**1. In the **Payment Terms** page:**

When entering a percentage in the **Discount %** column on the **Payment Terms page**, it will be validated. If the option **Limit Pmt. Disc. at VAT** is enabled in the **General Ledger Setup** page, the user will be notified if the entered value in the **Discount %** is higher than the set VAT tolerance Percentage (*also set up in the **General Ledger Setup page***).

**2. On a **Purchase/Sales document**:**

If the option **Limit Pmt. Disc. at VAT** is enabled in the **General Ledger Setup** page, and there is a payment discount with a higher percentage than the VAT tolerance percentage (*also set in the **General Ledger Setup page***), a notification will displayed and the payment discount percentage will be set to the maximum VAT tolerance percentage.



## 4.2 No payment Discount option VAT Posting

By default, Business Central applies the payment discount to all lines of the document, no lines are excluded and there is no way in which to select the lines that should not be included.

To exclude certain lines in the calculation of the payment discount, in the Dynavision Connect module a functionality is added.

This exclusion can be set in three levels:

The settings can be set on 3 levels:

### 1. In the **VAT Product Posting Groups**

Choose the search icon, enter **VAT Product Posting Groups**, and then choose the related link. On this page it is possible to indicate for which VAT Product posting group the payment discount should not be applied.

*Example given: for Reusable Packaging items.*

### 2. **Item / Resource / General Ledger Account**

On the Item, Resource and General Ledger account, the setting **No payment Discount** is also added.

If the payment discount is excluded from a certain VAT Product Posting Group, and e.g. an item is created and this posting group is assigned, the setting will be taken over and the setting **No Payment Discount** on the **Item card** will also be enabled. This can always be edited by the user.

### 3. On the **lines** of a **document**

In the lines of a document, the setting **No Payment Discount** is also available. If this column is not visible, it can be added through **personalization**. This makes it possible for the user to exclude certain lines or to overwrite the settings from the Item, Resource or G/L account for the line.

## 4.3 Technical background

The posting process calculates the payment discount and groups the lines according to the VAT identifier of the line.

In order to have a breakdown with and without payment discount, an additional VAT identifier is used, **VAT Identifier (No Payment Discount)**.

This identifier is used in the corresponding lines to keep the lines without payment discount separately.

This additional identifier can be configured in the **VAT Posting Setup** page.

There will automatically be a suggestion for the code. This is the default VAT Identifier + \*.

This Identifier can be modified if needed.

## 5 Validation Rules

It is possible to configure validation rules, to make sure that values for certain fields are conform certain requirements, *e.g. the field value may not be empty, the field value should be 12 digits, etc.*

### 5.1 Setup the possible Validation Rules

1. Choose the search icon, enter **Validation Rules**, and then choose the related link.
2. Add lines for the possible Validation Rules that can be used to validate data in fields.
3. Specify the information on the lines.
  - a. **Code**  
Specifies the code of the validation rule.
  - b. **Description**  
Specifies the description of the validation rule.
  - c. **Condition**  
Specifies the condition used to validate the value.  
The options are:
    - i. Must not be empty,
    - ii. Must be empty,
    - iii. Equals,
    - iv. Does not equal,
    - v. Is greater than,
    - vi. Is greater than or equal to,
    - vii. Is less than,
    - viii. Is less than or equal to,
    - ix. Begins with,
    - x. Does not begin with,
    - xi. Ends with,
    - xii. Does not end with,
    - xiii. Contains,
    - xiv. Does not contain, and
    - xv. Regex match.

**d. Value**

Specifies the value to compare the values with. This is based on the selected condition.

## 6 PrintNode

### 6.1 Configuration customer PrintNode API

For using the printnode integration a printnode account with subscription is needed. More info can be found on [www.printnode.com](http://www.printnode.com).

The PrintNode client must be installed on the print server of the customer, in the network of the customer. Using the online tool of PrintNode, printers can be defined which can be accessed to print documents from Business Central.

### 6.2 PrintNode Setup

1. Choose the search icon, enter **printNode Setup**, and then choose the related link.
2. On the page that opens, fill in the fields in order to set up PrintNode.
  - a. **API Key**  
The API key that has been generated for the customer PrintNode account.
  - b. **Base URL**  
The Base URL to the printnode API. Choosing action **Apply Default Settings** will fill in this field.
  - c. **Default Paper Width (mm)**  
Specifies the default Paper Width (mm) for printers with unknown paper types.
  - d. **Default Paper Height (mm)**  
Specifies the default Paper Height (mm) for printers with unknown paper types.
3. Choose the action **Test Connection** to verify if the API Key of the customer and the Base URL are entered correctly.
4. Choose the action **PrintNode Printers** to get an overview of the printers that are available on the PrintNode API. On this page, some settings can be changed for the printers.
  - a. Choose action **Get Printers** to get the PrintNode printers from the PrintNode API. This action will renew the list of printers and can be used when a new printer is added or when a certain printer is not visible in the list.
  - b. The settings that can be edited are:
    - i. the paper type;
    - ii. in case custom paper type is checked on the line, the dimensions can be changed;
    - iii. Landscape can be checked (or unchecked); and
    - iv. Fit to page can be checked (or unchecked).

## 6.3 Printer Selections

When the printers are defined in the PrintNode printers, they have to be added to the printer settings in order to use them to print.

1. Choose the search icon, enter **Printer Selections**, and then choose the related link.
2. On the page that opens, add the printers that need to be selected when printing certain reports. Choose action **New** to enter a new selection.
  - a. **User ID**  
Specifies the ID of the user for whom the permissions are defined.  
If no User ID is specified, the specific printer will be used/proposed in the printer selection screen when printing the selected report by any user.
  - b. **Report ID**  
Select the report that will be printed by the selected printer. If no report ID is specified, the printer will be set/proposed in the printer selection screen for all tasks that this user prints.
  - c. **Report Caption**  
The Caption of the selected report will be displayed in this field.
  - d. **Printer Name**  
Select the printer that will be used to print the selected report.

## 6.4 Printer management

The **Printer management** page can be accessed in two ways.

### Option 1

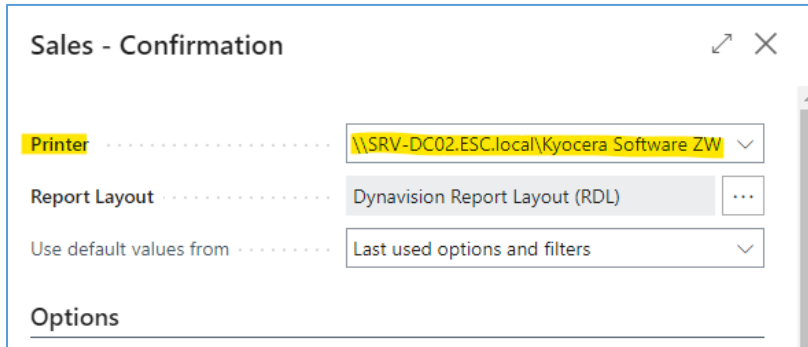
On the **Printer Selection** page, choose the action **Printer Management**.

### Option 2:

Choose the search icon, enter **Printer Management**, and then choose the related link.  
On this page it is possible to edit printer settings, set default printers (for all users), add an email printer and add a (or all) Universal Print printers by using the corresponding actions.

## 6.5 Usage

When choosing the action **Print** or choosing an action that prints a layout, if the printer selection has been set up for the report that is printed, the printer will be proposed in the **Printer field** in the screen that opens to add filters and options to print the layout. This selection can be overwritten in this screen.



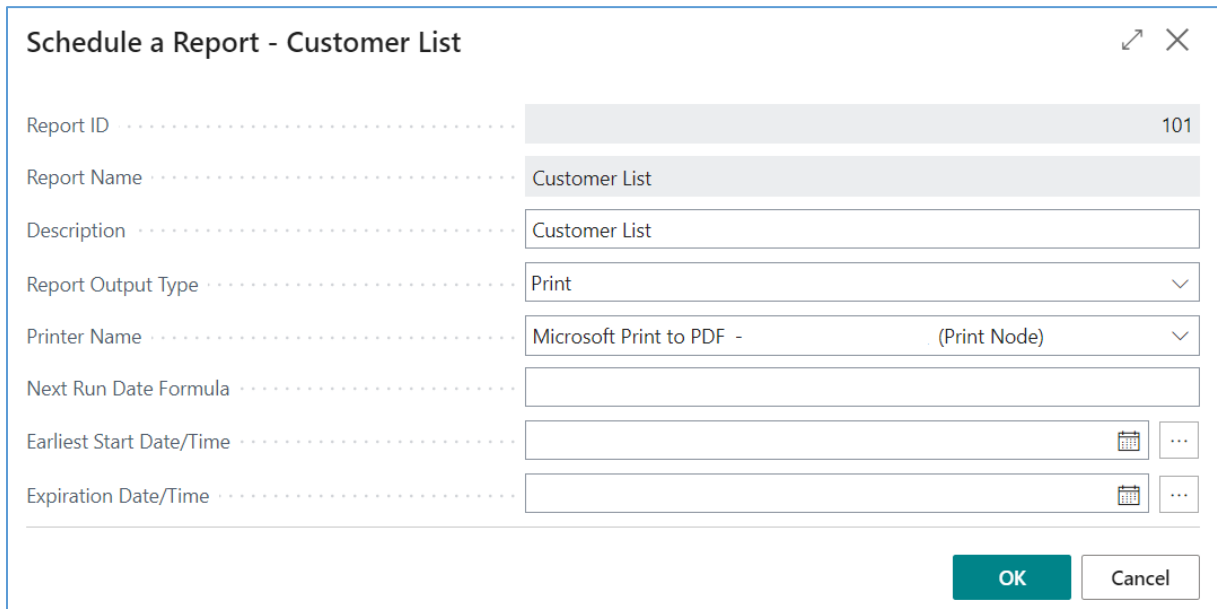
The screenshot shows a dialog box titled "Sales - Confirmation". It contains the following fields:

- Printer:** A dropdown menu with the selected value "\\SRV-DC02.ESC.local\Kyocera Software ZW".
- Report Layout:** A dropdown menu with the selected value "Dynavision Report Layout (RDL)".
- Use default values from:** A dropdown menu with the selected value "Last used options and filters".
- Options:** A section header for additional settings.

## 6.6 Printnode for background printing

When Printnode has been configured, when scheduling a report to be printed on the background, the standard Report Output Type and Printer Name are replaced by Dynavision fields, that will fill the actual fields in the background.

When choosing Print in the field **Printer Output Type**, the set up Printnode printers are available to select in the **Printer Name** field.



The screenshot shows a dialog box titled "Schedule a Report - Customer List". It contains the following fields:

- Report ID:** 101
- Report Name:** Customer List
- Description:** Customer List
- Report Output Type:** Print
- Printer Name:** Microsoft Print to PDF - (Print Node)
- Next Run Date Formula:** (Empty field)
- Earliest Start Date/Time:** (Empty field with a calendar icon and a dropdown menu)
- Expiration Date/Time:** (Empty field with a calendar icon and a dropdown menu)

At the bottom right, there are two buttons: **OK** and **Cancel**.

## 7 Attribute Printing Sets (APS)

An Attribute Printing Set can be used to print extra information (text or picture) in the Header, Line Header, Line or Footer of a Report Layout. An Attribute Printing Set consists out of one or multiple lines. Each line is linked to an Item Attribute with a specific value or value filter. When the source document contains an item matching the Attribute and Value (filter) combination, the line will be evaluated and the information will be printed.

### 7.1 Configuration

#### 7.1.1 Attribute Printing Set Table Mappings

When the Dynavision Connect app is installed, some table relationships will be created automatically. These relationships are necessary to establish the connection between different tables, in order to display the desired values on the layouts.

*The default relationships created during installation are mainly to display fields from the Customer and Item Cards.*

Since there can be multiple table mappings for a From/To Table combination, the APS system needs to know which table mapping should be used for a specific From/To Table combination. This is configured in the **Attribute Printing Set Table Mappings**.

1. Choose the search icon, enter **Attribute Printing Set Table Mappings**, and then choose the related link.
2. Choose the action **New** to add a new mapping to the list or edit an existing mapping if needed.
3. Fill in the necessary fields in order for the mapping to be complete.
  - a. **From Table No.**  
Specifies the table on which the source report's Document or Line data item is based. This table contains the field that needs to be mapped.
  - b. **From Table Caption**  
The Caption of the selected From Table No. will be displayed.
  - c. **To Table No.**  
Specifies the table for which the Printing set wants to retrieve data. This is the table that has the information that needs to be mapped in the field in the From Table.
  - d. **To Table Caption**  
The Caption of the selected To Table No. will be displayed.
  - e. **Table Mapping Code**  
Specifies the Table Mapping that will be used when the data needs to be retrieved from the To Table No. based on the From Table No.  
*E.g. T36-T18 will be used when a report, based on table 36 (Sales Header), needs to fetch information from table 18 (Customer).*
  - f. **Table Mapping Description**  
The Description of the chosen Table Mapping Code is displayed.

## 7.1.2 Attribute Printing Sets

The Attribute Printing Sets list provides an overview of the available Attribute Printing Sets in the system.

1. Choose the search icon, enter **Attribute Printing Sets**, and then choose the related link.
2. On the page that opens, choose the action **New** to create a new APS, or select an APS that needs to be edited. It is also possible to choose the action **Copy To New** to make a copy of the selected APS in the list. This APS can then be used as a base and can be edited to fit the need of the user.
3. On the **Attribute Printing Set**, set the necessary fields in order to display the wanted information on the layout when this APS is selected to be used on the layout through the **Report Layout Setup**.

**a. Code**

Specifies the code that is used to identify the Attribute Printing Set.

**b. Description**

Specifies the description that is used to identify the Attribute Printing Set.

**c. Lines**

In the Lines, the different attributes are specified that need to be printed, how they need to be printed and optionally in which field the information needs to be retrieved from the value table if the item matches the item attribute on the line.

*Remark: a maximum of 5 lines can be defined for performance reasons and to make sure that the reports are not overpopulated by information.*

*Either a value for the Value Field No., Display As or the Picture fields must be defined.*

**i. Item Attribute Name**

Specifies the Item Attribute that needs to be checked in order to print the value specified in the APS.

**ii. Item Attribute Value Filter**

Specifies the value filter of the Item Attribute. A value can be selected from a list of used values in the Item Attribute field on Items. It is also possible to apply filters according to the logic of Standard BC. *E.g. <>""; the APS will be executed only when the Item Attribute Value is different from empty.*

**iii. Location**

Specifies the location where the values need to be displayed on the layout.

The options are:

- Header (*Limited to one*),
- Line Header (*Limited to one*),
- Line, and
- Footer.

**iv. Display As**

A text Constant can be selected that will be printed on the layout if the APS is triggered. The %1 placeholder can be used to embed the value field in this Text Constant.

*It is not possible to select a Text Constant if a picture is chosen to be displayed on the current line.*

**v. Display As Preview**

A preview of the selection in the **Display As** column will be displayed.

**vi. Value Table No.**

Specifies the table from which the data should be retrieved and displayed when there are Items that match the Item Attributes on the APS.

**vii. Value Table Caption**

The Caption of the selected Value Table No. will be displayed.

**viii. Value Field No.**

Specifies the field of the Value Table No. that contains the data that should be retrieved and displayed when the APS is triggered.

**ix. Value Field Caption**

The Caption of the selected Value Field No. will be displayed.

**x. Value Field Filter**

Specifies an extra filter that can be set on the Value Field. If the calculated value does not match the filter value, the line will be skipped.

**xi. Picture Name**

Displays the name of the picture that will be displayed.

If no Display As is chosen, and a picture needs to be displayed, select the line and choose the action **Picture**, and then the action **Import Picture**.

*The picture can also be Exported or Deleted.*

**xii. Picture Size**

Specifies the size of the picture that will be displayed.

The options are:

- Small,
- Medium, and
- Large.

The lines of the APS can be moved by using the actions **Move Up** or **Move Down**.

### 7.1.3 Assigning the APS in the Report Layout

The Attribute Printing Set can be assigned to a Layout through the **Report Layout Setup**.

1. Choose the search icon, enter **Report Layout Setup**, and then choose the related link.
2. Choose the action **New** to set up a new Report Layout, or select a report layout that needs to be edited. (*See the manual of the Dynavision Layouts for how to set up the Report Layouts.*)
3. In the **Module Options Tab** specify the Attribute Printing Set in the **Attribute Printing Set Code** field.
4. If this report is printed, the information will be printed if the item satisfies the set attribute conditions in the APS.



## 7.1.4 Specifying the APS in the Report Request Page

When executing a report that supports APS, the request page allows the user to overrule the APS code in the **Options Tab** in the **Attribute Printing Set Code** field.

### 7.1.4.1 Reports where APS can be used

- Purchase Quote
- Purchase Order
- Posted Purchase Receipt
- Purchase Return Order
- Sales Quote
- Sales Order
- Sales Invoice
- Sales Credit Memo
- Sales Return Order
- Sales Shipment
- Service Quote
- Service Order
- Service Invoice
- Service Credit Memo
- Service Shipments
- Shop Label (Advanced Pricing) - uses only 1 logo from Header

## 7.2 Example

The system contains items that are Fairtrade or Organic. Following needs to be displayed on the layout in the following situations:

1. An organic label should be displayed for each item that has an Item Attribute Organic, value YES. This means that an image needs to be displayed on the item line on the sales document.
2. Every time an organic item is sold, the header must contain the indication that the company is certified to sell these organic items.
3. When a fairtrade item is sold, the line of the item must mention that this item is a fairtrade item.
4. Every time a fairtrade item is sold, the footer must contain the fairtrade label as an image.

Following Attribute Printing Set is defined for the use case:

| Item Attribute Name | Item Attribute Value Filter | Location | Display As | Display As Preview                   | Value Table No. | Value Table Caption | Value Field No. | Value Field Caption | Value Field Filter | Picture Name                        | Picture Size |
|---------------------|-----------------------------|----------|------------|--------------------------------------|-----------------|---------------------|-----------------|---------------------|--------------------|-------------------------------------|--------------|
| BIO                 | JA                          | Line     |            |                                      |                 |                     |                 |                     |                    | eu_biolabel_1.png                   | Small        |
| Fairtrade           | JA                          | Footer   |            |                                      |                 |                     |                 |                     |                    | FM_FSI_transparent_570x270_singl... | Large        |
| Fairtrade           | JA                          | Line     | FAIRTRADE  | Text constant data FAIRTRADE for...  | 27              | Item                | 3               | Description         |                    | -                                   |              |
| BIO                 | JA                          | Header   | BIO CERT   | Text constant data BIO CERT for E... | 79              | Company Information | 2               | Name                |                    | -                                   |              |

A sales order is created for the customer containing a bio item, Figuero 4, a fairtrade item, Figuero 12 and a normal item.

The result when the sales confirmation is printed using the set up Attribute Printing Set is:

|   |                             |   |                |                                    |     |                   |
|---|-----------------------------|---|----------------|------------------------------------|-----|-------------------|
| <b>DYNAVISION</b>                                   |                             | Dynavision<br>Teststraat 25<br>9000 GENT<br>bnp - BE82 0016 3949 1168<br>EORI No. BE987654321321654 |                | teststraat 5<br>9810 EKE<br>België |     |                   |
| <b>Dynavision is certified to sell Bio products</b> |                             |   |                |                                    |     |                   |
| Customer No.  | Document date               | Shipment Date   | Your reference | Order No.                          |     |                   |
| K000007   | 05/07/22                    |   |                | CT00011                            |     |                   |
| No.   | Description                 | Quantity  | Unit           | Unit Price                         | VAT | Total             |
| ART00077  | Chateau petrus 1993         | 1   | Fles           | € 2.500,00                         | 21% | € 2.500,00        |
| 140124  | Figuero 4                   | 1   | Fles           | € 13,75                            | 21% | € 13,75           |
| 140125  | Figuero 12                  | 1   | Fles           | € 13,75                            | 21% | € 13,75           |
|   | <b>FAIRTRADE Figuero 12</b> |   |                |                                    |     |                   |
| VAT %   | VAT Base                    | VAT Amount  |                | Subtotal                           |     | € 2.527,50        |
| 21%   | € 2.527,50                  | € 530,78  |                | VAT Amount                         |     | € 530,78          |
|   |                             |   |                | <b>Total inclusive VAT</b>         |     | <b>€ 3.058,28</b> |



## 8 FTP

The Dynavision Connect application provides an FTP framework. This framework allows to send or receive files using (S)FTP. This can be done manually, but also using code (e.g. *exporting the store labels as XML and send it to the Digilabels in the shop*)

### 8.1 FTP Setup

Choose the search icon, enter **FTP Setup**, and then choose the related link.

On the page that opens, add a line for each FTP URL that needs to be supported in order to send and/or receive files.

Choose the action **New** to enter a new FTP connection or use the action **Edit List** to update an existing connection.

**1. Code**

The code that is used to identify the FTP connection.

**2. FTP type**

The FTP type that is used to send and/or receive files.

The options are available:

- a. FTP, and
- b. SFTP (secure).

**3. FTP Url**

The path that is used to find the FTP server. This path is needed in order to be able to send/receive files. This is the URL of the file or directory that needs to be downloaded or accessed.

**4. File Filter**

Enter a filter that has to be used to filter files that are received. Any file matching this filter will be downloaded from the directory indicated in the field **FTP Url**.

Use **?** for any letter and **\*** for 0 or more letters. (E.g. *\*.PDF*)

It is also possible to download \*.ZIP files. These files will be automatically be unzipped.

**5. FTP Request type**

Specifies which type of request has to be executed. This is set up from the point of view of the user's computer.

The following options are available

- a. **Download file**: download files from the FTP server,
- b. **Download & delete file**: download the files from the FTP server and delete the downloaded files,
- c. **Upload file**: upload files to the FTP server,
- d. **Move file**: Moves a file from one specified location to another specified location. 2 folders need to be set up in order to use this Request Type.  
*When executing the move request manually by choosing the action **Send new request to FTP server** when the line with the move type is selected, a subfolder+filename for the source and target destination needs to be specified in the screen.*

**6. Direction**

Will be automatically filled in, depending on the chosen FTP Request Type. This will either be Import or Export.

**7. Username & change password**

A username and password will have to be inserted to use the FTP-server functionality. This will be needed in order to send and receive files.

**8.** In order to manually send a request to the set up FTP server on the selected line, choose the action **Send new request to FTP server** in the Action bar.

Depending on the FTP Request Type a file will have to be selected that needs to be downloaded or a file that needs to be uploaded using the actions in the Line tab.

By choosing action **Send to FTP**, an FTP request can be send to the specified FTP Url.

- a. All requests are logged and can be viewed by choosing the action **Show Requests** in the Action bar of the **FTP Setup** page

## 8.2 Usage

The set up FTP connections can be used in setup pages or functions that require an FTP connection to function. This can be done *example given* in the TOMRA Setup when choosing FTP as the type of the TOMRA voucher that is used.

## 9 Job Queue Monitor

### 9.1 Keep JobQueue entry alive

It is made possible to add a job to the job queue which will be run periodically. To make this possible, a codeunit is created (*71096666 - ESCA Job Queue Monitor*). This can be set as the **Object Type to Run** in the **Job Queue Entry Card** and chosen in the **Object ID to run** field. Choose the search icon, enter **Job Queue Entries**, and then choose the related link. Choose the entry that needs to be periodically run.

**1. Object Type to Run**

Select Codeunit in this field.

**2. Object ID to Run**

Select a Codeunit object to run, in case of the ESCA Job Queue Monitor, select 71096666.

**3. No. of Minutes between Runs**

Specifies the minimum number of minutes that are to elapse between runs of a job queue entry. The value cannot be less than one minute. This field only has meaning if the job queue entry is set to be a recurring job. If you use a no. of minutes between runs, the date formula setting is cleared.

*Example given: when entering 2 in this field, every 2 minutes the codeunit will go over the recurring task queue posts and restart the set posts.*

**4. Inactivity Timeout Period**

Specifies the number of minutes that pass before a recurring job that has the status On Hold With Inactivity Timeout is automatically restated. The value cannot be less than five minutes.

5. In the **Error Handling Tab** the settings can be defined that need to be executed when an error occurs.
  - a. **Restart on Error**  
If enabled, the job queue entry will restart when the Error status is reached.
  - b. **Send E-mail on Error**  
If enabled, an e-mail will be send when the job queue entry reaches the Error status.
  - c. **E-mail on Error**  
E-mail address to which e-mails will be send when the Error status is reached. The e-mail send from the Job Queue uses the email account that has been set as the default in the Email Accounts page.
  - d. **Maximum No. of Attempts to Restart**  
Specifies how many times the job queue monitor will try to restart a job queue task until successfully processed. (0 = infinite)

## 10Mail framework

To set up certain reports via the job queue to be generated and mailed to chosen individuals. This functionality thus provides the ability to generate reports conditionally by report recipient, e.g. for all salespeople individually for each salesperson a report of the sales he/she accomplished last month.

### 10.1 Setup and use

It is possible to schedule any report and send it through e-mail to recipients. Scheduling the report generation is done by using the action **Send to...** and then choosing **Schedule**.

In the screen that opens, it is possible to specify the starting date in the field **Earliest Start Date/Time**, the expiration date in the field **Expiration Date/Time** and the frequency of report generation using a date formula in the field **Next Run Date Formula**.

Through the job queue entry Card the Report Recipients can be set up.

1. Choose the search icon, enter **Job Queue Entries**, and then choose the related link.
2. Select the Job Queue Entry of the report for which the mailing has to be set up and choose the action **Report Delivery** that can be found by choosing **Related, Job Queue**.

The page can also be found by opening the **Job Queue Entry Card** and selecting the value in the field **Report Recipients**.

3. In the **Job Queue Report Delivery Card** page that opens, mail delivery settings can be specified.
4. Specify the **General** settings.
  - a. **Execute Report Per**  
Specifies if the report is executed only once or once per recipient. There are 6 options:
    - i. Salesperson/purchaser,
    - ii. Customer,

- iii. Vendor,
- iv. Contact,
- v. User, and
- vi. Employee.

Remark: *Not every option can be used for every report; it depends on the type of report that needs to be delivered.*

- b. Filter Table No.**  
Specifies the table from where the report information needs to be fetched.
  - c. Filter Table**  
The caption of the selected table will be displayed.
  - d. Filter Field No.**  
Specifies the field of the selected filter table, on which the filtering/grouping should be done in order to generate the report. *E.g. Execute Report Per Vendor, Filter Table Purchase header, Filter Field Buy-from Vendor No. this means that based on the buy-from vendor No. that matches the vendor number of the recipient the report will be filtered and generated. The report will only contain information for this buy-from vendor.*
  - e. Filter Field**  
The caption of the selected field will be displayed.
  - f. Email Settings**  
Specifies the Word template(s) per language used to compose the email body. The Word template(s) can be added by selecting the value in this field/ In the screen that opens, a template can be added by choosing **New** and selecting a template in the **Word Template Code** field. Select the **Language Name** for which the template applies.  
Checkbox **Default** can be selected to specify that this is the default language if no setting was found for a specific language.
  - g. Email Scenario**  
Specifies the email scenario used to send the email.
  - h. Enabled**  
Specifies if the report delivery settings will be applied or not.
5. Specify the **Recipients**. Each possible recipient for the report should be added in the lines. The report will be generated and send as many times as there are recipients listed in the Recipients table.
- a. Type**  
Specifies the type of recipient. The same options as in the field **Execute Report Per** are available.  
*It is always possible to specify an additional **Employee** or **User** who will also be included in the "TO", the "CC" or the "BCC" for each mail sent.*
  - b. Code**  
Specifies the code or name of the recipient. The list from which the selection can be made will be filtered based on the chosen type of the line.
  - c. Name**  
The name of the recipient will be displayed in this column.
  - d. Job Responsibility Code**  
Specifies the job responsibility code. This can be used in combination with type **Contact** to send emails to all contacts with this job responsibility code.

**e. E-mail**

The e-mail address of the selected recipient will be shown. It is also possible to leave the **Type** field blank and just insert an e-mail address of a recipient who needs to receive the mail.

*If the Type of the recipient is different than the **Execute Report Per** field, No separate report is generated for this recipient and no separate mail is sent. This recipient will be included in all send mails.*

**f. Email Recipient Type**

Specifies how the recipient should receive the email.

The options are:

- i. To,
- ii. CC, and
- iii. BCC.

### 10.1.1 Remarks

- If no report is generated for a particular recipient, no email is sent to that recipient.
- This only works for recurring reports.
- It is also possible to subscribe to a particular report through e.g. the list of Vendors, selecting the vendor that needs to be added and choose the action **Job Queue Reports**, that can be found by choosing **Related**.  
Check **Subscribe** for the report(s) the vendor should receive.  
The vendor is then included in the list of recipients and will also receive the report if results have been found and a report can be generated.

## 10.2 Rich Text Editor for composing email body

On the Message Type Card, when the **Communication Method** is set to **Email**, it is possible to use a **Rich Text Editor** to define the **email body**.

This makes it possible to add markup to the email body and insert images.

This information will be copied over when the email is set up for a document using this Message Type. On that page, the markup can be edited as well, using a Rich Text Editor.

## 11 Webquest framework

The Connect app includes a webrequest framework for technical development. This log will contain all send requests with their response code and the Call URL that was used. This makes it possible to trace these requests and see what went wrong if needed.

Choose the search icon, enter **Web Request Log List**, and then choose the related link. The requests in the overview can be sorted on the different columns.

In order to export selected log entries to a JSON file, choose action **Export Logs** which can be found by choosing **Actions** in the actions bar.

It is possible to resend a message by selecting the line of the message that needs to be resend and choosing the action **Send Message** which can be found by choosing **Actions** in the actions bar.

There is a retention policy for the logged date. This is set to 3 months. This policy can be found by choosing the action **Retention Policy** which can be found by choosing **Related** in the actions bar.

In case the retention policy has not run as expected, and expired entries are still visible in the log, the retention policy can be triggered manually to delete the expired entries. This can be done by choosing **Apply Manually** on the **Retention Policy** page. The retention policy can only be edited by an administrator.

## 12 Run object

In the Connect module, a functionality is added to be able to execute objects trough a page. This makes it possible to find objects more easily and run the task to be able to work efficiently without searching for pages.

1. Choose the search icon, enter **Run Object**, and then choose the related link.
2. In the page that opens, choose **New** to add a new object that can be run or choose **Edit List** to edit an existing object.
  - a. **Object Type**  
Specifies the type of the object.  
The options are:
    - i. Table,
    - ii. Report,
    - iii. Codeunit,
    - iv. XMLPort,
    - v. Page, and
    - vi. Query.
  - b. **Object ID**  
The Object ID can be selected that will be run. The list from which can be chosen is filtered based on the chosen **Object Type**.
  - c. **Object Name**  
The caption of the chosen Object ID will be displayed in this column.
  - d. **Group**  
A value can be added that is used to identify the group to which the object belongs.
  - e. **Description**  
The description for the run object.
2. After adding a line or selecting an object that needs to be run, choose action **Run** to run the object.
3. Use action **Add System Tables** to add commonly used system tables to the **Run Object** page. This makes it more easy to set up the objects in order to run.
4. Use the action **Table information** to display the **Table Information page**. *Remark: this might take a while*
5. Choose the action **Fields** to view all fields for the current table if applicable. If no table is selected, the view will show all fields of the different tables in the system.





## 13 Message Framework & Rulesets

The Dynavision Connect Module includes a **Message Framework** where message types can be set up.

This can be used for different applications, *e.g. exporting XML, sending emails, FTP requests, PTE customer customization, generating a JSON file , etc.*

A lot of functionalities within Business Central require one or more mandatory fields to be filled in before being able to continue. The **Ruleset Framework** provides a generic way of setting up these validations while also providing the ability to alter/extend these checks.

*In order to make full use of this functionality, coordination with developers is advised. In order to use the **ruleset** functionality and provide users with the ability to adjust them, a developer must foresee the following:*

- A custom ruleset event,
- A custom ruleset event implementation codeunit, and
- Custom ruleset operators (optional).

### 13.1 Message Types

1. Choose the search icon, enter **Message Types**, and then choose the related link.
2. In the page that opens, set up the message types that need to be supported by the system. Choose the action **New** to add a new type or select an existing message type and edit.
3. On the **Message Type Card** page that opens, fill in the fields needed to set up the message type.

#### a. General Tab

##### i. Code

The code that is used to identify the Message Type.

##### ii. Description

The description of the Message Type.

##### iii. Format

Specifies the format in which the message is sent/received. This can be vendor reporting, intercompany, shop labels, e-AD XML, etc. There is a number of options that can be chosen.

##### iv. Message Type

The type of message that will be send/received.

The options are:

- Requisition,
- Order,
- Receipt,
- Shipment,
- Invoice,
- Credit Memo,
- Vendor Reporting,
- Fiche 281.50,

- Shop Label, and
- E-AD Document.

**v. Direction**

Specifies if the message type supports incoming and/or outgoing messages.

**vi. Communication Method**

The communication method that will be used.

The options are:

- Default,
- Download,
- Database,
- Email,
- API, and
- FTP.

**vii. Job Queue Category Code**

Specifies the Category Code used by job queue entries processing incoming messages. The Job Queue Category Code can be selected from the Job Queue Categories list.

**viii. Test Mode**

If enabled, the message will be send in test mode.

**ix. Delete Attachment if Processed**

Id enabled, the attachment will be removed once the message has been processed.

**x. Partners**

Shows the number of partners for this message type. If the vendor/customer is mapped in this partner mapping, the message will be send to this customer/vendor when send message is chosen on the sales/purchase documents.

*If this message should be available for all customers/vendors no partners should be set.*

*The partners can be set by selecting the value in the field **Partners** of choosing the action **Partners** that can be found by choosing Message Type in the Actions bar.*

**xi. Blocked**

If enabled, the Message Type is blocked from being used in any communication.

**b. Incoming Messages Tab**

*Shown if **Direction** Incoming or Both is chosen.*

**i. Auto Process**

Specifies if incoming messages will be automatically processed. This is default enabled, but it can be useful to disable this for debugging.

**ii. File**

• **Name**

Specifies the format of the filename for the incoming message. *E.g. e-AD-%DOC. The legend for the formatting can be found when choosing the 3 points next to the field.*

- **Extension**  
Specifies the extension of the filename for the incoming message.

iii. **API**

*Shown if **Communication Method API** is chosen.*

- **URL Code**  
Specifies the API Url code for retrieving messages.
- **URL**  
The chosen URL will be displayed in this field.

iv. **FTP**

*Shown if **Communication Method FTP** is chosen.*

- **Code (Download)**  
Specifies the FTP code for downloading files. A FTP code can be selected from the FTP Setup list.  
An FTP Setup can be selected that has **FTP Request Type Download File**.
- **Path(Download)**  
A sub path can be entered to the FTP Url for downloading files.
- **Full Path (Download)**  
Shows the full FTP Url for downloading files.  
*FTP Url from FTP Setup/Subpath.*
- **Code (Move)**  
Specifies the FTP code to which downloaded files need to be moved (*e.g. to an archive location*).  
An FTP Setup can be selected that has **FTP Request Type Move File**.
- **Path (Move)**  
A sub path can be entered to the FTP Url for moving downloaded files.
- **Full Path (Move)**  
Shows the full FTP Url for moving downloaded files
- **File Name (Move)**  
Specifies the format of the new filename that will be assigned to the files after moving the downloaded files to the new location.

c. **Outgoing Messages Tab**

i. **Auto Send**

Specifies if outgoing messages are automatically sent when posting, releasing, etc. If disabled, messages will have to be send be manually.

ii. **File**

- **Name**  
Specifies the format of the filename for the outgoing message.
- **Extension**  
Specifies the extension of the filename for the outgoing message.
- **XMLPort ID**  
Specifies the XMLPort that will be used for building the

outgoing message content. An XMLPort can be selected in the filtered object list that opens when electing the field.

- **XMLPort Caption**  
The XMLPort caption of the selected XMLPort ID will be displayed in this field.
- **XML Schema**  
Specifies the XML Schema.

### iii. FTP

*Shown if **Communication Method** FTP is chosen.*

- **Code (Upload)**  
Specifies the FTP code for uploading files. A FTP code can be selected from the FTP Setup list.  
An FTP Setup can be selected that has **FTP Request Type** Upload File.
- **Path (Upload)**  
A sub path can be entered to the FTP Url for uploading files.
- **Full Path (Upload)**  
Shows the full FTP Url for downloading files.  
*FTP Url from FTP Setup/Subpath.*

### iv. Email

*Shown if **Communication Method** Email is chosen.*

- **Email**  
Specifies the email address to which the outgoing message will be sent.
- **Body**  
Specifies the text for the body of the email.
- **Scenario**  
Specifies the email scenario used to send the email. All types of documents can be chosen in the list.

### v. API

*Shown if **Communication Method** API is chosen.*

- **URL Code**  
Specifies the API Url code for sending messages.
- **URL**  
The chosen URL will be displayed in this field.

## d. Format Tab

*Shown if **Format** other than intercompany ... and PrikTik Order XML is chosen.*

### i. Format

- **Date**  
Specifies the format that will be applied on date fields.  
*E.g. <Closing><Day,2>/<Month,2>/<Year>.*
- **Time**  
Specifies the format that will be applied on time fields.
- **Price**  
Specifies the format that will be applied on price fields.
- **Quantity**  
Specifies the format that will be applied on quantity fields.

ii. Values

- **Date**  
A test date value can be selected in order to see the result of the set formatting.
- **Time**  
A test time value can be selected in order to see the result of the set formatting.
- **Price**  
A test price value can be selected in order to see the result of the set formatting.
- **Quantity**  
A test quantity value can be selected in order to see the result of the set formatting.

iii. Results

Shows the result of the formatting on the inserted test data in the values fields.

## 13.2 Partner Message Types

In the page **Partner Message Types**, which can be accessed by choosing the value in the **Partners** field of a **Message Type**, or by choosing the action **Partners** on the **Message Type Card**, the partners that need to receive the message need to be specified.

*If this message should be available for all customers/vendors no partners should be set.*

Fill in the necessary fields on the **Partner Message Types** page in order to set up the customers or vendors that need to receive the message.

1. **Message Type Code**

Specifies the Code of the Message Type for which the partners are set up.

2. **Partner Code**

Specifies the Code for the Partner. It is possible to select the value in this column to directly navigate to the **Partner Card**.

3. **Mappings**

Specifies the Mapping in text format. This allows to have an immediate overview of the customers, vendors, locations, and/or shipping agents that are mapped.

Choose the value in this column in order to open the **Partners Mapping** page. The page can also be accessed by choosing the action **Mappings**.

## 13.3 Partner Card

The Partner Card contains information about the partner that needs to receive certain messages.

This page can be accessed by choosing the Partner Code in the Partner Message Types page or by choosing the Search Icon, entering **Partners** and choosing the related link. Select the Partner on the page that opens.

- 1. Code**  
Specifies the Code of the Partner.
- 2. Name**  
Specifies the Name of the Partner.
- 3. Default Communication**  
Specifies the default communication method for all messages for this partner.
- 4. Blocked**  
Specifies if the partner is blocked from being used in any communication.
- 5. Outgoing Message**  
Specifies the information of the outgoing messages, like the Company name, the email of the partner, etc.
- 6. Mappings**  
The Mappings for the selected partner are listed in this section. It is possible to add or remove mappings.

## 13.4 Partner Mappings

Specifies the mapping for the partner that has been set up. In this page, a customer, vendor, location or shipping agent can be linked to a partner code.

- 1. Source Type**  
Specifies the type of mapping.  
The options are:
  - a. Customer,
  - b. Vendor,
  - c. Location, and
  - d. Shipping Agent.
- 2. Source Code**  
Specifies the source code of the mapping. *E.g. a vendor No.*
- 3. Source Description**  
Displays the description of the selected source of the mapping.
- 4. Partner Code**  
Specifies the partner code of the mapping.

## 13.5 Rulesets

Certain Message types sent through the Message Framework can optionally work with **Rulesets**.

These are field validations performed before the message is compiled. The validations are configurable. This way, a selection of checks can be set up to prevent certain values from being missing from a message (e.g., check that mandatory fields in an XML are filled in).

The **Rulesets** page can be accessed in two ways.

*Remark: the option is only available for certain Message Types.*

### Option 1

On the **Message Type Card**, choose **Message Type** and choose the action **Rulesets**.

### Option 2:

Choose the search icon, enter **Rulesets**, and then choose the related link.

On the page that opens, lines can be added with the rulesets that need to apply to the message type when a certain event happens.

#### 1. Event

The event that triggers the check of the ruleset. Currently only Send Message can be chosen.

#### 2. Link Code

Code that is used to identify a specific occurrence of an event. The ruleset will be applied on this Message Type when the event occurs.

#### 3. Table Caption

Source tables from which the event is triggered.

#### 4. Enabled

Specifies if the ruleset is enabled and if the check will be executed.

#### 5. Conditions

Conditions on the source table that will determine if the ruleset is triggered.

#### 6. Rules

##### a. Table Caption

The destination table that should be checked.

##### b. Table Mapping Code

The table mappings used by the system to determine the destination table record(s) based on the source table record.

*Remark: if the destination table is a setup table or the same table as the source table, the mapping is not required. In case the mapping is required, it will be marked as mandatory.*

##### c. Field Caption

The field of the destination table that should be checked.

##### d. Operator

The operator used to evaluate the field value, e.g. *Is greater than*.



**e. Value**

The value used to evaluate the field value in conjunction with the operator, of applicable, e.g. 1. Remark: the value field will be marked as mandatory when applicable.

**13.5.1 Ruleset evaluation**

When a ruleset check is implemented, the system performs the following steps when performing a check:

1. All enabled rulesets for the source record are located.
2. The conditions of the matching rulesets are evaluated.
3. All matching rulesets and their rules are checked one by one.
4. If one of the rulesets are violated, the ruleset dialog is shown.

**14 Text Blocks**

Text blocks contain the definition of which data needs to be printed and how this data should be formatted.

It is used to specify the contents to be printed in the address block regions on reports.

**14.1 Creating Text blocks**

1. Choose the search icon, enter **Text Blocks**, and then choose the related link.
2. On the page that opens, the existing Text Blocks are displayed. Choose the action **New** to create a new Text Block.
3. Fill in the necessary fields and define the lines that should be printed in the text block.
  - a. **Code**  
The code used to identify the Text Block.
  - b. **Description**  
The description of the Text Block.
  - c. **Lines**
    - i. **Field Caption**  
Specifies the field containing the source data that needs to be printed. The fields that can be selected are fields from the address table.
    - ii. **Title**  
Specifies a text constant or free text to be printed before the field value.
    - iii. **Title separator**  
Specifies the separator to be printed between the title and the field value.  
The options are:
      - New Line,
      - Space,
      - Comma,
      - Semicolon,
      - Colon,

- Dash, and
- Dash with spaces.

**iv. Field separator**

Specifies the separator to be printed after the field value. The same options as the **Title separator** are available.

**v. Preview**

Shows the resulting value based on the current setup.

4. Choose the action **Preview** to generate a preview of the configuration based on sample data. This way it is possible to check if all lines are added and formatted as needed.

## 14.2 Printing the Text block on a layout

1. Choose the search icon, enter **Report Layout Setup**, and then choose the related link.
2. On the page, in the **Addresses Tab** the field **Text Block** is added to all sections where addresses can be printed. In this field, select a text block that needs to be used to format and print the address.
3. **Remark:** *either use Text Blocks for all addresses on a layout or print all addresses without using Text Blocks.*

*Tip: **Source No.** can be used in the Text Block Card. This can be used to display either the customer no., vendor no., contact no., location code, responsibility center code based on the context of the address type source.*

## 15 Report Layout Dashboard

In order to make it more easy to work with report layouts, and to follow up which layouts are already added to Report Selections, a new functionality is added to the page **Report Layout Setup**.

This column **Report Selection Status**, displays the status of the report selection.

There are a few statuses that can be shown in this column:

**1. Configured**

This status means that the report is already configured and thus has been assigned to a Report usage in the Report Selection.

It is possible to select the link in the column, and the **Report Selection** page opens, showing the reportID selected for the usage.

**2. Other report Configured**

Indicates that another report is currently configured in the Report Selection for the report usage for which the layout is set up.

When choosing the value in the column, a message is shown. There are three options:

**a. Show**

The Report Selections page will be opened, showing the current configured report layout.

**b. Replace**

The current Report Selection will be replaced by the selected Report ID from which the action is triggered.

**c. Add**

The selected Report ID will be added to the current Report Selection for the Report usage.

After choosing the action in the message box, the action will be executed and the **Report Selection page** will open, showing the result of the chosen action.

**3. Not Configured**

Indicates that there is no configuration for the Report Selection for the type of the selected Report ID.

There are actions added on the **Report Layout Setup** page, in order to make navigation to the Report Selection page more easy.

Choose the action **Add Report Selections** to add missing report selections for the selected reports. If another report selection already exists, this selection will be replaced.

***Remark:** when the page **Report Selections – Warehouse** is opened, the **Usage** field in the header needs to be set by the user, in order to select the proper report usage option. The **Report Selection Type Warehouse** does not support the **Add Report Selection** action. The reason is that the report can be used for various kinds of documents (e.g. pick, put-away, movement,...).*

## 16 Filter items by attribute

In order to make it more efficient to filter on a common combination of item attributes, it is made possible to save these common combinations of Item Attribute filters under a particular name.

This filter can then be reused when generating different reports where filtering on item attributes is supported.

These filters can be set up in two ways.

1. The **Filter by Attributes** action on the **Items list** page.
2. Using the **Item Advanced Filters** page.

### 16.1 Filter by Attributes

1. Navigate to **Items**. On the list page, choose the action **Filter by Attributes** which can be found by choosing **Attributes** in the Actions bar.  
On the page that opens, previously set filters will be displayed of the page will be empty if none are yet defined.
2. Select an existing filter in the **Filter name** field, or define a new set of attributes.
  - a. **Filter name**  
The name that is used to save the filter. Select an existing filter in this field to start editing this existing filter or enter a new value when creating a new filter set.
  - b. **Attribute**  
Specifies the name of the attribute on which will be filtered. Select a value from the Item Attributes List that opens when selecting the field.

**c. Value**

Specifies the value of the filter. Single values or filter expressions, such as >, <, >=, <=, |, & and 1..100 can be used.

3. After defining the filter set, choose the action **Save**. The filter will be saved under the chosen name.

## 16.2 Item Advanced Filters

1. Choose the search icon, enter **Item Advanced Filters**, and then choose the related link.
2. On the page that opens, the defined filters can be viewed and new filters can be added. Select a filter that needs to be edited and choose the action **Edit Filters** that can be found by choosing **Actions** in the actions bar (*or select the value in the column **Item Attribute Filters***), or choose the action **New** to create a new set of filters.
3. Define the filter set as described in the section above and choose the action **OK** to save the attribute filter set.

## 17 Using external Filesystem in Business Central

In Standard Business Central, attachments are saved on a separate table, Document Attachment. When a lot of attachments are saved however, this database grows fast, causing Business Central to be out of memory and no more files can be saved unless more storage Capacity is bought for the environment.

Dynavision Connect added the functionality to configure a separate, external document system (SharePoint or Azure BLOB Storage) and connect this system to Business Central. The result of this coupling is that the attachments will be stored on this external storage instead of in the table of Business Central.

Before the setup in Business Central can be configured, the app registration needs to be created in the Azure portal. How this can be set up is mentioned in the following section, split up for SharePoint or Azure BLOB.

**Remark:** always make sure that the setup of the document Structures is correct by using the **Test Connection** action that is implemented on the list page of the **Document Structures** page and on the Card of the Document Structure.

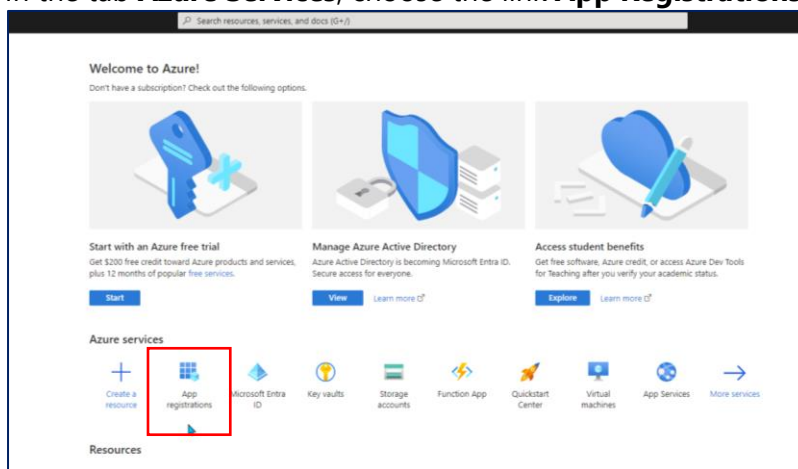
## 17.1 External File system setup in Azure portal

Dynavision Core added the functionality to connect Business Central to an external File system in order to save the attachments outside of Business Central. The external File systems need to be set up using certain configurations and permissions. The setup of these File systems are noted below.

## 17.2 SharePoint

### 17.2.1 Create App Registration

1. Navigate to the [Azure Portal](#).
2. In the tab **Azure Services**, choose the link **App Registrations**.

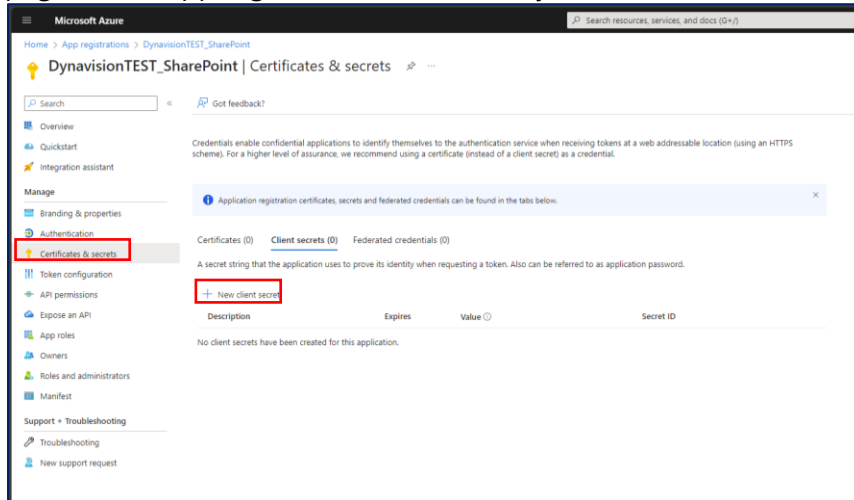


3. Choose the action **New Registration**.
4. Fill in the necessary fields in order to complete the App Registration.
  - a. **Name**  
Enter a name for the App Registration.
  - b. **Supported Account Types**  
Select following option: **Accounts in this organizational directory**.
  - c. **Redirect URL**  
Enter following URL and type:
    - i. **Type:** Web;
    - ii. **URL:** <https://businesscentral.dynamics.com/OAuthLanding.htm>
5. After filling in this information, choose the action **Register** to create the App Registration.

**Remark:** Save the **Application (client) ID** from the newly created App registration. This will be needed later to fill in as Client ID on the Document Attachment Setup in Business Central.

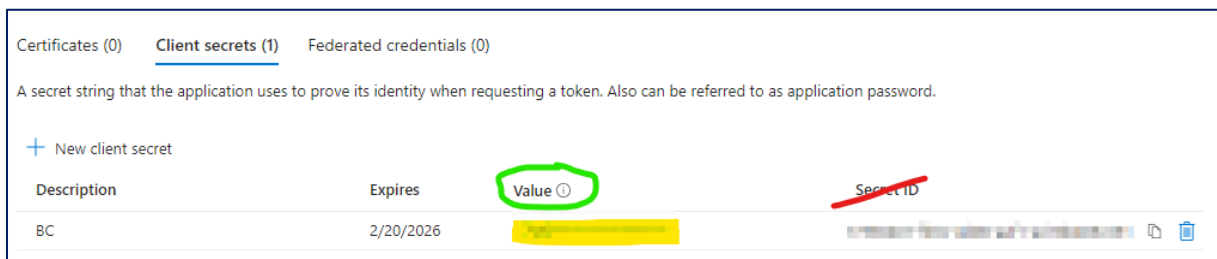
## 17.2.2 Certificates & secrets

1. Navigate to the **Certificates & Secrets** section by using the left side menu on the page of the App registration (that is newly created).



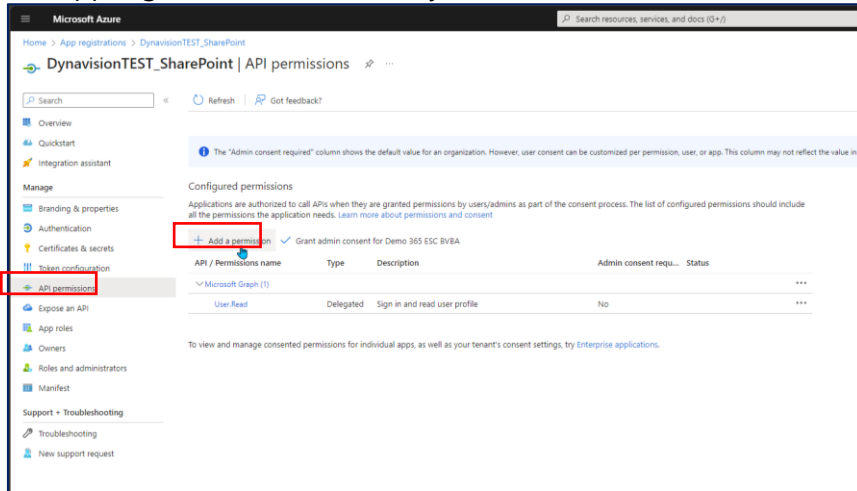
2. Choose the action **New Client Secret** to add a new Client Secret.
3. Fill in the necessary information to set up the Client Secret.
  - a. **Description**  
Enter a description.
  - b. **Expires**  
Specify when the Secret will expire.
4. After filling in the required information, choose the action **Add** to create the Secret.

**Remark:** Save the **Value** from the newly created Client Secret. This will be needed later to fill in as Client Secret on the Document Attachment Setup in Business Central.

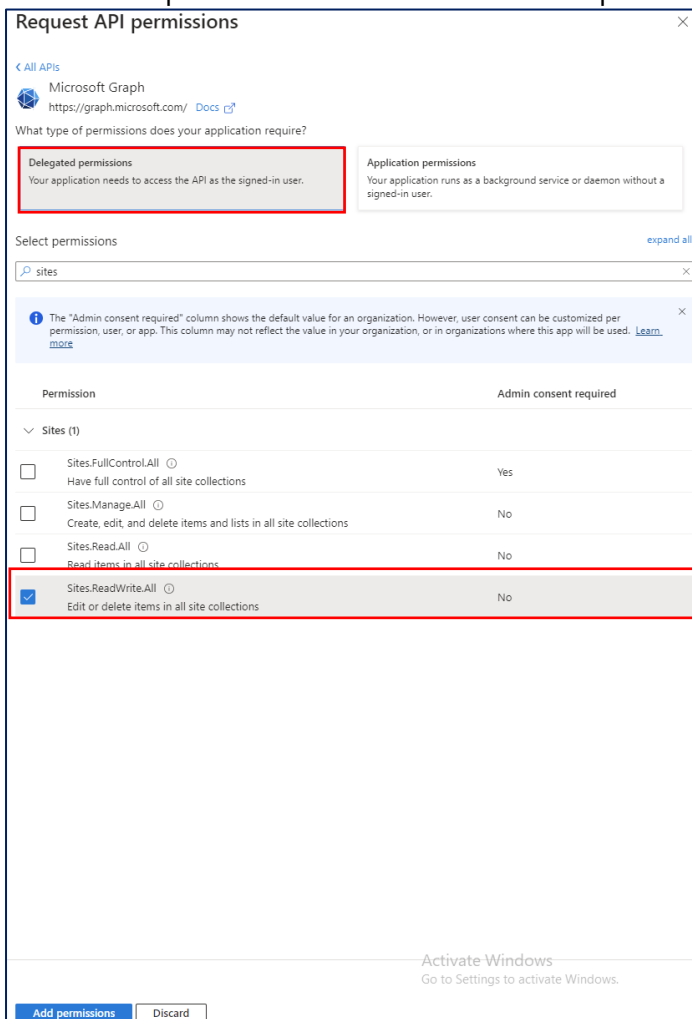


## 17.2.3 API Permissions

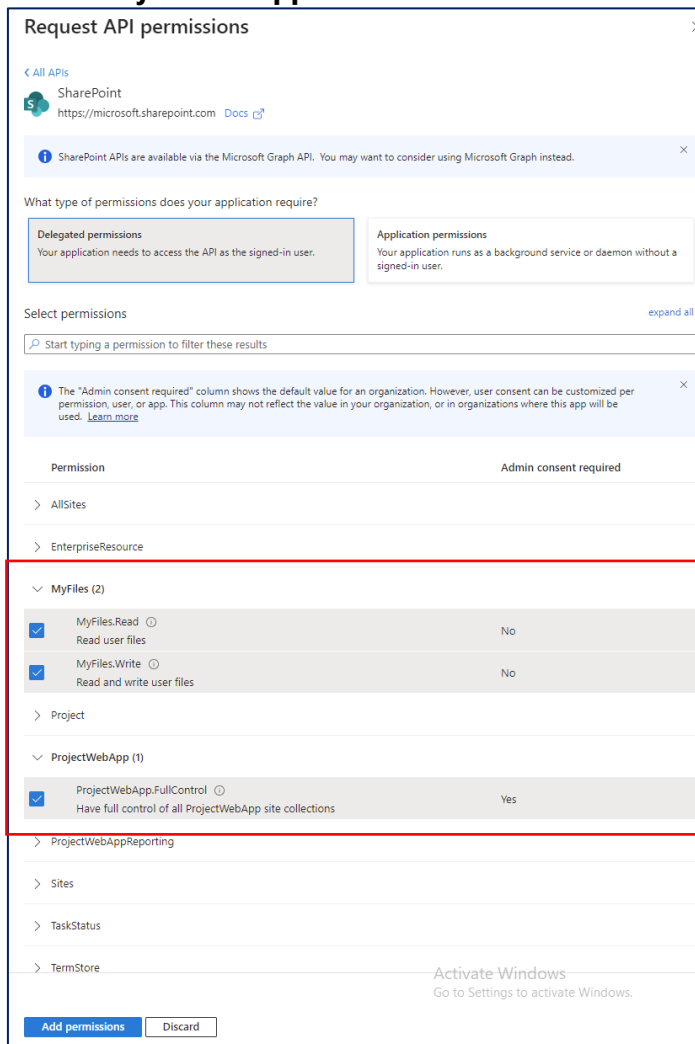
1. Navigate to the **API Permissions** section by using the left side menu on the page of the App registration (that is newly created).



2. Choose the action **Add a permission** to add a new API permission.
3. Select **Microsoft Graph** as the Microsoft API.
4. Select **Delegated Permissions**.
5. Select the option **Sites.ReadWrite.All** as the permission.



6. Finally, choose the action **Add permissions**.
7. Select the newly added permission and choose the action **Grant admin consent for XXX**. *If everything is set up correctly, the displayed Status next to the permission will be colored green.*
8. Choose the action **Add a permission** in order to set up additional required permissions.
9. Select **SharePoint** as the Microsoft API.
10. Select **Delegated permissions**.
11. Select the following permissions:
  - a. **MyFiles.Read**
  - b. **MyFiles.Write**
  - c. **ProjectWebApp.FullControl**



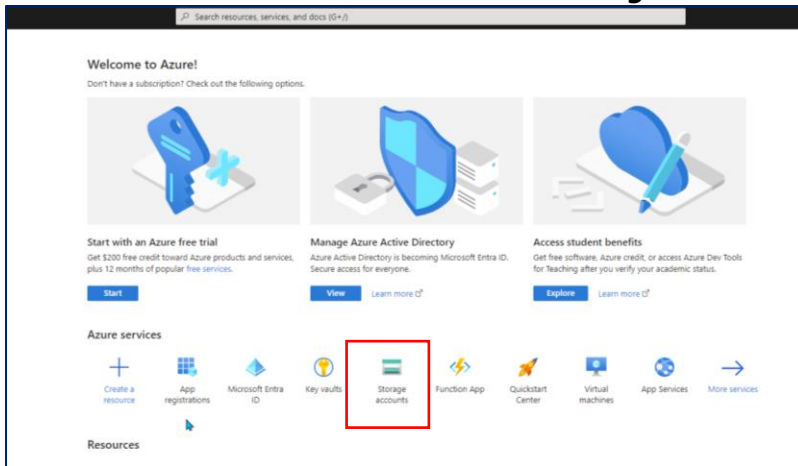
12. Choose the action **Add permissions**.
13. Select the newly added permission and choose the action **Grant admin consent for XXX**. *If everything is set up correctly, the displayed Status next to the permission will be colored green.*



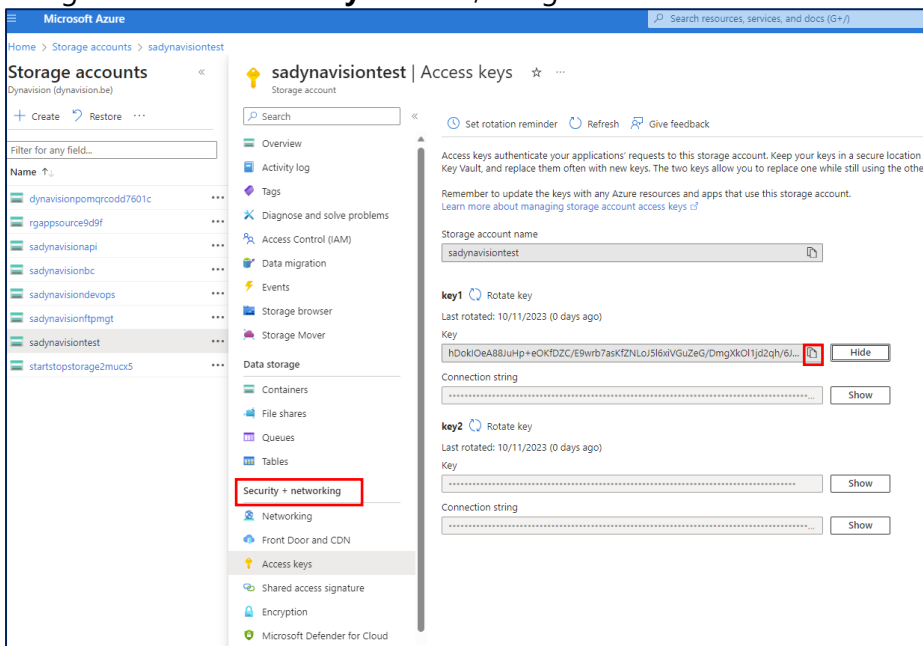
## 17.3 Azure BLOB

### 17.3.1 Create Storage Account

1. Navigate to the [Azure Portal](#).
2. In the tab **Azure Services**, choose the link **Storage accounts**.



3. Select the account for which the connection needs to be set up.
4. Navigate to the **Access Keys** section, using the left side menu.



5. Save the **Key Value**. This will be needed later to fill in as Client ID on the Document Attachment Setup in Business Central.

## 17.4 Document Attachment Setup

The configuration of the external storage that needs to be used in order to save files and to access those files can be done in the **Document Attachment Setup**.

1. Choose the search icon, enter **Document Attachment Setup**, and then choose the related link.
2. By default, the **Storage Type** is set to **Database**, meaning that the files are stored in the database of Business Central.

### 17.4.1 SharePoint

Following setup needs to be done when logged in in the Business Central environment with a user with SharePoint access.

1. As **Storage Type**, select **SharePoint**. After choosing this type, additional fields are shown that need to be filled in to finish the setup.
  - a. *The SharePoint site needs to be set up before this configuration can be set up. Contact your partner or consultant in case the environment needs to be set up.*
2. Fill in the information in the **SharePoint Settings** tab.
  - a. **URL**  
Specifies the URL to connect to SharePoint. (Example given: *https://mycompany.sharepoint.com*)
  - b. **Tenant ID**  
Specifies the tenant ID of the SharePoint Site. *This information can be found in the URL when Business Central is opened in the browser. This is the ID that is noted after businesscentral.dynamisc.com/TENANTID/...*
  - c. **Client ID**  
Specifies the Client ID, used to create a connection with SharePoint.  
**Remark:** *in order to get this information, a separate document has been created, the Support manual, which will guide the user in setting up this information.*
  - d. **Client Secret**  
Specifies the client secret; used to create a connection with SharePoint.
3. Choose the action **Authenticate** to perform the authentication, with the information set in the fields **Tenant ID**, **Client ID** and **Client Secret** in the setup.
  - a. If all information is correct, the message Authentication OK will be shown.
4. Choose the action **Manage expiration date**, to add an entry in the **Expirations date** page. This page will then open, and the Document attachment line will be added. The date needs to be filled in manually. This is described in [section Expiration dates management](#).
5. Choose the action **Document Structure** to specify the needed document structures. The Default document structures will be automatically generated, using the language set on the tenant.  
It is possible to update the SharePoint name and library location for all selected document structures, even when disabled, using the action **Adjust SharePoint Info**.  
**Remark:** *the defaults can always be regenerated using the action **Generate Defaults**.*

This will delete all existing document structures and replace them with the new default structures.

- a. Code**  
Specifies the unique code of the Document Structure.
- b. Description**  
Specifies the description of the Document Structure.
- c. Source Table**  
(optionally) Specifies the caption of the table for which a unique location should be created.
- d. Conditions**  
Specifies the condition for when the document structure should be applied.  
*Example given, when the Document Type is order, the structure should be applied.*
- e. Lines**
  - i. Type**  
Specifies the type that identifies how the value is retrieved.  
The options are:
    - 01.** Free Text,
    - 02.** Environment Name,
    - 03.** Company Name,
    - 04.** Company Display Name,
    - 05.** Table Caption,
    - 06.** Document Category Code,
    - 07.** Document Category Description,
    - 08.** Field Value.
  - ii. Field No.**  
In case Type **Field Value** is chosen, and a **Source Table Caption** is specified, a field can be selected from the Source Table from which the value will be retrieved and added to the document structure of the file.
  - iii. Field Caption**  
Displays the Caption of the selected Field No.
  - iv. Value**  
Specifies the **Free Text** used as the value in the Document Structure in case the type **Free Text** is selected for the line.  
The value in this field can also be used as default value, if the selected field value No. does not return a result, in case **Field Value** is chosen as Type on the lin.
- f. Base URL**  
Displays the base URL.
- g. Example**  
Displays an example of the path generated by the selected Document Structure. The Base Path is not included.
- h. Test Connection**  
Always make sure that the setup of the document Structures is correct by using the Test Connection action that is implemented on the list page of the Document Structures page and on the Card of the Document Structure.

**Remark:** In the application, there is no possibility implemented to create a map on the SharePoint Site per Customer to store the documents.

**Remark:** in order to set up the connection with SharePoint, 1 user is needed with access to SharePoint. This user will be configured in the Document Attachment Setup, meaning that all users of Business Central will be using this user to access the files.

This SharePoint user needs a Business Central license or a Dynamics 365 Administration role.

### 17.4.1.1 Example setup site per customer

It is possible to set up a site per customer. This can be achieved by using, for example, following setup.

As can be seen in the setup, the first line will fetch the Bill-to-customer Name, that is mentioned on the Sales Order. This will be used to create the file in the customer SharePoint, in the folder *Shared Documents/Drinkmaster365 – Test/Sales Documents/Order/DocumentNo.*

**Remark:** when an action is performed, for which connection is required with Sharepoint and the authentication parameters are not correct, a notification will be shown in order to fix the setup.

### 17.4.2 Azure BLOB Storage

1. As **Storage Type**, select **Azure BLOB**. After choosing this type, additional fields are shown that need to be filled in to finish the setup.
2. Fill in the information in the **Azure BLOB Settings** tab.

**Storage Account**

Specifies the name of the storage account.

*This information can be found on the Azure Services, ask your partner or consultant in case this information is not yet communicated.*

**a. Container**

Specifies the name of the BLOB container within the Storage account.  
*This information can be found on the Azure Services, ask your partner or consultant in case this information is not yet communicated.*

**b. Access Key**

Specifies the access key of the storage account.  
*This information can be found on the Azure Services, ask your partner or consultant in case this information is not yet communicated.*

3. Fill in the needed information in the **Document Structure** screen. The Default document structures will be automatically generated, using the language set in the **Document Structure Language** field. (*described in [SharePoint](#)*)

### 17.4.3 Document categories

Document categories make it possible to define the categories in which files that are uploaded need to be stored. The categories can be added, and then be added to the Document Structures, in order to save the uploaded files for *e.g.* under the specified submap, which will be named based on the Category code or description, depending on the selectin in the Document Structures.

## 17.5 Usage

The Attachments, when uploaded or attached to a file by using a certain action or sending profile in BC, will be saved on the external storage. The functionality of Business Central stays the same, and the files are accessible in Business Central and in the external storage.

*Remark: when a file is deleted from the external storage, the file will still be noted in Business Central, but an error will be displayed when trying to open or download that file. The files should always be deleted in Business Central.*

### 17.5.1 Bank Account – CODA statement

When working with external storage, it is possible that not all Document Structures are set up from the start. For example, the CODA Statement Document Structure will not be set up automatically.

When trying to import a CODA statement, using the Dynavision Advanced BE functionality, the imported CODA Statement file will be automatically attached to the created CODA Statement. When no Document Structure is set up for this table, the notification will be shown on the Bank Account Card after trying to import the file.

Using the action **Create** in the notification, the Document Structure can be set up on the page that opens. This will have pre filled in information to make the creation of the structure easier.

*Remark: in case there is already an existing Document Structure for the table, the notification will display a **Show** action, to avoid the creation of duplicate structures.*

## 18 Expiration dates management

In order to manage the expiration dates of secrets or certificates that are used in Business Central to communicate with external sources, *example given Sharepoint*, a page is added in which the expiration dates can be grouped.

These expiration dates can be added to the page **Expiration Date**, using the links provided on the **Authentication Setup Card**, and the **Document Attachment Setup** page when using Sharepoint as database.

1. Choose the search icon, enter **Expiration Dates**, and then choose the related link.
2. The page opens, with an overview of the added Expiration dates, and following information.
  - a. **Description**  
Displays the source from which the expiration date is added. This is clickable, in order to navigate to the setup page on which the secret or certificate is managed.
  - b. **Company Name**  
Displays the name of the company, in which the source record is managed.
  - c. **Expiration Date**  
Specify the date that the secret or certificate expires. This needs to be manually managed and updated, according to the information on the linked setup page. There is no automatic update.
  - d. **Notification Period**  
Specifies the period when a notification will be shown for expiring secrets. Currently this is a notification on the start page of Business Central, no email will be sent.
  - e. **Notify**  
Specifies if a notification must be shown, when the Expiration date lies before the specified Notification period.
3. When an expiration date lies before the specified Notification period, a notification will be shown on the start page of Business Central.

**Remark:** *the information on this page will not be automatically updated when the dates on the source setup pages is edited. Don't forget to update the information on this page after updating the source information.*

## 19 Recurrence Schedule

In the Dynavision Connect application, a framework has been added in order to be able to set up Recurrence Schedules. *These can be used in, example given, the Dynavision planning and dispatch application to set up the Delivery and order dates for Customers and Ship-to Addresses.*

4. Choose the search icon, enter **Recurrence Schedules**, and then choose the related link.

5. Choose the action **Get Default Data**, to add weekly occurrence to the list for each day of the week.
6. Set up the needed Recurrence schedule schema's.
  - a. **Code**  
Specifies the code to identify the Recurrence Schedule.
  - b. **Description**  
Specifies the description for the Recurrence Schedule.
  - c. **Schedule**  
Specifies the settings of the recurrence. *Example given: a recurrence might be set up for a day in the first week of every month.*
  - d. **Status**  
Specifies if the schedule is valid. Please ensure the schedule contains a Start Date. The Start Date should not be too far in the past.
7. It is possible to specify the Schedule by choosing either the value in the **Schedule Column** in the line for which the Schedule needs to be added or modified. It is also possible to select the line, and choose the action **Show Schedule**.
8. On the **Recurrence Schedule Card**, specify the information for the recurrence. It is important that a **Start Date** is chosen, otherwise the schedule will not be valid.
9. After specifying the settings for the Schedule, when returning to the page **Recurrence Schedules**, the Status will be updated, and the **Dates** (in the Dates fact box) will contain calculated dates using the schedule settings.

*The dates are calculated up to 10 years in the future, starting from the specified starting date. This has been implemented because standard Business Central has limited the periods to 500 in the future. This implementation eliminates the need to calculate the dates yearly using a job queue. Choose the action **Calculate Dates** in order to recalculate the dates in the background.*

**Remark:** if, in the company settings, a nonworking day is indicated, in the date fact box, the date will be colored red.

**Tip:** On the **Recurrence Schedule Card**, the three dots next to the title can be selected, in order to give other options (default Weekly is selected). It is possible to select the action **Show as menu**, in order to set these options more visibly on the Card page.

**Remark:** when there are no dates calculated and shown in the fact box, the schedule is invalid and cannot be used in the Planning and Dispatch functionalities.