Reporting Services

SYSPRO 8

Reference Guide

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SYSPRO

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Exploring

Where it fits in?

Our state of the art **Reporting Services** solution provides an intuitive web interface for designing and amending reports. By implementing a cloud first, server only solution, we are increasing the scalability and making it easier to design and maintain reports with a simpler deployment.

Benefits

- Easier to design and maintain reports.
- Simple deployment as a server only solution.
- Intuitive interface for designing and amending reports.

Navigation

The programs related to this feature are accessed from the **Program List** of the SYSPRO menu:

- *Program List > SYSPRO Reporting Services*

Terminology

Third-party reports

A third-party report in SYSPRO typically refers to a custom report or document that was developed by an external consultant, partner, or independent developer. These are reports that are not part of the standard reports that are included in the SYSPRO product.

Starting

Prerequisites

To use this feature, these components must be installed in the following order using the **SYSPRO Installer Application**:

1. SYSPRO Reporting Services

   The SYSPRO Reporting Services engine requires the connection string containing the SQL Server, SQL user and password that is used to create reports. These are found in the SRS reporting database connection credentials.

   This SQL user should be created and configured first before the SYSPRO Reporting Services engine is installed.

2. SYSPRO Application Gateway Service service
3. SYSPRO Reporting API

   - When installing theSYSPRO Application Gateway Service and SYSPRO Reporting API you are prompted to supply a valid gateway endpoint and authentication key before you can continue installing ***SYSPRO 8 2025***.
   - The SYSPRO Reporting API communicates with the SYSPRO 8 e.NET Communications Load Balancer service via the WsHttp end point, which is displayed in the SYSPRO 8 e.NET Communications Load Balancer config file:

     When the SYSPRO 8 e.NET Communications Load Balancer service is installed you have to specify the WsHttp endpoint. You can obtain that address from the service's config file that is located in the *Program files/SYSPRO/SYSPRO 8 e.net Communications Load Balancer* folder and should look similar to the following:

     add key="portWsHttp" value="31004"
   - The SYSPRO Reporting API and the services required to run it can be located on different machines.

To use this feature, the following setup option(s) must be enabled/defined:

SQL System Setup

Setup Options > System Setup > SQL

- Company database connection
  - Company database authentication
  - SQL Server name
- SQL Server administrative information
  - Administrator login
  - Administrator login password
- SQL Server standard user information
  - Standard login
  - Standard login password

The administrative and standard SQL user must have access to create a database and tables within the database, as well as access to read and write data.

- SRS reporting database connection

  - The SRS reporting database connection is the SQL user that must have DBcreator and read/write access.

    This is the user that creates the `_SRS table` the first time a report is generated and the user that obtains the data from the **_SRS database**.
  - The SRS reporting database connection is strictly used for the data that reports will use and will not be consumed by the SYSPRO Reporting API or the SYSPRO Reporting Services.
  - SRS authentication
  - SRS SQL Server name
  - SRS login
  - SRS login password

Select **Test SQL connection** to verify that the connection to the SYSPRO Reporting Services database is successful.

E.Net Service Details

Setup Options > System Setup > E.Net Service Details

- Server name
- SOAP port
- REST port

Reporting

Setup Options > System Setup > Reporting

- Reporting service API endpoint

  The endpoint is created automatically by the SYSPRO Application Gateway Service service.
- Maximum rows per report

Connectivity

Setup Options > System Setup > Connectivity

- Application Gateway service settings
  - Use Application Gateway service
  - Application Gateway service endpoint
  - Authentication key

    Select **Test connection** to verify that the connection to the **SYSPRO Application Gateway Service** is successful.

Licensing

To use this feature, the following module(s) must be installed according to the terms of your software license agreement:

- SYSPRO Reporting Services

Security

You can secure this feature by implementing a range of controls against the affected programs. Although not all these controls are applicable to each feature, they include the following:

- You restrict operator access to *activities* within a program using the **Operator Maintenance** program.
- You can restrict operator access to the *fields* within a program (configured using the **Operator Maintenance** program).
- You can restrict operator access to *functions* within a program using passwords (configured using the **Password Definition** program). When defined, the password must be entered before you can access the function.
- You can restrict access to the eSignature *transactions* within a program at operator, group, role or company level (configured using the **Electronic Signature Configuration Setup** program). Electronic Signatures provide security access, transaction logging and event triggering that gives you greater control over your system changes.
- You can restrict operator access to *programs* by assigning them to groups and applying access control against the group (configured using the **Operator Groups** program).
- You can restrict operator access to *programs* by assigning them to roles and applying access control against the role (configured using the **Role Management** program).

Restrictions and Limits

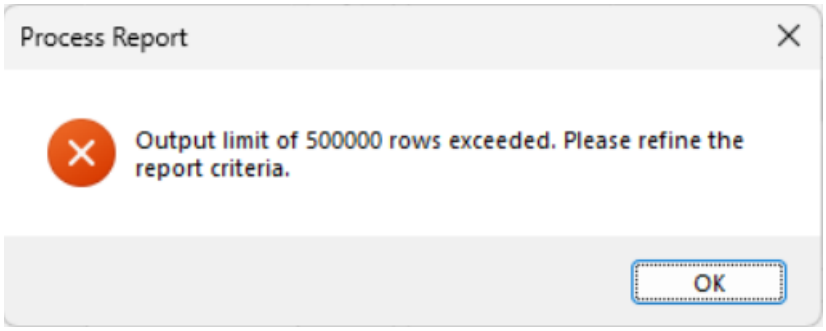
- Batch preview is not supported when printing a batch of documents, as this would open multiple preview panes.

Solving

System messages

Error messages

Output limit of 500 000 rows exceeded



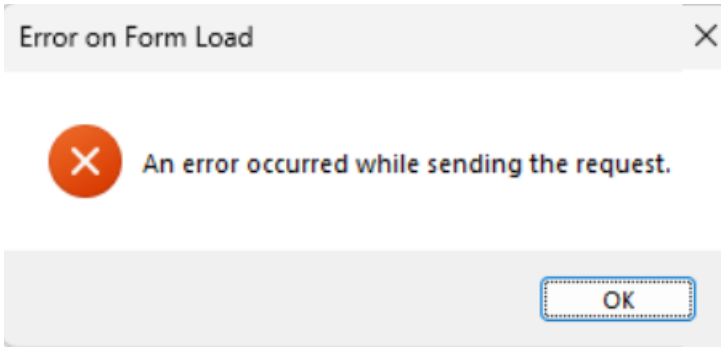
Cause

A default limitation of 500 000 line items was implemented to address the inconsistency in processing large reports with extensive data, which previously resulted in unpredictable behavior.

Solution

The limit can be configured at the **MAXIMUM ROWS PER REPORT** setup option (*Setup Options* > *System Setup* > *Legacy Reporting*).

Error occurred while sending the request



Cause

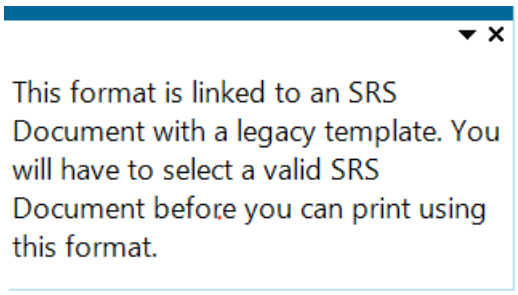
This message is displayed if the SYSPRO Reporting API is not running.

Solution

Start the SYSPRO Reporting API service or check the event viewer for the reason and resolve.

Informational messages

This format is linked to an SRS document with a legacy template



Cause

This message is displayed if you attempt printing a document that is linked to a legacy template.

Solution

Link the document to a template supported by the SYSPRO Reporting Services engine using the **Maintain SRS Document Templates**[1] program.

[1]Program: SRSPM2

FAQs

What's changed in SYSPRO 8 2025?

What has changed for SYSPRO Reporting Services in SYSPRO 8 2025?

The SYSPRO SRS What's changed in SYSPRO 8 2025 document outlines the changes made to SYSPRO Reporting Services in ***SYSPRO 8 2025***.

Creating and scheduling reports

Can all operators create reports?

Permission to create a new SRS report is determined by the **REPORT DESIGNER** setup option against the operator.

You can give an operator permission to design new SRS reports by following these steps:

1. Access the **Operator Maintenance** program and select the operator.
2. Select the **Options** tab and navigate to the **Access** section.
3. Enable the **REPORT DESIGNER** option.

How can I create a new report in SYSPRO Web UI (Avanti) or on SYSPRO Desktop?

You can create a new report in ***SYSPRO Web UI (Avanti)*** or ***SYSPRO Desktop***.

To create a new report in ***SYSPRO Desktop*** follow the below steps

1. Open **SYSPRO Reporting Services** (*Program List* > *SYSPRO Reporting Services*).
2. Select the **File** option at the top of the page.
3. Select **New SRS Report** and follow the steps seen in section 3 below, to create your report.

To create a new report in ***SYSPRO Web UI (Avanti)*** follow the below steps:

1. Select the hamburger menu icon to the top left of the page.
2. Within the hamburger menu navigate to **Reporting Services** > **Setup** > **New Report**.

   A **New Report** popup will be displayed.
3. Under **Action** select, **Create new report**.
4. Under **Report Type** or **Report based on** select your preferred option between:
   - **Standard(Business Object** in Desktop)

     This refers to reports that are included by default in the SYSPRO package, for example the **Credit Management** or the **Inventory Journal Report** . These reports are based off business objects using the predefined schema as a dataset.

- **Custom Datasource**

  This refers to reports created using a data source from any of the supported data sources, for example SQL, Excel, Oracle.

- **GL Financial Report**

  This refers to a report previously created using the program GL Define Financial Reports. You can use **SYSPRO Reporting Services** to convert such a report into a more flexible and dynamic format.

5. Once you've finished entering your requirements and details for the report, select **Save**.

   The **Report Designer** will automatically be displayed.

How do I connect to a datasource before generating a data set?

When creating a report, you will need to connect to a valid data source before generating a dataset into the **Report Designer** canvas. Doing so, is important when creating reports from a **Custom Datasource**.

Follow these steps to generate a dataset:

1. Connecting to the database and adding a data set:

   a. Select the **Data** panel icon (found to the right of the **Properties** icon).

   You'll automatically be connected to the database that you are logged into. Your connection will be displayed under **Data Sources**.

   b. Select the **+Add** button under **Data Sets** and choose your data from the options provided.

2. An **Edit Data Set** popup will be displayed.

   a. Add the query that will be used to interrogate your data, to the **Query** section.

   > **FOR EXAMPLE:**
   >
   > An example of a query to select data from a BAQ:
   > "`select * from your_baqs_name`"

   b. Select **Validate**, followed by **OK**.

   The selected data set will be displayed under **Data Sets** .

3. Adding Data to the Canvas.

   a. Select a format to add the data (such as a table), which can be selected from the **Control Box** on the left and dragged into the canvas.

   Select an area of the table to add a field from your dataset to the selected area.

b. Alternatively you can select the data directly from the **Data Sets** section on the right side of the canvas.

   Select the **Select Fields** icon found to the right of the data set. This will convert every field in your data set to a checkbox item.

c. Once you've checked your intended fields, drag your dataset into the canvas.

   A table will be generated displaying your selected fields.

d. Select **Save** and **Preview** to view your report.

Can I select report parameters when using the Report Scheduler[1]?

Yes, you can select report parameters by following these steps:

1. Launch the **Report Scheduler**[2] program.
2. Select an existing schedule or create a new schedule.
3. Add the report in the **Reports to Run** listview.
4. Select the **Define Options** hyperlink to select what you want to include in the report at the **Report options** tab and how you want the report to be generated at the **Output options** tab.

   If no options are selected, then the report is generated using the default options.

[1]Program: IMPDRS
[2]Program: IMPDRS

Working with data in the Report Designer

What are the main sections of the Report Designer?

- On the left of the page, you'll see a **Control Toolbox** which can be used to add various items including textboxes, images and tables.
- In the center of the page is the **Canvas**, where your data can be placed and updated.
- On the right-hand side of the page is the **Properties** section, which includes **Advanced Properties** where the layout, preview settings and data can be edited.

How can I edit and update the data in the Report Designer?

Once you've generated a dataset into the **Report Designer** there are many methods to edit and update it.

- To add details or input to your data, select a field in the canvas and update it as required.
- You can change the font size, put in bold, adjust the alignment, save or preview your work, using the **toolbar** at the top of the page.
- To move columns in a table, select a column and drag it to the intended location
- You can further format your data using the **Properties** tab. Select the fields in your canvas that you wish to format before selecting the **Properties** tab. Using the **Properties** tab you can edit your table's borders, background, and features of your selected text.

What's the difference between a parameter and a filter?

- Parameters define rules and criteria for selecting specific data. For instance, a parameter might specify that data related to a particular type of customer will be selected from a dataset.
- Filters apply the rules of parameter to a selected destination.

How do I use the Expression Editor to learn about functions?

You can search any function in the expression editor and the syntax or formula will be displayed, as well as a brief description of the function.

> **FOR EXAMPLE:**
>
> Syntax: Max(<Values>)
>
> Description: Returns the maximum non-null value from the specified expression.

Follow these steps to use the **Expression Editor**:

1. With the **Report Designer** open, select a field in the **canvas** where you intend to use a function.
2. Navigate to the **Properties** tab on the right of the page.
3. Under **Common** select the **data binding** button (displayed as a gray square to the right of the **Value** field).
4. The **Expression Editor** will be displayed.

   Select the **Search** field and enter the name of the function you intend to use.

   The function's **syntax** and **description** will be displayed.
5. Double-click your intended function displayed under **Functions**.
6. Enter the required data into the fields displayed under **Expression**.
7. Select **Save** and **Preview** your report.

How do I use the lookup function?

The lookup function in SYSPRO requires a field from your source and a field from your destination to match the two. Lookups are useful for transferring data from one dataset, to be displayed in another.

Follow these steps to use the lookup function:

1. With the **Report Designer** open, select a field in the canvas where you intend to perform the lookup.

2. Navigate to the **Properties** tab on the right of the page.

3. Under **Common** select the **data binding** button (displayed as a gray square to the right of the **Value** field).

4. The **Expression Editor** will be displayed. Select the **Search** field and enter **lookup**. The lookup function's syntax and description will be displayed.

5. Double-click the **Lookup** button displayed under **Functions**. The lookup function will be displayed under **Expression**.

6. Enter your intended data into the fields displayed under **Expression**.

7. Select **Save** and **Preview** your report.

How can I add a custom form field to a report?

1. Right-click on the report in the **Program List** and select **Design Report**.

   The Report Designer will be displayed.

   > This option only applies to ***SYSPRO Desktop*** and will be visible if your operator is set up to be a report designer.
   >
   > In ***SYSPRO Desktop*** this feature is found on the **Report Form**, using the gear on the top right corner.

2. Select the **ReportBody** tab to change the information in the body of the report.
3. Add a secondary data source to the report:
   a. Select **Data** to display the data panel and view the data sets and available fields.
   b. If the required data set is not displayed, select **Add** in the **Data** panel and select the data source to be used for the new dataset.

      The **Edit Data Set** widow is displayed.
   c. Add a name for the data set in the **Name** field of the **General** section.
   d. Enter the query statement in the **Query** field.
   e. Select **Validate** to validate the query statement.
   f. Select **OK**.

      The custom form fields will be displayed in the Data panel below the data set.
4. If a secondary data set is used, you must use a lookup function to link the secondary data set.
   a. Select **Properties** gear to view the Textbox panel.
   b. At the **Value** field select the **Data Binding** option and then select the **Expression** editor.

      The **Common - Value** window is displayed.
   c. Select the Lookup function from the **Functions** drop-down.

      The function will be displayed in the **Expression** box.
5. Save your changes.

> Data sources are automatically created for all companies in the SysproAdmin table.

How do I group data?

Grouping data refers to creating hierarchies within your selected information.

> **FOR EXAMPLE:**
>
> You may wish to create a view of your business' branches, customers per branch, and the sales value per customer. In this case, you would group your data by branch, then by customer, then by sales values.

To group your data:

1. With the **Report Designer** open, select the field in your canvas that you wish to use as your data heading (grouping) and select the **Data** panel to the right of the canvas.
2. A handle titled **Groups** will be displayed. This handle can be used to manage the hierarchy of your groupings.
3. Select the field you intend to group your data with, from your data set.

   Drag the field into the handle, to group the data within your table. Doing so will automatically create a group heading and group footer.
4. Select **Save** and **Preview** your report.

The group heading row can be used to insert titles for each field per grouping, while the footer row can be used to create totals for each column.

When adding a field to the group footer, the field will automatically aggregate the total value of the field in the grouping. For example, if a "sales value" field is added to the footer, the sum of the sales value for that grouping will automatically be displayed.

How do I create a nested table?

A nested table is a table within a table. Nested tables can be used to transport entire tables or grids from one dataset to another.

With the **Report Designer** open, ensure that both the **table you wish to nest** and the **table that will contain the nested data** are displayed on the canvas.

Follow these steps to create a nested table:

1. Select the table you wish to nest.
2. Drag the selected table into a field (or several merged fields) of the table you intend to nest it in.
3. Filter the nested table's data:

a. Select the cells of the nested table before navigating to the **Properties** tab to the right of the canvas.

b. Navigate to the **Filters** field under **Data** and select **+Add...**.

c. The **Filters** section will be displayed.

   Select the **+ Add...** button to create a filter.

d. Add the criterion to ensure it filters the required data from your intended data-source into your nested table.

4. **Save** and **Preview** your report.

How can I use layers to create a watermark?

Watermarks can be created in SYSPRO without using layers.

1. Follow these steps to create layers within your report:

a. Launch the **Report Designer** and select the **Report Toolbox** bar on the left of the page.

b. Select the **Layers** function.

> By default, there is only one layer per page.
>
> Optional: For ease of use, select the "**Hide Layer**" icon to hide the default layer while adding the watermark.

c. Select the **+ Add Layer** button to create **Layer1**.

> Using layers you can select which **Target Device** or type of report the layer will be displayed on or left off.
>
> With the Layer selected, navigate to the **Layer** tab under **Properties**. Under **Target Device** you can toggle the option to display the selected layer when previewed on **Screen**, used as an **Export** or when printed on **Paper**.

2. Follow these steps to create a watermark on your report:

a. With **Layer1** selected, add the item that will contain your watermark to the canvas.

   This container could be an image, textbox, or any option of your choice.

b. Select the container and navigate to the tab (the tab name depends on the selected container, e.g. Textbox if you have selected a textbox container) under **Properties**.

c. Select **Layer1** under **Layer Name** of the **Layout** section.

d. To push your watermark to be displayed behind the contents of your report, select the **Z-index** under **Layout** and update the value to **0**.

e. Select the container in the canvas and add your intended watermark or message.

f. Resize and center the container to ensure it displays as required in your report.

g. Unhide your default layer.

h. **Save** and **Preview** your report and ensure your watermark displays as intended.

How do I create a drilled through report?

Drilling through refers to a report, in which each linked section leads to a separate child report, that does not necessarily maintain the format of the initial report (the parent report).

Follow these steps to use the jump-to feature to create a drilled through report:

1. Using the Jump-to functionality.

a. Launch the **Report Designer** .

b. Select the item in the canvas (your intended section of a plot, table, graph etc.) and navigate to the **Properties**. Under **Properties**, the **Plot** tab will be displayed.

c. Under the **Action** section of **Plot**, select the **Type** field and choose what type of destination you intend for your report to lead to.

The options available in the drop-down:

- **Jump to Report**
- **Jump to Bookmark**
- **Jump to URL**.

d. Depending on your selection, a new field will be displayed under **Type**. Select the exact destination you wish your report to link to, such as a specific URL, report, or bookmark.

e. You can add a parameter to parse your data into the linked report.

Select the **+ Add** button displayed in the **Parameters** field in the **Action** section, before adding the details of the parameter.

f. **Save** the report.

2. Creating a filter for the child report.

To ensure that the jump-to reflects the section of the data that you intend, you may need to add a corresponding filter to the child report.

a. Open the child report and display it in the **Report Designer**.

b. Navigate to the **Data** tab and select **Add +** under **Parameters**.

c. Select the newly created parameter and enter your intended details.

d. Select the entire table or the portion you wish to filter before selecting the **Properties** tab to the right of the canvas.

e. Under **Tablix** the **Data** tab will be displayed. Select **+ Add...** next to the **Filters** field.

f. Add the details to the filter.

g. Save the report.

3. Using the drilled through report.

a. Navigate back to the parent report.

b. Select the **Preview** icon and test the functionality of the jump-to features you've added.

Printing, importing and exporting reports and report templates

Can I import report templates?

Yes, you can import report templates in one of the following ways:

- Launch the **SRS Document Templates Import**[1] program and select the **Import** function.
- Use the **Import** function that is displayed on the toolbar of the **SRS Document Templates Maintenance**[2] program.

  The **SRS Document Templates Import**[3] program will be displayed.

- Access to the **Import** function can be restricted by applying access control against groups or roles.
- Template files with an rdlx extension can be imported using one of the programs mentioned above.
- If a report has been exported from **SYSPRO Reporting Services**, using the **Export** function, the files will reside in a zip file which can then be imported using the **Import** function. Doing so, will import the template as well as a corresponding control file and form.

Can I export report templates?

Yes, you can export report templates in one of the following ways:

- Launch the **SRS Document Templates Export**[4] program and select the **Export** function.
- Use the **Export** function that is displayed on the toolbar of the **SRS Document Templates Maintenance**[5] program.

  The **SRS Document Templates Export**[6] program will be displayed.

- Access to the **Export** function can be restricted by applying access control against groups or roles.
- If a report has been exported from **SYSPRO Reporting Services**, using the **Export** function, the files will reside in a zip file which can then be imported using the **Import** function. Doing so, will import the template as well as a corresponding control file and form.

[1]Program: SRSPIT
[2]Program: SRSPMT
[3]Program: SRSPIT
[4]Program: SRSPET
[5]Program: SRSPMT
[6]Program: SRSPET

How do I export a report from the SRS Viewer?

1. With the **SRS Viewer** open and displaying the report you wish to export, select the **Export** icon.

   The **Export** tab will be displayed to you.

   > When exporting a report from the **SRS Viewer**, you'll be able to use the **Advanced Settings** of the export function.
   >
   > Select the **Advanced Settings** checkbox under the **Export** tab to view the full package of export features and options.

2. Select your intended format (such as PDF) and any other options of your choice before selecting the **Export** button.

   Doing so, will create your report and send it to the downloads folder of your device.

How do I export a report directly from SYSPRO Reporting Services?

With **SYSPRO Reporting Services** open:

1. Select the report you wish to export from **Available Reports**.
2. In the pop-up window, select the **Export Report** checkbox.

   Next to the checkbox is the **Export Option**s button.

   > The options available in **Export Options** are not as extensive as those available when previewing a report in the SYSPRO Viewer.

3. Select the **Process** button, once you've finalized your selections.

How do I send a report to the queue?

> Printing directly can be a time-consuming process. To save time, you can send your report to the queue to be printed, which enables you to keep working in SYSPRO while your report is printed in the background.

To send a report to the queue using ***SYSPRO Desktop***, follow the below steps:

With SYSPRO Reporting Servicesopen:

1. Select the report you wish to print from **Available Reports**.
2. Select the **Output Options** tab before **de**selecting **Preview Report**.
3. After deselecting **Preview Report** select **Process**.

Doing so will send the report to the queue.

4. To view the report in the queue navigate to SYSPRO before selecting the **Report Queue** icon.

To send a report to the queue using ***SYSPRO Web UI (Avanti)*** follow the below steps:

1. Select your intended report either through a tile or through the hamburger menu.
2. Select the **Add to Queue** icon.
3. To view the report in the queue navigate to SYSPRO before selecting the **Report Queue** icon.

Where are the printing jobs for the SYSPRO Reporting Services saved?

The information is saved in the `Jobs` and `ScheduledJobs` tables within the `SysproReportingService` database.

Using

Process

Installation and Configuration

1. Install the SYSPRO Reporting Services engine.
    a. Install the SYSPRO menu Server 8.00.298
    b. Review the following product parameters:
        - SQL Server connection string

> **FOR EXAMPLE:**
>
> Data Source=SQLSERVER;User ID=user;Password=password;TrustServerCertifiate=False;
>
> Replace *SQLSERVER* with the SQL server name used for reporting, *user* with the username of the SQL Server user and *password* with the SQL server user password.

- Installation directory

2. Install the SYSPRO Application Gateway Service service.

Parameters of the SYSPRO Application Gateway Service

Parameter	Description and considerations
HTTP Port	Indicate if you want to use an HTTP port. Default port number provided: `30800` Accept the default provided or change manually to match your preference.
Add HTTP port to firewall	For best practice, enable this option to ensure that the port number is added to your firewall.
HTTPS Port	Indicate if you want to use an HTTPS port. Default port number provided: `30801` Accept the default provided or change manually to match your preference. SSL certificate details are required when selecting this port type.
Add HTTPS port to firewall	For best practice, enable this option to ensure that the port number is added to your firewall.
Certificate Store	This indicates the SSL certificate store found against your system. This field is read only and can't be changed.

Parameter	Description and considerations
Certificate Subject	Select the **Browse** icon to retrieve the relevant SSL certificate to use for running your web client. This launches the **Parameter Certificate Browser** screen with the valid and current SSL certificates available under the default stores. The selection defaults to the first item found in the Store list which subsequently loads the **Subjects** (also defaulting to the first item in the list). From here you can browse for and select the applicable SSL certificate.
Certificate Subject Overwrite	This indicates the current SSL certificate subject, if the **Overwrite Subject** option was enabled within the **Parameter Certificate Browser** screen. This field is read only and can't be changed.
Please enter the SYSPRO Gateway Read Only Authentication key	Enter a read-only authentication key for the SYSPRO Application Gateway Service service. **FOR EXAMPLE:** `AppGateWayPass123` You can define any password, pass-phrase or secret for this authentication key, and once defined its stored in the Gateway's configuration as a hashed value. Ensure that you take note of this key as it is required later when configuring the gateway in the **Setup Options**[1] program.

[1]Program: IMPCFG

Parameter	Description and considerations
Please enter the SYSPRO Gateway Authentication key	Enter a value for the SYSPRO Application Gateway Service authentication key. **FOR EXAMPLE:** `AppGatewayKey321` You can define any password, pass-phrase or secret for this authentication key, and once defined its stored in the Gateway's configuration as a hashed value. If you plan on installing the ***SYSPRO Embedded Analytics*** module: Ensure that you take note of this key as it will be required during the install for SYSPRO Embedded Analytics, as well as within the **Setup Options**[1] program when configuring your environment.
Destination Folder	Default provided: `C:\Program Files\SYSPRO\SYSPRO Application Gateway` Accept the default provided or change manually to match your preference.

3. Install the SYSPRO Reporting API service.

[1]Program: IMPCFG

Affected programs

The following indicates areas in the product that may be affected by implementing this feature:

Setup programs

SRS Document Templates Maintenance

Program List > SRS Documents > Document Setup

This program lets you maintain document templates that can be linked to document types.

Maintain SRS Document Templates

Program List > SRS Documents > Document Setup

This program lets you create and maintain documents and link these to document templates.

For the **Reporting Services** engine, we made the following changes in this program:

- You can import and export documents, as well as maintain document templates by selecting the **Functions** option from the toolbar.
- You can specify the output folder where you want to store printed documents by selecting the **Configure** hyperlink at the **Output options** field.
- You can view the template used, schema and sample XML by selecting the **View** hyperlink at the **Document details** field.
- You can view the operator, date and time details by selecting the **View** hyperlink at the **History** field.

Report programs

For the **Reporting Services** engine, we made the following changes:

- All reports have been updated and converted for the new SYSPRO Reporting Services engine.
- Various *'List of'* reports have been deprecated, as these can be easily created.In most cases the information contained in these reports can simply be exported from the listview containing the data. You can view the list of programs deprecated in ***SYSPRO 8 2025***.

Import programs

SRS Document Templates Import

Program List > SRS Documents > Document Setup

This program lets you import **SYSPRO Reporting Services** document templates per document type.

Export programs

SRS Document Templates Export

Program List > SRS Documents > Document Setup

This program lets you export **SYSPRO Reporting Services** document templates per document type.

Query programs

SRS Report Queue

SYSPRO Ribbon bar > Home

This program lets you manage, execute (i.e. print, email, export) and schedule all your reports on the server.

For the **Reporting Services** engine, we made the following changes in this program:

- We added the **Type** field to the toolbar, where you can select to view either documents and reports in the queue.
- We added the **Purge Manager** option to the toolbar.
- We added the **Additional filters** option that lets you filter by document types, dates, times and status.
- The **Preview** hyperlink lets you preview reports and documents.
- We removed the **Show scheduled reports** option as all reports will be displayed in the listview as per the selections.
- Listviews refresh automatically as you select options.

SRS Documents Preview

*Accessible from the **Preview** function in various programs that generate documentation, e.g. the **Sales Order Entry** program.*

This program lets you preview documents generated online using the **Reporting Services** engine and all documents and reports from the **SRS Report Queue** program.

Scheduling programs

Report Scheduler

Program List > SYSPRO Reporting Services

This program provides the functionality to automate the generation and distribution of reports at predefined intervals.

Browse programs

SRS Document Queue

SYSPRO Programs > SRS Documents > Document Setup

You use this program to view, execute and manage all documents (e.g. invoices, statements, quotations, etc.) in the document queue, when using server-side printing.

For the **Reporting Services** engine, we made the following changes in this program:

- We removed the **Purge Manager** option from the toolbar, as this functionality is now located within the **SRS Report Queue** program.

Using the Report Designer

The **Report Designer** provides an easy-to-use interface that allows users without prior reporting experience to design engaging and interactive reports. The **Report Designer** provides you with the ability to create a new report or edit an existing one without writing any code. The designed reports can then be exported to any format or printed from the preview window. The main interface elements of the **Report Designer** are the **Report Toolbox**, **Menu Bar**, **Properties**, **Data Panels**, and a **Design Area (Canvas)**.

Report Designer

Report Toolbox

The **Report Toolbox** contains the **Report Explorer**, **Group Editor** and **Report Controls** that assist in designing reports.

- Report Explorer

  Provides an overview of the hierarchy of added report items. It displays the current selection and allows the selection of other report items.

- Group Editor

  Shows column and row hierarchies of tablix members for currently selected tablix or table data region.

- Layers

  Used to add layers to the report. Use the **+ Add Layer** button to add new layers. A default layer is automatically present in the designer.

- Report Controls

  Includes all the available controls for designing a report, such as textbox, checkbox, container, line, shape, table of contents, image, list, table, tablix, chart, bullet, barcode, etc.

Menu Bar

The **Menu Bar** contains options to undo or redo an action as well as to save, preview and format a report.

Properties and Data Panels

Access and modify the properties of a report or manage data connection using these panels.

- Properties

  Displays the properties of the selected report control in the **Design Area**. If more than one control is selected, the panel displays their common properties. Use the **Collapse/Expand** toggle button to view the collections on the **Property** panel. If you

- open any collection on the **Property** panel for one item, then it will remain open even if you switch to another item and it will collapse for all when you click the collapse option.
- Data:

  Contains options to add datasets, parameters, and common values.

  - Data sets

    Displays the datasets available for designing a report.

  - Parameters

    Allows you to add and modify report parameters.

  - Common Values

    Displays common values such as current date and time, page number, total pages, page N of M, report name, user ID, and user language, to use in your reports.

Design Area

The **Design Area** allows you to create and edit reports by simply dragging and dropping the report controls from the **Report Toolbox** into the **Design Area**.

Other Settings

The **Set Zoom** percentage allows you to switch between advanced or basic property mode, specify grid settings and more.

- Grid

  Show or hide grid lines in the **Design Area**.

- Snap

  Enable or disable report controls to snap to grids and guides when you drag them into the **Design Area**. You can also specify the size of the grid lines.

- Zoom

  Set the zoom percentage of the **Design Area** by clicking the zoom-in and zoom-out buttons.

- Grid Unit

  Switch to the measurement unit for the grid lines to centimeters. By default the grid unit is set to inches.

- Properties Mode

  Switch to advanced or basic properties mode. By default basic properties mode is selected.

Data Binding in Reports

The connection between a report and a dataset is known as data binding. When you connect a report to a dataset the report extracts the information from the data source to display the required data.

Using New Based on Server Data Source

If you want to fetch data from a data source to be used only in one report and to configure its related data options such as fields, parameters and filters to display only the required information.

With the **Report Designer** open:

1. Go to the **Data** panel and click **Dataset** > **Add**.
2. Select the datasource from the list of SYSPRO company Databases and click **Add**.
3. In the **Edit Data Set** dialog that appears, provide the **Query** field, and other settings for the chosen dataset as shown in the next steps.
   a. Enter your intended name of the dataset in the **Name** field. By default, this field is set to Dataset1. The dataset name should not contain any empty spaces or special characters such ("-", "/", "@", etc).
   b. In the Query field, write a SQL query to extract the data from the data source. (eg. `Select * from ExampleData`)
   c. Click the **Validate** button to verify the SQL statement.

   > If the SQL query is successfully validated, you will see a count of queried fields against the **Bound Fields** field. Click the **Show Items** button to view the entire list of bound fields in the dataset. Field names are the names given to the fields in a dataset, while the data fields are the original names of the fields in the database, which should not be modified or renamed.

4. By default field names show the same names as the data fields. You can modify a field name by replacing its old name with the new name. To delete a field click the **Delete** icon adjacent to the field name in the list. Deleting a field here will not affect the actual data stored in the data source.
5. Add a calculated field in the dataset to create a new field by applying some calculations to the existing data. You can add a calculated field using the **Add** button.
6. In the **Parameters** field, you can add report parameters and then use the "`where`" clause in the SQL query to filter the data.

7. To display only relevant data in the report use filtering in the dataset. The **Filters** field is especially useful when you have a data source like XML that does not support query parameters.
8. Click the **Validate** button to verify the dataset definition, and then the **OK** button. The dataset will be added to the report.

Managing a Dataset in a Report

Under the **Data** panel there are two icons displayed next to each dataset. Select the **Edit** icon to modify the existing details for a dataset by changing its name, parameter value(s), field name(s), filter value(s), and so on. The **Delete** icon can be used to remove the bound dataset from the report.

Report Controls

The **Report Toolbox** in the **Report Designer** offers several report controls and data regions that you can use to create a report. You can drag these from the **Report Toolbox** and drop them onto your reports. Each report control in the **Report Toolbox** has its own sets of predefined settings which you can customize as per your requirements.

The following table lists the available report controls in the **Report Toolbox**.

Table of Report Controls

Report Control	Description
TextBox	The textbox control is the most extensively used report control by the users. It is used to display static text and expressions in a report. In addition, it is the default control that appears in each cell of a table or tablix report control and is automatically created when you drag a field from a dataset onto the design area.
CheckBox	The checkbox control is used to display boolean data, which can have one of the two possible values: true or false. You can check and clear a checkbox by simply clicking on it. By default, a checkbox control appears as a small box with its text to the right.
Container	The container control is used as a container for other report items. Use this report control to enhance the layout and appearance of your report. There is no data associated with the Container control.

Report Control	Description
Line	The line control draws a horizontal, vertical, or a diagonal line with the specified size and color in the report. It is used for both enhancement and visual separation of report controls. This report control has no data associated with it.
Shape	The shape control is a graphical element that allows you to embed shapes of different types into your reports such as rectangles, rounded rectangles or elliptical shapes. There is no data associated with this report control.
Image	An image control is used to insert images of different types into your reports such as external source, a database or embedded.
List	The list control is a container element in which you can place other report controls and arrange them in any configuration you like. These report controls are placed inside the List control repeats for each row or group in the dataset.
Table	The table control is the most used control that organizes the data in tabular format, that is, into rows and columns. It contains three rows and columns by default, a total of nine cells, each of which is filled with a text box. You can add and remove rows or columns, filter or sort the table data and add groups to suit your needs.
Tablix	The tablix control displays data in cells that are arranged in rows and columns. It is essentially a combination of two data regions, table and matrix and provides enhanced layout capabilities ranging from the creation of simple tables to advanced matrices.
Chart	The chart control represents the data graphically, making it easier for you to comprehend large amounts of data quickly. You can work with a variety of chart types including column, bar, line, area, pie, spiral, polar, radar, and miscellaneous, and accordingly customize its elements like chart axis, data labels, chart title, etc. as per your needs.

Report Control	Description
Bullet	The bullet control is used to compare the performance of a target measure against the other quantitative measures in the dataset. It serves as an alternative for the dashboard gauges.
Barcode	The barcode control lets you insert different types of barcodes into your reports. Along with that you can also control its position, style, background color, width and other properties.
Formatted Text	The formatted text control displays richly formatted text. You can also use this control for the mail merge operations. The formatted text control takes HTML code as the input.
Sparkline	The sparkline control is a small graph drawn without any axes or coordinates. This control is specifically used to display data trends in your reports. The different types of supported sparklines are line, column, whiskers, area and stackedbar.
Subreport	The subreport control is used to insert another report into your current report. You can pass parameters from the current report to display the filtered data in the subreport. This control will affect the performance of a report and should be used with caution. A more efficient alternative to the subreport is the lookup functions or nested tables.
Overflow Placeholder	The overflow placeholder control is only available with the page reports. This control is used when the data does not fit inside the fixed size report controls like list, tablix, banded list and table.
Banded List	The banded list control is a collection of free-form bands in which you can place your report controls. By default it consists of three bands: a header, a footer, and a detail band. The bound report controls in the detail band repeat for every row of data.

Textbox

Adding a Textbox

The textbox control is an input box that can be used to write any text in a report or display any textual data. For example, you can use a textbox to write the title of the report or to display any data.

By default, all the cells of the table and tablix report control have textboxes. When you drag and drop the fields from a dataset onto the **Report Designer**, text boxes are created automatically. You can edit and format the text in the textbox as well.

Follow the below steps to add a textbox to the **Report Designer**:

1. From the **Report Toolbox** on the left, drag and drop the **Textbox** control onto the **Design Area**.
2. Now add the content. You can either type the text directly into the textbox or you can select the fields and bind the fields to the dataset.
3. You can also use expressions in the **Textbox**. Right-click the **Textbox** and select the option **Expression**.

Binding Data to a Textbox

There are several methods to bind data to a textbox. With the **Report Designer** open, use one of the following methods:

Method 1

1. From the **Report Toolbox** on the left, drag and drop the **Textbox** control onto the **Design Area**.
2. Select the **Textbox** and from the field's **Selection Adorner** select a field from the list. If a numeric field is selected by default the Sum of the numeric field is taken. If the field selected is non-numeric then the count of the field is taken.

Method 2

1. From the report **Toolbox** on the left drag and drop the **Textbox** control onto the **Design Area**.
2. From the data binding tab on the right, expand the dataset and drag-drop the desired field (s) onto the **Textbox**.

Method 3

1. From the **Data** tab on the right, click the **Select Fields** button next to the bound dataset and select the desired fields.
2. Drag-drop the selected fields onto the **Design Area**. A table with its column bound to the fields is created and the cells in the table have a textbox.

You can double-click in the table cell and the textbox will become editable and you can edit the font, size, color, etc. of the text.

Properties of a Textbox

You can customize the default textbox appearance by setting properties in the **Properties** tab of the textbox control. Properties like adding a border, editing font size, font type, background color, etc. can be customized.

Listed below are the common properties.

Common

Property	Description
Name	Sets the name of the selected textbox.
Value	Sets the data to be displayed in the textbox. You can enter text directly, or click to select a field, add an expression, and so on.

Action

Property	Description
Type	This sets the action to be taken when clicking on the text in the textbox. The dropdown list has four options.
None	This option means no action is to be taken.
Jump to Report	This option allows you to jump from the current report to another report. You can link any text in the report. When a user clicks the linked text, it will jump to the report linked with that text.
Jump to Bookmark	This option is used for jumping within the current report. You can define the bookmark and then select the jump to bookmark settings, to make it easier to jump between report content. You can bookmark any element in the report to make it a destination anchor for the jump.

Property	Description
Jump to URL	This option is used to jump to an external web page.

Background

Property	Description
Background	This sets the background of the textbox.
Color	This option sets the background color of the textbox. You can select the color by clicking the dropdown list.
Image	This option sets the background image of the textbox. Click the dropdown list to select the image source. Shared refers to the images that are uploaded on the portal, Embedded refers to the new images that you can select and upload here, Database refers to the database graphics field. Click the Expand icon to display more image properties.
Source	This is the source from which the image is coming.
Value	This refers to the image selected from the source.
MIME Type	This refers to the image format like png, gif, etc.
Repeat	This defines the way in which the image is covering the textbox. It has four options.
Repeat	This option repeats the image both height-wise and width-wise until the background area is covered.
NoRepeat	When this option is selected, then the image is not repeated and is displayed only once.
RepeatX	This option repeats the picture horizontally (width-wise).
RepeatY	This option repeats the picture vertically(height-wise).

Border

Property	Description
Border	This option sets the border of the textbox.

Property	Description
Width	You can set the width of the textbox border using this option. By clicking the Expand icon, you can set the width of the border of all the sides of the textbox in case required.
Style	Select the border style from the dropdown list. By clicking the Expand icon, you can set the style of the border of all the sides of the textbox in case required.
Color	Select the border color from the dropdown list. By clicking the Expand icon, you can set the color of the border of all the sides of the textbox in case required.

Text

Property	Description
Text	This sets the text formatting in the textbox. You can set the font Color, Family, Size, Style, Weight, Decoration, Alignment, Justification, Vertical Align, word WrapMode, Line Spacing, Character Spacing, Data Format, Rotation Angle, Font adaptation, and font-weight ratio.

Dimensions

Property	Description
Dimensions	This sets the location and size of the textbox.
Left	This option sets the distance to be maintained from the upper left side of the textbox horizontally.
Top	This option sets the distance to be maintained from the top of the textbox vertically.
Width	This option sets the width of the text box.
Height	This option sets the height of the text box.

Layout

Property	Description
Layout	This sets the textbox layout in a report as a whole.
Style	This option sets the theme of the textbox in the report.

Property	Description
Padding	Padding refers to the space between the textbox content and the border. You can set the padding from - Top: Sets the top padding in points, Left: Sets the left padding in points, Right: Sets the right padding in points, Bottom: Sets the bottom padding in points.
Layer Name	Sets the report layer.
Keep Together	This option ensures whether the textbox will appear on the same page or not when there is a lot of content.
Can Grow	Determines whether the report should increase the height of the textbox control based on its content.
Can Shrink	Determines whether the text box height should automatically shrink when there is less content.
Z-Index	This property sets the position of the textbox when there are multiple textboxes that are stacked together. The textbox with a greater Z-Index value will always be in front of the textbox that has a lower Z-Index value.

Visibility

Property	Description
Visibility	This sets the visibility of the textbox control on the report preview.
Hidden	This option sets whether to hide the textbox or not on the preview.
Toggle Item	Visibility can be toggled by another report item. This option sets another item, such as another text box, as a toggle button to whether display the current text box or not.
Initial Toggle State	This option sets the display state of the textbox (that can be used as a toggle button) when the report is first loaded. If it is Collapsed, then the toggle element shows as a plus sign, and all the content of the current textbox is hidden. If it is Expanded, then the toggle element shows as a minus sign, and all the content of the current textbox is displayed.
Height	This option sets the height of the text box.

Data

Property	Description
Element Name	You can enter a name to be used in the XML output for this textbox.
Element Output	You can select Auto, Output, or NoOutput to decide whether to include this textbox in the XML output or not. Auto exports the contents of the textbox only when the value is not a constant.
Element Style	You can select Auto, AttributeNormal, or ElementNormal to decide whether to render textboxes as Attributes or Elements in the exported XML file. Auto uses the report's setting for this property.

User Sort

Property	Description
Sort Expression	You can enter an expression to sort the data.
Sort Target	You need to select the data region within the report on which to apply the sorting. The default value is the current scope, but you can also choose an alternate data region.

International

Property	Description
International	This section is used to set the calendar fields to the international formats. You can select the international Calendar styles, writing direction (rtl or ltr), language, writing mode, etc.

Misc Options

Property	Description
Tooltip	Sets the textual label of the textbox when the mouse is moved over the cell.

Property	Description
Label	Sets a textual content that is used as the display text for report catalog items. The report catalog is made using the Table of Contents element in the report toolbox, and the table of contents is used for quick positioning jumps in multi-page reports.
Bookmark	Enter text or an expression to use as a positioning identifier to jump to this element. You can define the bookmark and then select the "jump to bookmark" setting, to make it easier to jump between report content. You can bookmark any element in the report to make it a destination anchor for the jump.
Heading Level	Sets the heading levels in the TOC
Height	This option sets the height of the text box.

Container

The Container control is used to enhance the visual representation of your reports. Container control is used as a container for other report controls and highlights the report controls added to the container. You can also customize the appearance of the container using visual settings like the border, dimensions, background, and layout.

The container control has no specific data associated with it.

Adding a Container

To add a **Container** control to a report and to add other controls to the **Container**, follow the below instructions:

1. Navigate to the **Report Designer**.
2. Drag and drop the **Container** control onto the designer area from the **Designer Toolbar**.
3. Using the **Inspector** Panel on the right side of your screen, customize the appearance of the **Container**.
4. To add other controls to the **Container**, drag and drop the control from the **Toolbar** onto the **Container** in the **Design Area**.

Inspector Panel Properties

Common

Property	Description
Name	Add a unique name to the container. Special characters such as period (.), space ( ), forward slash (/), backslash (\), exclamation marks (!), and hyphens (-) are not supported. You can use an underscore (_) in the name of the container

Background & Borders

Property	Description
Color	Select the background color of the container.
Borders	Select the type of border to apply to the container. Border options for containers are: Left, Right, Top, Bottom, and All.
Width	Select the width of the borderline.
Style	Select a style for the border from the following options: Dotted, Dashed, Solid, Double, Groove, Ridge, and Inset.
Color	Select a color for the borderline.

Border

Property	Description
Rounding Radius	Set the radius of the rounded corners. Acceptable radius values range from 1 to 30 points. To set the rounding radius for specific corners, click the Expand button and set the radius of each corner using the input boxes.

Dimensions

Property	Description
Left	Set the left margin of the container.
Top	Set the top margin of the container.
Width	Set the width of the container.
Height	Set the height of the container.

Layout

Property	Description
Style	Select a color theme for the container from the dropdown.
Page Break	Select a page break option (None, Start, End, StartAndEnd, or Between) generated by instances.
New Page	Select an option from to start the content after a page break. The available options are Next, Odd, and Even.

Misc

Property	Description
Page Name	Add a name to the container to use when exporting the report.

Line

Line control is a visual element used to draw horizontal, vertical, and diagonal lines to separate or highlight specific areas within a report. To add a **Line** control to a report, navigate to the **Report Designer** before dragging and dropping the **Line** control onto the **Design Area** from the **Toolbar**.

Inspector Panel Properties

Section	Property	Description
Common	Name	Add a unique name to the line control. Special characters such as period (.), space ( ), forward slash (/), backslash (\), exclamation marks (!), and hyphens (-) are not supported. You can use an underscore (_) in the name of the line.
Layout	Start Point X	Set the abscissa at the starting point of the line control.
	Start Point Y	Set the ordinate of the starting point of the line control.
	End Point X	Set the abscissa at the end point of the line control.

Section	Property	Description
	End Point Y	Set the ordinate of the end point of the line control.
Appearance	Line Color	Select a color for the line control.
	Line Style	Set the style of the line control from the dropdown.
	Line Width	Set the width of the line control. The range of the width can be set from 0 to 20.

Shape

Shapes are used to highlight a specific area of a report, and no data is associated with them. Unlike the **Container** control, other controls cannot be placed inside a Shape control.

The **Shape** control is a graphical element used to add shapes to a report. It includes the following shapes rectangle, rounded rectangle and an ellipse.

To add a **Shape** control to a report, navigate to the **Report Designer** and from the **Toolbar** drag and drop the **Shape** control onto the **Design Area**.

Inspector Panel Properties

Section	Property	Description
Common	Name	Add a unique name to the shape control. Special characters such as period (.), space ( ), forward slash (/), backslash (\), exclamation marks (!), and hyphens (-) are not supported. You can use an underscore (_) in the name of the shape.
Background	Color	Select a background color of the shape control.
	Image	Set an image as a background of the shape control using this property. You can add a shared image, an embedded image, or images from a database as a background for the shape control.
Border	Width	Set the width of the border of the shape control. The range of the width can be set from 0 to 20.

Section	Property	Description
	Style	Select a border style for the shape control from the dropdown.
	Color	Select a color for the border of the shape control.
	Shape Style	Select the style of the shape from the dropdown. The following style options are available in the dropdown: Rectangle, RoundRect (Rounded Rectangle), Ellipse
	Rounding Radius	Set the radius of the rounded corners. Acceptable radius values range from 1 to 30 points. To set the rounding radius for specific corners, click the Expand button and set the radius of each corner using the input boxes.
Dimensions	Left	Set the left margin of the shape control.
	Top	Set the top margin of the shape control.
	Width	Set the width of the shape control.
	Height	Set the height of the shape control.
Layout	Style	Select a color theme for the shape control from the dropdown.

Image

The **Image** control displays the picture that you want to add in the report. You can use images in various scenarios in the report, like displaying logo images in the report or displaying any product picture in a product list report.

You can use the **Image** control directly in a report or within a table cell. You can use the images as shared pictures that exist on the portal, as external images that are from any external image resources, and as database images where images are in the database. The supported image formats are BMP, JPEG, GIF, PNG, EMF, WMF, and SVG.

Using Image Control in a Report Designer

This section describes how to use an Image control in a report. Follow the below steps to add an **Image** control.

1. Navigate to the **Report Designer**.
2. From the **Report Toolbox** on the left, drag and drop the **Image** control onto the **Design Area**. You can also add it to a table cell.
3. Now you need to set the source of the image. For this, go to the **Properties** tab and under the **Appearance** section click the dropdown list Image.
4. You will see the following three options: **Shared**, **Embedded**, and **Database**.
    a. You can select the **Shared** option and select the desired image from the list. The selected image will be displayed in the **Image** control.
    b. The image source **Embedded** refers to the images stored locally on the system that can be embedded into the **Report Designer**. These are uploaded image files, which are only used by the current report. To add an embedded image:
        i. Select the **Embedded** option and click the **Load** icon.
        ii. A new window is opened. Navigate to the desired path where the image to be uploaded is stored and select the image.
        iii. The selected image will be displayed under the **Embedded** option.
        iv. Select the image from the list and the selected image will be displayed in the **Image** control on the report.

            The embedded images that are uploaded in the report are available under the **Report Layout** section on the **Properties** tab.
    c. The image source **Database** refers to the images stored in the database which can be used in the reports. If you want to use an **Image** field in the database, you must bind the **Image** field.

You can also use the URL address of any image as the image source of the image control by:

1. Setting the **Source** to **External**.
2. Setting **Value** to the URL of an image.

Properties Tab

You can customize the default **Image** control appearance by setting properties in the **Properties** tab of the **Image** control. Properties like adding a border, layout, visibility, etc. can be customized.

Listed below are the common properties.

Table of Image Property Controls

Common

Property	Description
Name	Sets the name of the selected image control.

Action

Property	Description
Type	This sets the action to be taken when clicking the image. The dropdown list has four options.
None	This option means no action is to be taken.
Jump to Report	This option allows you to jump from the current report to another report. You can link any image in the report. When a user clicks the linked image, it will jump to the report linked with that image.
Jump to Bookmark	This option is used for jumping within the current report. You can define the bookmark and then select the jump to bookmark settings, to make it easier to jump between report content. You can bookmark any element in the report to make it a destination anchor for the jump.
Jump to URL	This option is used to jump to an external web page.

Appearance

Property	Description
Appearance	This sets the appearance of the image.
Image	This option sets the image to be displayed in the image control in the report. Click the dropdown list to select the image source. Shared refers to the images that are uploaded on the portal, Embedded refers to the new images that you can select and upload here, and Database refers to the database graphics field. Click the Expand icon to display more image properties.
Source	This is the source from which the image is coming.

Property	Description
Value	This refers to the image selected from the source. Example: If the image source is "Shared", then you need to select the specific shared image here.
MIME Type	This refers to the image format like png, gif, etc.
Image Sizing	This sets the size of the image to be displayed while previewing. This dropdown list has 4 options: Autosize, Fit, FitProportional, and Clip.
Horizontal Alignment	This sets the position of the image in the control horizontally. It has 3 options: Left, Center, and Right.
Vertical Alignment	This sets the position of the image in the control vertically. It has 3 options: Top, Middle, and Bottom.

Border

Property	Description
Border	This option sets the border of the image.
Width	You can set the thickness of the image border using this option. By clicking the Expand icon, you can set the width of the border on all sides of the image.
Style	Select the borderline style of the image from the dropdown list. By clicking the Expand icon, you can set the style of the border on all the sides of the image, in case required.
Color	Select the border color from the dropdown list. By clicking the Expand icon, you can set the color of the border on all sides of the image.

Dimensions

Property	Description
Dimensions	This sets the location and size of the image.
Left	This option sets the landscape position of the image to be maintained from the upper left side of the report.
Top	This option sets the vertical position of the image to be maintained from the top in the report.

Property	Description
Width	This option sets the width of the image.
Height	This option sets the height of the image.

Layout

Property	Description
Layout	This sets the image layout in a report as a whole.
Padding	Padding refers to the space between the image and the border or within the image control. You can set the padding from - Top: Sets the top padding in points, Left: Sets the left padding in points, Right: Sets the right padding in points, Bottom: Sets the bottom padding in points.
Layer Name	Sets the report layer.
Z-Index	This property sets the position of the image element when there are multiple images that are stacked together. The image with a greater Z-Index value will always be in front of the image that has a lower Z-Index value.
Height	This option sets the height of the image.

Visibility

Property	Description
Visibility	This sets the visibility of the image on the report preview.
Hidden	This option sets whether to hide the image or not on the preview. Set it to True, to display the image. By, default it is False.
Toggle Item	Visibility can be toggled by another report item. This option sets another item such as a text box, as a toggle button to whether display the current image or not.

Misc Options

Property	Description
Tooltip	Sets the textual label of the image when the mouse is moved over the image.
Label	Sets textual content that is used as a display text for report catalog items. The report catalog is made using the Table of Contents element in the report toolbox, and the table of contents is used for quick positioning jumps in multi-page reports.
Bookmark	Enter text or an expression to use as a positioning identifier to jump to this element. You can define the bookmark and then select the "jump to bookmark" setting, to make it easier to jump between report content. You can bookmark any element in the report to make it a destination anchor for the jump.

List

A **List** control is a container element of the report that repeatedly displays the data of a report control placed inside the **List** control for every record in the dataset bound to the report.

To add a **List** control to a report and to add other controls to the **List**, navigate to the **Report Designer**. Drag and drop the **List** control onto the designer

area from the **Toolbar**.

Detailed below are the common properties of a list.

Common

Property	Description
Name	Add a unique name to the list. Special characters such as period (.), space ( ), forward slash (/), backslash (\), exclamation marks (!), and hyphens (-) are not supported. You can use an underscore (_) in the name of the List.

Data

Property	Description
Data Set Name	Select a dataset from the dropdown. Use this dropdown when you have more than one dataset bound to the report.
Data Set Parameters	Use the + Add button to add parameters to the dataset. You can enter static values, expressions, or data fields as parameters.
Sort Expressions	Set a sort expression for the List control using this property.
Filters	Add filters to filter out the data from the report.

Group

Property	Description
Name	Add a unique name to the group. Special characters such as period (.), space ( ), forward slash (/), backslash (\), exclamation marks (!), and hyphens (-) are not supported. You can use an underscore (_) in the name of the container.
Group Expressions	Enter an expression to use for grouping the data. Click the + Add button to add the group expressions.
Page Break	Select a page break option (None, Start, End, StartAndEnd, or Between) using the dropdown.
Filters	Add filters to filter out the grouped data from the report.

Background & Borders

Property	Description
Color	Select the background color of the container.
Borders	Select the type of border to apply to the container. Border options for lists are: Left, Right, Top, Bottom, and All.
Width	Select the width of the borderline.
Style	Select a style for the border from the following options: Dotted, Dashed, Solid, Double, Groove, Ridge, and Inset.
Color	Select a color for the borderline.

Dimensions

Property	Description
Left	Set the left margin of the list control.
Top	Set the top margin of the list control.
Width	Set the width of the list control.
Height	Set the height of the list control.

Layout

Property	Description
Style	Select a color theme for the container from the dropdown.
Padding	Set the padding of the list items. You can use the Expand button to set the padding in all four directions.
Page Break	Set a page break between the List control and other report elements using the dropdown. The following options are available in the dropdown: ▪ None: No page break between the list control and other elements. ▪ Start: Page break at the start of the list control. ▪ End: Page break from the end of the list control. ▪ StartAndEnd: Page break at both the start and end of the list.
New Page	Select an option from to start the content after a page break. The available options are Next, Odd, and Even.
Rows or Columns Count	Enter a value to add the number of rows or columns to List control.
Grow Direction	Select a growing direction of the list from the following options: Column, ColumnReverse, Row, or RowReverse.

No Data

Property	Description
Message	Enter a message to display for No Data content.

Property	Description
Font, Size, and Color	Set the font family, size, and color of the font for the No Data content.
Weight, Style, and Decoration	Set the appearance of the No Data content using the Weight, Style, and Decoration properties.

Table

The **Table** is the most commonly used data region in designing reports. It organizes the data in a tabular format, in rows and columns which makes the data easier to understand. By default a table has three columns and three rows, a total of nine cells, where each cell is filled with a text box. In a table you can sort and filter the bound data, display a total row at the end of a table, merge rows and columns, freeze to keep certain rows and columns visible when scrolling the table and more.

Table Components

A table is comprised of the following components:

Component	Description
Header Row	By default, a table has a header row that appears at the top of the table. It is typically used to label each column or add a header to the table. A table can have several header rows.
Group Header Row	Appears at the beginning of each group in the table. You can use a group header row to display the group's field value or summary value. A group can have several header rows.
Details Row	Repeats for each record in the bound dataset. If the details row is inside the row group, it will repeat once for each unique value of the group. A table can have more than one details row. Note that the details group is the innermost child group.
Group Footer Row	Appears at the end of each group in a table. You could use the group footer row to display the summary values. A group can have several footer rows.

Component	Description
Footer Row	By default, a table has a footer row that appears at the end of the table. You could use the footer rows to display grand totals or notes. A table can have several footer rows.
Row and Column Handlers	Use to add rows and columns to the table. Note that the added row can be a header row, details row, or footer row.

Bind Data to a Table Data Region

Follow the below steps to bind data to a **Table** data region. There are several methods of doing so within the **Report Designer**.

Method 1

1. From the **Report Toolbox** on the left, drag and drop the **Table** data region onto the **Design Area**.
2. From the **Data Binding** tab on the right, expand the dataset and drag-drop the desired fields onto the cells in the details row. The header row in the table is automatically filled with the corresponding labels.

Method 2

1. From the **Report Toolbox** on the left, drag and drop the **Table** data region onto the **Design Area**.
2. Select a **TextBox** in the details row and, from the **fields selection** adorner select a field from the list.

Method 3

1. From the **Data** tab on the right, click the **Select Fields** button next to the bound dataset and choose the desired fields.
2. Drag-drop the selected fields onto the **Design Area**. A table with its column bound to the fields is created.

Add Rows and Columns

Once you create a table in the **Report Designer**, you can insert and delete additional rows and columns in your table based on your requirements.

To add rows and columns to a table data region follow the below steps.

Adding Rows

This section describes the different ways to add rows to a table.

Method 1

1. Select the cell in the row (or the entire row) where you want to add a row.
2. Right-click the selected cell (or row), and choose one of the following insert options from the context menu:

   To add a new row above the selected row, select **Row** > **Insert Row** > **Above** option.

   To add a new row below the selected row, choose the **Row** > **Insert Row** > **Below** option.

Method 2

1. Click anywhere inside the table.
2. A **row handler** will appear when you place the cursor to the left of the table row. Click the **row handler** to add a new row.

Method 3

1. Select the cell in the row (or the entire row) where you want to add a row.
2. Right-click the selected cell (or row), and choose **Row** > **More Options** from the **Context** menu.
3. In the **Insert Rows** dialog box that appears, specify the number of rows you want to insert and their position (i.e. above or below) with respect to the selected cell (or row) in the table. The **Count** field in the dialog accepts values ranging from 1 to 20.
4. Click the **Insert** button.

Adding Columns

This section describes the different ways to add columns to a table.

Method 1

1. Select the cell in the column (or the entire column) where you want to add a column.
2. Right-click the selected cell (or column), and choose one of the following insert options from the context menu -

To add a new column to the left of the selected column, select **Column** > **Insert Column** > **Left** option.

To add a new column to the right of the selected column, select **Column** > **Insert Column** > **Right** option.

Method 2

1. Click anywhere inside the table.
2. A **Column Handler** will appear when you place the cursor on the top of the table column. Click the **Column Handler** to add a new column.

Method 3

1. Select the cell in the column (or the entire column) where you want to add a column.
2. Right-click the selected cell (or column) and choose the **Column** > **More Options** from the context menu.
3. In the **Insert Columns** dialog box that appears, specify the number of columns you want to insert and their position (i.e. left or right) with respect to the selected cell (or column) in the table.

   The **Count** field in the dialog accepts values ranging from 1 to 20.
4. Click the **Insert** button.

Delete Rows and Columns from a Table Data Region

Follow the below steps to delete rows and columns from a table.

Delete rows from a table:

1. Select the cell in the row (or the entire row) which you want to delete.
2. Right-click the selected cell (or row) and choose the **Row** > **Delete Row** option from the **Context** menu.

Delete columns from a table:

1. Select the cell in the column (or the entire column) which you want to delete.
2. Right-click the selected cell (or column) and choose the **Column** > **Delete Column** option from the context menu.

Merge Cells

Cell merging is used to combine multiple cells into a single cell. You can merge cells both horizontally and vertically in a table. Vertical cell merging is possible only within the same row type, that is, within the **Header**, **Group Header**, **Footer**, **Group Footer**, or **Details** row.

When you merge multiple cells, only the content of the upper-left cell for left-to-right languages, or the upper-right cell for right-to-left languages is preserved.

Follow the below steps to merge multiple cells in a table.

1. Select the cells you want to combine. Use the Ctrl key to select more than one cell.
2. Right-click the selected cells and choose the **Cells** > **Merge Cells** option from the context menu.

To split Cells in a Table Data Region

Follow the below steps to split the merged cell into more cells. Note that you cannot split an unmerged cell.

1. Select the cell you want to split.
2. Right-click the selected cell and choose the **Cells** > **Split Cells** option from the context menu.

Group Data

Grouping is used to combine the rows based on certain values in one or more columns. If you group the data based on one column all the rows with the same column values are grouped into one section. Adding groups to a table makes it easier to summarize and analyze the complex data in reports.

Follow the below steps to add a group to a table.

1. Click anywhere inside the table to make the **Groups** pane appear on the right side of the table.
2. Drag and drop the desired field from the **Data** tab to the **Groups** pane. Doing so, will group the data based on your desired field values.

   Alternatively, you can add a group by selecting the **Group** > **Insert Group** option from the context menu. Additionally, make sure to set the **Grouping Expression** property in the **Properties** panel.
3. Merge the cells in the **Group** Header row by selecting the **Cells** > **Merge Cells** option from the context menu and enter your intended expression in the **Value** property.
4. In the **Group Footer** row, select the cell of the column you wish to sum and enter the sum function expression in its **Value** property.

   > **FOR EXAMPLE:**
   >
   > {Sum(Name_of_Intended_Column)}.
   >
   > This will add a summarized value amount at the end of each section.

5. Additionally you can enter the text "**Sub Total**" in the **Group Footer** cell of the **Region** column.
6. Preview the report.

Freeze Rows and Columns

When previewing a **Table** data region that contains a large volume of data, you may need to scroll to view all the content. However, as rows or columns scroll out of view, it becomes challenging to interpret the data in context. To address this, you can freeze specific row(s) and column(s), ensuring they remain visible while the rest of the table scrolls.

Follow the below steps to freeze specific row(s) and column(s) in a table.

1. Select the entire table and go to the **Properties** panel on the right.
2. Scroll down the panel and find the **Frozen Rows** and **Frozen Columns** properties.
    a. Use the **Frozen Rows** property to specify the numbers of row(s) you want to freeze in the table. Note that this property is applicable only to the header row(s), which means you should not exceed the row count than the actual number of header row(s) in the table.
    b. Use the **Frozen Columns property** to specify the number of column(s) you want to freeze in the table.
3. Preview the report.

Sort Data

Sorting is the most used operation for data analysis. You can sort the data by one or more columns, alphabetically or numerically, in ascending or descending order. Sorting helps to organize and quickly visualize the data in a table. Or you might want to arrange the data in groups (i.e. policy type - new and renewal) in ascending order of policy number. Sorting applied on a group has higher precedence than the sorting applied on a table.

To Apply Sort in a Table Data Region

Follow the below steps to sort the data in a table.

1. Select the table and go to the **Properties** panel on the right.
2. Under the **Data** section, find the **Sort Expressions** property. This property contains the name of the field or an expression based on which you want to sort the data.
3. Click the **Add Item** button and choose the desired field from the **Data Binding** dropdown. The dropdown lists all the available fields in the bound dataset. You can also add expressions.

Alternatively, select the **Details** group from the **Group** pane, and go to the **Sort Expressions** property under the **Data** section.

Use the **Show Items** button to display the list of sort items for the selected table.

4. Choose whether to sort the data in ascending or descending order through the **Sort** button. The default order is ascending.
5. Preview the report.

To Apply Sort to a Group

The following steps assume that you have already added a group to the **Table** data region.

1. From the **Groups** pane, select the details group.

   Applying sort to the details group helps in organizing the data within the groups.
2. Under the **Data** section, find the **Sort Expressions** property. This property contains the name of the field, or an expression based on which you want to sort the data.
3. Click the **Add Item** button and choose the desired field from the **Data Binding** dropdown. The dropdown lists all the available fields in the bound dataset. You can also add expressions.
4. Choose whether to sort the data in ascending or descending order through the **Sort** button. The default order is ascending.
5. Preview the report.

Applying an Interactive Sort in a Table Data Region

Interactive sort enables you to sort the data for table and group when you preview a report. It adds interactive sort buttons on the chosen column header and allows you to toggle between the increasing and decreasing sorting order.

Apply Interactive Sort to a Table

1. Select the column header cell according to which you want to sort the data.
2. Go to the **Properties** panel on the right and find the **Sort Expression** property. This property contains the name of the field or an expression based on which you want to sort the data.
3. Choose the desired field from the **Data Binding** dropdown. The dropdown lists all the available fields in the bound dataset. You can also add expressions.
4. Specify the scope to which you want to apply the sort in the **Sort Expression Scope** property. The only possible value for this property is the currently selected table name.
5. Choose whether to set the **Sort Target** property to the dataset or table.

6. Preview the report.

Apply Interactive Sort to a Group

The following steps assume that you have already added a group to the Table data region.

1. Select the group header cell where you want to add the interactive sort buttons.
2. Go to the **Properties** panel and find the **Sort Expression** property under the User Sort section. This property contains the name of the field or an expression based on which you want to sort the data.
3. Choose the desired field from the **Data Binding** dropdown. The dropdown lists all the available fields in the bound dataset. You can also add expressions.
4. Specify the scope to which you want to apply the sort in the Sort Expression Scope property. The possible values are the currently selected table name and its associated group(s). Set the **Sort Expression Scope** property to your desired group name.
5. Choose whether to set the **Sort Target** property to dataset, table, or group.
6. Preview the report.

Filter Data

Use filters to view only the data in which you are interested. The filters make data analysis simple and let you focus on the specific information.

To Filter Data in a Table Data Region

The following are the steps to filter data in a table. Use the **AND** or **OR** operators to add multiple filters to a table.

1. Select the table by clicking the four-way arrow.

   If you want to apply a filter on a group, select the required group from the **Groups** panel.
2. Go to the **Properties** panel and find the **Filters** property under the **Data** section.

   In the case of applying a filter on a group, you can find the **Filters** property under the **Group**section.
3. Click the **Add** button to define the filter criteria for the table.
4. Set the **Operator** to match your requirements.
5. Preview the report to see the result.

Show Row Numbers

Manually numbering the rows in a table is a time-consuming task. Use the **RowNumber** function of the **Expression Editor** to automatically generate the sequence number for each new row in the table. You can also apply this function on grouped data to find the running count of all the rows in the specified scope.

Follow the below steps to add row numbers to a table.

1. Add a new column to the table using the column handle or the context menu. This column will contain the row numbers.
2. Enter the text "**RNo**" in the header cell of the new column.
3. Right-click the detail cell of the new column and choose the **Cell Expression** option from the context menu.

   Alternatively, you can set the **Value** property in the Properties panel to Expression.
4. In the **Expression Editor** double-click the **RowNumber** property under **Common Functions** > **Miscellaneous** on the left.
5. The expression is now displayed on the right of the editor.
6. Click **Save** to close the editor.
7. Preview the report.

To Show Row Numbers with Scope in a Table Data Region

Follow the below steps to add row numbers in a specified scope. These steps assume that you have already added a row group to the table.

1. Add a new column to the table using the column handle or the context menu. This column will contain the row numbers for the group.
2. Enter the text "**Group RNo**" in the header cell of the new column.
3. In the **Group** pane on the right of the table, select the row group name.
4. Copy the name of the group name from the **Value** property of the **Properties** panel.
5. Right-click the detail cell of the new column and choose the **Cell Expression** option from the context menu. Alternatively, you can set the **Value** property in the **Properties** panel to **Expression**.
6. In the **Expression Editor** that opens, double-click the **RowNumber** (Scope) property under **Common Functions** > **Miscellaneous** on the left, and paste the group name enclosed with double quotes.
7. Click **Save** to close the editor.
8. Preview the report.

Tablix

The **Tablix** data region displays the data in a cross-table format, which is especially useful in analyzing a huge set of categorical data. It also provides an efficient way to create a multidimensional report organized in meaningful hierarchies based on the business requirements. A **Tablix** is a combination of two report regions, a table, and a matrix. Therefore, it combines the functionalities of both the data regions (table and matrix) with added capabilities including the support for adjacent groups, interactive layout options such as the stepped row group, collapsed group, and more. By default, a **Tablix** consists of four cells, where each cell contains a **Textbox** control.

Tablix Components

Table of Components

Typically, a tablix is composed of the following components.

Component	Description
Corner	Displays static information such as headings, titles, etc. representing the **Tablix** data.
Row Group	Groups in this area organize the report data in horizontal direction. A row group is represented by a square bracket on the left side of the row.
Column Group	Groups in this area organize the report data in vertical direction. A column group is represented by a square bracket above the column.
Body	Displays aggregated data by the row and column grouped data in the **Tablix** data region.

Static and Dynamic Rows and Columns

A row and column in a **Tablix** data region can either be static or dynamic.

- Static rows and columns are used to display labels and totals. They are rendered only once when you preview a report. For example, the header and footer rows in a tablix are static rows.
- Dynamic rows and columns are associated with one or more groups. They are rendered once for every unique value in the group when you preview a report and are known as group instances.

Tablix Wizard

Select the **Configure** button on the top-right corner of the tablix to display **the Tablix Wizard**.

The **Tablix Wizard** is broadly divided into two portions. The portion on the left displays the available fields in the bound dataset. The portion on the right displays the Design Area that allows you to configure the row groups, column groups, values, and layout options.

Layout Design

The **Layout Design** provides various layout options for the row and column groups in a tablix. You can also use the **Filter** button to filter the data in a tablix.

Totals Tab

The **Totals** tab describes the layout settings related to the totals and subtotals for the row and column groups.

- Totals for Row Groups

  A new row is added to display the aggregated values at the end or beginning of the parent row group.

- Subtotals for Row Groups

  A new row is added to display the aggregated values at the end or beginning of the child row group. This option is applicable when a tablix consists of a row group hierarchy.

- Totals for Column Groups

  A new column is added to display the aggregated values at the end or beginning of the parent column group.

- Subtotals for Column Groups

  A new column is added to display the aggregated values at the end or beginning of the child column group. This option is only applicable when a tablix contains a column group hierarchy.

- Show Totals before Groups

  Choose whether to display the totals and subtotals before or after row and column groups.

Styling Tab

The **Styling** tab lists the available styles that you can apply to the tablix. Styling options depend on the current report theme.

The styles include, the following:

- Light Style 1 Accent 1 Tablix
- Light Style 1 Accent 2 Tablix
- Light Style 1 Accent 3 Tablix
- No Style No Grid Tablix
- SmoothTablix

Organization Tab

The Organization tab provides interactive layout options for a tablix.

- Expand/Collapse Groups

  Expands and collapses the rows and columns in a group hierarchy.

- Collapsed Group

  Hides the rows and columns associated with child row and column groups. This option is available when you check the **Expand/Collapse Groups** option.

- User Sort

  Adds interactive sort buttons to the column headers that help to organize the tablix data.

- Stepped Rows Groups

  Displays all the child row groups in the same column as the parent group. By default, the row groups in tablix are displayed in different columns.

- Frozen Rows and Columns

  Locks certain rows and columns to keep them visible while the rest of the tablix scrolls

Row Groups

Row groups arrange the data in groups by rows. The row groups expand vertically in a report. You can apply filter on the row group, specify the sorting order for the row group, modify the data format, and swap the rows/column groups

Column Groups

Column groups arrange the data in groups by columns. The column groups expand horizontally in a report. You can apply filters on the column group, specify the sorting order for the row group and modify the data format.

Values

Values refers to the summary values to be displayed in the tablix cells. You can specify the aggregate function for the field, modify the data format, or apply summary and total value calculations such as % grand total, % row group total, etc.

Bind Data to a Tablix Data Region

Follow the below steps to bind data to a **Tablix** data region.

1. From the **Report Toolbox** on the left, drag and drop the **Tablix** data region onto the **Design Area** (or simply click the report item).
2. If a dataset is already added to the report, a **Tablix Wizard** appears after dropping (or clicking) the data region. The **Tablix Wizard** allows you to quickly configure the tablix data and layout.

   Drag and drop the dataset fields from the left panel into the **Row Groups**, **Column Groups**, and **Values** areas on the right.
3. If you close the **Tablix Wizard,** a blank matrix with two rows and columns is created. You can use the **Context Menu** to manually add the row and column groups and the **Group Editor** to view the row and column group hierarchies.

Add Row and Column Groups

The **Tablix** data region organizes the data in groups by rows and columns. The row group expands vertically, and the column group expands horizontally in the report. The rows and columns inside the groups repeat once for each unique group value. The rows and columns outside the groups repeat once for the group. You can create nested groups as well as adjacent groups in a tablix.

The easiest way to add a group in a tablix is through the **Tablix Wizard**. However, you can use the **Cell Context Menu** or the **Group Editor** to insert row and column groups.

Using the Tablix Wizard

The **Tablix Wizard** is the primary way to add row and column groups in a tablix. The wizard appears automatically when you drop the **Tablix** data region onto the **Design Area** or click the data region in the **Report Toolbox**. You can also use the **Configure** button to open the **Tablix Wizard**.

The left pane in the wizard displays the available fields in the bound dataset.

- To create a row group, drag and drop the dataset field to the **Row Groups** area. You can create a group hierarchy by placing multiple fields in this area organized in a specific order.
- To create a column group, drag and drop the dataset field to the **Column Groups** area. You can create a group hierarchy by placing multiple fields in this area organized in a specific order.

The corresponding buttons next to the fields placed in the **Row Groups** and **Column Groups** areas allow you to specify the sorting order and change the data format for the field. Use the **Swap** button in the **Row Groups** area to swap the rows and column groups.

Using the Cell Context Menu

The **Cell Context Menu** in a tablix provides options to create both nested and adjacent groups. You can access these options by right-clicking the cell in the tablix data region

Row Group

To insert a row group in a tablix, choose from the following options.

- Parent

  Inserts a parent row group.
- Child

  Inserts a child row group. This option is unavailable if there is no parent row group.
- Adjacent Before

  Inserts an adjacent row group above the selected cell.
- Adjacent After

  Inserts an adjacent row group below the selected cell.
- Delete

  Deletes the row group.
- Enable Group

  Inserts a parent/child row group based on the cell location. This option is available when no groups are associated with the selected cell.
- Disable Group

  Deletes the parent/child row group based on the cell location. This option is available when one or more groups are associated with the selected cell.

Column Group

To insert a column group in a tablix, choose from the following options.

- Parent

  Inserts a parent column group.

- Child

  Inserts a child column group. This option is unavailable if there is no parent column group.

- Adjacent Left

  Inserts an adjacent column group to the left of the selected cell.

- Adjacent Right

  Inserts an adjacent column group to the right of the selected cell.

- Delete

  Deletes the column group.

- Enable Group

  Inserts a parent/child column group based on the cell location. This option is available when no groups are associated with the selected cell.

- Disable Group

  Deletes the parent/child column group based on the cell location. This option is available when one or more groups are associated with the selected cell.

Using the Group Editor

The **Group Editor** in the **Report Toolbox** shows the row and column hierarchies for the currently selected **Tablix** data region. It also provides you options to add nested and adjacent groups to the chosen group in the editor.

In the **Tablix Group Editor**, when a column is selected within a column hierarchy that is the column group, or a row is selected within a row hierarchy that is the row group highlights the specific row and column headers.

Adding a Row Group

To add a row group to the currently selected row group, click the **Vertical Ellipsis** icon and choose from the following options.

- Parent

  Inserts a parent row group.

- Child

  Inserts a child row group.

- Adjacent Before

  Inserts an adjacent row group above the selected row group.

- Adjacent After

  Inserts an adjacent row group below the selected row group.

- Enable Group

  Inserts a parent/child row group based on the textbox location. This option is available when no groups are associated with the selected textbox.

- Disable Group

  Deletes the parent/child row group based on the textbox location. This option is available when one or more group is associated with the textbox cell.

Adding a Column Group

To insert a column group in a tablix, choose from the following options.

- Parent

  Inserts a parent column group.

- Child

  Inserts a child column group.

- Adjacent

  Left Inserts an adjacent column group to the left of the selected column group.

- Adjacent Right

  Inserts an adjacent column group to the right of the selected column group.

- Enable Group

  Inserts a parent/child column group based on the textbox location. This option is available when no groups are associated with the selected textbox.

- Disable Group

  Deletes the parent/child column group based on the textbox location. This option is available when one or more group is associated with the selected textbox.

Show Totals and Subtotals

Display totals and subtotals to show summarized values for a column or group in a tablix. The totals displays a summarized value for all the rows in the data region and the subtotals displays a summarized value for each group instance. You can choose which function to use for computing the totals and subtotals values from SUM, AVG, COUNT, MIN, MAX, etc.

The easiest way to display totals or subtotals in a tablix is through the **Tablix Wizard**. However, you can also use the **Cell Context Menu** or the **Group Editor** to show totals and subtotals.

Using the Tablix Wizard

The **Tablix Wizard** is the primary way to display totals and subtotals in a tablix. The wizard appears automatically when you drop the **Tablix** data region onto the **Design Area** or click the data region in the **Report Toolbox**. You can also use the **Configure** button to open the **Tablix Wizard**.

The **Layout Options** in the wizard provides you various settings related to totals and subtotals for the row and column groups. By default, the totals and subtotals use the **COUNT** function.

To display totals for row or column group, choose from the following options:

- Totals for Row Groups

  Displays totals at the end of all the row group instances.
- Totals for Column Groups

  Display totals at the end of all the column group instances.
- Show Totals before Groups

  Displays totals and subtotals at the beginning of all the group instances.

To display subtotals for row or column group, choose from the following options:

- Subtotals for Row Groups

  Displays subtotals at the end of each row group instance.
- Subtotals for Column Groups

  Displays subtotals at the end of each column group instance.
- Show Totals before Groups

  Displays totals and subtotals at the beginning of all the group instances.

Using the Cell Context Menu

The **Cell Context Menu** in a tablix displays totals and subtotals based on the group hierarchy. You can access the following totals options by right-clicking the cell in the Tablix data region. If you right-click a cell associated with a parent group, it will display totals. Similarly, if you right-click a cell associated with a child group, it will display subtotals.

By default, Totals and Subtotals use the SUM function.

- Add Total After

  Displays totals or subtotals at the end of group instances.

- Add Total Before

  Displays totals or subtotals at the beginning of group instances.

Using the Group Editor

The **Group Editor** in the **Report Toolbox** shows the row and column hierarchies for the currently selected **Tablix** data region. It also provides you options to display totals and subtotals to the chosen group in the editor. If you right-click a cell associated with a parent group, it will display totals. Similarly, if you right-click a cell associated with a child group, it will display subtotals. By default, Totals and Subtotals use the SUM function.

To show totals or subtotals in a **Tablix** data region, click the **Vertical Ellipsis** icon next to the row or column group, and choose from the following options.

- Add Total After

  Displays totals or subtotals at the end of group instances.

- Add Total Before

  Displays totals or subtotals at the beginning of group instances.

Merge Cells

Cell merging combines one or more cells to create a new larger cell. You can merge cells to avoid redundancy, improve appearance, or add labels that span several columns or rows.

You can merge the cells in the corner and body area of the tablix. The cells in the corner area can be merged both horizontally and vertically, while the cells in the body area can be merged only in the horizontal direction. Cells with duplicate values in the row group and column group areas are automatically merged into a single cell while previewing the report. When you merge multiple cells, only the content of the upper-left cell for left-to-right languages, or the upper-right cell for right-to-left languages is preserved.

To Merge Cells in a Tablix Data Region

Follow the below steps to merge the cells in a tablix.

1. Select the cells in the intended area of the tablix. Use the **Ctrl** key to select more than one cell.
2. Right-click the selected cells, and choose the **Cells** > **Merge Cells** option from the context

menu.

The selected cells are merged into one single cell.

Freeze Rows and Columns

The easiest way to freeze specific rows and columns in a **Tablix** data region is through the Frozen Rows and Columns option in the **Tablix Wizard**.

However, this can also be achieved by using the **Frozen Rows** and **Frozen Columns** properties as elaborated in the below section.

To Freeze Rows and Columns in a Tablix Data Region

Follow the below steps to freeze specific row(s) and column(s) in a tablix.

1. Select the entire tablix and go to the **Properties** panel on the right.
2. Scroll down the panel and find the **Frozen Rows** and **Frozen Columns** properties.

   Use the **Frozen Rows** property to specify the numbers of row(s) you want to freeze in the tablix.

   Use the **Frozen Columns** property to specify the number of column(s) you want to freeze in the tablix.
3. The **Frozen Rows** and **Frozen Columns** properties are only applicable to the header row (s) and column(s) of the Tablix data region, which means the number of row(s) and column (s) you want to freeze should not exceed the actual number of header row(s) and column (s) in the tablix.
4. Preview the report.

Expand and Collapse Groups in a Tablix Data Region

Follow the below steps to expand and collapse groups in a tablix.

1. Click anywhere inside the **Tablix** data region.
2. From the **Group Editor** on the left, select the appropriate group for which you want to hide or show the associated rows or columns.

   Once the group is selected, you will see the **Tablix Member** properties in the **Properties** pane.
3. The **Hidden** property sets the visibility for the selected group item each time you run a report.

   Set the property to **True** to hide the group item.

   Set the property to **False** to display the group item.
4. In the **Toggle Item** property, choose the textbox from the drop-down where you want to show the toggle icons.

   The textbox with the toggle icon cannot be the group for which you want to hide or show the associated rows or columns. It must be the textbox associated with a parent group.

5. Select the textbox associated with the parent group.
6. To specify the initial state of the toggle icons to be displayed on previewing the report, set the **Initial Toggle State** property to either **Collapsed** or **Expanded** in the **TextBox** properties.

   If you select **Collapsed** a **plus** (+) sign is displayed in the initial state.

   If you select **Expanded** a **minus** (-) sign is displayed in the initial state.
7. Preview the report.

Barcode

The **Barcode** control is used to display data in a machine readable QR or barcode format that enables you to scan sensitive information. The **Barcode** control lets you insert different types of barcodes into your report.

Structure

Structure of the **Barcode** control is explained below.

- Quiet Zone

  The zone at the left and right ends of the bar code are known as Quiet Zone. Both ends must be at least 10 times as wide as the minimum element width for proper scanning of the barcode.
- Start Character

  Start Character indicates the start of the barcode.
- Stop Character

  Stop Character indicates the end of the barcode.
- Check Digit

- Check Digit is a numeric value used to check read errors. Check Digit is located right after the barcode data.
- Bar Height

  Bar Height is the height of the barcode and is recommended to be greater than 15% of the barcode length.

Adding a Barcode Control to a Report

To add a Barcode control to a report, navigate to the **Report Designer** and follow the below instructions:

1. Drag and drop the **Barcode** control onto the **Design Area** from the **Designer Toolbar**.
2. Use the **Inspector** Panel on the right side of your screen to customize the appearance of the **Barcode** control.

   Select your intended type of barcode from the **Type** property of the **Symbology** section.

Inspector Panel Properties

The Inspector Panel properties of the Barcode control are listed and described in the below tables.

Common

Property	Description
Name	Add a unique name to the Bullet control. Special characters such as period (.), space, ( ), forward slash (/), backslash (\), exclamation marks (!), and hyphens (-) are not supported. You can use an underscore (_) in the name of the control.
Value	Enter a value or an expression for the value of the barcode. Value is a key attribute of the Barcode control.

Symbology

Property	Description
Type	Select a type of barcode from the dropdown.

Background & Borders

Property	Description
Color	Select the background color of the barcode.

Property	Description
Borders	Select the type of border to apply to the barcode. Border options for barcode are - Left, Right, Top, Bottom, and All.
Width	Select the width of the barcode.
Style	Select a style for the border from the following options - Dotted, Dashed, Solid, Double, Groove, Ridge, and Inset.
Color	Select a color for the barcode.

Text

Property	Description
Font	Select the font family of the text data in the barcode.
Size	Select a font size from the dropdown.
Color	Select a font color of the text data in the barcode.
Weight	Select a font weight to display the text data in the barcode.
Style	Select an style option for the text data in the barcode.
Decoration	Select a decoration option for the text data in the barcode.

Dimensions

Property	Description
Left	Set the left margin of the Barcode control.
Top	Set the top margin of the Barcode control.
Width	Set the width of the Barcode control.
Height	Set the height of the Barcode control.

Appearance

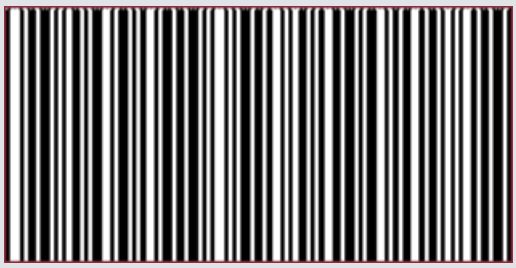
Property	Description
Caption Location	Select an option to display the caption above or below the barcode.

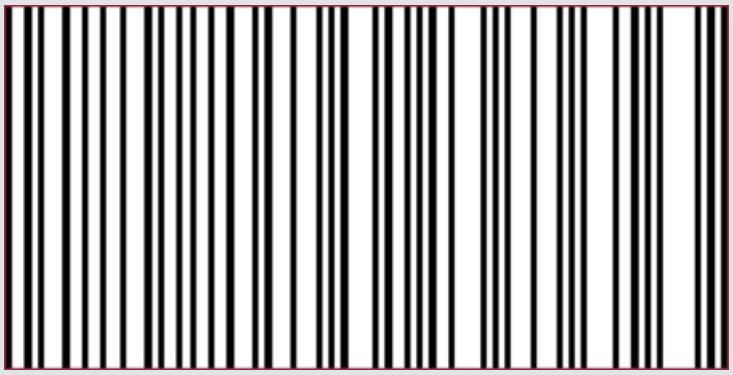
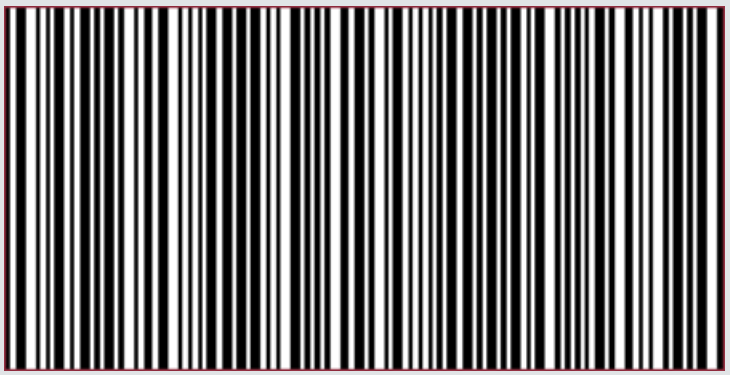
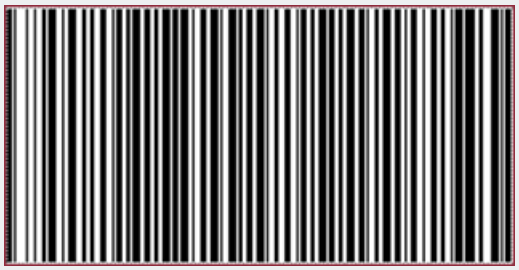
Property	Description
Checksum	Checksum increases the accuracy of the barcodes. Set the flag to False to turn off Checksum. By default, this option is set a True.
Rotation	Select a rotation angle for the barcode to None, 90 degrees, 180 degrees, or 270 degrees.

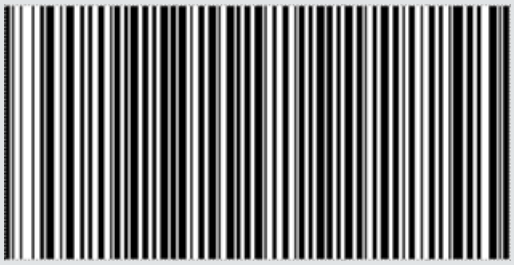
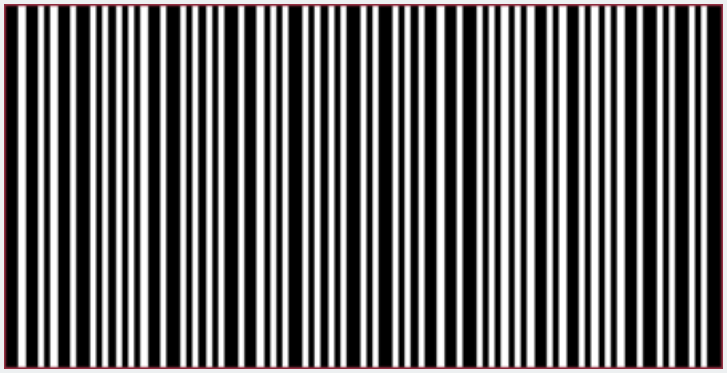
Layout

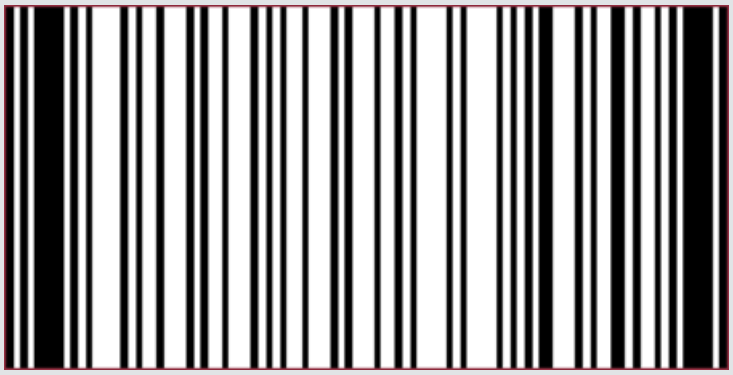
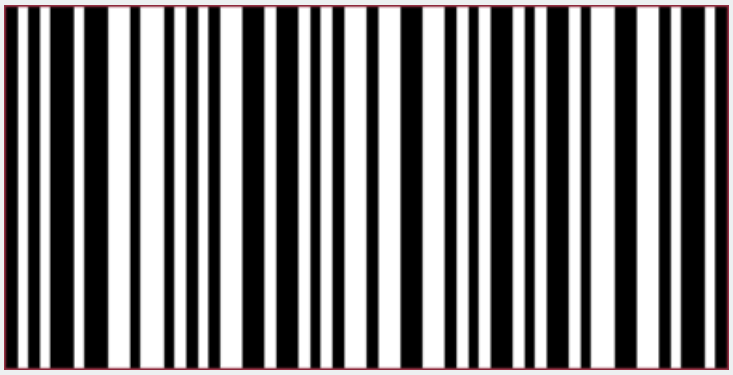
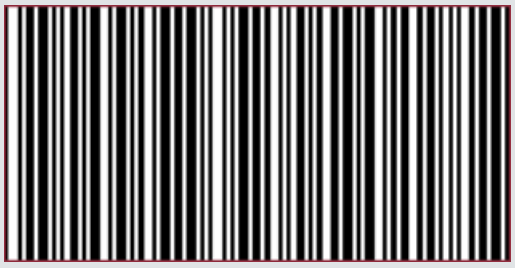
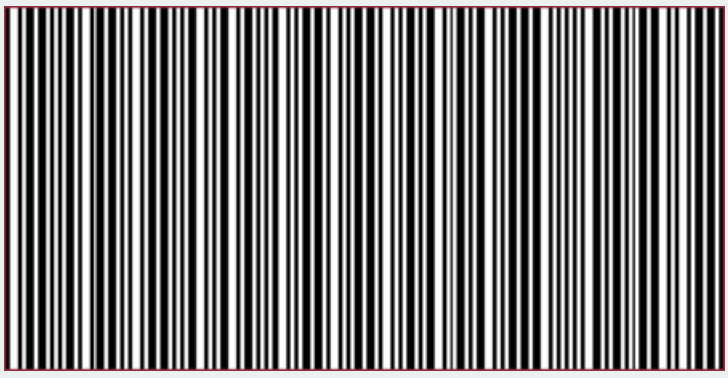
Property	Description
Padding	Set the padding of the barcode. You can use the Expand button to set the padding in all four directions.

Barcodes Symbology

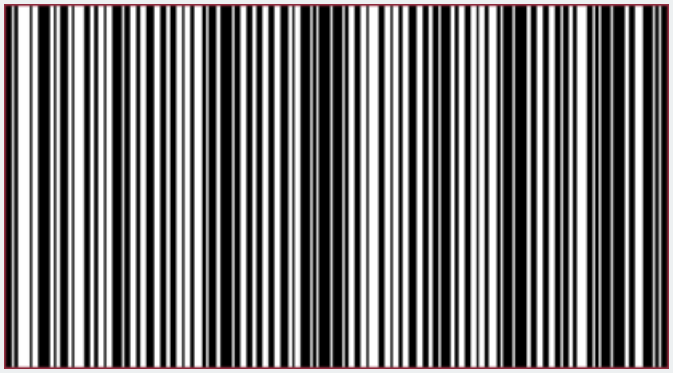
Symbology	Example	Description
ANSI 3 of 9		ANSI 3 of 9 (Code 39) barcode uses upper case alphabets (A-Z), numerals (0-9), and special characters like -, *, $, /, +, and % in the symbology.
ANSI Extended 3 of 9		ANSI Extended 3 of 9 (Code 39) barcode uses the complete ASCII character set.
Aztec		Aztec is a 2-D barcode symbology and supports all the ASCII characters (0 to 255).

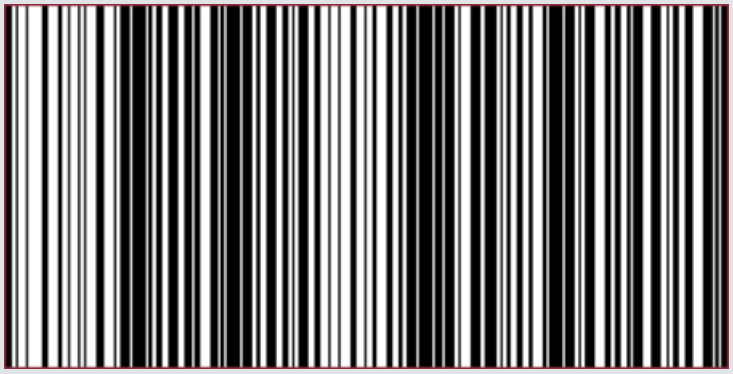
Symbology	Example	Description
BC412		BC412 barcode uses 35 characters, numerals (0 to 9), and upper case alphabets (A to Z). BC412 is used in semiconductor wafer identification.
Codabar		Codabar barcode uses A,B,C, or D alphabets as the Start and Stop Characters. Codabar uses numerals (0 to 9) and symbols (-, $, :, /, and ;) in the remaining code symbology.
Code 11		Code 11 barcode can encode numerals (0 to 9), hyphen (-), and Start/Stop Characters. Code 11 is primarily used in labeling telecommunicatio n equipment.
Code 128 A		Code 128 A uses control characters, numerals (0 to 9), punctuation, and upper case alphabets (A to Z).

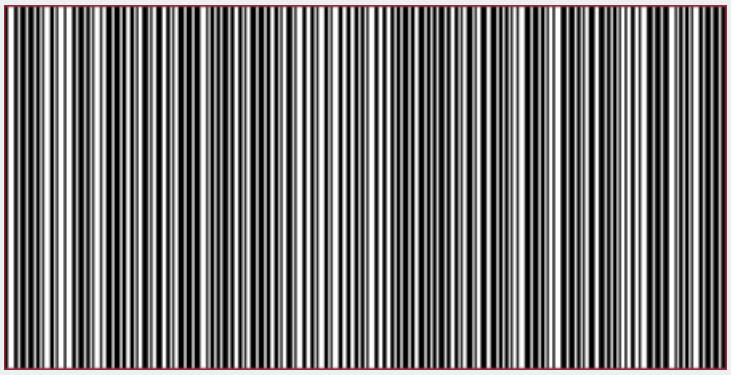
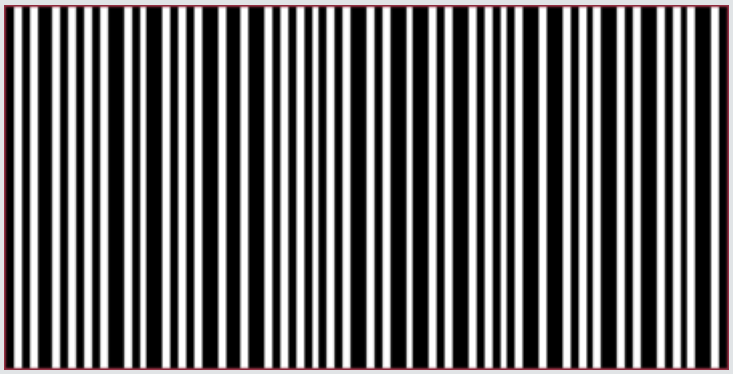
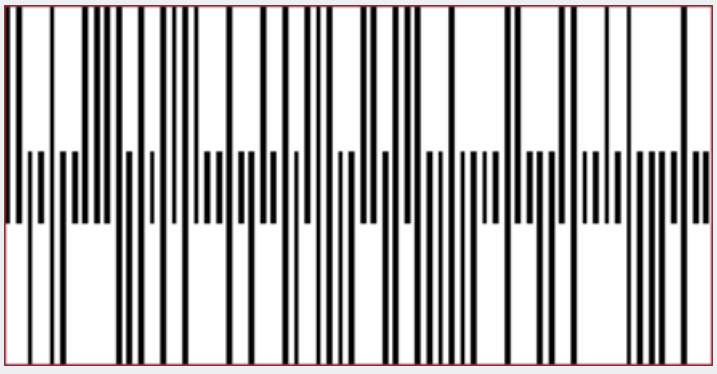
Symbology	Example	Description
Code 128 B		Code 128 B uses punctuations, numerals (0 to 9), and upper case and lower case alphabets.
Code 128 C		Code 128 C uses only numerals (0 to 9).
Code 128 Auto		Code 128 Auto uses the complete ACSII character set. Code 128 Auto automatically selects between Code 128 A, B or C to give the smallest barcode.
Code 2 of 5		Code 2 of 5 uses only numerals (0 to 9).

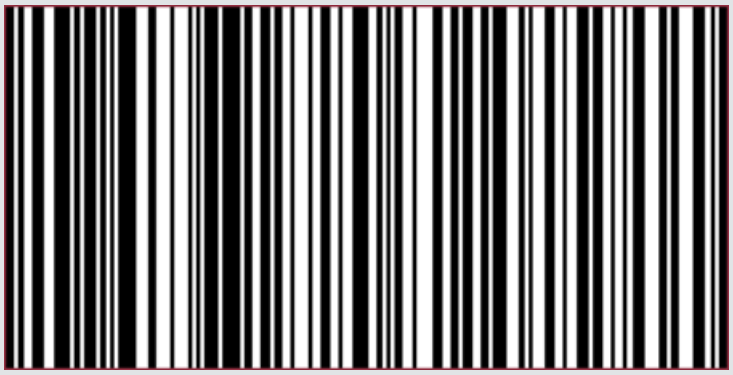
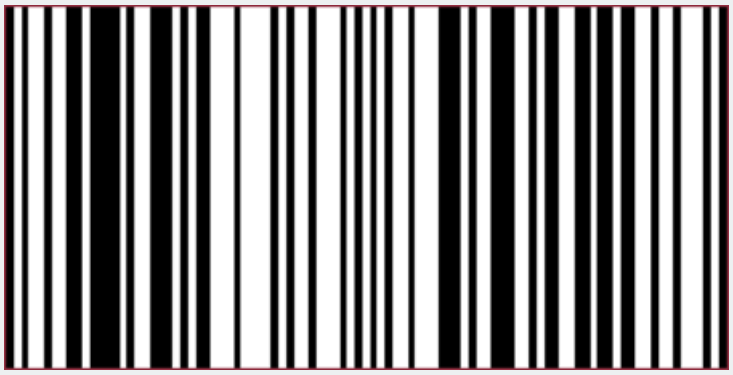
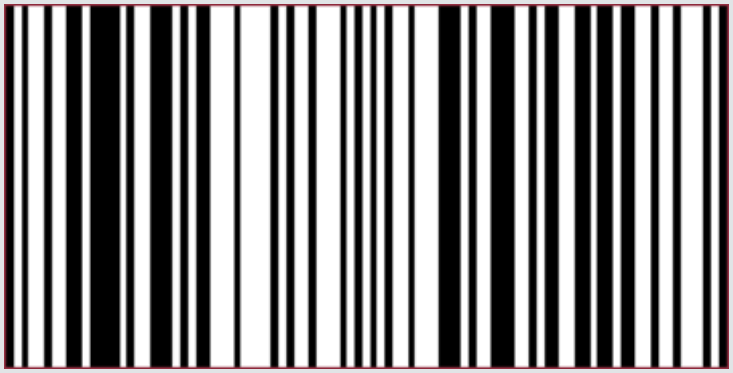
Symbology	Example	Description
Code 93		Code 93 uses upper case alphabets (A to Z), special characters (%, $, *, /, +, and -), and numerals (0 to 9).
Interleaved 2 of 5		Interleaved 2 of 5 is a two-width barcode symbology that uses only numerals (0 to 9) and must contain even number of digits in the code.
Code 39		Code 39 barcode uses numerals (0 to 9), upper case alphabets (A to Z), space character, and special characters (-, ., $, /, +, and %).
Extended Code 39		Extended Code 39 barcode uses the complete ASCII character set.

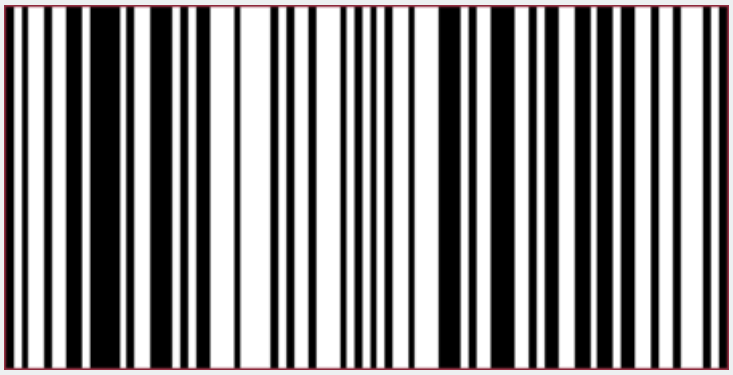
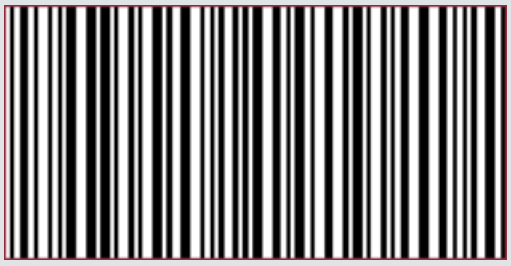
Symbology	Example	Description
Code 49		Code 49 is a two-dimensional high-density stacked barcode and contains two to eight rows of eight characters each. Code 49 encodes the complete ASCII character set. Each row of the code has a start and stop code.
Extended Code 93		Extended Code 93 uses the complete ASCII character set.
Data Matrix		Data Matrix is a two-dimensional high-density barcode symbology with square modules arranged in square or rectangular matrix pattern.

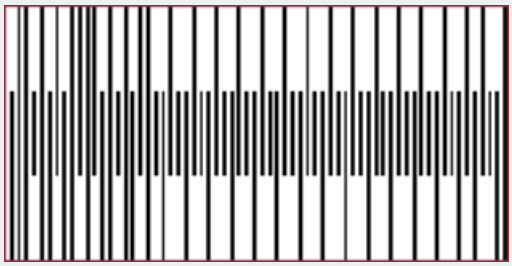
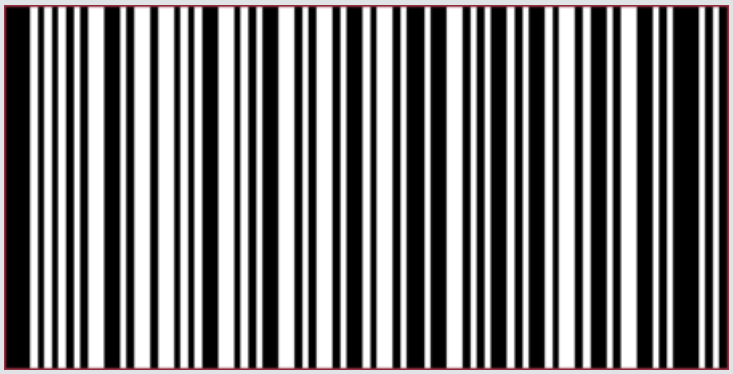
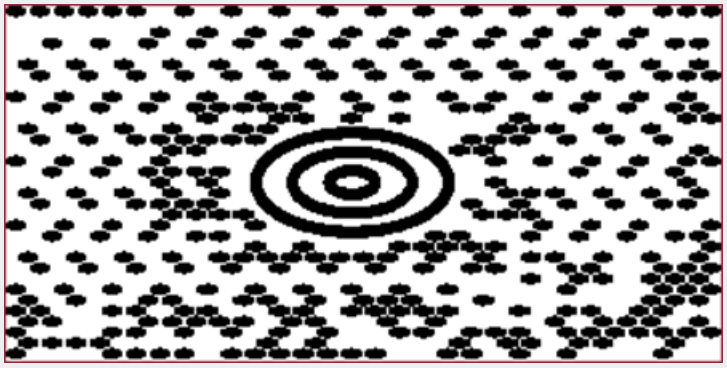
Symbology	Example	Description
EAN-13		EAN 13 barcode uses only numerals (12 numbers and a check digit). Check digit known as CheckSum is used to verify that the code has been scanned correctly.
EAN-8		EAN 8 is a condensed version of EAN 13 and uses 8 digits in the code (7 numbers and a check digit).
EAN-128FNC1		EAN-128FNC1 is a one-dimensional alphanumeric representation of Application Identifier (AI) data for making containers in the shipping industry.
GS1 Data Matrix		GS1 Data Matrix is a two-dimensional barcode used in healthcare industry. GS1 Data Matrix can take up to 2000 characters in the code.

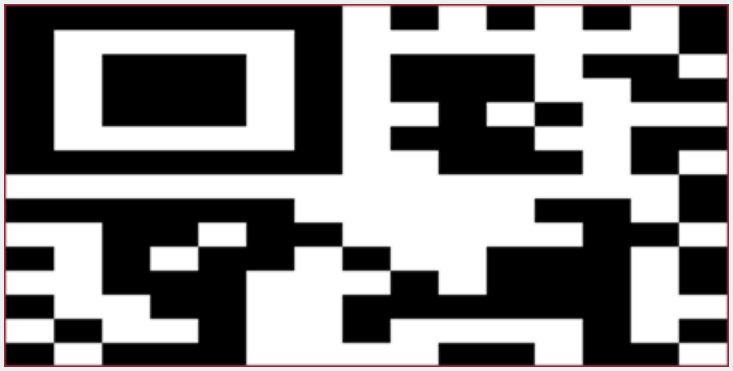
Symbology	Example	Description
GS1 QR Code		GS1 QR Code begins with the Function Code 1 (FNC1). It uses application identifiers to separate data within the barcode. Data in GS1 QR Code is stored as binary information in the square dots (known as modules).
HIBC Code 128		HIBC Code 128 uses the Code 128 symbology and encodes the primary and secondary data using a slash (/) as a delimiter. HIBC Code 128 is used in the healthcare products industry for identification purposes.

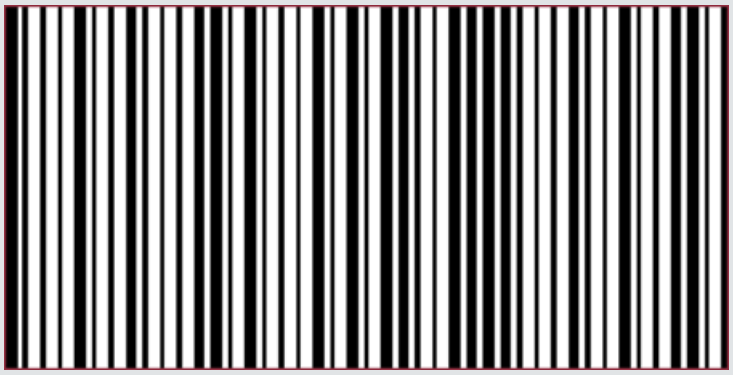
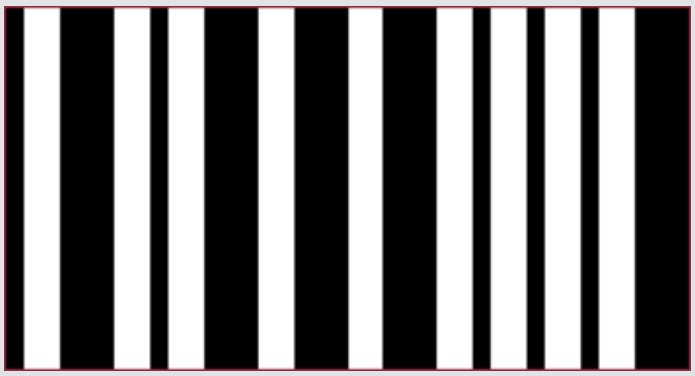
Symbology	Example	Description
HIBC Code 39		HIBC Code 39 uses the Code 39 symbology and encodes the primary and secondary data using a slash (/) delimiter. HIBC Code 39 is used in the healthcare products industry for identification purposes
IATA 2 of 5		IATA 2 of 5 is a modified Code 2 of 5 barcodes and uses only numeric digits with a check digit.
Intelligent Mail		Intelligent Mail is a 65-bar code used for domestic mail in the USA.

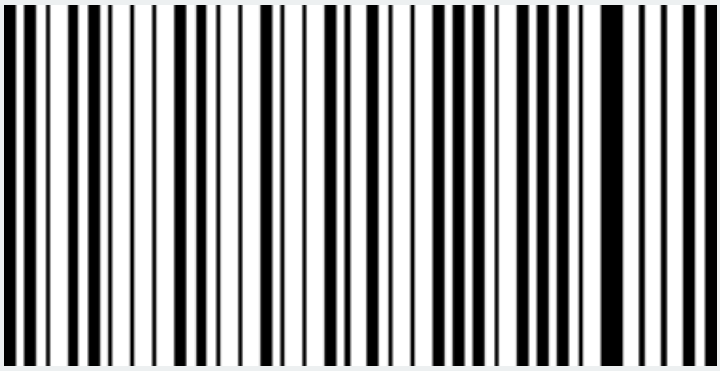
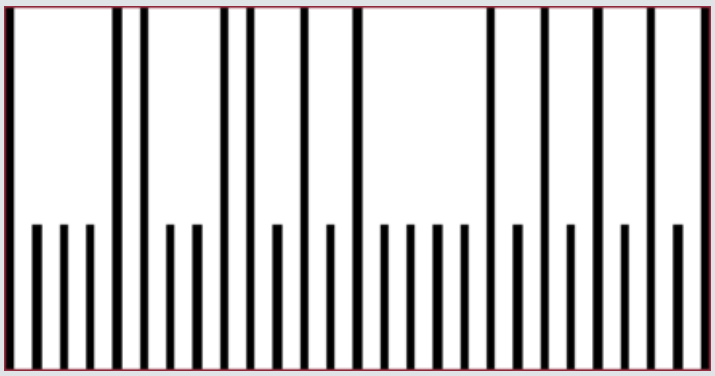
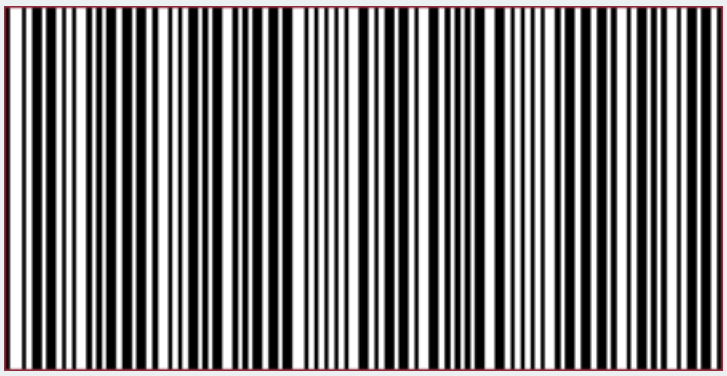
Symbology	Example	Description
Intelligent Mail Package		Intelligent Mail Package is a modified version of Intelligent Mail and is more efficient in terms of processing and tracking mails.
ISBN (International Standard Book Number)		ISBN barcode is a special form of EAN 13 code and is used as a unique 9-digit commercial book identifier. The properties specific to the ISBN barcode are listed and described in this section.
ISMN (Internationally Standard Music Number)		ISMN barcode is a special form of EAN 13 code and is used for marking printed musical publications. The properties specific to the ISMN barcode are listed and described in this section.

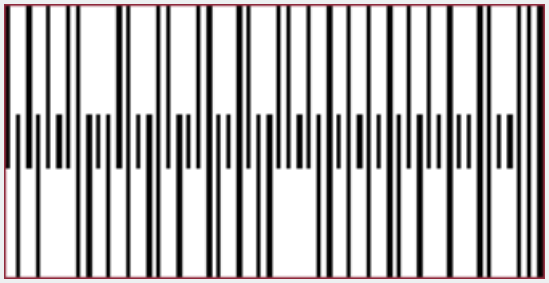
Symbology	Example	Description
ISSN (International Standard Serial Number)		ISSN barcode is a special form of EAN 13 code and is used to identify serial publications, publications issued in numerical order (such as the volumes of a magazine). The properties specific to the ISSN barcode are listed and described in this section.
ITF-14		Interleaved 2 of 5 barcode is used to mark carton boxes containing goods with a EAN 13 code. A digit is added in the starting of the code to mark the packing variant.

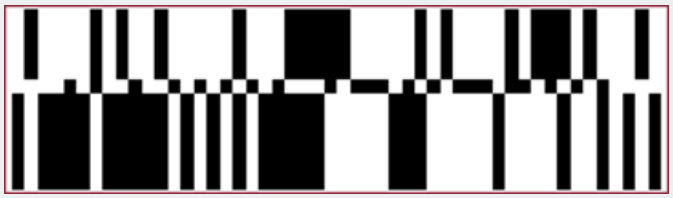
Symbology	Example	Description
Japanese Portal		Japanese Postal is the barcode used by Japanese Postal system. Japanese Postal barcode encodes alpha and numeric characters consisting 18 digits including 7 digits of the postal number followed by an optional block and house number information. The encoded data can include hyphens (-).
Matrix 2 of 5		Matrix 2 of 5 is a higher density barcode with 3 black bars and 2 white bars.
MaxiCode		MaxiCode is a special polar barcode that uses 256 characters. MaxiCode is used as shipping labels for world-wide addressing and package sortation.

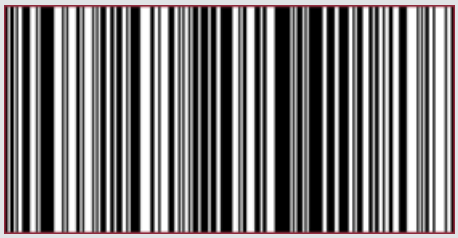
Symbology	Example	Description
Micro PDF417		Micro PDF417 is a two-dimensional multi-row symbology derived from PDF417. MicroPDF 417 is used for applications that needs to encode data in two dimensional symbols consisting of up to 15 bytes, 250 alphanumeric characters, or 366 numeric digits. Micro PDF417 allows you to insert FNC1 character as a field separator for variable-length Application Identifiers.
Micro QR Code		Micro QR Code is a 2-D barcode designed for applications that use a small amount of data and can encode up to 35 numeric characters. Micro QR Code can handle numeric and alphanumeric data including Japanese Kanji and Kana characters.

Symbology	Example	Description
MSI Code		MSI Code uses only numeric digits (0 to 9).
PDF417		PDF417 is a two-dimensional high-density barcode symbology that can encode up to 1108 bytes of information. PDF417 consists of a stacked set of smaller codes and can encode up to 35 alphanumeric characters or 2710 numeric characters.
Pharmacode		Pharmacode represents only numeric data from 3 to 131070. Pharmacode is used in the pharmaceutical industry for packaging purposes and is designed to be readable despite printing errors.

Symbology	Example	Description
Plessey		Plessey barcode uses hexadecimal digits to encode. Plessey is a one-dimensional barcode mainly used in libraries.
PostNet		PostNet barcode uses numeral digits (0 to 9) with a check digit.
PZN (Pharmaceutical Central Number)		PZN barcode uses the same encoding algorithm as Code 39. However, PZN can carry only - 0123456789 digits and supports 6 or 7 digits for encoding. The PZN and a check digit are automatically added to the code. PZN is mainly used in medicine and healthcare products in Germany and other German speaking countries.

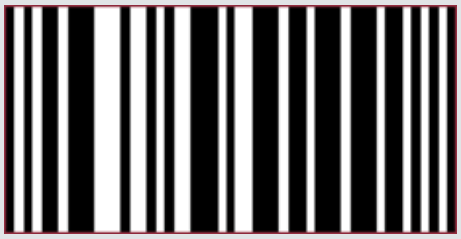
Symbology	Example	Description
QR Code		QR Code is a two-dimensional barcode symbology that is capable of handling numeric, alphanumeric, and byte data along with Japanese Kanji and Kana characters. QR Codes can encode up to 7366 characters.
RM4SCC (Royal Mail)		RM4SCC uses letters and numerals with a check digit. RM4SCC is a barcode used by the Royal Mail in United Kingdom.
RSS-14		RSS-14 is a 14 digit Reduced Space Symbology barcode that uses EAN.UCC item identification omni-directional scanning in point-of-scale laser scanners. The RSS family of the barcodes is also known as GS1 DataBar.

Symbology	Example	Description
RSS-14 Stacked		RSS-14 Stacked barcode uses EAN.UCC information with Indicator digits stacked in two rows for a smaller width. The properties specific to the RSS-14 Stacked barcode are listed and described in this section.
RSS-14 Stacked Omnidirectional		RSS-14 Stacked Omnidirectional barcode uses the EAN.UCC information with omnidirectional scanning is stacked in two rows for a smaller width.
RSS-14 Truncated		RSS-14 Truncated barcode uses the EAN.UCC information and includes Indicator digit of zero or one for smaller items not scanned at the point-of-sale.

Symbology	Example	Description
RSS Expanded		RSS Expanded barcode uses EAN.UCC information along with AI elements such as weight and best-before dates. RSS Expanded lets you insert an FNC1 character as a field separator for variable-length Application Identifiers (AI).
RSS Expanded Stacked		RSS Expanded Stacked barcode uses the EAN.UCC information with AI elements and are stacked in two rows for a smaller width. RSS Expanded Stacked lets you insert an FNC1 character as a field separator for variable length Application Identifiers (AI).

Symbology	Example	Description
RSS Limited		RSS Limited barcode uses EAN.UCC information including Indicator digits of zero or one for using on small items not scanned at the point of sale.
SSCC-18		SSCC-18 is an 18-digit Serial Shipping Container Code. SSCC-18 is used to identify individual shipping containers for tracking purposes.
Telepen		Telepen barcode has two modes - alphanumeric only and numeric only. Both modes require a start character, a check digit, and a stop character. Telepen is mainly used in manufacturing industries.

Symbology	Example	Description
UCC/EAN-128		UCC/EAN 128 barcode complies to GS1-128 standards and uses a series of Application Identifiers (AIs) to encode data. UCC/EAN 128 uses the complete ASCII character set and the FNC1 character as the first character position. Using AIs, it encodes Best Before Date, Batch Number, Weight, and such other attributes. UCC/EAN-128 barcode symbology is used in HIBC applications.
UPC-A		UPC-A barcode symbology uses only numerals (11 numeric digits and a check digit).

Symbology	Example	Description
UPC-E0		UPC-E0 barcode uses only numerals and is used for zero-compression UPC symbols. The first digit of the barcode signifies the number system (always 0 for this code type) and the last digit as the check digit.
UPC-E1		UPC-E1 barcode uses only numerals and is used for shelf labelling in retail industry. The first digit of the barcode signifies the number system (always 1 for this code type) and the last digit as the check digit. Length on the input string of the UPC-E1 barcode is six numeric characters.

Barcode Specific Properties

Aztec

Property	Description
Layers	Indicates the number of barcode layers. Set the number of layers ranging from 0 to 32 using this property.
Error Correction	Indicates whether to allow code recovery in case the barcode is partially damaged. Set the correction value ranging from 5% to 95% using this property.
Encoding	Select a barcode encoding pattern from the dropdown.

Code 49

Property	Description
Grouping	To use grouping for the Code 49 barcode, set this property to True. When set to true, any value that cannot be expressed in a single barcode will be split into several barcode grouped together. By default, this property is set as False.
Group Number	Set a number ranging from 0 to 8 from barcode grouping.

Data Matrix

Property	Description
Ecc Mode	Select a ECC Mode from the dropdown. The available options are - ECC000, ECC050, ECC080, ECC100, ECC140, and ECC200.
Ecc200 Symbol Size	Select the size of the ECC200 symbol from the dropdown. By default, the value of this property is set as SquareAuto.
Ecc200 Encoding Mode	Select the encoding mode for ECC200 from the dropdown. The available options are - Auto, ASCII, C40, Text, X12, EDIFACT, and Base256.
Ecc000_140 Symbol Size	Select the size of the ECC000_140 symbol from the dropdown.

Property	Description
Structure Append	To make the barcode a part of the structured append symbol, set the Structure Append property to True. By default, this property is set as False.
Structure Number	Enter the structure number of the barcode symbol within the structured append symbols.
File Identifier	Enter the file identifier of a related group of the structured append symbols ranging from 0 to 254. If you set the File Identifier value as 0, the file identifier symbols are calculated automatically.
Encoding	Select a barcode encoding pattern from the dropdown.

EAN-13 and EAN-8

Property	Description
Caption Grouping	To add spaces between groups of characters in the caption to make long numbers easier to read, set the Caption Grouping property to True. By default, this property is set as False.
Supplement Value	Enter a value or expression to set the value of the barcode supplement.
Supplement Bar Height	Enter the bar height of the barcode supplement.
Supplement Spacing	Enter the spacing between the main and supplement barcodes.
Supplement Spacing	Enter the spacing between the main and supplement barcodes.
Supplement Caption Location	Select the location of the supplement caption from the dropdown. The available options are - None, Above, and Below.

EAN-128FNC1

Property	Description
Dpi	Specify the printer resolution ranging between 0 to 999999 using the Dpi property. Use the + and - sign buttons to increase or reduce the Dpi value.
Module Size	Enter the horizontal size of the EAN-129FNC1 barcode module.
Bar Adjust	Enter the adjustment size (dot units) which affects the size of the module only.

GS1 Data Matrix

Property	Description
Symbol Size	Select the size of the Data Matrix symbol from the dropdown.
Symbol Size	Select the size of the Data Matrix symbol from the dropdown.
Encoding Mode	Select an encoding mode from the following options - Auto, ASCII, C40, Text, X12, EDIFACT, and Base256.
Structured Append	To make the barcode a part of the structured append symbol, set the Structure Append property to True. By default, this property is set as False.
Structure Number	Enter the structure number of the barcode symbol within the structured append symbols.
File Identifier	Enter the file identifier of a related group of the structured append symbols ranging from 0 to 254. If you set the File Identifier value as 0, the file identifier symbols are calculated automatically.

GS1 QR Code

Property	Description
Version	Enter the version of the Micro QR Code barcode style ranging from 1 to 40.
Error Level	Select the error correction level for the arcode form the dropdown. The available options are -M, L, H and Q.
Mask	Select the barcode masking pattern from the dropdown. The available options are Auto, Mask000, Mask001, Mask010, Mask011, Mask100, Mask101, Mask110, and Mask111.
Encoding	Select a barcode encoding pattern from the dropdown.

ISBN, ISMN, and ISSN

Property	Description
Caption Grouping	To add spaces between groups of characters in the caption to make long numbers easier to read, set the Caption Grouping property to True. By default, this property is set as False.

MaxiCode

Property	Description
Mode	Select the mode of the MaxiCode barcode from the dropdown. The available options are - Mode2, Mode3, Mode4, Mode5, and Mode6.

Micro PDF417

Property	Description
Compaction Mode	Select the compaction mode from the dropdown. The available options are - Auto, TextCompactionMode, NumericCompactionMode, or ByteCompactionMode.
Version	Select the version to set the symbol size.

Property	Description
Segment Index	Enter the segment index of the structured append symbol ranging from 0 to 99998. The Segment Index value should be less than the value in the Segment Count.
Segment Count	Enter the segment count the structured append symbol ranging from 0 to 99999.
File ID	Enter the File ID of the structured append symbol ranging from 0 to 899.

Micro QR Code

Property	Description
Version	Select the version number of the Micro QR Code from the dropdown. The available options are - Auto, M1, M2, M3, and M4.
Error Level	Select the error correction level for the Micro QR Code from the dropdown. The available options are - L, M, and Q.
Mask	Select the masking pattern from the dropdown. The available options are - Auto, Mask00, Mask01, Mask10, and Mask11.
Encoding	Select a barcode encoding pattern from the dropdown.

PDF417

Property	Description
Columns	Enter the column numbers of the barcode ranging from 1 to 30. The default value of the Columns property is -1.
Rows	Enter the row numbers for the barcode ranging from 3 to 90. The default value of the Row property is -1.
Error Correction Level	Enter the error correction level for the barcode ranging from 0 to 8. The error correction capability increases as the value increases. With the increase in the value of the Error Correction Level property, the size of the barcode increases. The default value of this property is -1.

Property	Description
PDF417 Type	Select the type of the PDF417 barcode from the dropdown. The available options are - Normal and Simple. Use the simple option for compact type barcode where the right indicator is not displayed or printed.

QR Code

Property	Description
Connection	To use the connection for QR Code, set this property as True. The Connection property is used in conjunction with the Connection Number property. By default, this property is set as False.
Connection Number	Enter the correction number for the barcode ranging from 0 to 15. Connection Number is used to set the number of barcodes it can split into.
Version	Enter the version of the QR Code to specify the size of the barcode. Increase in the value of the version increases the size of the barcode enabling to store more information. When the Model property as described below is set as Model1, specify a version value ranging from 1 to 14 and when the Model property is set as Model2, specify a version value ranging from 1 to 40.The default value of Version is -1.
Error Level	Select the error correction level for the QR Code from the dropdown. The available options are - M, L, H, and Q.
Mask	Select the barcode masking pattern from the dropdown. The available options are - Auto, Mask000, Mask001, Mask010, Mask011, Mask100, Mask 101, Mask110, and Mask111.
Model	Select the model of the QR Code from the dropdown. The available options are Model1 and Model2.
Encoding	Select a barcode encoding pattern from the dropdown.

RSS-14 Stacked and RSS Limited

Property	Description
Caption Grouping	To add spaces between groups of characters in the caption to make long numbers easier to read, set the Caption Grouping property to True. By default, this property is set as False.
Composite Type	Select the composite type for the barcode from the dropdown. The available options are - None and CCA.
Composite Value	Enter the value of the composite barcode using the Composite Value property.

RSS Expanded Stacked

Property	Description
Caption Grouping	To add spaces between groups of characters in the caption to make long numbers easier to read, set the Caption Grouping property to True. By default, this property is set as False.
Row Count	Enter the number of stacked rows of the RSS Expanded Stacked barcode.

UPC-A, UPC-E0, and UPC-E1

Property	Description
Caption Grouping	To add spaces between groups of characters in the caption to make long numbers easier to read, set the Caption Grouping property to True. By default, this property is set as False.
Supplement Value	Enter a value or expression to set the value of the barcode supplement.
Supplement Bar Height	Enter the bar height of the barcode supplement.
Supplement Spacing	Enter the spacing between the main and supplement barcodes.

Property	Description
Supplement Caption Location	Select the location of the supplement caption from the dropdown. The available options are - None, Above, and Below.

Formatted text

The Formatted Text control can perform mail merge operations, and it displays richly formatted text in HTML. You can format the Formatted Text report control by entering the HTML code into the Html property. You can freely expand the content of the report through HTML coding.

Using Formatted Text Control in a Report Designer

Follow the below steps to add a Formatted Text control.

1. From the **Report Toolbox** on the left either drag and drop the Formatted Text control onto the design area or left click the control. You can also add it to the **List** control.
2. You can set the properties of the control.

   Select the control and click the **Properties** tab. The list of properties related to the **Formatted Text** control is displayed.

Properties Tab

You can set the Formatted Text control appearance by setting properties in the Properties tab. Properties like adding a border, layout, visibility, etc. can be customized.

Listed below are the common properties.

Common

- Name

  Sets the name of the selected **Formatted Text** control.

Content

This sets the mail merge options for the control.

- Html

  To format the text in the control enter HTML code here. Click the **Data Binding** option and select the **Expression** to add the HTML code. All text written in the Html property must be enclosed in the tags.
- Encode Merge Fields

- This setting controls the encoding behavior of mail merge fields. Set this option to **True** to encode the mail merge fields.
- Merge Fields

  This option sets the mail merge fields. Click the **Plus** button to add a new mail merge field to the **Formatted Text**. Mail merges can be deleted them using the **X** button.

  - Field Name

    Enter the name of the field that is unique within the report. This is used in the **Html** property inside `<%FieldName%>` tags to display the field in the formatted text.

  - Value

    Enter an expression to pull data into the control for mail merge operations or you can select the field from the dataset by clicking the **Pick Data** option.

Background

This sets the background of the Formatted Text control.

- Color

  This option sets the color to be used as a background for the **Formatted Text**. You can select the color by selecting from the dropdown list.

- Image

  This option sets the background image of the **Formatted Text** control. Click the dropdown list to select the image source. **Shared** refers to the images that are uploaded on the portal, **Embedded** refers to the new images that you can select and upload, **Database** refers to the database graphics field. Click the **Expand** icon to display more image properties.

  - Source

    This is the source from which the image is coming.

  - Value

    This refers to the image selected from the source.

    > **FOR EXAMPLE:**
    >
    > If the image source is "**Shared**" you'll need to select the specific shared image here.

  - MIME Type

    This refers to the image format like png, gif, etc.

  - Repeat

- This defines the way in which the image covers the **Formatted Text** control.
  - Repeat

    This option repeats the image both height-wise and width-wise until the background area is covered.
  - NoRepeat

    When this option is selected, then the image is not repeated and is displayed only once.
  - RepeatX

    This option repeats the picture horizontally (width-wise).
  - RepeatY

    This option repeats the picture vertically (height-wise).

Border

This sets the border of the **Formatted Text**.

- Width
  You can set the thickness of the border of the Formatted Text using this option. By clicking the **Expand** icon you can set the width of the border of all the sides of the **Formatted Text**.
- Style
  Select the border line style of the **Formatted Text** from the dropdown list. By clicking the **Expand** icon, you can set the style of the border of all the sides of the **Formatted Text**, as required.
- Color
  Select the border color from the dropdown list. By clicking the **Expand** icon you can select the color of the border of all the sides of the **Formatted Text**.

Dimensions

This sets the location and size of the **Formatted Text**.

- Left
  This option sets the landscape position of the **Formatted Text** to be maintained from the upper left side in the report.
- Top
  This option sets the vertical position of the **Formatted Text** to be maintained from the top in the report.
- Width

- This option sets the width of the **Formatted Text**.
- Height
  This option sets the height of the **Formatted Text**.

Layout

This sets the Formatted Text layout in a report.

- Style
  This sets the theme of the control.
- Layer Name
  Sets the report layer.
- Z-Index
  This property sets the position of the **Formatted Text** control when there are multiple formatted text controls stacked together. The formatted text with a greater **Z-Index** value will always be in front of the **Formatted Text** that has a lower **Z-Index** value.

Visibility

This sets the visibility of the Formatted Text on the report preview.

- Hidden
  This option sets whether to hide the formatted text or not on the preview. Set it to **True** to display it. By default it is set to **False**.
- Toggle Item
  Visibility can be toggled by another report item. This option can be used to set another item such as a text box as a **toggle** button that can display or hide the current **Formatted Text**.

Data

This sets the XML data output properties.

- Element Name

  Enter a name to be used in the XML output for this **Formatted Text** report control.
- Element Output

  Choose Auto, **Output**, **NoOutput**, or **ContentsOnly** to decide whether to include this **Formatted Text** in the XML output. Choosing **Auto** exports the contents of the **Formatted Text** report control.

Misc Options

- Tooltip
  Sets the textual label of the **Formatted Text** when the mouse is hovered over it.
- Label
  Sets a textual content that is used as a display text for the report catalog items. The report catalog is made using the **Table of Contents** element in the **Toolbox** and the table of contents is used for quick positioning jumps in multi-page reports.
- Bookmark
  You can enter text or an expression to use as a positioning identifier to jump to this element. You can define the bookmark and then select the **jump to bookmark** setting, to make it easier to jump between report content. You can bookmark any element in the report to make it a destination anchor for the jump.

Using Mail Merge in Formatted Text Control

To create a mail merge report, follow the below steps.

1. With the **Report Designer** open select the **Properties** tab and select **Data Set Name** under the **Data** section.
2. Under the **Group** section add the **Group Expressions** by clicking the **Plus** icon.
3. Click the **Data Binding** and select the **ProductKey** field from the data set.
4. Drag and drop the **Formatted Text** control on the **List** data region. Check from the **Report Explorer** that the **Formatted Text** is nested within the **List** data region.
5. Set the **Encode Mail Merge** field to **True**.
6. Add the Merge Fields. Click the Add Item icon and click the Data Binding option and select your required mail merge fields from the dataset.
7. Set the **Html** property by clicking the **Data Binding** option and then selecting the **Expression** option. The **Expression Editor** is displayed.
8. You can add the HTML code in the **Expression Editor**.
9. Format the appearance of the report control and preview it.

Sparkline

The **Sparkline** control is used to display data trends on a small graph in your reports. **Sparkline** shows the most recent value of the data at the rightmost point and compares it with an earlier value allowing you to view general changes in the data over time. The **Sparkline** control supports line, column, profit and loss, area, and stacked charts. **Sparkline** can be embedded within tables to gain a better understanding and analysis of business data.

Sparkline Structure

- Series Value

  A series value is used to show a set of data in the **Sparkline** chart.

- Grouping Expressions

  Grouping expressions are used to group data in the **Sparkline**.

Adding a Sparkline to a Report

1. With the **Report Designer** open, drag and drop the **Sparkline** control onto the **Design Area** from the **Designer Toolbar**.
2. Use the **Inspector** Panel on the right side of your screen to customize the appearance of the **Sparkline** control.

Inspector Panel Properties

Common

Property	Description
Name	Add a unique name to the Sparkline control. Special characters such as period (.), space ( ), forward slash (/), backslash (\), exclamation marks (!), and hyphens (-) are not supported. You can use an underscore (_) in the name of the control.
Sparkline Type	Select the chart type for the sparkline control. Use the dropdown to select one of the following options: Line, Columns, Whiskers, Area, or StackedBar.
Series Value	Enter a value or an expression to use as a series value for the sparkline control.

Dimensions

Property	Description
Left	Set the left margin of the Sparkline control.
Top	Set the top margin of the Sparkline control.
Width	Set the width of the Sparkline control.
Height	Set the height of the Sparkline control.

Layout

Property	Description
Style	Select a color theme for the Sparkline control from the dropdown.

Group

Property	Description
Name	Add a unique name to the details group. Special characters such as period (.), space, ( ), forward slash (/), backslash (\), exclamation marks (!), and hyphens (-) are not supported. You can use an underscore (_) in the name of the group.
Group Expression	Add grouping expressions such as field names to the sparkline control using the + button

Data

Property	Description
Data Set Name	Select a dataset from the dropdown to bind the data to the sparkline control.
Data Set Parameters	Add parameters to the dataset using the + button. Dataset parameters can be values or expressions.
Sort Expressions	Set a sort expression for the sparkline control using this property.
Filters	Add filters to filter out the data from the report.

Overflow Placeholder

The **Overflow Placeholder** control is only available in the **Page Report**. It is a rectangular placeholder for data that does not fit inside the fixed size of a **List**, **Tablix**, or **Table** data region.

The fixed-size page layout does not allow you to change sizes based on the data in the fixed page layout. Accordingly you can link a data region to an **Overflow Placeholder**.

The control gets its **Size** property values from the **FixedSize** of the data region it is linked with. Data that overflows from the fixed size of your tables or other data regions can span pages but you can control the layout of each page and specify where the overflow data goes with an **Overflow Placeholder**.

Using Overflow Placeholder Control in a Report Designer

This section describes how to use an Overflow Placeholder control in a report.

- You can bind the overflow data from a data region to an **Overflow Placeholder** control.
- You can place multiple **Overflow Placeholder** controls in a report to create different looks for your report output. If you are using multiple **Overflow Placeholder** controls then you should link a data region to an **Overflow Placeholder** control and then link that **Overflow Placeholder** control to another **Overflow Placeholde**r control. Two common layouts that you can create are:
  - Columnar Report Layout

    Place the data region and the **Overflow Placeholder** on the same page of the report to create a layout that displays data in a columnar format.
  - Multiple Page Layout

    Place the data region on the first page of the report and the **Overflow Placeholder** controls on subsequent pages to create a layout with overflow data on multiple pages.

Properties Tab

You can set the Overflow Placeholder control appearance by setting properties in the Properties tab. Listed below are the common properties.

Properties Table

Property	Description
Common	▪ Name Sets the name of the selected **Overflow Placeholder** control. ▪ Overflow Name This sets the linking of one **Overflow Placeholder** control to another. You can select the **Overflow Placeholder** control to be linked from the dropdown list.
Dimensions	This sets the location and size of the Overflow Placeholder. ▪ Left This option sets the landscape position of the **Overflow Placeholder** to be maintained from the upper left side in the report. ▪ Top This option sets the vertical position of the **Overflow Placeholder** to be maintained from the top in the report. ▪ Width This option sets the width of the **Overflow Placeholder**. ▪ Height This option sets the height of the **Overflow Placeholder**.
Layout	This sets the **Overflow Placeholder** layout in a report as a whole. ▪ Layer Name Sets the report layer.

Data Analysis and Interactivity

An interactive report makes the data analysis process easier by letting the end users modify the report data during the run-time. This gives users more control over the data as they can modify and view the desired information to improve decision-making. Non-technical users can prepare highly interactive reports without assistance from IT professionals. The **Report Designer**

supports features interactive features like parameters, drill-down, filters, links, sorting and document map

- Parameters

  Report parameters are typically used to filter the report data at run time. You can either set default values to the parameters or prompt the users to enter the parameter values at the run time.

- Drill-Down

  The drill down feature is useful in analyzing the multidimensional data in the reports. It allows users to navigate from a summarized view to a more detailed view by going one step deeper.

- Filters

  Filters in reports allow users to display only the relevant information in the reports. Filters can be used to limit and manipulate the information displayed in reports.

- Sorting

  Sorting data enables users to organize the data and present it in a logical order at run-time. It allows users to sort the data alphabetically or numerically in ascending or descending order.

- Document Map

  The document map feature allows users to navigate to any item in the report by simply clicking that item.

- Bookmarks, Hyperlinks, and Drill-through Links

  These links allow users to navigate to any bookmarked item in a report, to an external web page or to another report for more detailed information.

Jump To

The **Jump To** feature helps you create shortcuts from one report to another report, bookmark, or URL (internal or external) in a pop-up dialog. The **Jump To** feature helps you quickly find additional details of a particular data series by jumping to another document or a URL. The **Jump To** feature is supported in all report controls such as table, textbox, container, table of contents, etc.

Creating a Jump to Scenario

To create a **Jump To** follow the below instructions:

1. Navigate to the **Report Designer**.
2. Select a report control and navigate to the **Action** section of the **Inspector** panel.
3. From the **Type** dropdown menu select a **Jump To** action (Jump to Report, Jump to Bookmark, or Jump to URL).
    a. Jump to Report

        When using the **Jump to Report** type choose a report from the **Jump To Report** dropdown menu and adjust the parameters as needed.

    b. Jump to Bookmark

        When using the **Jump to Bookmark** type choose an existing bookmark of the report from the **Jump To Bookmark** dropdown menu.

    c. Jump to URL

        When using the **Jump to URL** type add the desired URL for the jump to action in the **Jump To URL** text box.
4. Navigate to the **Preview Report** page and follow the below instructions (depending on what type of **Jump To**, you selected).

Jump to a Report

1. On the preview report page select the report control that you applied the **Jump to Report** action to.
2. If the report has parameters select your intended parameters and click the **Preview** button.
3. The report linked to the jump to action will appear on your screen.

Jump to a Bookmark

1. On the preview report page select the report control that you applied the **Jump to Bookmark** action to.
2. On clicking the report control you will be navigated to the associated bookmark.

Jump to a URL

1. On the preview report page select the report control that you applied the **Jump to URL** action to.
2. You will be navigated to the URL entered in the Jump To URL input box on the Inspector Panel.

Expression Editor

You can use an expression to set the value of a control in the report or set conditions under which certain styles apply. You can set expressions through the **Expression Editor** dialog while setting values in the **Properties** window. The editor allows you to choose from several fields available to the report as well as to a particular property.

You can access the **Expression Editor** by selecting nearly any property of a control and choosing **<Expression...>** from the drop-down list.

All expressions are enclosed within curly braces {}. Even the expression for a field value for a **TextBox** is set as follows: `{LastName}`

The **Date & Time** functions used to define the date and time values display the date in MM/DD/YYYY and the time in HH:mm:ss format. While building an expression you can directly add the entire expression or part of it in the Expression pane of the **Expression Editor**. Then use the **Insert** or **Append** buttons to create a complete expression.

Concatenating Fields and Strings

You can concatenate fields with strings and with other fields.

FOR EXAMPLE:

Use the following expression to get a result such as "Customer Name: Smith, John":

Customer Name: {`LastName`} , {`FirstName`}

Conditional Formatting

You can concatenate fields with strings and with other fields. You can highlight a part of data by using expressions in properties like Color, Font, Border, etc. on specific field values based on a condition.

FOR EXAMPLE:

- The formula for conditional formatting is:

  `{IIF(<Condition>, <TruePart>, <FalsePart>)}`
- if you enter the following expression in the **Font** > **FontWeight** property of a textbox that displays the names of people you will get the name "Denise" in bold.

  `{IIF(FirstName ("Denise", "Bold", "Normal"))}`

Attributes of the Expression Editor

The **Expression Editor** has three major attributes.

- Expression pane
- Values
- Functions

Expression Pane

The **Expression** pane is the input area of the **Expression Editor** window where you enter the expressions such as a string.

All expressions are enclosed within curly braces '{}'. Even the expression for a field value for a **TextBox** is set as: `{LastName}`

Values

Values are the input fields available to the selected report. The following **Values** are available in the **Expression Editor**.

- Constants

  This refers to static constants like numbers or strings. For example 123, and "abc".

- Common Values

  Common Values are built-in field values of the report. For example the current page number and the total number of pages.

- Parameters

  These nodes represent the parameters of the report defined in the **Report Designer**.

- Data Sets

  These nodes list the datasets and fields linked to the selected report.

- Operations

  Operations list the arithmetic, comparison, concatenation, logical/bitwise, and bit shift operators.

- Documents Map:

  This defines the labels of the TOC (Table of Content) members of the selected report.

- Theme:

  The theme refers to the visual settings including fonts, colors, constant, and images. A combination of two or more theme elements is used to increase the graphical appeal of a table in the selected report.

- Report Items

  Report Items refer to the field items available as textboxes in the selected report.

Functions

You can use various aggregate and other functions in your expressions including the running value, population standard variance, standard deviation, count, minimum and maximum.

> **FOR EXAMPLE:**
>
> - You could use the following expression to get a count of employees.
>
> ```
> {Count(EmployeeID, Nothing)}
> ```

Creating Expressions
Accessing the Expression Editor

1. Navigate to the **Resource** or **Document Portal** > **Categories** tab.
2. Select a report under the **Document** pane. Either click the **Edit** button on the top-right corner of the window or click the **Ellipses** icon and then click the **Edit** option. The selected report will open in edit mode.
3. Select the text box you wish to create or edit the expression for.

   Under the **Properties** grid on the right side of your screen, click the yellow square box next to the **Value** property in the **Common** section and click the **Expression** option. The **Expression Editor** window will appear on your screen.

Creating or Editing Expressions

1. In the **Expression Editor** window select an expression element from the **Values** or **Functions** section or directly enter the expression in the **Expression** pane. Double-click the expression element to add it to the **Expression** pane.
2. Click the **Save** button to add the expression.
3. To resize the **Expression Editor** dialog click and drag the resize button on the bottom left corner of the dialog box. To move the **Expression Editor** dialog, click and drag the header section of the dialog box.

List of Values

Common Values are run-time values available for every property in each report. You can directly drag and drop these common values from the **Report Explorer** onto the design surface or add and modify the values from the **Expression Editor**. Following is a list of the values that you can see under the **Values** node in the **Report Explorer** and the **Expression Editor**.

The following tables list all available values.

Common Values

Value	Description	Expression
Current Date and Time	Displays the current date and time. The date and time are displayed in MM/DD/YYYY and HH:mm:ss 12-hour format. It can be used in the Page Header and Page Footer.	{&ExecutionTime}
Page Number	Displays the current page number. It can be used in the Page Header and Page Footer.	{&PageNumber}
Total Pages	Displays the total number of pages. It can be used in the Page Header and Page Footer.	{&TotalPages}
Page N of M	Displays the current page number (N) and the total number of pages (M) in the format 'N of M'. It can be used in the Page Header and Page Footer.	Page {&PageNumber} of {&TotalPages}
Page Number (Section)	Displays the current page number of the section to which the function belongs. The section can be a report or a data region.	{&PageNumberInSection}
Total Pages (Section)	Displays the total number of pages of the section to which the function belongs. The section can be a report or a data region.	{&TotalPagesInSection}
Page N of M (Section)	Displays the current page number (N) and the total number of pages (M) in the format 'N of M,' of the section to which the function belongs. The section can be a report or a data region.	Page {&PageNumberInSection} of {&TotalPagesInSection}

Value	Description	Expression
Report Name	Displays the name of the report.	{&ReportName}
User ID	Displays the User ID of the user previewing the report.	{User!UserID}
User Language	Displays the Language of the user previewing the report as per system settings.	{User!Language}
User Context	"Use only with function, e.g. UserContext.GetValue (""name""), UserContext.NumberToWords (123)."	{UserContext}

Arithmatic

Value	Description	Expression
^	Raises a number to the power of another number.	S: <Number1> ^ <Number2> E: {Quantity ^ 2}
*	Evaluates the multiplication of two numbers.	S: <Number1> * <Number2> E: {Quantity * 5}
/	Divides two numbers (numerator by denominator) and returns the quotient as a floating-point number.	S: <Number1> / <Number2> E: {AnnualSales / 2}
**	Divides two numbers and returns an integer result.	S: <Number1> \ <Number2> E: {AnnualSales \ 2}
Mod	Divides two numbers and returns the remainder.	S: <Number1> Mod <Number2> E: {AnnualSales Mod 12}
+	Evaluates the sum of two numbers or concatenates two strings.	S: <Value1> + <Value2> E: {Quantity + 2}

Value	Description	Expression
-	Evaluates the difference between two numbers or negates the value of a numeric expression.	S: <Number1> - <Number2> E: {Quantity - 2}

Comparison

Value	Description	Expression
<	Returns True if the left operand is less than the right operand.	S: <Value1> < <Value2> E: {AnnualSales < 80000}
<=	Returns True if the left operand is less than or equal to the right operand.	S: <Value1> <= <Value2> E: {AnnualSales <= 80000}
>	Returns True if the left operand is greater than the right operand.	S: <Value1> > <Value2> E: {AnnualSales > 80000}
>=	Returns True if the left operand is greater than or equal to the right operand.	S: <Value1> >= <Value2> E: {AnnualSales >= 80000}
=	Returns True if the left operand is equal to the right operand.	S: <Value1> = <Value2> E: {AnnualSales = 80000}
<>	Returns True if the left operand is not equal to the right operand.	S: <Value1> <> <Value2> E: {AnnualSales <> 80000}
Like	Compares two strings and returns True if the left operand is the same as the right operand.	S: <String1> Like <String2> E: {FirstName Like "A*"}
Is	Compares two object references and returns True if the left operand is identical to the right operand.	S: <Value1> Is <Value2> E: {FirstName Is LastName}

Concatenation

Value	Description	Expression
&	Returns the string value of the concatenation of two expressions that individually evaluate to strings.	S: <String1> & <String2> E: {FirstName & " " & LastName}
+	Evaluates the sum of two numbers or concatenates two strings.	S: <String1> + <String2> E: {FirstName + " " + LastName}

Logical/Bitwise

Value	Description	Expression
And	Returns the logical conjunction of two Boolean expressions, or the bitwise conjunction of two numeric expressions.	S:<Value1> And <Value2> E: {AnnualSales > 80000 And Quantity > 5}
Not	Returns the logical negation of a Boolean expression, or the bitwise negation of a numeric expression.	S: Not <Value> E: {Not AnnualSales > 80000}
Or	Returns the logical disjunction of two Boolean expressions, or the bitwise disjunction of two numeric values.	S: <Value1> Or <Value2> E: {AnnualSales > 80000 Or Quantity > 5}
Xor	Returns a logical exclusion operation of two Boolean expressions, or a bitwise exclusion of two numeric expressions.	S: <Value1> Xor <Value2> E: {AnnualSales > 80000 Xor Quantity > 5}

Value	Description	Expression
AndAlso	Returns the logical conjunction of two Boolean expressions by skipping evaluation of the other expression if the evaluation of the first expression provides the result.	S: <Boolean1> AndAlso <Boolean2> E: {AnnualSales > 80000 AndAlso Quantity > 1}
OrElse	Returns the logical disjunction of two Boolean expressions by skipping evaluation of one expression if the evaluation of the other expression provides the result.	S: <Boolean1> OrElse <Boolean2> E: {AnnualSales > 80000 OrElse Quantity > 1}

Bit Shift

Value	Description	Expression
<<	Performs an arithmetic left shift on a bit pattern.	S: <Number1> << <Number2> E: {RegionID << 2}
>>	Performs an arithmetic right shift on a bit pattern.	S: <Number1> >> <Number2> E: {RegionID >> 2}

Document Map

Value	Description	Expression
Path	Returns the path of the TOC level.	{DocumentMap.Path}

List of Functions

You can use a function in an expression to perform actions on data in data regions, groups, and datasets. You can access these functions under the **Functions** node within the **Expression Editor** dialog. In any property that accepts expressions you can use the dropdown and select **<Expression>** to open the dialog.

The following tables contain details about each of the functions included for use in **Property** expressions.

Date & Time

The Date & Time functions used to define the date and time values display the date in MM/DD/YYYY and the time in HH:mm:ss format.

Value	Description	Expression
DateAdd	Returns a date and time value that is the result of adding the interval to the date and time field of the specified unit.	S: DateAdd (DateInterval,Number,DateTime) E: {DateAdd("d", 5, SaleDate)}; {DateAdd(DateInterval.Day, 5, SaleDate)}

Value	Description	Expression
DateDiff	Returns the difference between the start date and time and end date and time of the specified unit.	S: DateDiff(<DateInterval>, <DateTime1>, <DateTime2>[, <DayOfWeek>[, <WeekOfYear>]]) E: {DateDiff("yyyy", SaleDate, "1/1/2015")}; {DateDiff (DateInterval.Year, SaleDate, "1/1/2015")}
DatePart	Returns the Integer value that represents the specified part of the given date.	S: DatePart(<DateInterval>, <DateTime>[, <FirstDayOfWeek>[, <FirstWeekOfYear>]]) E: {DatePart ("m", SaleDate)}
DateSerial	Returns a Date value that represents a specified year, month, and day, with the time information set to midnight (00:00:00).	S: DateSerial(<Year Number>, <Month Number>, <Day Number>) E: {DateSerial(DatePart("yyyy", SaleDate) - 10, DatePart("m", SaleDate) + 5, DatePart("d", SaleDate) - 1)}
DateString	Returns the String value that represents the current date in your system.	S: DateString() E: {DateString()}; {DatePart("m", DateString())}
DateValue	Returns a Date value that contains the information on date represented by a string, with the time set to midnight (00:00:00).	S: DateValue(<StringDate>) E: {DateValue("December 12, 2015")}
Day	Returns an Integer value from 1 through 31 that represents the day of the month.	S: Day(<DateTime>) E: {Day (SaleDate)}
Hour	Returns an Integer value from 0 through 23 that represents the hour of the day.	S: Hour(<DateTime>) E: {Hour (SaleDate)}
Minute	Returns an Integer value from 0 through 59 that represents the minute of the hour.	S: Minute(<DateTime>) E: {Minute (SaleDate)}

Value	Description	Expression
Month	Returns an Integer value from 1 through 12 that represents the month of the year.	S: Month(<DateTime>) E: {Month (SaleDate)}
MonthName	Returns the name of the month specified in the date as a String.	S: MonthName(<Month Number>[, <Abbreviate>]) E: {MonthName (MonthNumber)}
Now	Returns the current date and time in your system.	S: Now() E: {Now()}
Second	Returns an Integer value from 0 through 59 that represents the second of the minute.	S: Second(<DateTime>) E: {Second (SaleDate)}
TimeOfDay	Returns a Date value containing the current time of day in your system.	S: TimeOfDay() E: {TimeOfDay()}
Timer	Returns a Double value that represents the number of seconds elapsed since midnight.	S: Timer() E: {Timer()}
TimeSerial	Returns a Date value that represents a specified hour, minute, and second, with the date information set relative to January 1 of the year 0001.	S: TimeSerial(<Hour Number>, <Minute Number>, <Second Number>) E: {TimeSerial(DatePart ("h", SaleDate), DatePart("n", SaleDate), DatePart("s", SaleDate))}
TimeString	Returns the String value that represents the current time of day in your system.	S: TimeString() E: {TimeString()}
TimeValue	Returns a Date value that contains the information on time represented by a string, with the date set to January 1 of the year 0001.	S: TimeValue(<StringTime>) E: {TimeValue("15:25:45")}; {TimeValue (SaleDate)}
Today	Returns a Date value that contains the current date in your system.	S: Today() E: {Today()}

Value	Description	Expression
Weekday	Returns an Integer value that contains a number representing the day of the week.	S: Weekday(<DateTime>[,<DayOfWeek>]) E: {Weekday (SaleDate, 0)}
WeekdayName	Returns a String value that contains the name of the specified weekday.	S: WeekdayName(<WeekDay>[, <Abbreviate>[, <FirstDayOfWeek>]]) E: {WeekdayName(3, true, 0)}; {WeekDayName(DatePart("w", SaleDate), true, 0)}
Quarter	Returns an Integer value from 1 through 4 that represents the quarter of the year.	S: Quarter(<DateTime>) E: {Quarter (SaleDate)}
QuarterName	Returns a String value that represents the quarter of the year.	S: QuarterName(<DateTime>) E: {QuarterName(SaleDate)}
Year	Returns an Integer value from 1 through 9999 representing the year.	S: Year(<DateTime>) E: {Year (SaleDate)}
AddYears	Returns a date and time value that is a result of adding the date interval in years. The specified date interval can be negative.	S: <DateTime>.AddYears (<Number>) E: {OrderDate.AddYears(3)}
AddMonths	Returns a date and time value that is a result of adding the date interval in months. The specified date interval can be negative.	S: <DateTime>.AddMonths (<Number>) E: {OrderDate.AddMonths(2)}
AddDays	Returns a date and time value that is a result of adding the date interval in days. The specified date interval can be negative.	S: <DateTime>.AddDays(<Number>) E: {OrderDate.AddDays(5)}
AddHours	Returns a date and time value that is a result of adding the time interval in hours. The specified time interval can be negative.	S: <DateTime>.AddHours (<Number>) E: {OrderDate.AddHours(12)}

Value	Description	Expression
AddMinutes	Returns a date and time value that is a result of adding the time interval in minutes. The specified time interval can be negative.	S: <DateTime>.AddMinutes (<Number>) E: {OrderDate.AddMinutes(30)}
AddSeconds	Returns a date and time value that is a result of adding the time interval in seconds. The specified time interval can be negative.	S: <DateTime>.AddSeconds (<Number>) E: {OrderDate.AddSeconds(30)}
AddMilliseconds	Returns a date and time value that is a result of adding the time interval in milliseconds. The specified time interval can be negative.	S: <DateTime>.AddMilliseconds (<Number>) E: {OrderDate.AddMilliseconds(500)}
DateTime.Parse	Converts the specified string value to a date and time value.	S: DateTime.Parse(<String>[, <String>]) E: {DateTime.Parse ("01/01/1970")}

Math

Value	Description	Expression
Abs	Returns the absolute or positive value of a single-precision floating-point number.	S: Abs(<Number>) E: {Abs(-5.5)}; {Abs(YearlyIncome - 80000)}
Acos	Returns the angle whose cosine is the specified number.	S: Acos(<Number>) E: {Acos (0.5)}; {Acos(Angle)}
Asin	Returns the angle whose sine is the specified number.	S: Asin(<Number>) E: {Asin(0.5)}; {Asin(Angle)}
Atan	Returns the angle whose tangent is the specified number.	S: Atan(<Number>) E: {Atan (0.5)}; {Atan(Angle)}
Atan 2	Returns the angle whose tangent is the quotient of two specified numbers.	S: Atan2(<Number1>, <Number2>) E: {Atan2(3, 7)}; {Atan2(CoordinateY, CoordinateX)}

Value	Description	Expression
BigMul	Returns the multiplication of two 32-bit numbers.	S: BigMul(<Number1>, <Number2>) E: {BigMul (4294967295, -2147483647)}; {BigMul(Int32Value, Int32Value)}
Ceiling	Returns the smallest integer greater than or equal to the specified double-precision floating-point number.	S: Ceiling(<Number>) E: {Ceiling (98.4331)}; {Ceiling(AnnualSales / 6)}
Cos	Returns the smallest integer greater than or equal to the specified double-precision floating-point number.	S: Cos(<Number>) E: {Cos(60)}
Cosh	Returns the hyperbolic cosine of the specified angle.	S: Cosh(<Number>) E: {Cosh (60)}
E	Returns the value of E, which is 2.71828182845905.	S: E E: {E * 2}
Exp	Returns e raised to the specified power, where e is Euler's number. It is the inverse of the Log function.	S: Exp(<Number>) E: {Exp(3)}; {Exp(IntegerCounter)}
Fix	Returns the integer portion of a number.	S: Fix(<Number>) E: {Fix(-7.15)}; {Fix(AnnualSales / -5)}
Floor	Returns the largest integer less than or equal to the specified double-precision floating-point number.	S: Floor(<Number>) E: {Floor (4.67)}; {Floor(AnnualSales / 12)}
IEEERemainder	Returns the remainder after division of one number by another according to IEEE standards.	S: IEEERemainder(<Number1>, <Number2>) E: {IEEERemainder (9, 8)}
Log	Returns the logarithm of the specified number.	S: Log(<Number>) E: {Log(20.5)}; {Log(NumberValue)}
Log10	Returns the logarithm of the specified number to the base 10.	S: Log10(<Number>) E: {Log10 (20.5)}; {Log10(NumberValue)}
Max	Returns the maximum non-null value from the specified expression.	S: Max(<Values>) E: {Max (OrderTotal)}

Value	Description	Expression
Min	Returns the minimum non-null value from the specified expression.	S: Min(<Values>) E: {Min (OrderTotal)}
PI	Returns the value of PI, which is 3.14159265358979.	S: PI E: {2 * PI * Radius}
Pow	Returns one number raised to the power of another number.	S: Pow(<Number1>, <Number2>) E: {Pow(Quantity, 2)}
Round	Returns the round-off of a decimal number to the nearest integer or to the nearest decimal number up to the specified digits.	S: Round(<Number>) E: {Round (12.456)}; {Round(AnnualSales / 12.3)}
Sign	Returns a value indicating the sign of an 8-bit signed integer.	S: Sign(<Number>) E: {Sign (AnnualSales - 60000)}
Sin	Returns the sine of the specified number.	S: Sin(<Number>) E: {Sin(60)}
Sinh	Returns the hyperbolic sine of the specified angle.	S: Sinh(<Number>) E: {Sinh(60)}
Sqrt	Returns the square root of the specified number.	S: Sqrt(<Number>) E: {Sqrt(121)}
Tan	Returns the tangent of the specified number.	S: Tan(<Number>) E: {Tan(60)}
Tanh	Returns the hyperbolic tangent of the specified angle.	S: Tanh(<Number>) E: {Tanh (60)}
Truncate	Removes the digits after decimal point without rounding-off, and returns the integer value.	S: Truncate(<Number>) E: {Truncate(UnitPrice)}

Text

Value	Description	Expression
Contains	Returns True if the string contains the specified substring.	S: <String>.Contains(<String>) E: {ShipAddress.Contains("street")}
EndsWith	Returns True if the string ends with the specified substring.	S: <String>.EndsWith(<String>) E: {Description.EndsWith ("documents")}
IndexOf	Returns the index of the first occurrence of the specified substring within the string.	S: <String>.IndexOf(<String>[, <Number>]) E: {Description.IndexOf ("documents")}
InStr	Returns the start position of the first occurrence of the specified substring within the string.	S: InStr(<String>, <String>) E: {InStr(Description, "documents")}
LastIndexOf	Returns the index of the last occurrence of the specified substring within the string.	S: <String>.LastIndexOf(<String>[, <Number>]) E: {Description.LastIndexOf ("documents")}
Replace	Replaces all the occurrences of the first specified substring with the second specified substring within the string.	S: <String>.Replace(<String>, <String>) E: {Description.Replace ("documents", "invoices")}
StartsWith	Returns True if the string starts with the specified substring.	S: <String>.StartsWith(<String>) E: {Description.StartsWith ("Invoice")}
Substring	Returns the substring at the specified position (zero-based) of the specified length.	S: <String>.Substring(<Number>, <Number>) E: {Description.Substring(1, 10)}
ToLower	Returns the specified string in lower case.	S: <String>.ToLower() E: {ShipCountry.ToLower()}
ToUpper	Returns the specified string in upper case.	S: <String>.ToUpper() E: {ShipCountry.ToUpper()}
Trim	Returns the string after removing all the white-space characters from both the start and the end of the specified string.	S: <String>.Trim() E: {@Info.Trim()}

Value	Description	Expression
TrimEnd	Returns the string after removing all the white-space characters from the end of the specified string.	S: <String>.TrimEnd() E: {@Info.TrimEnd()}
TrimStart	Returns the string after removing all the white-space characters from the start of the specified string.	S: <String>.TrimStart() E: {@Info.TrimStart()}

Inspection

Value	Description	Expression
IsArray	Returns True if the expression can be evaluated as an array.	S: IsArray(<Expression>) E: {IsArray(@Initials)}
IsDate	Returns True if the expression represents a valid Date value.	S: IsDate(<Expression>) E: {IsDate(BirthDate)}; {IsDate ("31/12/2010")}
IsDBNull	Returns True if the expression evaluates to a null.	S: IsDBNull(<Expression>) E: {IsDBNull(MonthlySales)}
IsError	Returns True if the expression evaluates to an error.	S: IsError(<Expression>) E: {IsError(AnnualSales = 80000)}
IsNothing	Returns True if the expression evaluates to nothing.	S: IsNothing(<Expression>) E: {IsNothing(MiddleInitial)}
IsNumeric	Returns True if the expression can be evaluated as a number.	S: IsNumeric(<Expression>) E: {IsNumeric(AnnualSales)}
DBNull.Value	Allows checking whether a value is a DBNull value.	S: DBNull.Value E: {IIF (Organization is DBNull.Value, "<NULL>", Organization)}

Program Flow

Value	Description	Expression
Choose	Returns a value from a list of arguments.	S: Choose(<Index>, <Value1>[, <Value2>,...[, <ValueN>]]) E: {Choose(3, "10", "15", "20", "25")}

Value	Description	Expression
IIF	Returns the first value if the expression evaluates to True, and the second value if the expression evaluates to False.	S: IIF(<Condition>, <TruePart>, <FalsePart>) E: {IIF(AnnualSales >= 80000, "Above Average", "Below Average")}
Partition	Returns a string (in the form x : y) that represents the calculated range based on the specified interval containing the specified number.	S: Partition(<Value>, <Start>, <End>, <Interval>) E: {Partition (1999, 1980, 2000, 10)}
Switch	Returns the value of the first expression that evaluates to True among a list of expressions.	S: Switch(<Condition1>, <Value1>[, <Condition2>, <Value2>,...[, <ConditionN>, <ValueN>]]) E: {Switch(FirstName = "Abraham", "Adria", FirstName = "Charelotte", "Cherrie")}

Aggregate

Value	Description	Expression
AggregateIf	Calculates the aggregate of the values from the specified expression if the Boolean expression meets the given condition.	S: AggregateIf(<Condition>, <AggregateFunction>, <AggregateArguments>) E: {AggregateIf(Discontinued = true, "Sum", InStock)}
AggregateIf (with scope)	Calculates the aggregate of the values from the specified expression if the Boolean expression meets the given condition, within the specified scope.	S: AggregateIf(<Condition>, <AggregateFunction>, <AggregateArguments>, <Scope>) E: {AggregateIf (Discontinued = true, "Sum", InStock, "Category")}
Avg	Calculates the average of all non-null numeric values from the specified expression.	S: Avg(<Values>) E: {Avg (LifeExpentancy)}
Avg (with scope)	Calculates the average of all non-null numeric values from the specified expression within the specified scope.	S: Avg(<Values>, <Scope>) E: {Avg(LifeExpentancy, "GroupByCountry")}

Value	Description	Expression
Count	Calculates the number of non-null values from the specified expression.	S: Count(<Values>) E: {Count (EmployeeID)}
Count (with scope)	Calculates the number of non-null values from the specified expression within the specified scope.	S: Count(<Values>, <Scope>) E: {Count(EmployeeID, "Title")}
CountDistinct	Calculates the number of non-repeated values from the specified expression.	S: CountDistinct(<Values>) E: {CountDistinct(OrderID)}
CountDistinct (with scope)	Calculates the number of non-repeated values from the specified expression within the specified scope.	S: CountDistinct(<Values>, <Scope>) E: {CountDistinct (OrderID, "GroupByCategory")}
CountRows	Calculates the number of rows.	S: CountRows() E: {CountRows ()}
CountRows (with Scope)	Calculates the number of rows within the specified scope.	S: CountRows(<Scope>) E: {CountRows("Title")}
CrossAggregate	Calculates the specified function with specified expression as an argument in the cross of specified row and column.	S: CrossAggregate (<Expression>, <FunctionName>, <ColumnGroupName>, <RowGroupName>) E: {CrossAggregate(Amount, "Sum", "YearGroup", "CategoryGroup")}
CumulativeTotal	Calculates the sum of page-level aggregates returned by the expression for current and previous pages.	S: CumulativeTotal (<Expression>, <Aggregate>) E: {CumulativeTotal(OrderID, "Count")}
DistinctSum	Calculates the sum of values from the specified expression when the value of the other expression is not repeated.	S: DistinctSum(<Values>, <Value>) E: {DistinctSum (OrderID, OrderFreight)}
DistinctSum (wih scope)	Calculates the sum of values of the specified expression when the value of the other expression is not repeated, within the specified scope.	S: DistinctSum(<Values>, <Value>, <Scope>) E: {DistinctSum(OrderID, OrderFreight, "Order")}

Value	Description	Expression
First	Returns the first value from the specified expression.	S: First(<Values>) E: {First (ProductNumber)}
First (with scope)	Returns the first value from the specified expression within the specified scope.	S: First(<Values>, <Scope>) E: {First(ProductNumber, "Category")}
Last	Returns the last value from the specified expression.	S: Last(<Values>) E: {Last (ProductNumber)}
Last (with scope)	Returns the last value from the specified expression within the specified scope.	S: Last(<Values>, <Scope>) E: {Last(ProductNumber, "Category")}
Max	Returns the maximum non-null value from the specified expression.	S: Max(<Values>) E: {Max (OrderTotal)}
Max (with scope)	Returns the maximum non-null value from the specified expression within the specified scope.	S: Max(<Values>, <Scope>) E: {Max(OrderTotal, "Year")}
Median	Returns the value that is the mid-point of the values in the specified expression. Median is the center value in a sequence of values.	S: Median(<Values>) E: {Median (OrderTotal)}
Median (with scope)	Returns the value that is the mid-point of the ordered values in the specified expression, within the specified scope. Median is the center value in a sequence of values.	S: Median(<Values>, <Scope>) E: {Median(OrderTotal, "Year")}
Min	Returns the minimum non-null value from the specified expression.	S: Min(<Values>) E: {Min (OrderTotal)}
Min (with scope)	Returns the minimum non-null value from the specified expression within the specified scope.	S: Min(<Values>, <Scope>) E: {Min(OrderTotal, "Year")}
Mode	Returns the most frequently occurring value from the specified expression.	S: Mode(<Values>) E: {Mode (OrderTotal)}

Value	Description	Expression
Mode (with scope)	Returns the most frequently occurring value from the specified expression, within the specified scope.	S: Mode(<Values>, <Scope>) E: {Mode(OrderTotal, "Year")}
RunningValue	Calculates a running aggregate of all non-null numeric values from the specified expression, using another aggregate function as a parameter.	S: RunningValue(<Values>, <AggregateFunction>) E: {RunningValue(Price, "Sum")}
RunningValue (with scope)	Calculates a running aggregate of all non-null numeric values from the specified expression, using another aggregate function as a parameter, within the specified scope.	S: RunningValue(<Values>, <AggregateFunction>, <Scope>) E: {RunningValue(Price, "Sum", "Nwind")}
StDev	Calculates the standard deviation of all non-null values of the specified expression.	S: StDev(<Values>) E: {StDev (LineTotal)}
StDev (with scope)	Calculates the standard deviation of all non-null values of the specified expression, within the specified scope.	S: StDev(<Values>, <Scope>) E: {StDev(LineTotal, "Nwind")}
StDevP	Calculates the population standard deviation of all non-null values of the specified expression.	S: StDevP(<Values>) E: {StDevP (LineTotal)}
StDevP (with scope)	Calculates the population standard deviation of all non-null values of the specified expression within the specified scope.	S: StDevP(<Values>, <Scope>) E: {StDevP(LineTotal, "Order")}
Sum	Calculates the sum of the values of the specified expression.	S: Sum(<Values>) E: {Sum (Price)}
Sum (with scope)	Calculates the sum of the values of the specified expression within the specified scope.	S: Sum(<Values>, <Scope>) E: {Sum(Price, "Category")}
Var	Calculates the variance (standard deviation squared) of all non-null values of the specified expression.	S: Var(<Values>) E: {Var (LineTotal)}

Value	Description	Expression
Var (with scope)	Calculates the variance (standard deviation squared) of all non-null values of the specified expression.	S: Var(<Values>, <Scope>) E: {Var(LineTotal, "Order")}
VarP	Calculates the population variance (population standard variation squared) of all non-null values of the specified expression.	S: VarP(<Values>) E: {VarP (LineTotal)}
VarP (with scope)	Calculates the population variance (population standard variation squared) of all non-null values of the specified expression, within the specified scope.	S: VarP(<Values>, <Scope>) E: {VarP(LineTotal, "Order")}

Conversion

Value	Description	Expression
ToBoolean	Converts the specified value to Boolean.	S: ToBoolean(<Value>) E: {ToBoolean(HouseOwnerFlag)}
ToByte	Converts the specified value to Byte.	S: ToByte(<Value>) E: {ToByte (ProductNumber)}
ToChar	Converts the specified value to Char.	S: ToChar(<Value>) E: {ToChar (OrderStatus)}; {ToChar("Hello")}
ToDateTime	Converts the specified value to a Date and Time value.	S: ToDateTime(<Value>) E: {ToDateTime(SaleDate)}; {ToDateTime("1 January, 2017")}
ToDecimal	Converts the specified value to Decimal.	S: ToDecimal(<Value>) E: {ToDecimal(Sales)}
ToDouble	Converts the specified value to Double .	S: ToDouble (<Value>) E: {ToDouble (AnnualSales)}; {ToDouble(535.85 * 0.2691 * 67483)}
ToInt16	Converts the specified value to a 16-bit signed Integer.	S: ToInt16(<Value>) E: {ToInt16 (AnnualSales)}; {ToInt16(535.85)}
ToInt32	Converts the specified value to a 32-bit signed Integer.	S: ToInt32(<Value>) E: {ToInt32 (AnnualSales)}

Value	Description	Expression
ToInt64	Converts the specified value to a 64-bit signed Integer.	S: ToInt64(<Value>) E: {ToInt64 (AnnualSales)}
ToSingle	Converts the specified value to a single-precision floating-point number.	S: ToSingle(<Value>) E: {ToSingle (AnnualSales)}; {ToSingle (15.857692134)}
ToString	Converts the specified value to String.	S: ToString(<Value>) E: {ToString (YearlyIncome)}; {ToString(13.5)}
.ToString	Converts the value to String in the specified format.	S: .ToString(<Value>) E: {OrderDate.ToString("dd MMM yyyy")}
ToUInt16	Converts the specified value to a 16-bit unsigned Integer.	S: ToUInt16(<Value>) E: {ToUInt16 (AnnualSales)}
ToUInt32	Converts the specified value to a 32-bit unsigned Integer.	S: ToUInt32(<Value>) E: {ToUInt32 (AnnualSales)}
ToUInt64	Converts the specified value to a 64-bit unsigned Integer.	S: ToUInt64(<Value>) E: {ToUInt64 (AnnualSales)}
Format	Converts the specified value to rmat.	S: Format(<Value>) E: {Format (OrderDate, "dd MMM yyyy")}
NumberToWords	Converts the specified value to words. Single argument function uses the current language from the portal. A function with two arguments uses the language passed by the second argument (Supported cultures: "zh-cn", "en-us", "ja-jp").	S: NumberToWords(<Value>) E: {UserContext.NumberToWords (123.5)}; {UserContext.NumberToWords(981, "zh-CN")}

General

Value	Description	Expression
GetFields	Returns an IDictionary<string,Field> object that contains the current contents of the Fields collection. Only valid when used within a data region. This function makes it easier to write code that deals with complex conditionals. To write the equivalent function without GetFields() would require passing each of the queried field values into the method which could be prohibitive when dealing with many fields.	S: GetFields() E: {GetFields()}; {Code.DisplayAccountID(GetFields())}
InScope	Evaluates to true or false depending on whether the current value is in the specified scope.	S: InScope(<Scope>) E: {InScope ("Order")}
Level	Returns a zero-based integer representing the current level of depth in a recursive hierarchy in the current scope. The first level in the hierarchy is 0.	S: Level() E: {Level()}
Level (with scope)	Returns a zero-based integer representing the current level of depth in a recursive hierarchy in the specified scope. The first level in the hierarchy is 0.	S: Level(<Scope>) E: {Level("Order")}
Level (with scope)	Returns a zero-based integer representing the current level of depth in a recursive hierarchy in the specified scope. The first level in the hierarchy is 0.	S: Level(<Scope>) E: {Level("Order")}
Lookup	Returns the first matching value for the specified name from the dataset with name and value pairs.	S: Lookup(<Source>, <Destination>, <Result>, <DataSet>) E: {Lookup (ProductID, ProductID, Quantity, "DataSet2")}

Value	Description	Expression
LookupSet	Returns the set of matching values for the specified name from the dataset that contains name/value pairs.	S: LookupSet(<Source>, <Destination>, <Result>, <DataSet>) E: {LookupSet(ProductID, ProductID, Quantity, "DataSet2")}
Previous	Calculates the value of the expression for the previous row of data.	S: Previous(<Expression>) E: {Previous(OrderID)}
Previous (with scope)	Calculates the value of the expression for the previous row of data within the specified scope.	S: Previous(<Expression>, <Scope>) E: {Previous(OrderID, "Order")}
RowNumber	Returns the running count of all the rows.	S: RowNumber() E: {RowNumber()}
RowNumber (with scope)	Returns the running count of all the rows in the specified scope.	S: RowNumber(<Scope>) E: {RowNumber("OrderID")}
GetLength	Returns the number of elements in the specified array.	S: <Collection>.GetLength (<Number>) E: {@MultiValueParameter.GetLength (0)}
Item	Returns an item by its name from Fields/Parameters/ReportItems.	S: <Object/Record>.Item(<String>) E: {Fields.Item("Company Name").Name}; {Parameters.Item ("Parameter1").Name}; {ReportItems.Item ("TextBox1").Value}
Join	Returns a string that is a result of joining the elements of an array, using the specified delimiter between elements.	S: Join(<Values>, <String>) E: {Join (@MultiValueParameter, ", ")}
GetUserValue	Displays the user context value for specified property, e.g. "name","email".	S: UserContext.getValue(<String>) E: {UserContext.getValue("name")}
UserContext.T	Displays the user translation for specified key.	S: UserContext.T(<String>) E: {UserContext.T("translationKey")}

Page Layout

Page layout describes how a report page will appear when it is previewed. You can customize the default page layout by adding margins, specifying the page size, arranging report controls, hiding pages at run time and more.

Hide Pages at Run Time

You can easily hide or remove the pages in a **Page** report at the run time using the **Visibility** properties.

The visibility for a report page can be set using the **Hidden** and **ToggleItem** properties. These properties let you specify whether to hide or display the page when you preview a report. In the rendered report the page generation for the hidden pages is skipped.

Using the Hidden Property

This property controls the visibility of the report page based on the expression that you specify or the value you set, being **True** or **False**. If you want to hide the report page set the property to True. In cases where you want to hide the report page under certain conditions you'll need to enter a suitable expression.

> **FOR EXAMPLE:**
>
> Consider a scenario where a Page report contains three pages. Page 1 of the report consists of the report header and order summary details. Page 2 of the report contains the overflowing content of Page 1, being the order summary details and Page 3 consists of receipt of the ordered items
>
> You want the page generation for Page 3 to skip in case the order amount or the amount paid is zero.
>
> To do so, set the Hidden property for the Page 3 to:
>
> `{iif(Sum(Quantity * UnitPrice) = 0, true, false)}.`

Using the Toggle Item Property

This property toggles the visibility of the report page based on a textbox click in the report. In the rendered report a **Toggle** icon appears next to the textbox to indicate a collapsed state for the hidden page and an expanded state for the visible page. Whenever the textbox is clicked the toggle state changes. Accordingly you can show or hide the page.

Report Output
Preview Report

When you create a report in the **Report Designer** you must preview it in the **Report Viewer** to verify the final output of your report. The **Report Viewer** has numerous built-in features that enable you to print or export a report, zoom in or out of a report, search for any text or

numbers in a report, navigate between the report pages, save filters for reports that define the value of parameters and more. All these features are useful when previewing a report.

Preview Methods

The following are the different ways to view your report output.

In the **Report Designer**, click the **Preview** button to generate the report output in the **Viewer**.

Set Full Screen as Default Preview View

1. In the **Report Designer**, go to the **Info** panel and set the **Fullscreen** toggle button to **True**.
2. Click the **Preview** button to generate the report output in the viewer. By default, the preview of the report output will open in full screen and the menu bar will be shown at the bottom of the page. Use the **Expand** button to expand the sidebar.

Saving the Filters

You can save the filters for reports which define the value of the parameters. These filters can be used as quick settings for the parameters when previewing the reports. Instead of defining the parameters every time, you can use these preset filters to match the filters that were used in the preview.

Follow the below steps to save filters as required:

1. Under the **Documents** section on the portal, click the **Preview** button against the report which output you want to see in the **Report Viewer**.
2. If the report has the parameters select the parameters and click **Preview**.
3. Click the **Expand** toolbar, and then click the **Filters** option.
4. Select the **Save Current Data Filter** option.
5. The **Save New Data Filter** dialog pop-up will be displayed.
6. Enter the details and save the filters.
7. The saved filter is now listed.

   You can then use these filters as quick settings for the parameters when previewing the reports.

Viewer Toolbar

The following table lists the actions you can perform through the **Viewer** toolbar.

Name	Description
First Page	Navigates to the first page of the report.
Previous Page	Navigates to the previous pages in the report.
Next Page	Navigates to the following pages in the report.
Last Page	Navigates to the last page of the report.
Refresh	Refreshes the report to check for any new modifications or updates.
Cancel	Cancels the report rendering.
Back to Parent	Returns to the parent report in a drill-through page report.
Go Back	Takes Viewer to the previous view in the Viewer history.
Go Forward	Takes the Viewer one step forward in the Viewer history.
Move Tool	Allows to move a selection or an entire page by moving the mouse.
Zoom Out	Decreases the magnification of the report.
100%	Displays the current zoom percentage. Allows you to select from the available zoom options - Zoom In, Zoom Out, 100%, Fit to Page and Fit to Width.
Zoom In	Increases the magnification of the report.
Expand toolbar	To view more options on the toolbar.
Toggle Fullscreen	Displays the report in fullscreen mode, hiding the entire UI.
Print	Displays the Print dialog to specify printing options.
Email	Emails the report to the designated email address(es) in the specified export format.

Name	Description
Single Page View	Shows one page at a time in the Viewer.
Continuous View	Shows all preview pages one below the other.
Galley	Displays report in a single scrollable page.
Filters	Gives the ability to save filters for reports which define the value of the parameters.
Search	Allows you to search for text with match-case and whole-word search options.
Export	Allows you to export to PDF, Excel, Word (docx), CSV, HTML, PNG, TXT, and JSON formats.
Expand or Collapse	Expands or collapses the sidebar panel for Search and Export options.

Exporting the Report

You can export a report to various of file formats, such as pdf, excel, word, csv, html, image, json, txt, xml, and excel data. When the report is exported to the desired file format, important information can be backed up on your system and duplicate copies can be created to save reports in different file formats.

Follow the below steps to export a report while previewing.

1. In the **Report Viewer** click the **Export** button on the top-right corner of the viewer to expand the **Export** panel on the right side of your screen.

   By default, the **Delivery Type** in the **Export** settings is set as **Export**.

2. Select a suitable file format from the list. For example, select Word or Excel as the export format and then click the **Advanced Settings** checkbox to set the export properties of the selected format.
3. Set the advanced properties of the selected export format. click the **Export** button to export the report. Export settings for each export format are different.
4. Your report will be exported to the **Downloads** folder of your system.

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