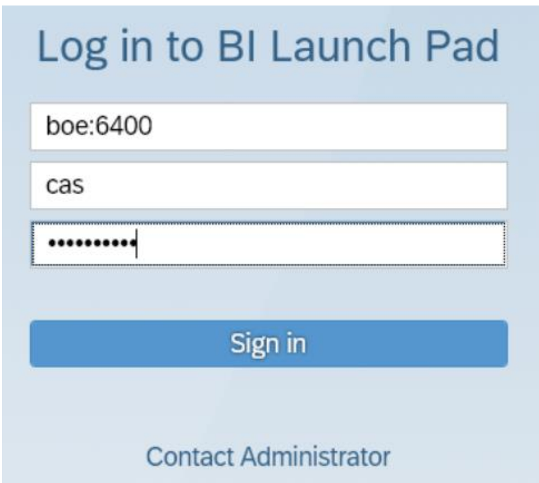
# BI Fiori Launch Pad Overview ⤒

You can perform a fresh SAP BI 4.3 full install or upgrade your previous SAP BI 4.x system. In both cases, you need a new 4.3 license that can be downloaded from the SAP Support web site.

Once installed and deployed, you can connect to the BI Launch Pad through its Login page, whose URL is by default http://<server>:<port>/BOE/BI




*BI Launch Pad: Login Page*

After you have authenticated, the **Home** page presents some tiles that give you access to repository's resources:

- **Folders**: to navigate in the BI Platform repository folders.

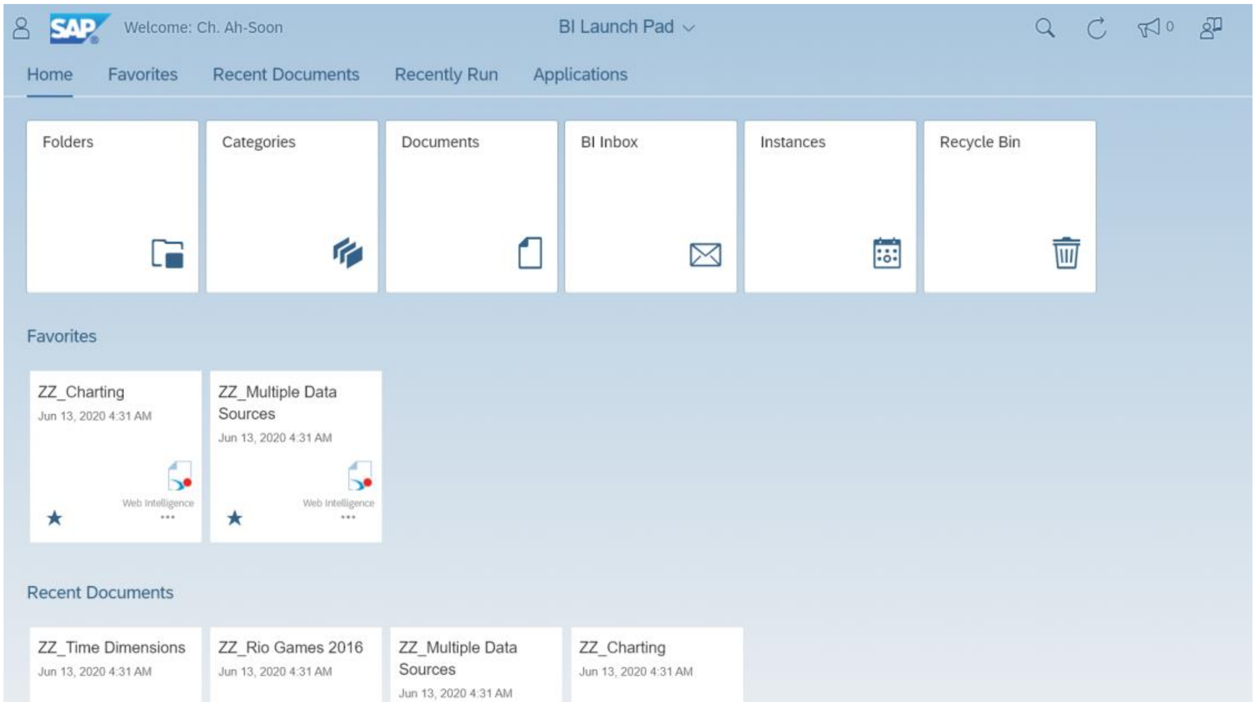
- **Categories**: to navigate in the BI Platform repository categories.

- **Documents**: to display your documents as a flat list.

- **BI Inbox**: to access the documents and alerts you have received.

- **Instances**: to give you an overview of all your schedules and publications.

- **Recycle Bin**: to display and restore documents you have deleted.




*BI Launch Pad: Home Page*

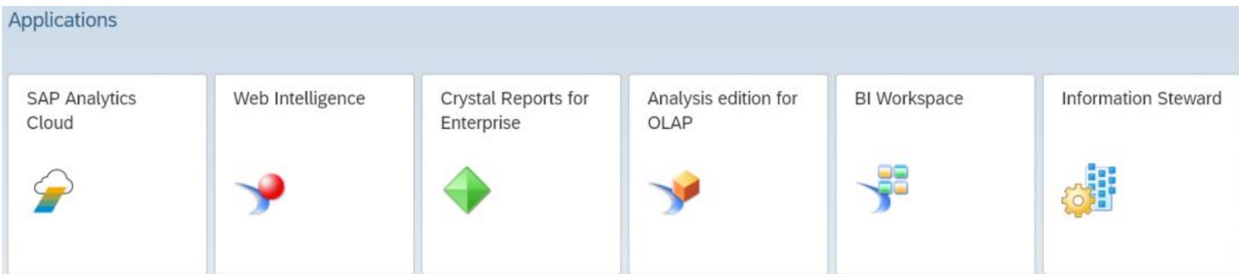
Under these tiles, three sections with document tiles are displayed. These documents are the ones:

- You have set as favorites (**Favorites**)

- You have previously opened (**Recent Documents**)

- That have been recently processed through schedules (**Recently Run**).

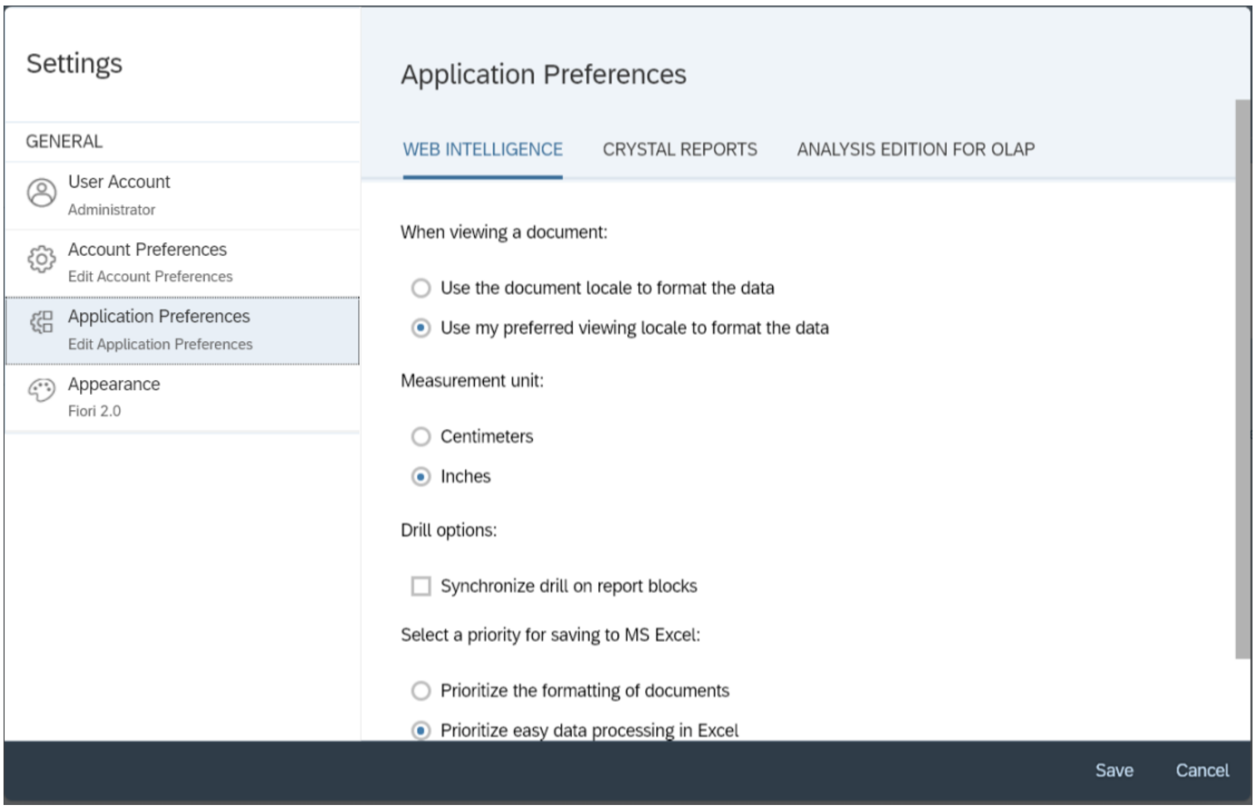
Finally, the **Applications** section contains tiles you can click to start the corresponding application hosted in BI Launch Pad. These applications include Web Intelligence.




*BI Launch Pad: Applications Tiles*

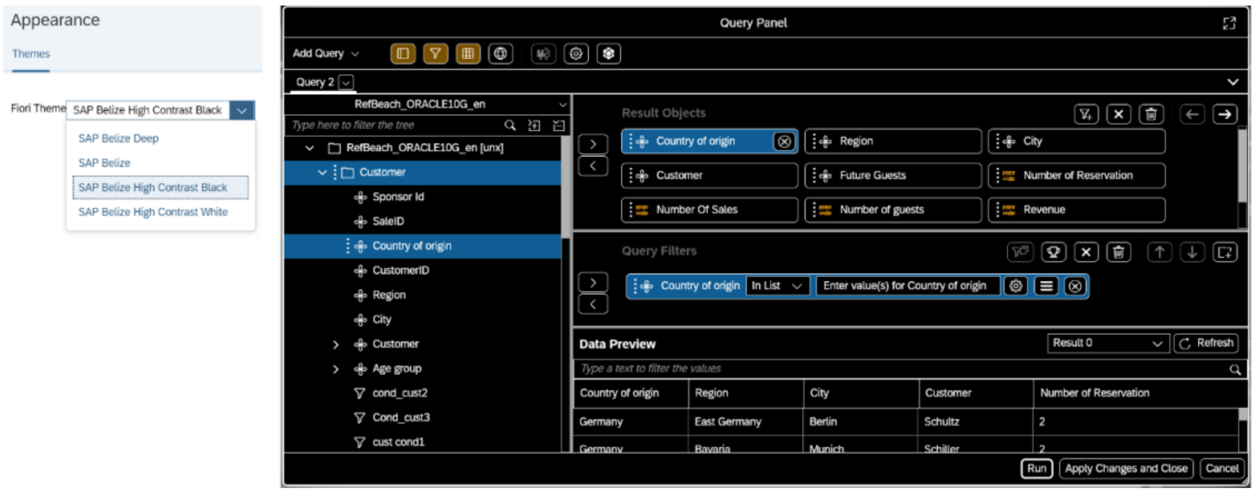
To modify the BI Launch Pad settings, click the icon () at the top left of the **Home** page, then **Settings** to open the **Settings** dialog box.

- In the **Application Preferences** section, click the **Web Intelligence** tab to display the Web Intelligence preferences. In addition to the usual drill, Excel save or right-to-left orientation options, you can also define your measurement unit (centimeters or inches). This was previously defined at document level and you had to set it for every document.




*BI Launch Pad: Web Intelligence Preferences*

- In the **Appearance** section, you can also choose another **Fiori theme** for the user interface, for example a high contrast display for BI Launch Pad and Web Intelligence.

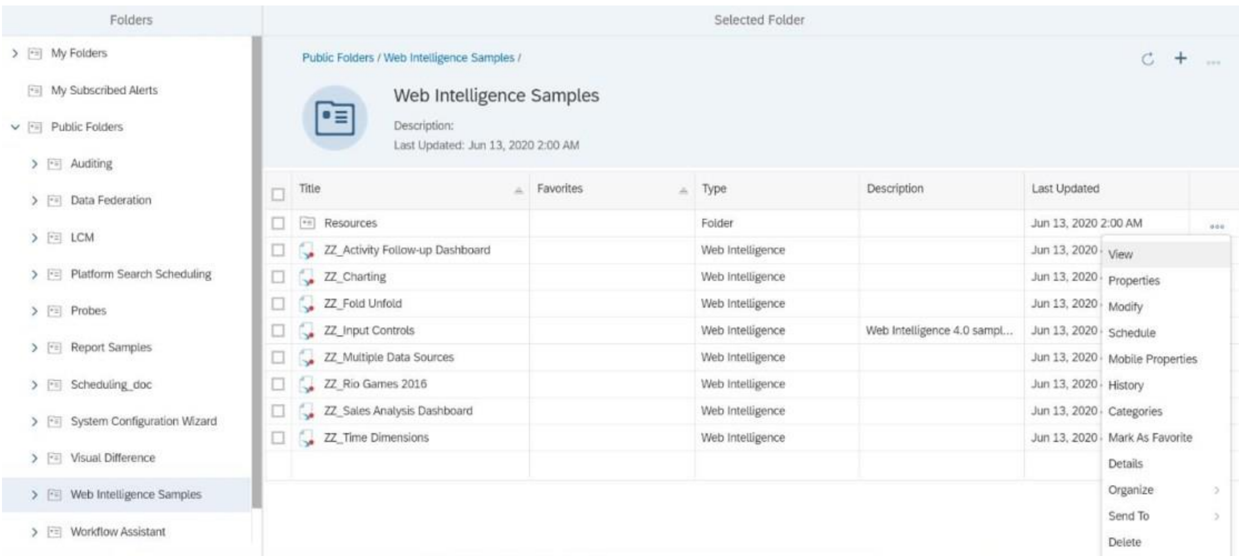



*Web Intelligence: High Contrast Display*

To open a Web Intelligence document:

- If it is displayed on the **Home** page as a tile, click this tile to open it in *Reading* mode

- If you access the document through the **Folders**, **Categories** or **Documents** tile, click the **More** button (∘∘∘) to open the contextual menu. This menu contains the different actions you can perform on this document, including **View** to open it in *Reading* mode or **Modify** to open it in *Edit* mode




*BI Launch Pad: Document Menu*

For more details about BI Launch Pad's new features, see [SAP BusinessObjects BI 4.3: What's New.]

## Web Intelligence: Reading Mode ⤒

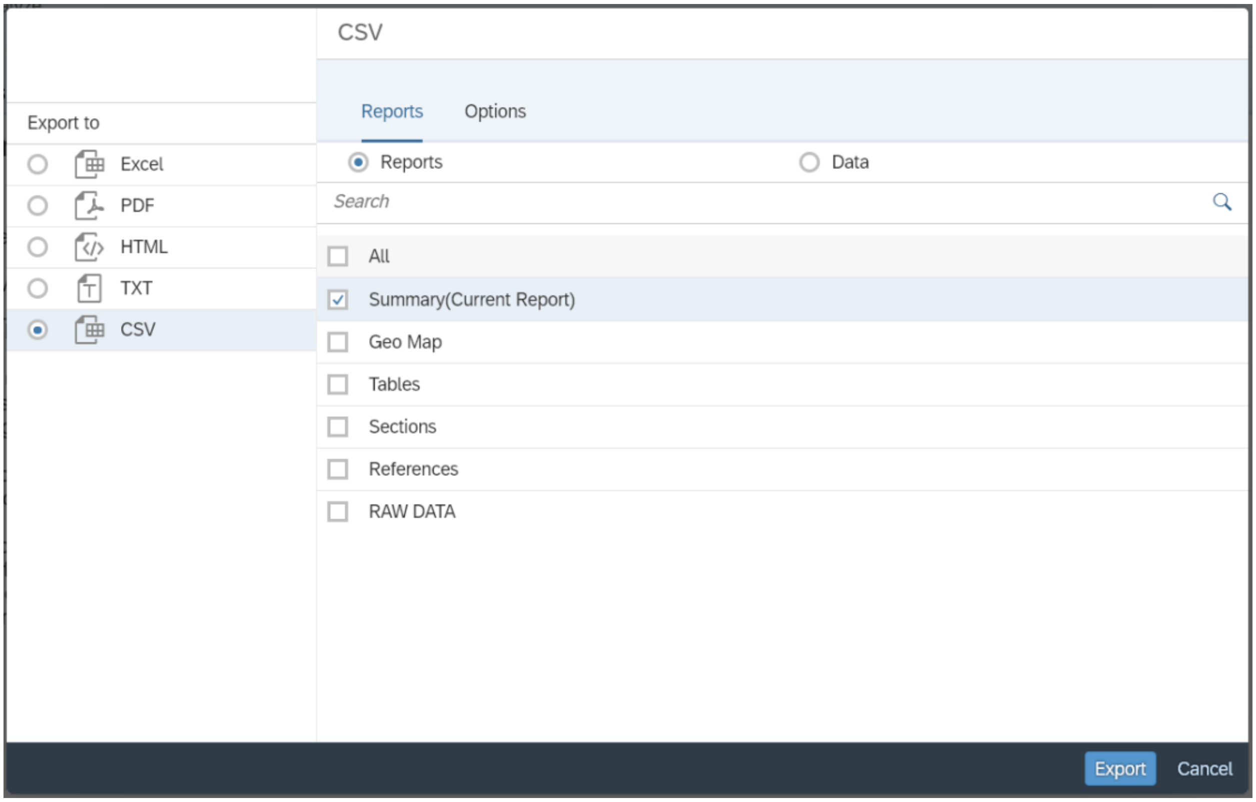
The Web Intelligence *Reading* mode proposes a simplified interface in which users can easily view, refresh and export documents. It proposes some interactivity and analysis capabilities through input controls, elements linking, drill or track changes. In SAP BI 4.3, this *Reading* mode interface is similar to the Web Intelligence Interactive Viewer FIORI-based interface released since [SAP BI 4.2 SP4.]

### Main Toolbar

The toolbar contains sections with the following commands:

**File**

- : Opens the menu with the **Save** and **Save As**
- : Undoes the last actions.
- : Redoes the last undone actions.
- : Opens the **Print** dialog box to set parameters (report and page selection, page size, orientation, margins and scaling) and generate a PDF that can be printed out.
- : Opens the **Export to** dialog box to export the report's or cube's data into different file formats. The dialog box has been reorganized to better display all possible options (Request 215268) and to propose the Excel format by default (Request 140228).




*Web Intelligence: Export to Dialog Box*

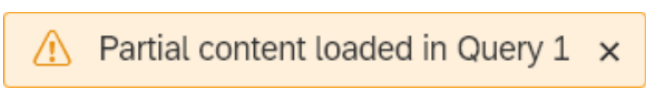
- : Opens the **Send to users** dialog box in which you can select the users or groups that are to receive this document in their BI Platform repository inbox.

- : Opens the Online Help on the SAP web site.

- : Displays the Web Intelligence version.

**Data**

- : Refreshes the document's queries that have been selected for refresh by the document's designer. In the new interface, this button is more visible (Request 131476), especially when a data provider has been partially refreshed. In this case, a warning is sent and an orange dot () is added to the **Refresh** button (Request 206429).




*Web Intelligence Refresh: Partial Refresh Warning*

**Analyze**

- : Opens or closes the **Filter Bar** used to display and set filters values (see description below). Another icon is displayed ( ) if (a) filter(s) already applies/apply to the current report.

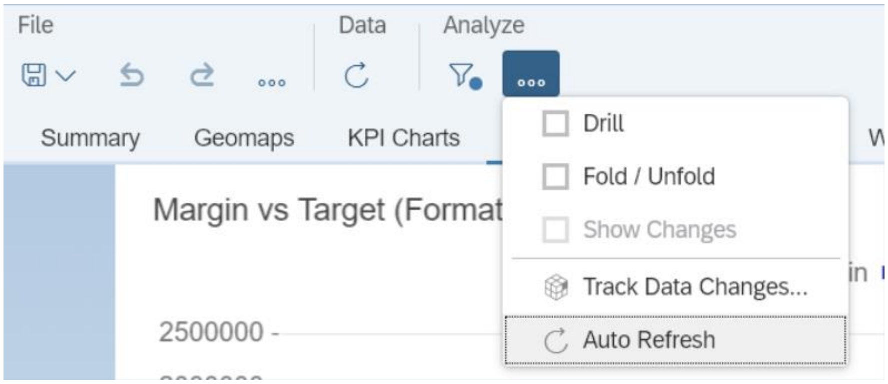
- **Drill** checkbox: Enables/disables the drill mode.

- **Fold/Unfold** checkbox: Enables/disables the fold / unfold.

- **Show Changes** checkbox: If the “Track Data Changes” feature has been enabled, use this checkbox to highlight these changes.

- : Opens the **Track Data Changes** dialog box in which you can enable/disable the tracked changes, define the dataset reference and the reports to compare. It also displays the fonts and colors used to show the differences.

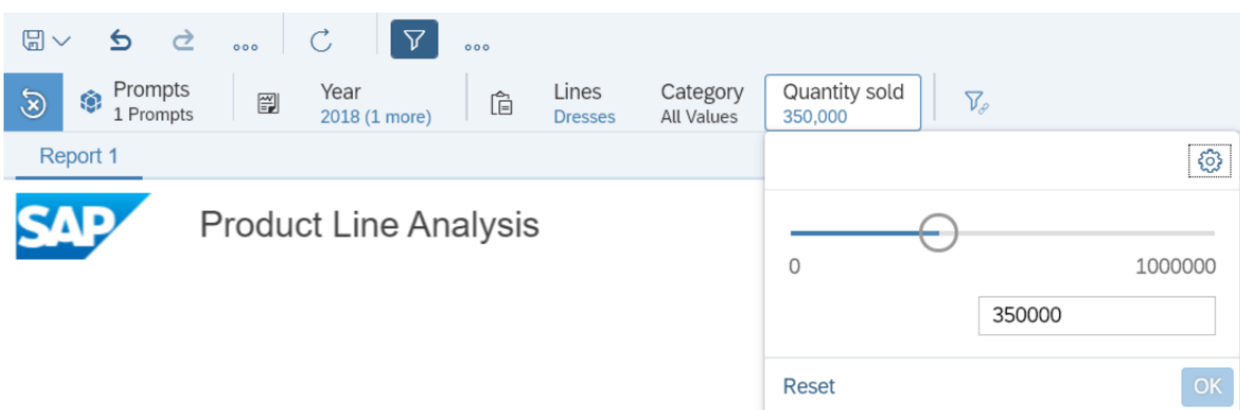
- : Switches to the "Auto Refresh" mode in which the document is refreshed regularly and automatically (see SAP BI 4.2 SP6). Before entering this mode, you need to define a refresh frequency and answer potential prompts if any. These values are kept for the next refresh actions, as long as you remain in this mode.




*Reading Mode: Auto-Refresh*

## Filter Bar

In *Reading* mode, the **Filter Bar** is the single place where you can see and, when possible, modify the filters and input controls that impact your document's dataset.




*Reading Mode: Filter Bar*

In detail, the **Filter Bar** contains the following items:

- The **Reset** button ( ) to reset all input controls to their default values and remove the element linking filtering (Request 144999).

- The prompts that have been answered during the document's queries execution. Click **Prompts** ( ) to see these values. To modify them, refresh your document and provide new values for the prompts.

- The document's input controls ( ) that apply to the whole document, and the report input controls ( ) that apply only to the current report. Click an input control to modify its values using list, multi-list (checkboxes), slider, spinner… depending on the document's designer choice. For list and multi-list, a search text field can be used to find only the values that match a search string.For a group of input controls, click the group and select the input controls to add. The order in which you select the input controls defines the filter path, *i.e.* the input controls' dependencies. For example, if you select *Country* before *City*, the selected countries filter your choice of cities.

- Element linking through which a block is filtered by a value selected in a table. Click the element linking icon ( ) to display the value of this element linking and reset it, if needed.

If the window is too small to display the full **Filter Bar**'s content, then arrows are displayed on its edges allowing you to scroll.


*Reading Mode: Filter Bar Scrolling Arrows*

## Report Selection and Vanishing Toolbar

In *Reading* mode, you can move from one report to another by clicking the corresponding tabs displayed under the toolbars.

To navigate in the report, you may use the **Vanishing Toolbar** at the bottom of the page. This toolbar appears when you move your cursor to the bottom of the page and disappears when you stay idle for a few seconds. This toolbar contains the following commands:

- The controls to go to the first page, previous page, a specific page, next page or last page.

- : Opens the **Zoom** slider to select the zoom ratio.
- : Toggles between the *Print* layout and the *Draft*
- : Fits the page's width to the window's width.
- : Fits the page to the window.


*Reading Mode: Vanishing Toolbar*

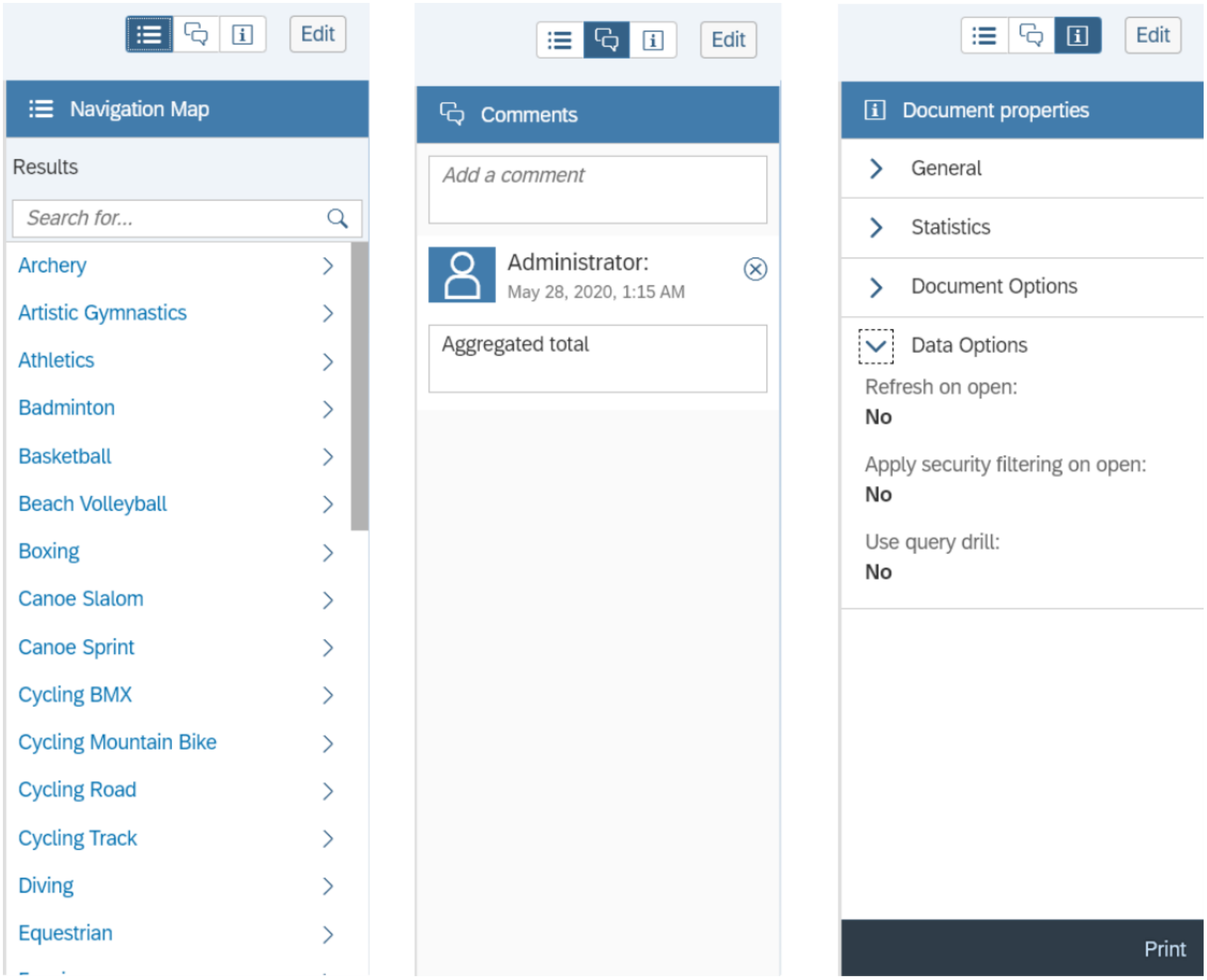
## Side Panel

Unlike the previous releases, the side panel is located on the right. To open or close this side panel, click one of the buttons in the toolbar depending on the content you want to display:

- : The **Navigation Map** pane, to quickly navigate in the report based on its sections.

- : The **Comments** pane, containing the comment threads. Click an existing comment in the document to view its thread or right click a report element in the document to comment it.

- : The **Document properties** pane, to display the document's statistics and properties (Refresh on open, document style, …)




*Reading Mode: Navigation Map, Comments and Properties Side Panels*

## Web Intelligence: Edit Mode ⤒

The main improvement in SAP Web Intelligence 4.3 is the *Edit* mode. It completes the FIORI convergence (Request 209030). This mode has been simplified to improve the productivity of report designers by allowing them to perform tasks faster.

There are several ways to open the *Edit* mode:

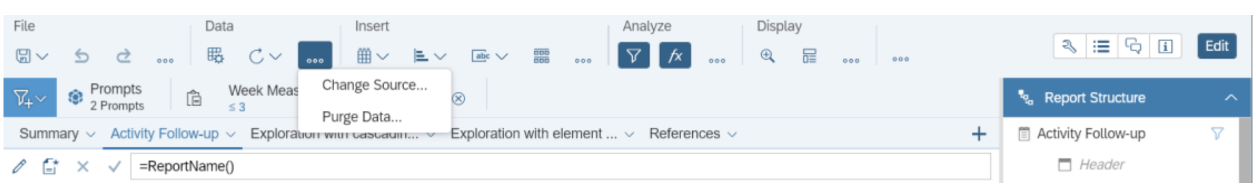
- By clicking the **Web Intelligence** tile on the BI Launch Pad **Home** page and creating a new document.

- By selecting the **Modify** command (∘∘∘) on the document menu allowing you to edit this document.

- In *Reading* mode, by clicking the **Edit** button to edit the current document.

## Main Toolbar

The toolbar contains only general commands that apply to the overall document. These commands should be familiar and have been reorganized for a simpler and faster access (Request 107473).



*Edit Mode: Toolbar*

The toolbar contains  sections with the following commands:

**File**, that contains the same commands as in *Reading* mode

**Data**

- : Opens the **Query Panel** allowing you to edit the document's queries.

- : Opens the **Refresh** menu described below. As in *Reading* mode, when a data provider has been partially refreshed, an orange dot is displayed on the **Refresh** button () to provide you with a visual "document contains partial data".

- **Change Source**: Opens the **Change Source Wizard** dialog box, to change universes, SAP BW or SAP HANA data providers.

- **Purge Data**: Opens the **Purge Data Providers** dialog box, to remove datasets from queries.

**Insert**

- : Opens the menu in which you can select tables types and forms to insert into your report.

- : Opens the menu in which you can select one of the default charts types to insert. For further charts types, open the **Turn Into** section in the **Data** side panel.

- : Opens the menu in which you can select predefined cells to insert.

- : Adds a section.

- : Inserts a custom element, if you have registered one in the CMC.

**Analyze**

- : Opens/closes the **Filter Bar** (see below). As in *Reading* mode, an icon is used to highlight that the dataset is filtered ().

- : Opens/closes the **Formula Bar** (see below).

- **Drill**, **Fold/Unfold**, **Show Changes** checkboxes: As in *Reading* mode, click these checkboxes to enable/disable drill, enable/disable fold/unfold or show document changes.

- : Opens the **Track Data Changes** dialog box.

- : Opens the **Manage Formatting Rules** dialog box.

### Display

- : Opens the **Zoom** slider to select the zoom ratio.

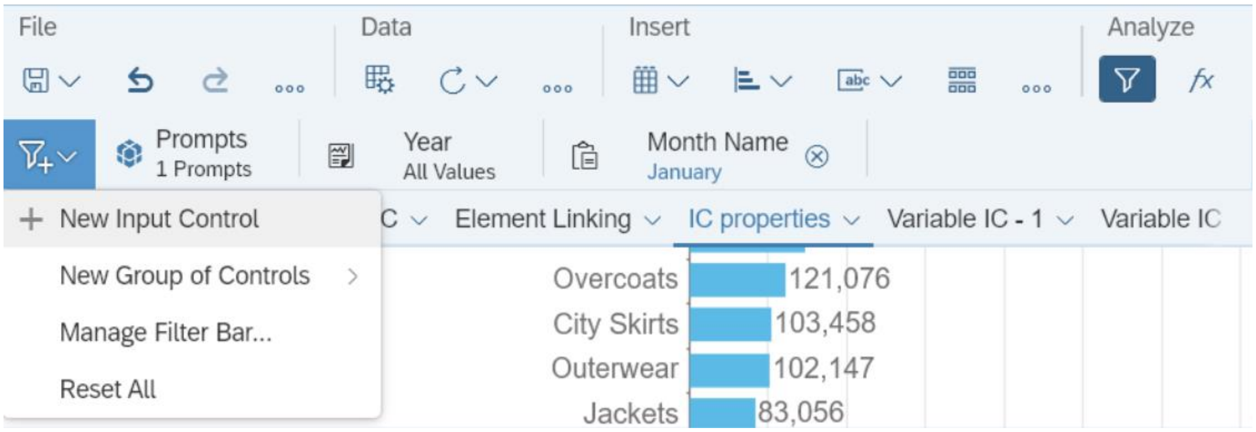
- : Toggles between the *Print* layout and the *Draft*
- **Structure** checkbox: Use this checkbox to switch between *Structure* and *Data*
- : Fits the page's width to the window's width.
- : Fits the page to the window.

**Navigate** contains the same controls as in the **Vanishing Toolbar** of the *Reading* mode to navigate in the report's pages.

Depending on your screen size, some commands are reachable by opening the **More** menu (∘∘∘).

## Filter Bar

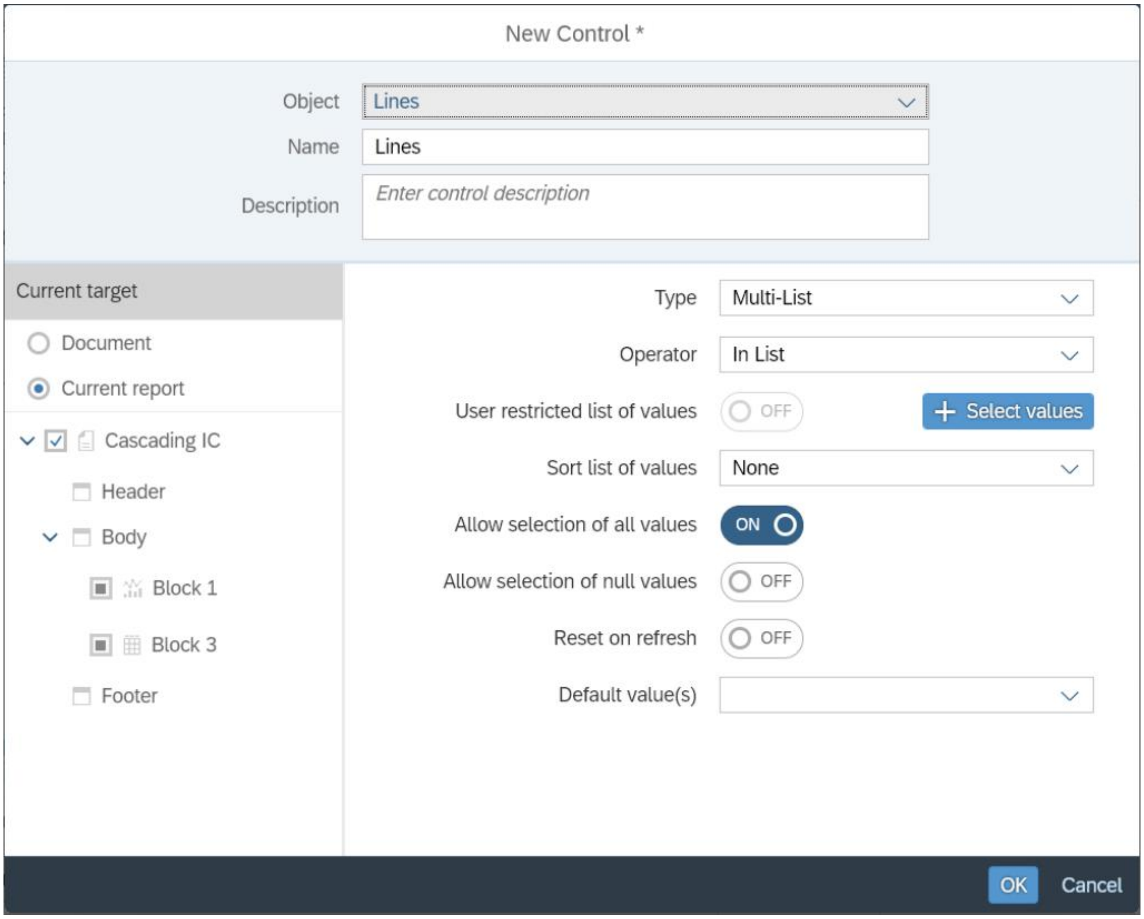
Like in *Reading* mode, you can use the **Filter Bar** to view and change filters values. In *Edit* mode, you can in addition manage input controls and group of input controls, through the **Manage Input Controls** button ().




*Edit Mode: Filter Bar*

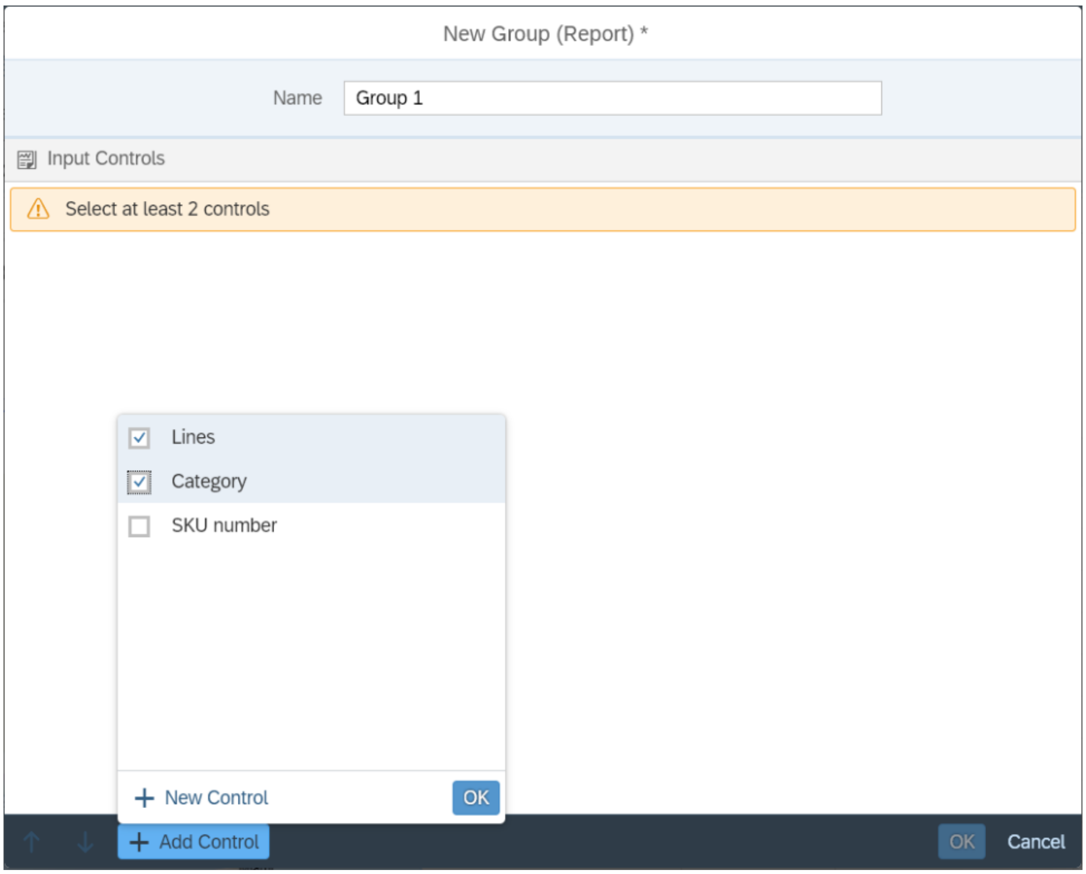
Click this button to open a menu with the following commands:

- **New Input Control**: Opens the **New Control** dialog, in which you can provide the different parameters to create an input control (the impacted object, its scope document or report, the interface item used to modify it…)




*Edit Mode: New Control*

- **New Group of Controls**: Once you have selected the scope of the group to create (the whole document or the current report), the **New Group** dialog box opens. You can give the new group a name and click **Add Control** to select the input controls to add in this new group. If needed, you can click **New Control** to create an input control on the fly and add it.




*Edit Mode: New Group of Input Controls*

- **Manage Filter Bar**: Opens the **Manage Filter Bar** dialog box listing all input controls and groups. Select a group or input control and click the **Edit** icon ( ) to

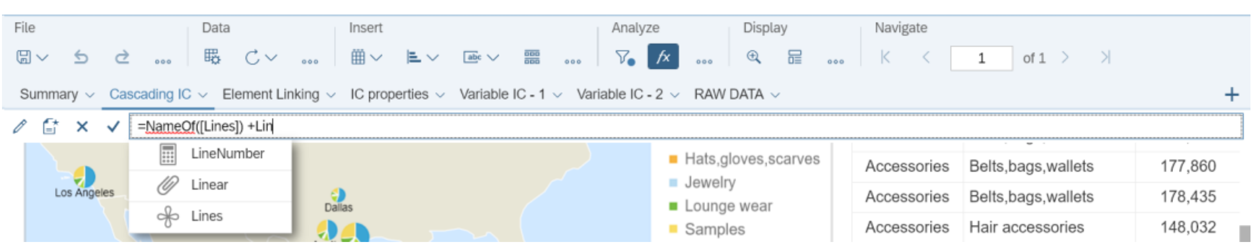
edit it or the **Delete** icon ( ) to delete it.
To define the position of a group of input control on the **Filter Bar**, select it and use the arrow buttons ( and ) to move it up and down in the list.
You can also create a group or an input control from this dialog box by clicking **+ Add**.

- **Reset All**: Resets all input controls to their default values and removes the element linking filtering.

Another way to edit an input control's properties is to click first the input control in the **Filter Bar**, then the **Settings** icon ( ) and finally **Advanced Settings**. This opens the **Edit Control** dialog box.

## Formula Bar

In the **Formula Bar**, you can enter a value or a formula in a cell. This **Formula Editor** supports auto-completion: while you type a formula, a menu proposes the objects, functions or operators that match the letters you have typed (Requests 236699 and 241647). You may select the one to use by clicking it or by using the arrow keys and pressing [Enter].



*Edit Mode: Formula Bar*

The **Formula Bar** contains the following four buttons:

- **Display the Formula Editor**: Opens the **Formula Editor** that can help you to type the formula.

- **Create a new variable using this formula**: Opens the **Formula Editor** allowing you to create a variable from the formula in the **Formula Bar**.

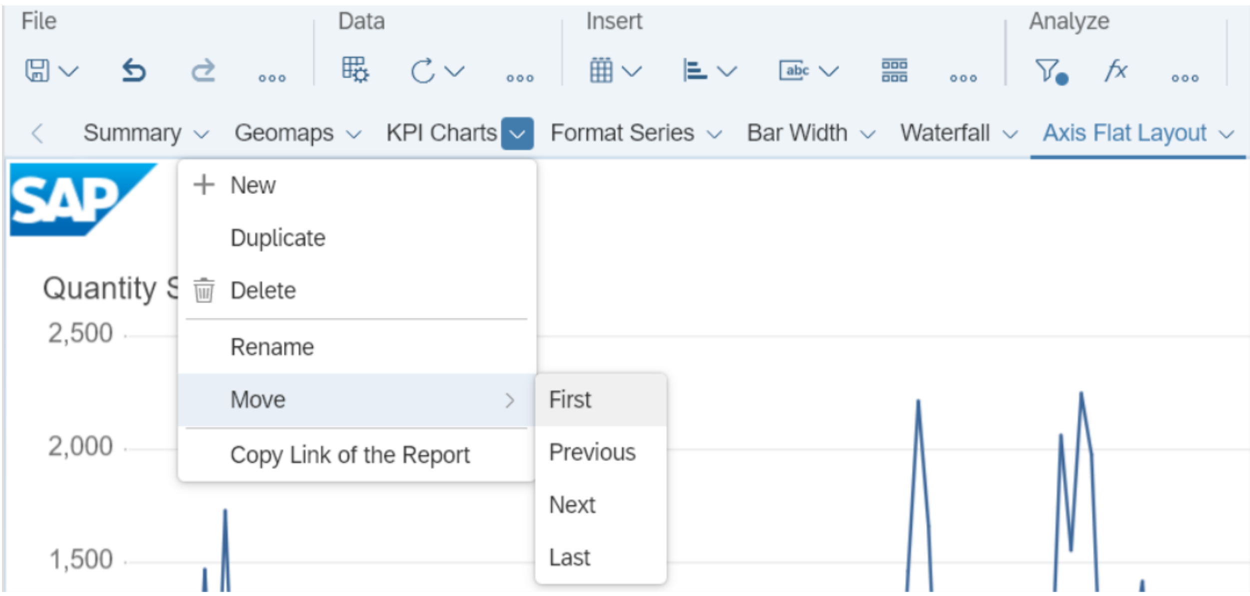
- **Restore the initial formula**: To cancel the formula you have entered and restore the previous one.

- **Validate the formula**: To validate and save the current formula in the cell.

## Report Tab

In the document, you access a report by clicking the corresponding tab below the **Main Toolbar** and **Filter Bar**.

Click the drop-down menu (⌵) beside the report name to open the menu containing commands to add a new report, duplicate, delete, rename or move the selected report.




*Edit Mode: Report Menu*

The last command in the menu (**Copy Link of the Report**) copies the *Opendoc* URL to this report into the clipboard. You may copy and share this URL that can be used to directly open this report.

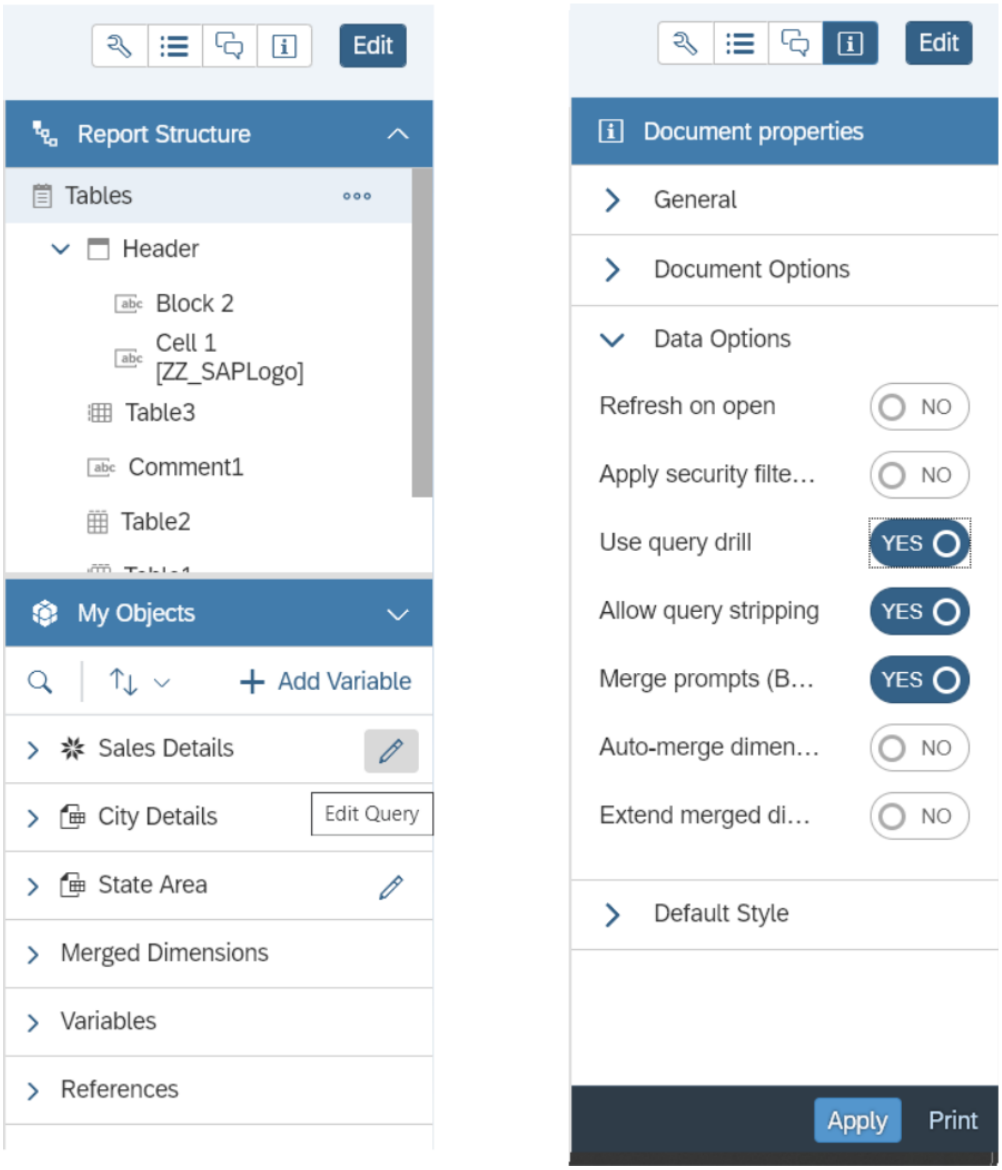
## Main Side Panel

The *Edit* mode proposes two side panels and as in *Reading* mode, they are located on the right. By default, only the main side panel opens. It contains two stacked panels:

- **Report Structure**: This panel displays the report structure with the different blocks it contains.

- **My Objects**: This panel displays the document dictionary with all objects retrieved by the queries and also the enrichments added by the document designer.

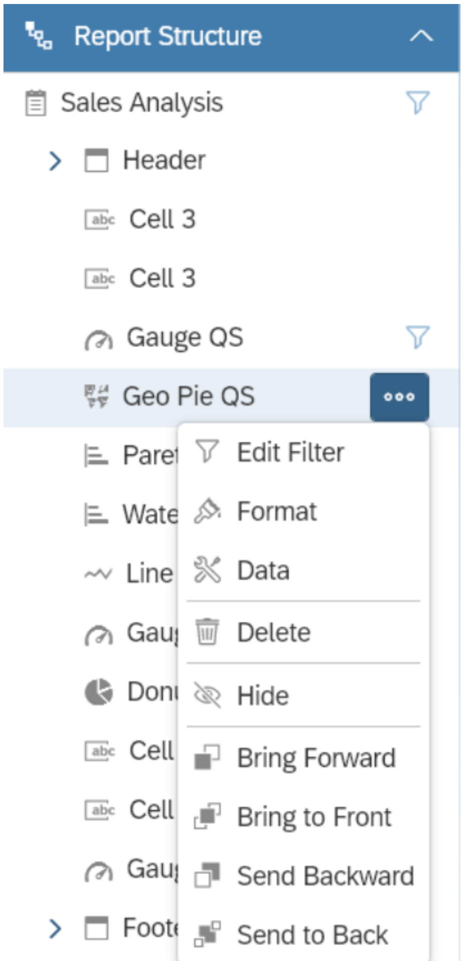
Like in *Reading* mode, the buttons on the toolbar can be used to display the **Navigation Map**, **Comments** and **Document properties** panels in the main side panel. In Edit mode, they replace the **Report Structure** and **My Objects** panels when selected. **Document properties** panel allows you to modify document's options and properties in *Edit* mode.




*Edit Mode: Main Side Panel*

## Main Side Panel: Report Structure

As in previous releases, the **Report Structure** displays a tree of all items in the current report: header, footer, charts, cells, tables, …

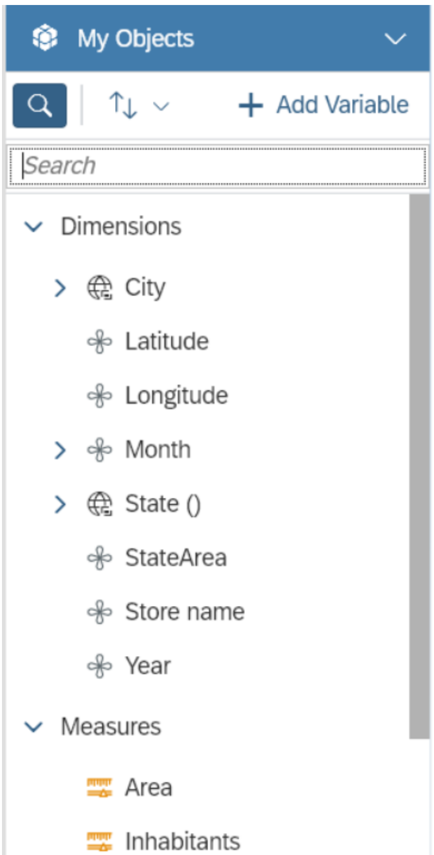



*Edit Mode: Report Structure Side Panel*

It can be useful to understand how a report is organized and access a specific block rather than looking for it in the document: if you click the **More** icon (∘∘∘) beside an item, the **Format** and **Data** commands open the **Format** and **Data** panels described below.

## Main Side Panel: My Objects

The **My Objects** panel lists the document's dictionary. In this panel, you manage the objects retrieved from the document's queries, the enrichment you defined for these objects as well as the variables and references you create. For example, to add a new variable, click **Add Variable**, to opens the **Formula Editor** and create your variable.



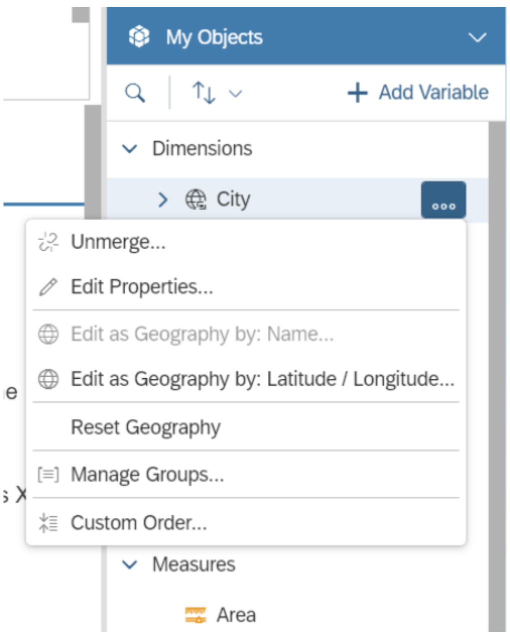

*Edit Mode: My Objects Panel*

You can display these objects in alphabetical order, by folders or by queries. The corresponding options are **Alphabetical View**, **Folders View** or **Queries View** and are available in the **View Mode** menu (↑↓).

Click the **More options** icon (∘∘∘) beside an object to open its contextual menu with the usual actions you can perform:

- Enriching a dimension by making it a geo or time dimension
- Merging / unmerging objects
- Managing groups
- Editing object properties
- Setting the measure type to Number or Decimal
- Defining a custom sort for the object

- …




*Edit Mode: My Objects Contextual Menu*

This panel works in a similar way than in previous releases. There are, however, a few usability enhancements:

- You can delete several variables at the same time (Request [208832]).

- The focus remains on the current variable when you edit it (Request 208418).

- In **Queries View**, you can directly edit a query and open it in the **Query Panel** by clicking the **Edit Query** icon ( ).

## Build Side Panel

The *Edit* mode introduces a second side panel that can be opened or closed through a fourth button ( ) located in the toolbar. This second side panel replaces the modal dialog boxes (**Assign**, **Turn To**, **Format**, **Breaks**, **Sort**, …) available in previous releases. It contains all the properties that were previously exposed in the modal dialog boxes. Depending on their category, these properties are displayed in one of these two panels:

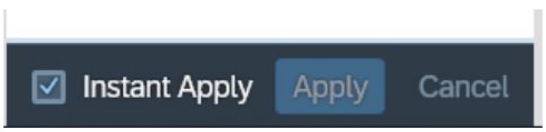
- **Data**, defines the data structure of the item you have selected

- **Format**, defines the format of the item you have selected

You can switch from one panel to another by clicking their respective header.

They are contextual panels and the displayed properties depend on your selection. When you select an element, it automatically displays the relevant properties.

The properties you set in the **Data** panel are immediately applied to the selected item. You can decide to automatically apply the properties you picked in the **Format** panel by selecting the **Instant Apply** checkbox at the bottom of the panel. As these format changes imply regular requests to the server for each modification, you may prefer to unselect this checkbox and rather click **Apply** in one request to the server.



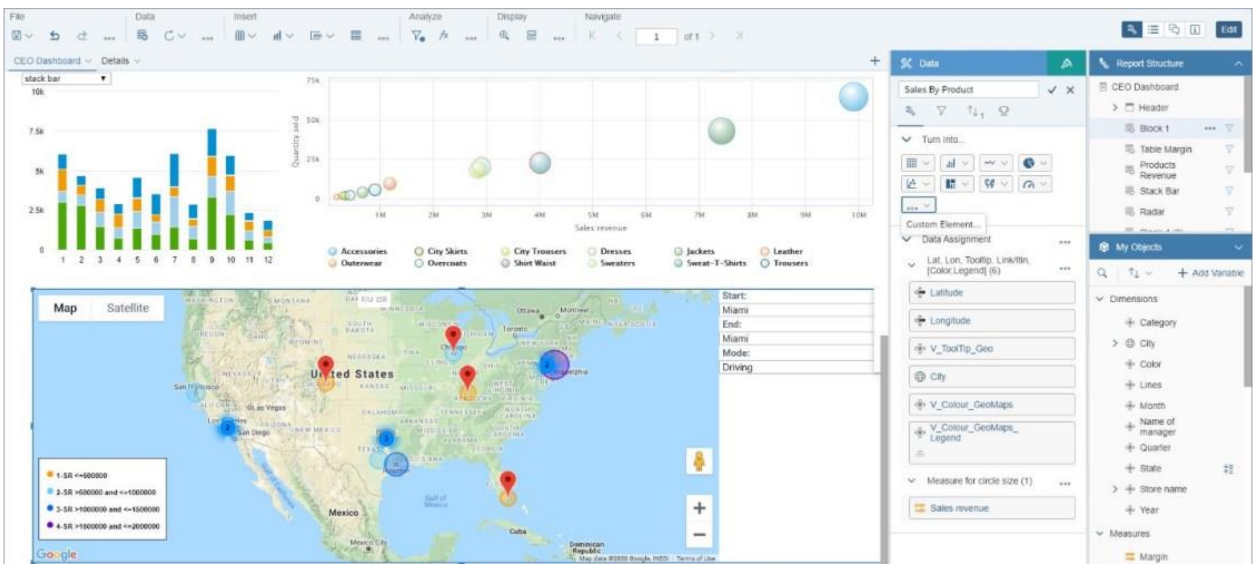

*Edit Mode: Format Panel Apply Options*

This new side panel is one of the main enhancements of the document authoring workflows. As described in the next two sections, setting a format or organizing a block feed is much easier through this side panel than via the previous dialog boxes (Requests 109434 and 107959).

## Build Side Panel: Data

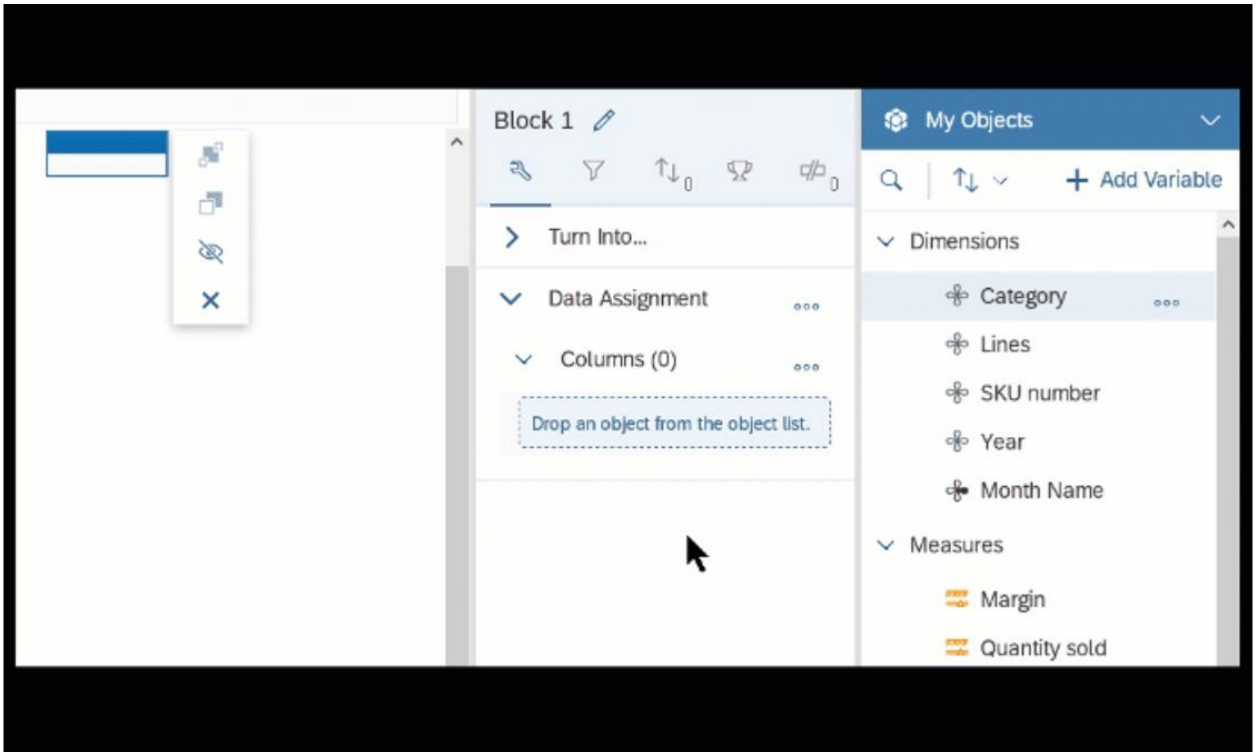
The **Data** panel is available when you select a chart or a table and is used to define the data and structure of this selected table or chart block. The corresponding properties of the **Data** panel are organized in tabs, and only tabs relevant to your selection are displayed. These tabs are:

- : The **Feeding** tab contains the **Turn into** command used to select the table or chart type for this block. If you have registered custom elements in the CMC, they appear in the last menu of the **Turn Into** command.




*Edit Mode: Selecting Custom Element (Courtesy from Need4Viz)*

The **Data Assignment** section defines the objects used in the selected table or the chart. You may easily add objects to this block by drag-and-dropping them from the **My Objects** panel. Drag and drop can also be used to more easily change the objects' order in the block.




*Edit Mode: Adding Objects to a Table Through Drag and Drop*

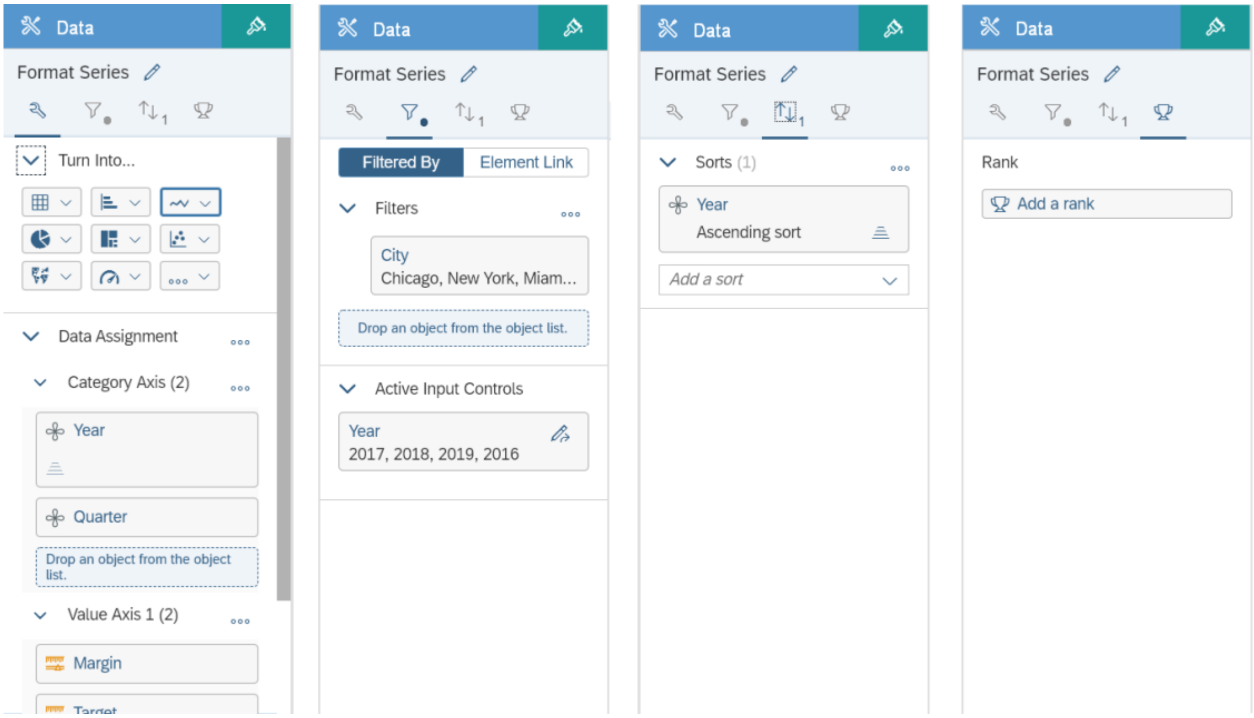
Another way to add objects is to click the **More** icon (∘∘∘), select the **Formula** and picks them from the **Formula Editor** or enter a formula to feed the block.

- : To manage the **Filters** and **Element Links** for the selected block. If a filter has been defined, then a dot is displayed on the tab. This tab provides an overview of all filters that apply to this block by listing also the input controls.

- : To manage the **Sort** that applies to the selected block. If sorts have been defined, the number of defined sorts is displayed on the tab.

- : To manage the **Ranking** that applies to the selected block. If a ranking is defined, a dot is displayed on the tab.

- : To manage the **Breaks** options of the selected table.



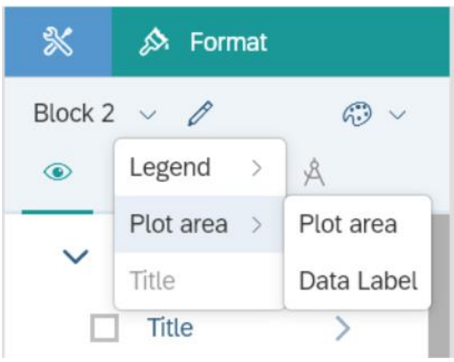

*Edit Mode: Data Sub-Tabs for a Chart*

## Build Side Panel: Format

The **Format** panel contains all formatting properties for the selected item: report, cell, table, table cell, chart… To select a specific area of a chart (axis, title, legend, …), you can either:

- Click this area in the chart itself.

- Or select the chart and then the desired chart area in the menu located beside the chart's name in the **Format**




*Edit Mode: Chart Area Selection*

The properties you can set depend on your selection, since some may not be relevant to your selection. These properties are organized by categories in the **Format** panel's sub-tabs.

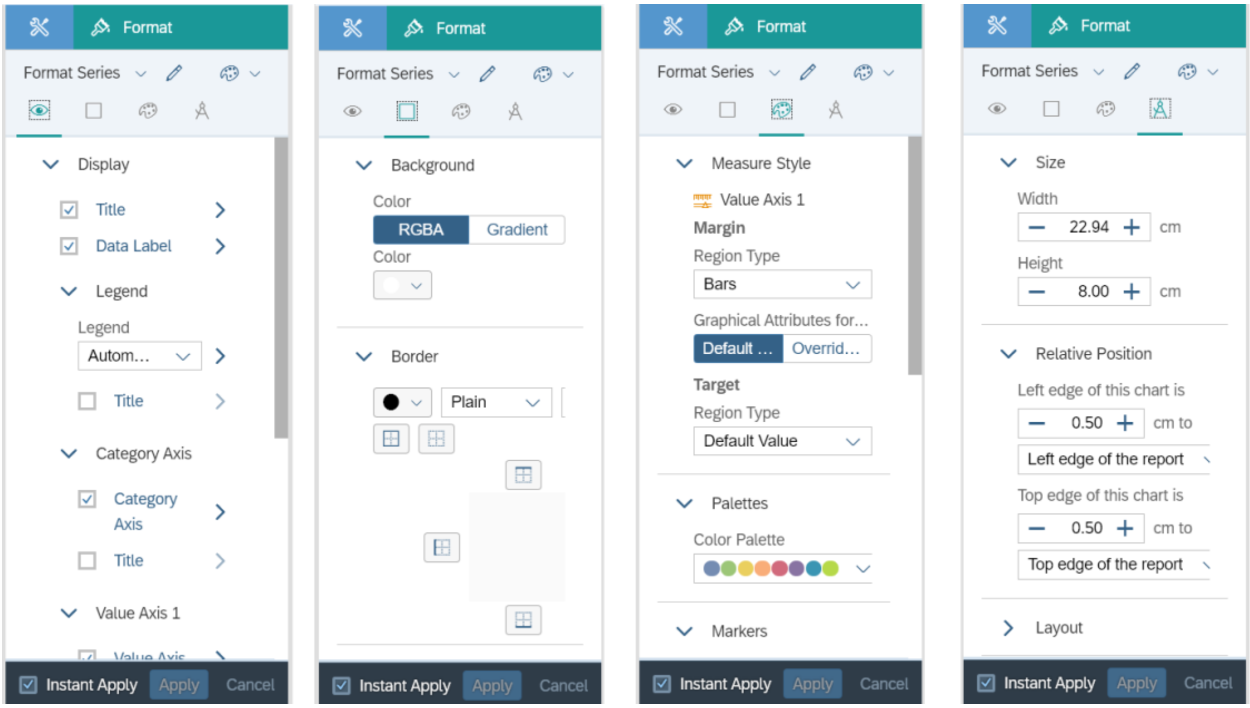
- : Contains **Display** settings. For tables, it includes the properties that define what must be displayed or hidden: header, footer, object name, hide when empty, duplicate rows aggregation… For charts, it also includes the components to be displayed or not: title, data label, legend, …

- **:** Contains **Appearance** settings, like background color, borders' definition, spacing, padding…

- **:** Contains **Text** settings, like its police, font, color, alignment, …

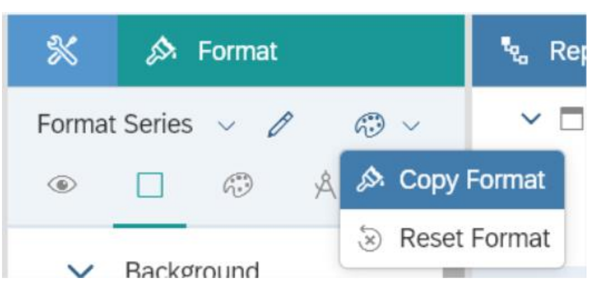
- : Contains **Styling** settings for charts, like palette, markers size…

- : Contains **Layout** settings. For pages, it includes print layout, margins and scaling properties. For blocks, it includes relative positioning regarding other blocks, size and page break options…




*Edit Mode: Format Sub-Tabs for Charts*

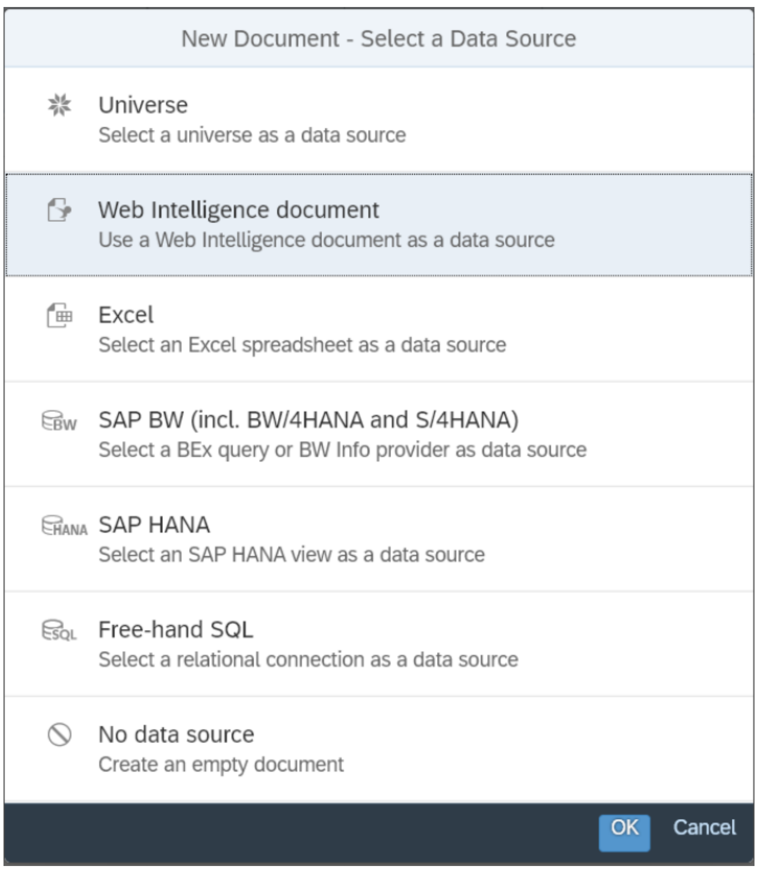
At the top of the panel, beside the name of the selected block area (that can be changed as in the **Data** side panel), you may open the **Format Painter** menu ( ). It contains the **Copy Format** and **Reset Format** commands to respectively copy or reset the format of the current block.



*Edit Mode: Format Menu*

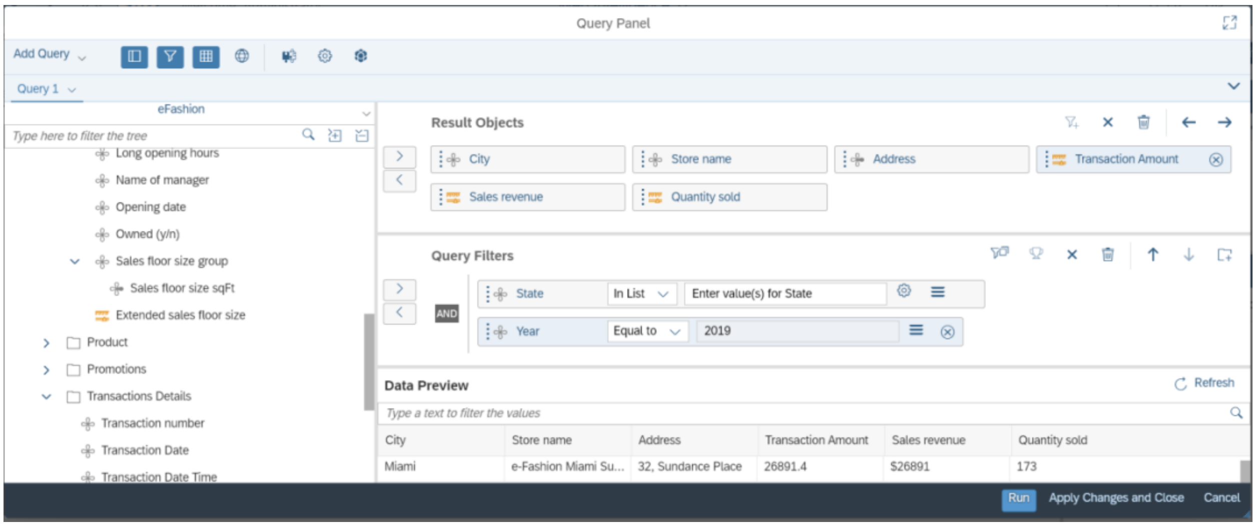
## Query Panels

When you create a document or add a query to an existing document, you are asked to select a data source type and then the data source itself.

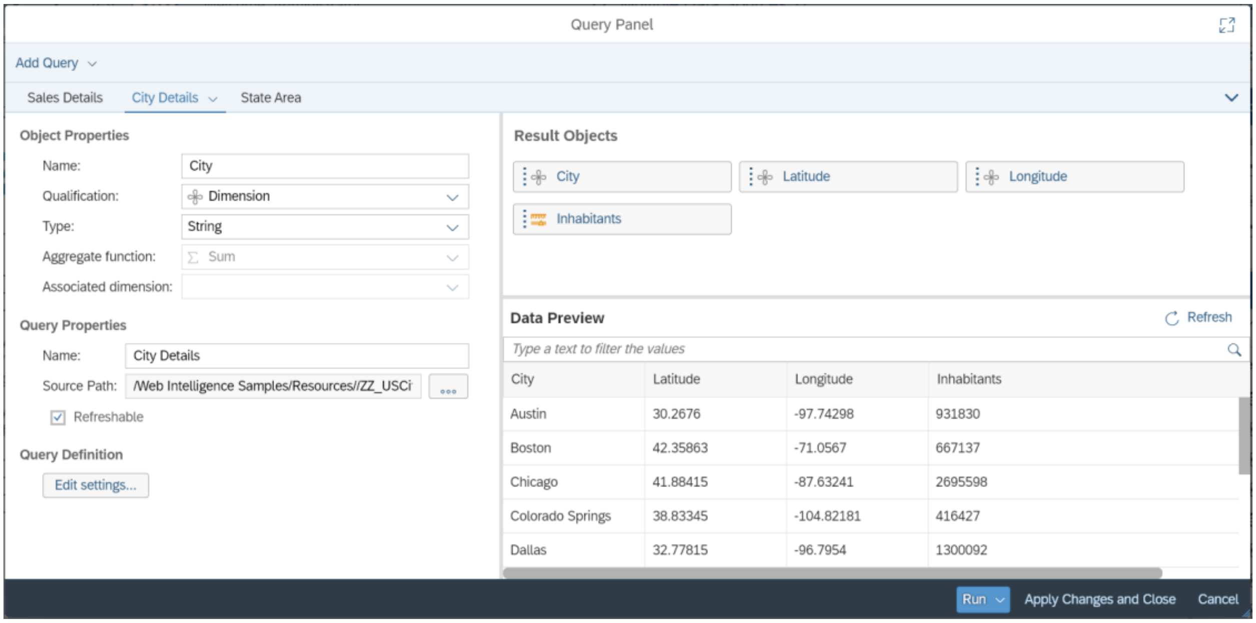



*Query Panel: Data Source Type Selection*

The Query Panel opens, and you can select objects to create a query and retrieve the corresponding dataset. This Query Panel depends on the data source type. In SAP BI 4.3, these Query Panels are similar to the ones available in SAP BI 4.2, except for the FIORI skin, and propose the same features.

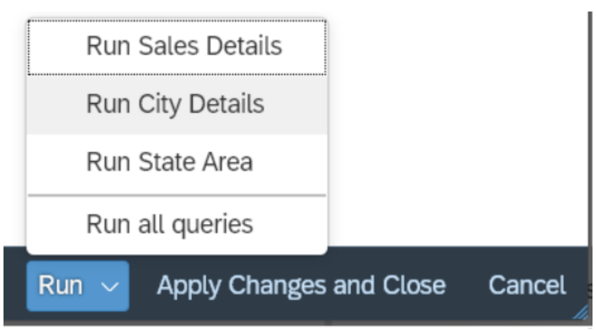



*Query Panel: Universe Data Source*




*Query Panel: Excel Data Source*

To run the query and close the query panel, click **Run**. If your document contains several queries, you can open a menu from this button and select the query to run.

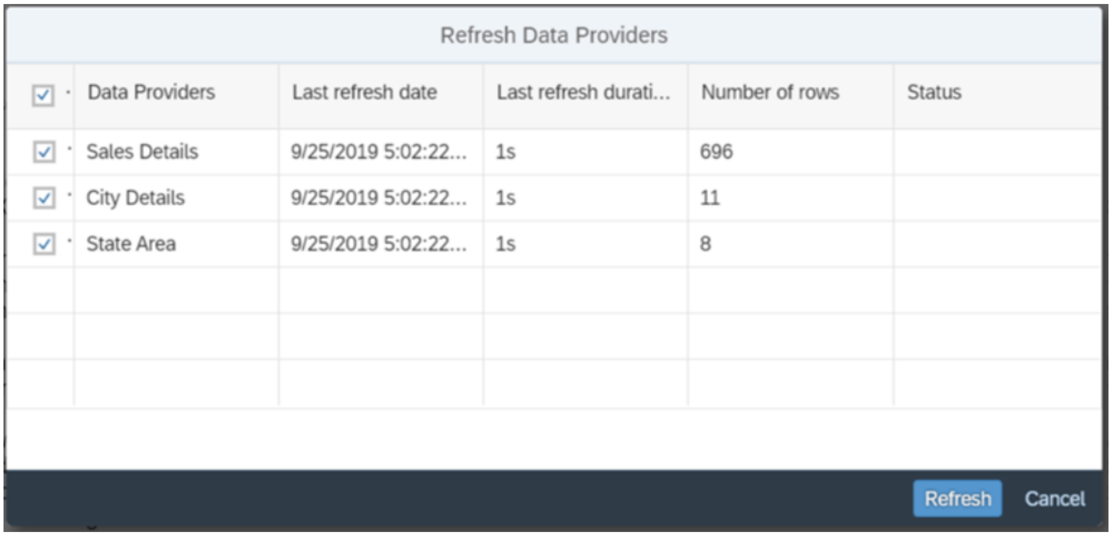



*Query Panel: Selecting Query to Run*

## Refresh and Purge Queries

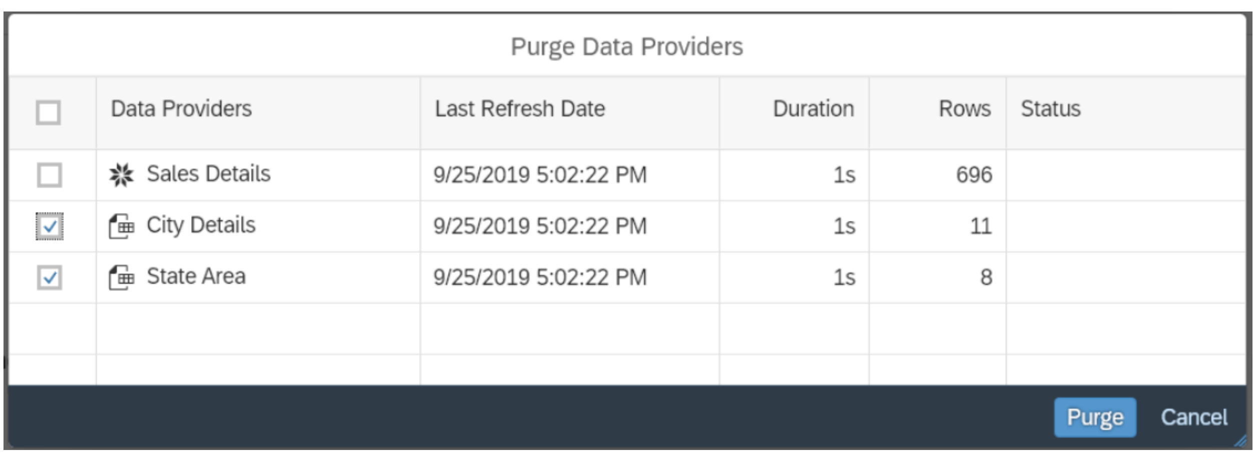
The **Refresh** menu () of the toolbar's **Data** section contains the following commands:

- **Refresh** to refresh all authorized queries.
- **Refresh Data For** to open a dialog box that provides some statistics about the queries’ last refresh. You can explicitly select the data sources to refresh during the next document refresh.




*Refresh Data Providers Dialog Box*

The toolbar's **Data** section also contains the **Purge Data** command that opens the **Purge Data Providers** dialog box. The content of this dialog box is the same as in the **Refresh Data Providers** dialog box. However here, you can explicitly purge data from the data providers of your choice by selecting the checkbox in front of the data providers and clicking **Purge** (Request [143679]).



*Purge Data Providers Dialog Box*

## Web Intelligence: Rich Client ⤒

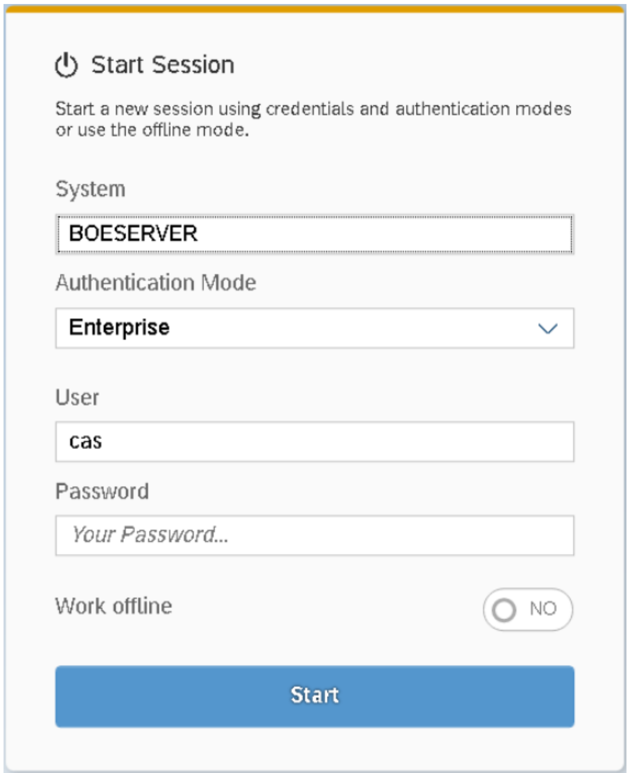
SAP BI 4.3 also offers Web Intelligence Rich Client for desktop usage. It is not a Java application any longer bur rather reuses the same interface as the SAP BI 4.3  web version in BI Launch Pad.

As all desktop tools in SAP BI 4.3 (Information Design Tool, Universe Design Tool…), it is released in 64-bit (Request 107828).

### Login

You can start Web Intelligence Rich Client from the **Start** menu or by double-clicking a locally-saved Web Intelligence document. You land on the login page the process of which has been simplified (Request 127659). You are required to enter the system name, your credentials and the authentication mode. With the toggle button, you can choose to work in *Online* or *Offline* mode (used to work disconnected after you have retrieved resources locally on your desktop).

The Standalone and ZABO modes (allowing you to download and install Web Intelligence Rich Client from BI Launch Pad) are not yet released.

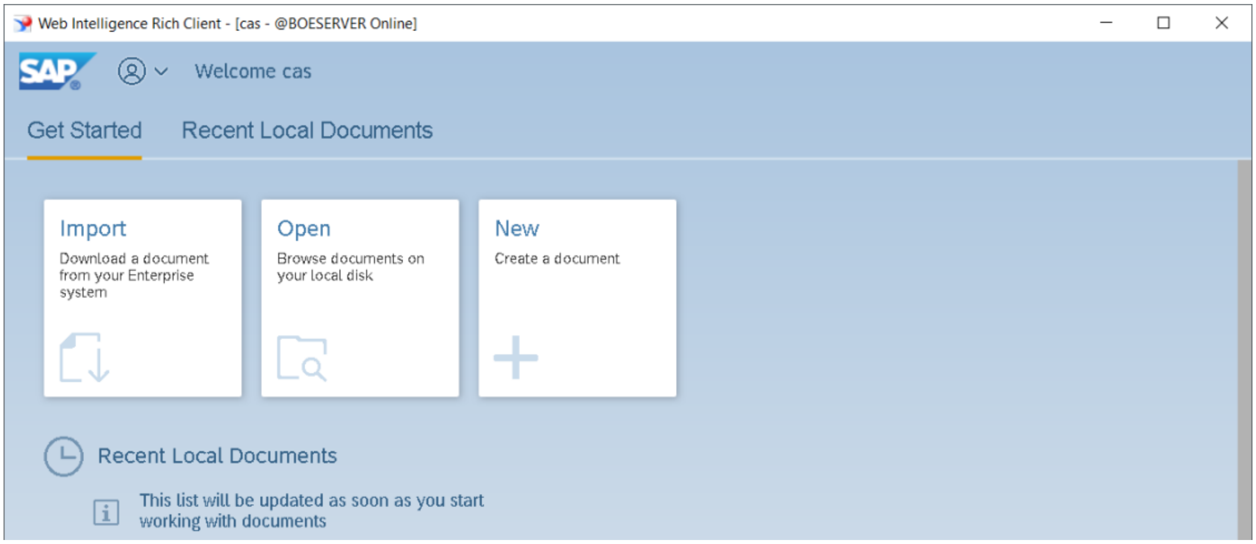



*Web Intelligence Rich Client : Login Page*

If your login parameters are valid, Web Intelligence Rich Client displays the **Welcome** page.

## Welcome Page

The new Web Intelligence **Welcome** page design is similar to the **Home** Page of BI Launch Pad.




*Web Intelligence Rich Client: Home Page*

Three tiles are displayed at the top of this page. They offer actions that follow the workflows of your documents:

- **Import**: To select a document in the BI Platform repository and explicitly import it toa local folder so that you can edit it.

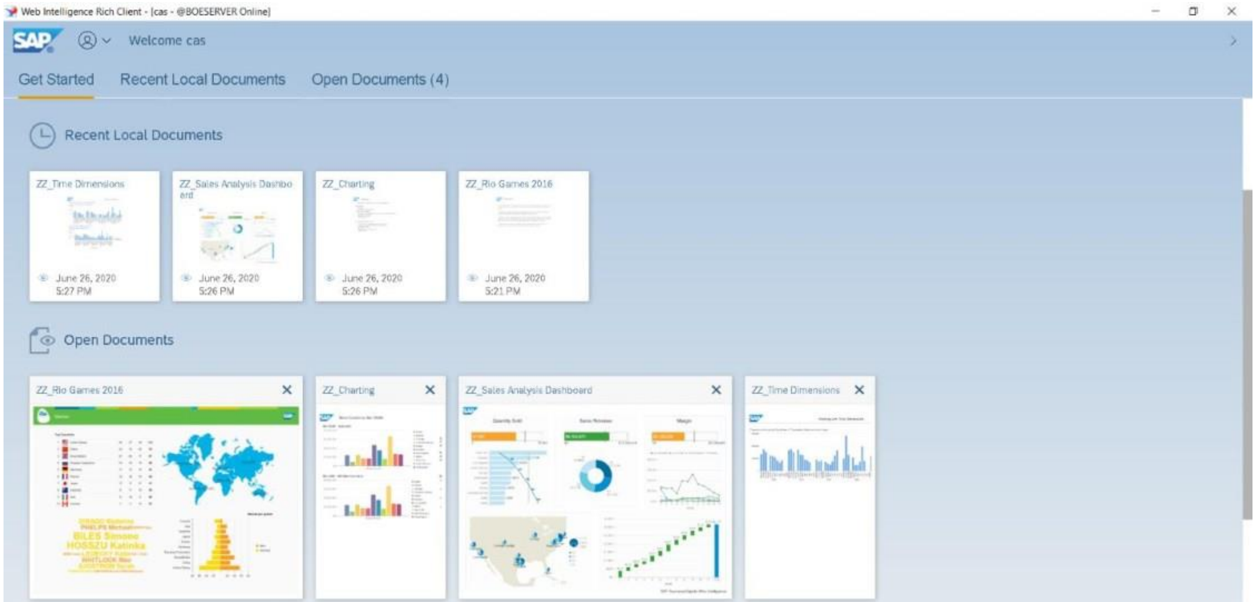
- **Open**: To open a document you have previously imported on your local file system.

- **New**: To create a local document.

The **Welcome** page also displays two other sections:

- The **Recent Local Documents** section displays tiles for the local documents you have previously opened. These tiles contain a thumbnail of the document, a snapshot taken the last time the document was saved, as well as its last save date. Click a tile to open the corresponding document.

- The **Open Documents** section displays tiles for the documents that are open in this session. These tiles show a thumbnail of the active report of the document. You can also click this thumbnail to quickly switch to this document or click the cross icon in the tile’s header to close it.




*Web Intelligence Rich Client: Recent and Open Documents Tiles in Welcome Page*

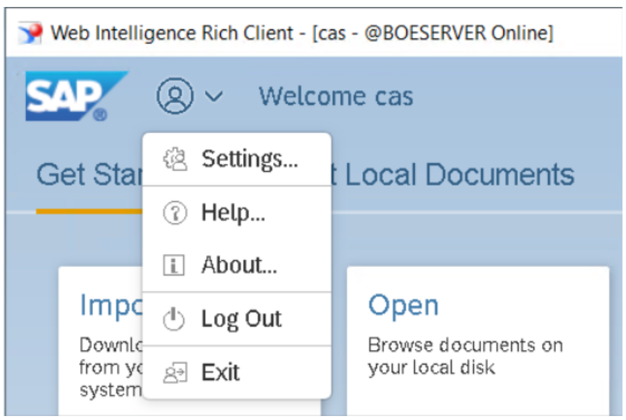
The drop-down menu at the top of the **Welcome** page header, contains the following commands:

- **Settings**: to set Web Intelligence Rich Client parameters like the local documents' default folder, the drill options, the locales or the measurement unit.

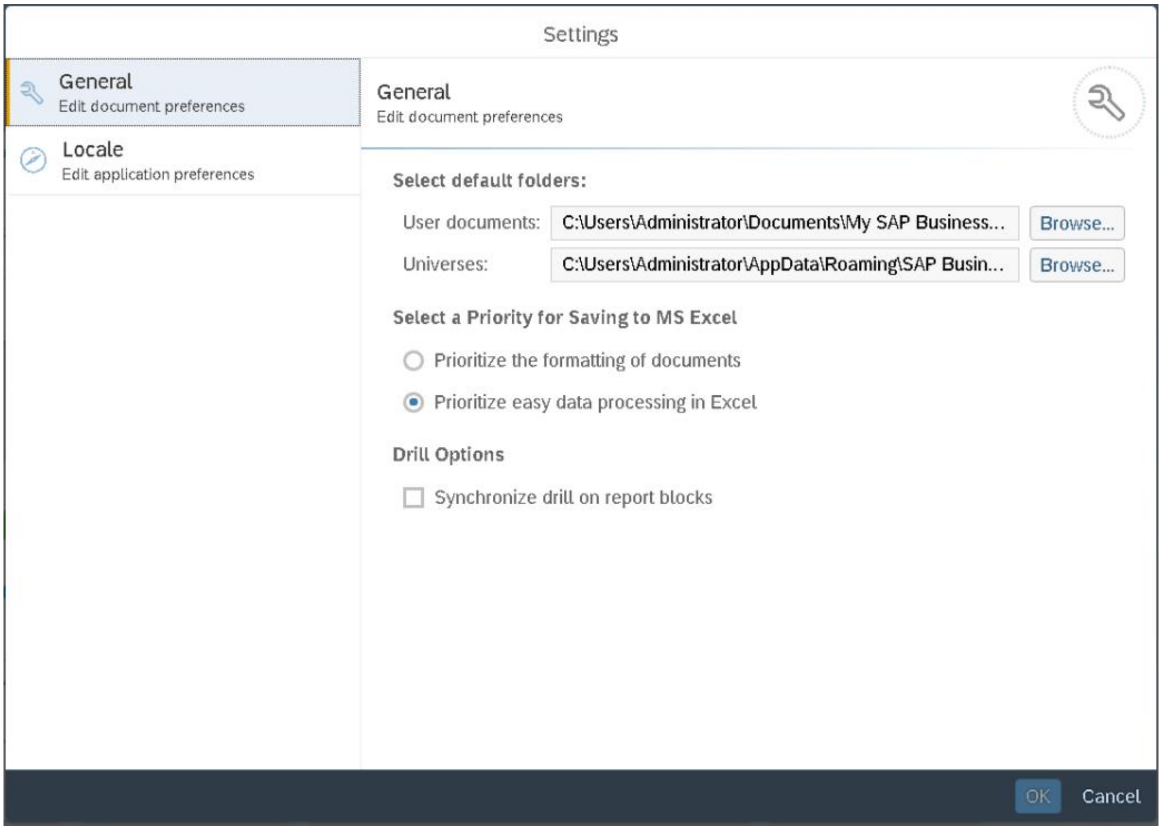
- **Help** and **About**: To open the usual Online Help and **About** dialog box.

- **Log Out**: to logout and return to the Login page.

- **Exit**: to exit the tool. When exiting, all local Web Intelligence processes are terminated.




*Web Intelligence Rich Client: User Menu*




*Web Intelligence Rich Client: Settings Dialog Box*

## Creating a Document

To create a local document, click the **New** tile in the **Welcome** page. The interface and workflows to create a document are the same as in BI launch Pad:

- Select the data source type, then the data source itself. (The data source you can select must be stored in the repository; local data providers are not yet supported.)

- Create and run your query.

- Add charts, tables, formatting… to your report and add new reports and queries

Basically, you can take advantage of the same *Edit* and *Read* modes as in the web version, except for some features that are not yet supported or not yet available:

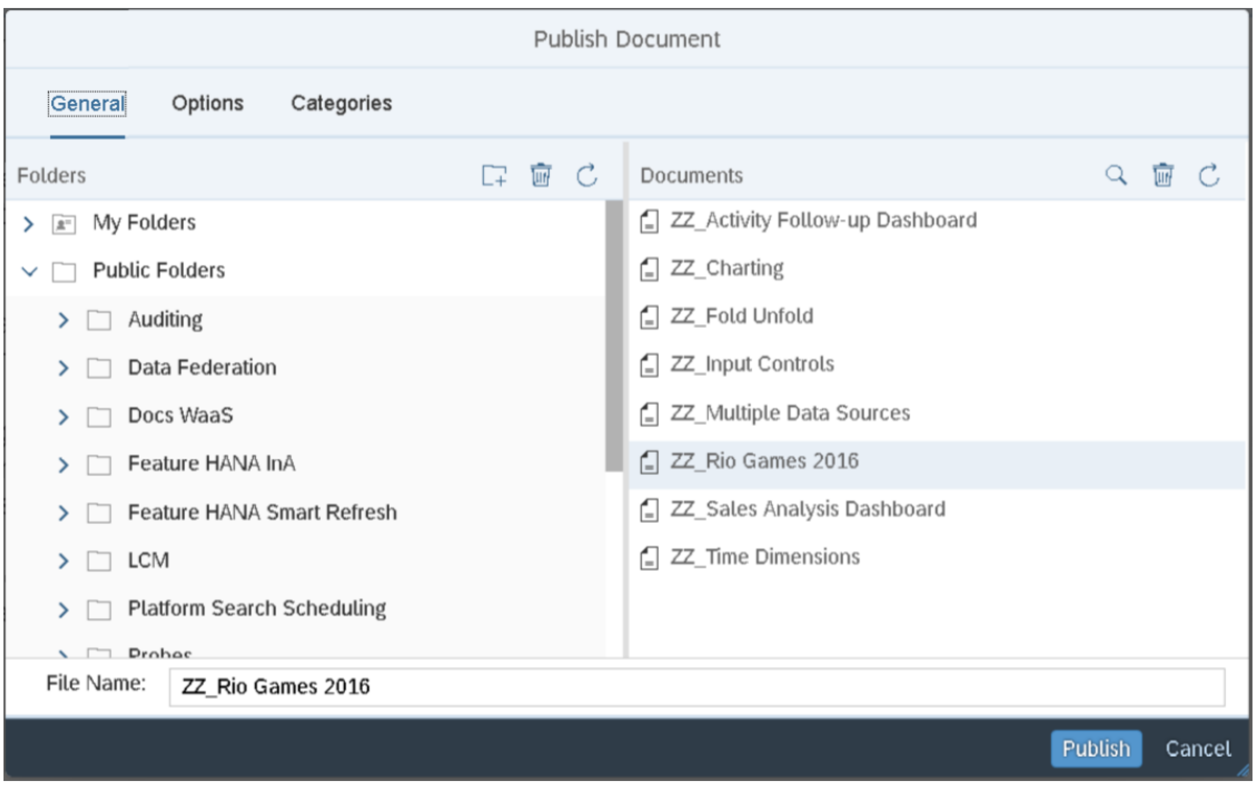
- You can view comments but cannot modify comments on local documents.

- You cannot send a document to BI Platform users.

Once you have finalized your document, you can:

- Save it locally by selecting the **File** > **Save** You can reopen it later by selecting the **Open** tile in the **Welcome** page.

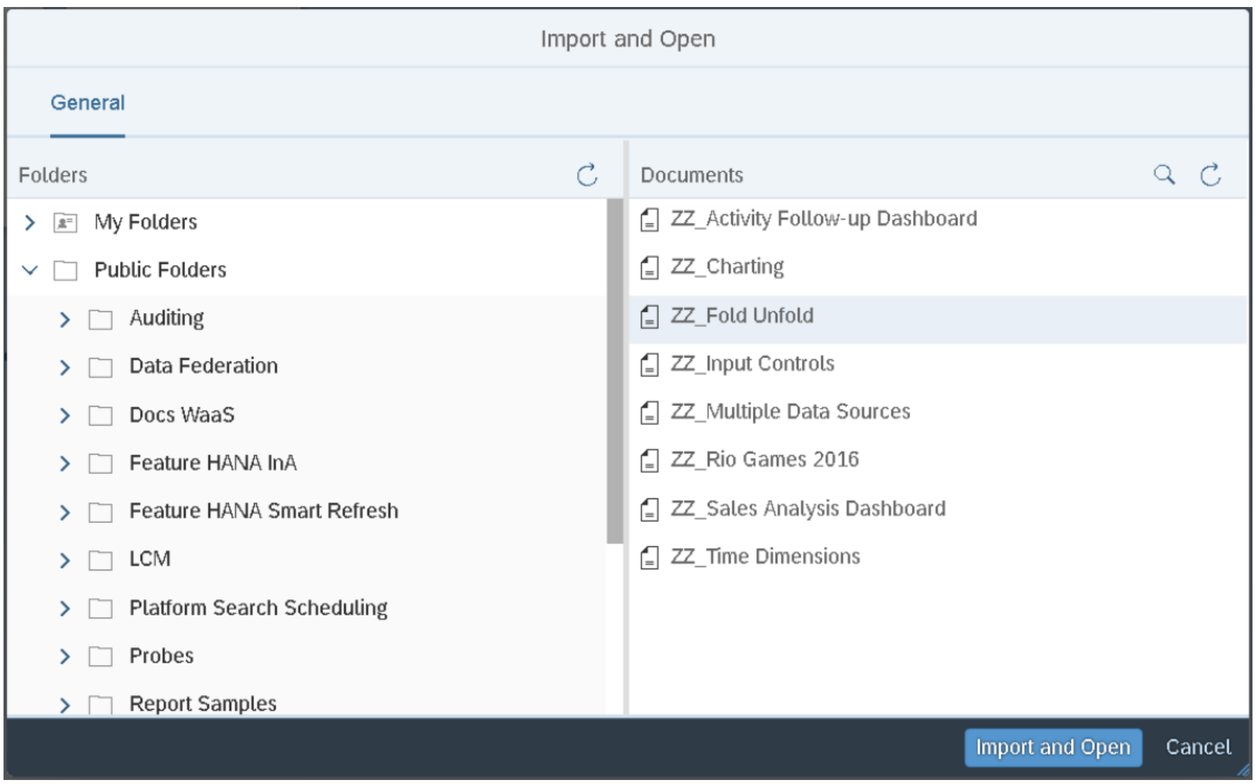
- Publish it in the BI Platform repository by selecting the **File** > **Publish to Enterprise** command, and then select the destination folder in the **Publish Document** dialog box.




*Web Intelligence Rich Client: Publish Document Dialog Box*

## Importing a Document from the Repository

If you have already some documents in the BI Platform repository, you can work on them in Web Intelligence Rich Client. Start Web Intelligence and connect to the BI Platform repository. In the **Welcome** page, click the **Import** tile to open the **Import and Open** dialog box and select the document to import and open.




*Web Intelligence Rich Client: Import and Open Dialog Box*

The selected document is copied to your file system, and this copy is opened for you to work on it using the same interface as in BI Launch Pad.

Once you have finalized your changes, you can save it in the BI Platform repository again by selecting the **File** > **Publish to Enterprise** command first, and the destination folder in the **Publish Document** dialog box as a second step.

You may prefer to save it locally for further changes before publishing it. In this case, select the **File** > **Save** command or select the **File** > **Make Copy** one to create another local copy.

In both cases, depending on your security rights, you may save it:

- With document access to all users, so that all repository users that have provided their credentials can open it.
- While removing the document's security, so that users do not need to authenticate anymore.
- While keeping it secured for you only.

Later on, if you restart Web Intelligence Rich Client in *Online* or *Offline* mode, you can reopen this local copy by clicking the **Open** tile in the **Welcome** page.

## Web Intelligence: Document as a Data Source ⤒

The support of Web Intelligence document as a data source for another document is a new capability offered in SAP BI 4.3 (Requests 107970 and 109142). The source document can be considered as a virtual universe and a database; and their metadata and data can be shared and leveraged by other documents.

This feature covers several use-cases:

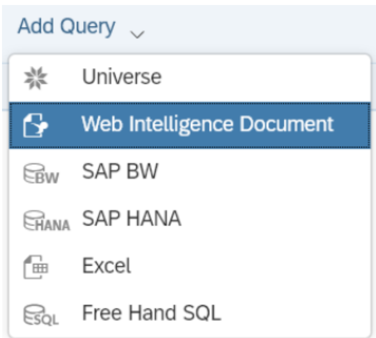
- A document that queries a large dataset can be refreshed during quiet periods through a schedule and then be used as a data source for other documents. These documents do not query the initial data sources, but the dataset saved in the source document. This prevents initial data sources from being too solicited and improves the refresh time.

- A power report designer may prepare metadata (merged dimensions, geo-dimensions, time dimensions, variables) and share it through a source document.

- Likewise, a document that queries multiple heterogeneous data sources can be exposed as one single metadata provider and hide the complexity of the data sources it queries.

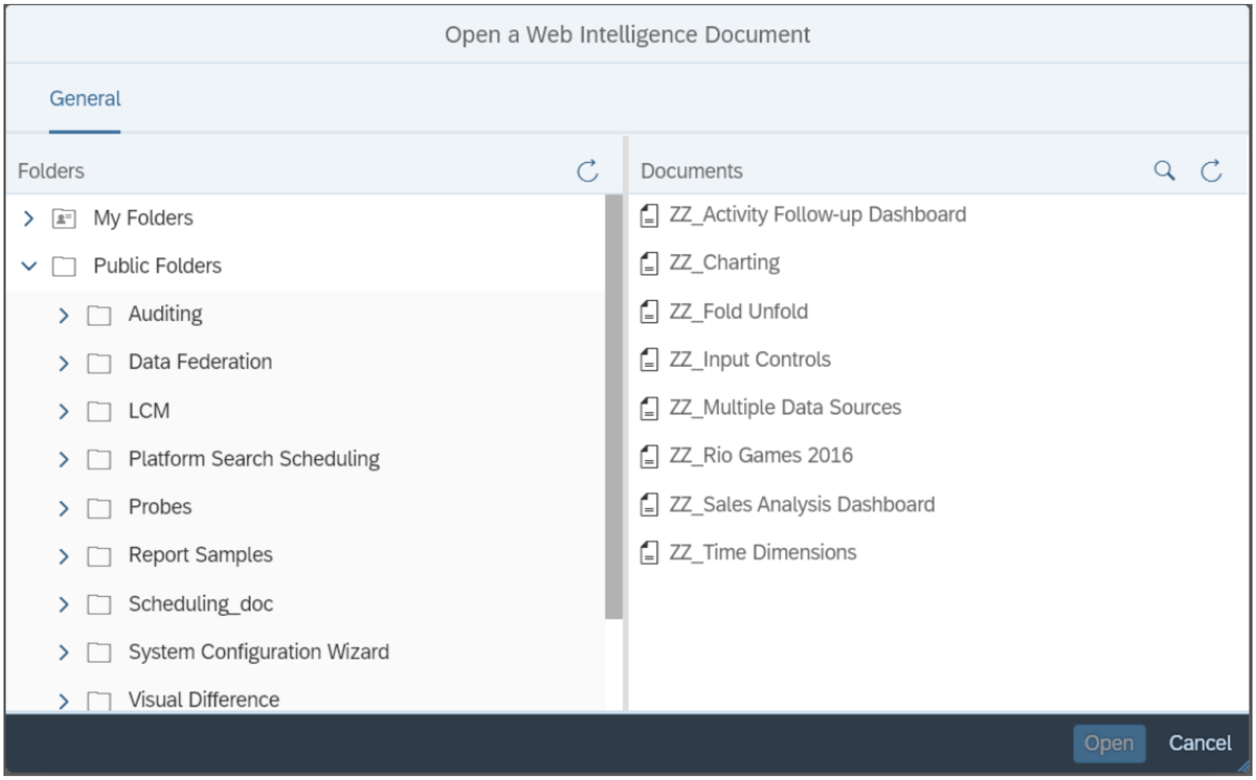
## Creating a Query

When you create a document or add a query to an existing document, you can select **Web Intelligence document** in the list of possible data sources.




*Web Intelligence: Adding a New Query*

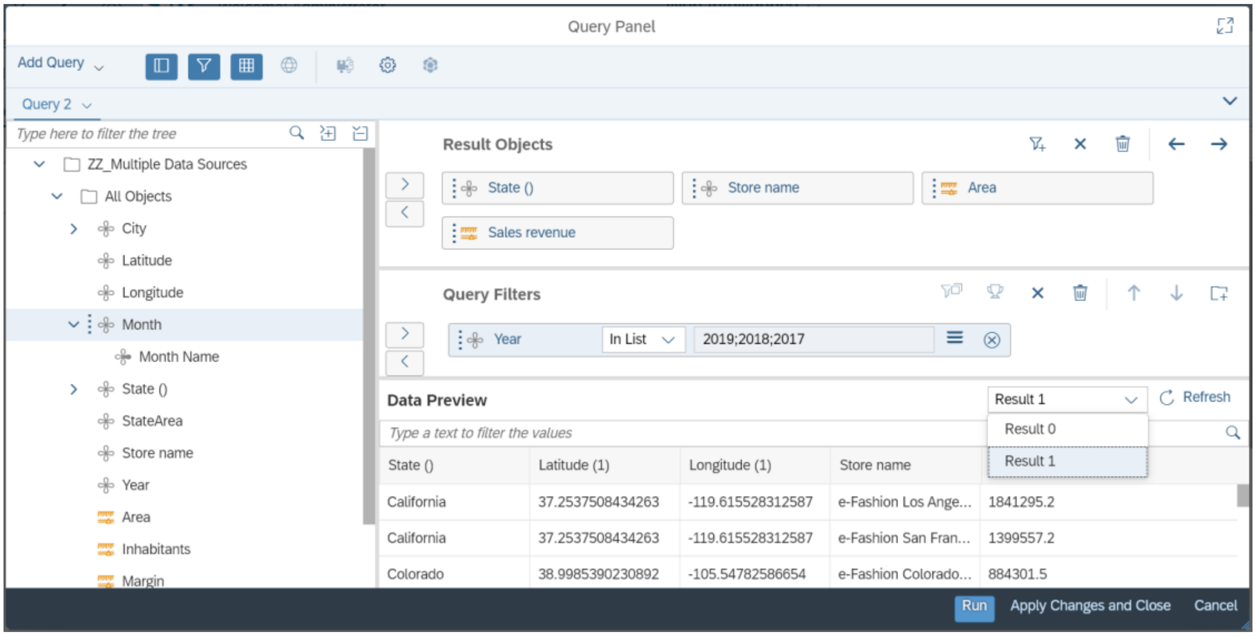
You are then asked to select a document in your *Personal* folders or in the *Public* folders of the BI Platform repository.




*Web Intelligence: Document Selection*

Once you have selected the source document, the **Query Panel** opens and displays the document's objects: its dimensions, attributes, measures, hierarchies or variables... You can define a query by drag-and-dropping objects in the **Results Objects** section. You can also add filters in the **Query Filters** section to narrow down the dataset to retrieve from the source document.

This **Query Panel** is very similar to the one used for universes, although it does not yet support features like combined queries, advanced filters or query stripping.




*Query Panel: Web Intelligence Document Data Source*

If the source document contains hierarchies, you may use the **Member Selector** to select the members to query. This **Member Selector** supports the same operators as for SAP BW data sources: *Children*, *Descendants Until* and *Descendants Unit Named Level*, but not *Ancestors* nor *Parents*.

## Refreshing Data

The refresh retrieves the dataset from the source document. If your query contains filters or member selections, they are applied when it is sent to the source document.

After the refresh, the objects that your query consists of appear in the **My Objects** panel. You can use them to feed the tables and charts in your report like you would for any data source. If you have enriched the source document with merged dimensions and/or geographical or time dimensions, they are retrieved as well and can be reused in the new document.

During this refresh, the source document is not refreshed. This is the reason why a source a document defined as being *refreshed on open* or based on an SAP HANA Online data source, cannot be used as a data source. The source document must be explicitly refreshed, either manually or through a schedule. If the **Smart View** option has been selected in the CMC, the data is retrieved from the source document's last scheduled instance.

The aggregation of variable defined as measure is delegated to the source document. If you change the aggregation scope, the measure returns #TOREFRESH. Refresh the document to send the query against the source document so it returns the new aggregated value for the measure.

## View-Time Security Filtering

The date of the dataset retrieved from the source document corresponds to the source document's last refresh time. At refresh time, it is secured with the security profiles that apply to the user who is running the query. As the source document is not refreshed, it might be an issue if this source document dataset is shared with other users who do not have the same security profiles.

If the source document queries a universe created with Information Design Tool and secured with a Business Security Profile, you can enable the **Apply security filtering at view time** option (see SAP BI 4.2 SP6) to filter the dataset when a document based on this source document is opened.

If you set this option for the consuming document, the Business Security Profiles that apply to the user are enforced on the fly when the document is opened and without refreshing the source document, nor the document created on it:

- **Display Data** Business Security Profiles prevents a denied object and its data to be displayed.

- Only rows that match the filters conditions defined in the **Filters** Business Security Profiles are displayed.

If you set this option for the source document, the filtering is applied when data is retrieved from this source document:

- **Display Data** Business Security Profiles prevents a denied object and its data from being retrieved.

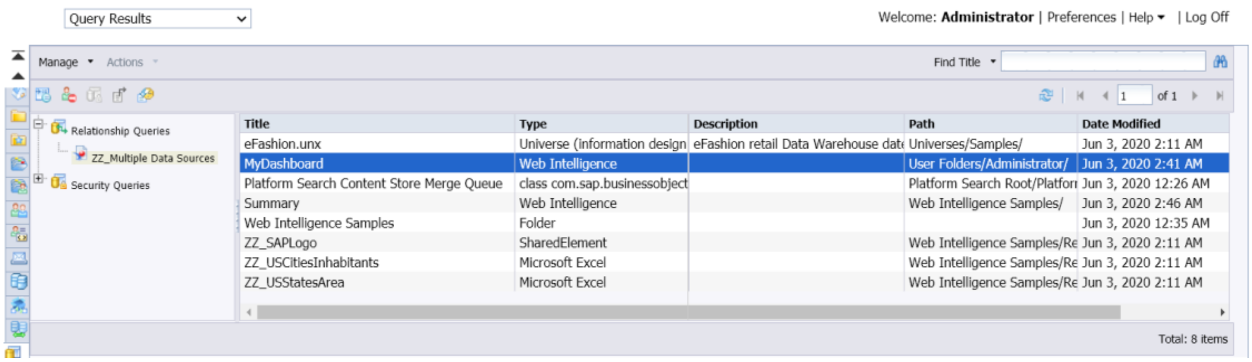
- Only rows that match the filters conditions defined in the **Filters** Business Security Profiles are retrieved.

You can also set this option for both documents.

As this security relies on universe's Business Security Profile, it applies only to source document queries based on universe created in Information Design Tool.

## Document Dependencies

In the BI Platform repository, a link is created between the source document and a document that uses it as a source. Hence, dependencies between these documents are properly displayed in Life Cycle Management, Promotion Wizard or in the CMC if you use **Tools** > **Check Relationships**.




*CMC: Source Document Relationship*

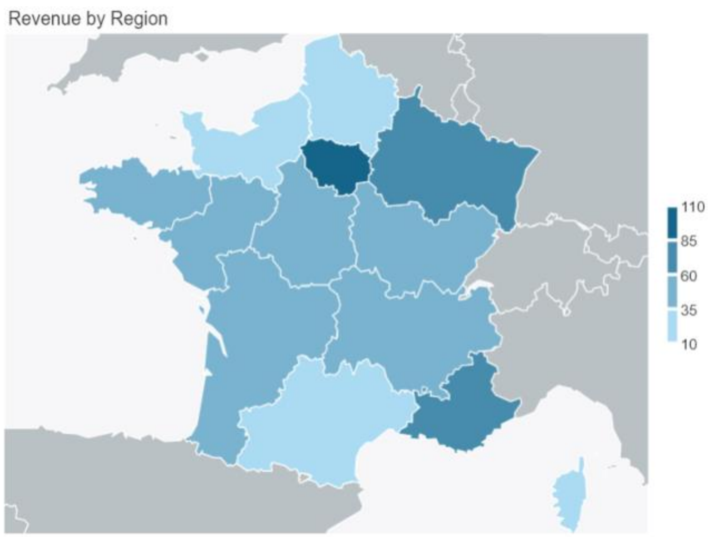
## Web Intelligence: Geo Map ⤒

To provide more accurate geo dimensions, the *Here* geographical database used by Web Intelligence has been updated with its 2019 version:

- Borders and regions take geographical changes into consideration, e.g., new French regions are available (Request 144513).

- Regions, sub-regions and cities have been added in some countries for better coverage.

- New cities have been added, some have been removed, considering the 100,000 inhabitants limit, except for the United States of America.




*Geo-Map: New French Regions*

If you have created geo charts in SAP BI 4.2 with a mapping by name, you need to remap these names when editing these documents in SAP BI 4.3 due to ID changes in the geographical database.

## Web Intelligence: Formula Language Functions and Formula Editor ⤒

In the *Data Provider* category, *DataProviderType* has been updated to return the correct data provider type. The possible values are: "Universe", "Text", "Excel", "Web Services", "SAP BW", "SAP HANA", "Free-Hand SQL" and "Web Intelligence" for the new Web Intelligence document data source. Besides *NumberOfRows*, *NumberOfColumns* has been added to return the number of objects of a data provider.

- **string** DataProviderType ( **Data provider** dp )

- **int** NumberOfColumns ( **Data provider** dp )

In
the *Document* category, *DocumentPath*, *DocumentParentFolder* and *DocumentParentF older* have been added to respectively return the document's path (Request 108755), the name of its parent folder (Request 206442) and the document description (Request 144988). *QuerySummary* has also been updated to return the correct data provider type (cf. *DataProviderType*).

- **string** DocumentPath ()

- **string** DocumentParentFolder ()

- **string** DocumentDescription ()

- **string** QuerySummary ()

In the *String* category, *Trim*, *LeftTrim* and *RightTrim* have been extended to allow you to define the character to remove from the string (Request 217310). By default, this character is the space character.

- **string** Trim ( **string** str [; **string** ch] )

- **string** LeftTrim ( **string** str [; **string** ch] )

- **string** RightTrim ( **string** str [; **string** ch] )

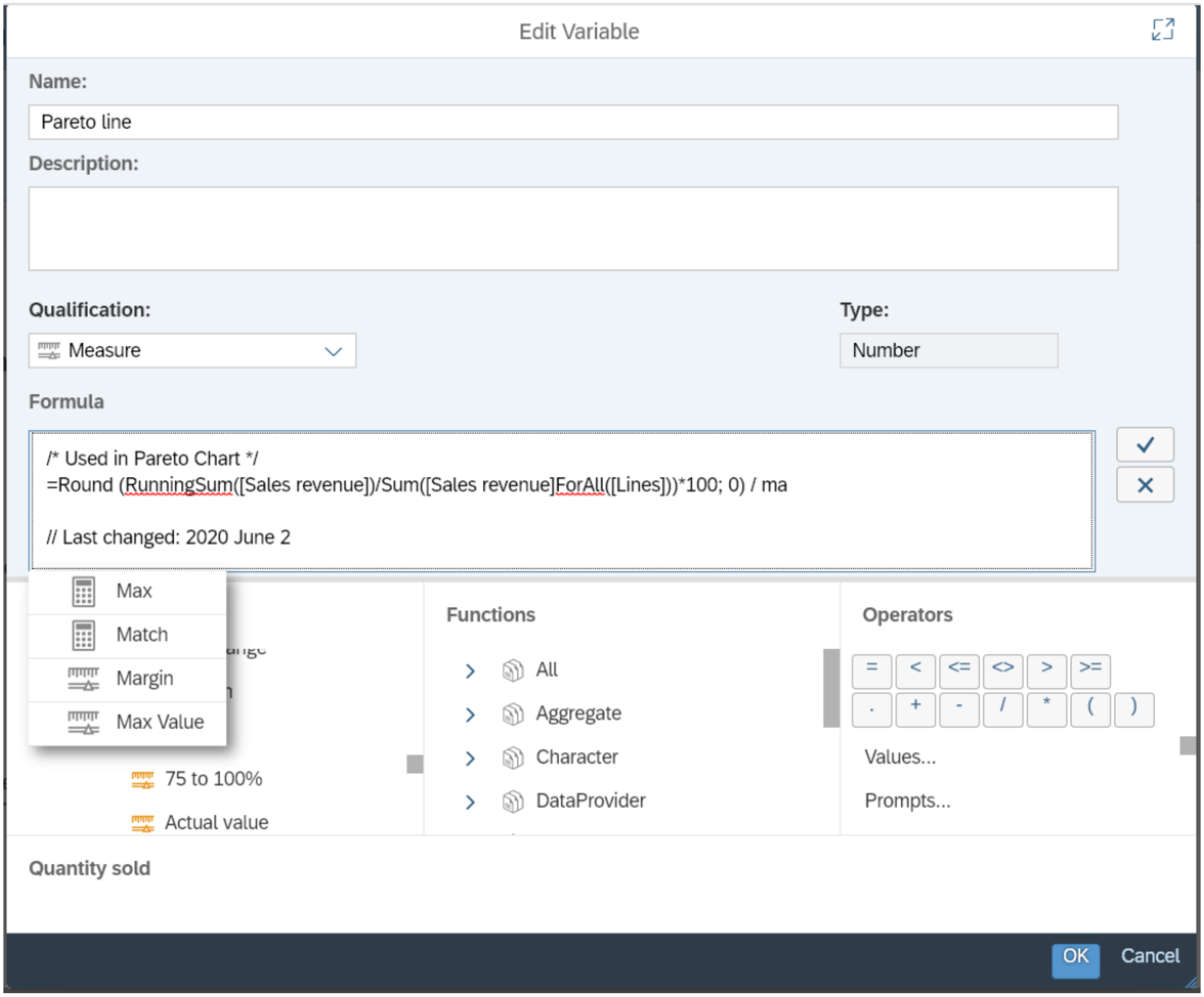
To create more readable and maintainable formulas, you can use the classic comments usually supported by most programming languages (Request 111272) in the formula language:

- To comment the end of a line, you may use //

- To comment a block in the formula, you may use /* */

When you open the **Formula Editor**, all category folders are closed by default (Request [202146](202146)). To find a function more easily, the *All* category (that contains all functions) is displayed at the top of the categories' list.

As in the **Formula Bar**, the **Formula Editor** supports auto-completion. When you type a formula, a menu displays the objects, functions or operators that match the letters you typed (Request [241647](241647)). Select the one to use by clicking it or using the arrows keys and pressing [Enter].




*Auto-Completion in the Formula Editor*

## Web Intelligence: Security Rights ⤒

To adapt the new interface and deployment modes, the Web Intelligence security rights have been updated:

- Names and categories have been simplified and aligned (Request 214981)

- Two new rights are introduced to secure the use of Free-Hand SQL (Request 219070  Query: Edit Free Hand SQL script and Query: View Free Hand SQL script

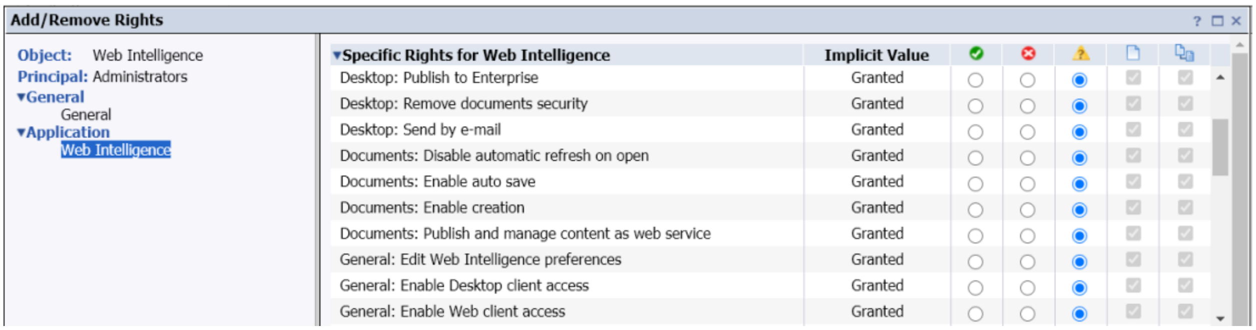
| The following table lists Web Intelligence application security rights, with their equivalent in SAP BI 4.2. **SAP BI 4.3 Security Right** | **Previous SAP BI 4.2 Name** |
|---|---|
| Data: Enable data tracking | Data - Enable data tracking |
| Data: Enable formatting of changed data | Data - Enable formatting of changed data |
| General: Enable Desktop client access | Desktop interface - Enable Web Intelligence Deskto |
| Desktop: Publish to Enterprise | Desktop interface - Export documents |
| Desktop: Print documents | Desktop interface - Print documents |

| | |
|---|---|
| Desktop: Remove documents security | Desktop interface - Remove document security |
| Desktop: Give access to everyone | Desktop interface - Save document for all users |
| Documents: Disable automatic refresh on open | Documents - Disable automatic refresh on open |
| Documents: Enable autosave | Documents - Enable autosave |
| Documents: Enable creation | Documents - Enable creation |
| Documents: Publish and manage content as web service | Documents - enable publish and manage content as service |
| General: Edit Web Intelligence preferences | General - Edit ‘My Preferences’ |
| General: Enable Web client access | Interfaces - Enable web viewing interface |
| Query: Edit script generated from universe | Query script - Enable editing (SQL , MDX, ...) |
| Query: Edit Free Hand SQL | |
| Query: View script generated from universe | Query script - Enable viewing (SQL , MDX, ...) |
| Query: View Free Hand SQL | |
| Reporting: Create and edit breaks | Reporting - Create and edit breaks |
| Reporting: Create and edit conditional formatting rules | Reporting - Create and edit conditional formatting |
| Reporting: Create and edit input controls and group | r |
| Reporting: Create and edit predefined calculations | Reporting - Create and edit input controls |
| Reporting: Create and edit filters and consume input controls | Reporting - Create and edit predefined calculations<br>Reporting - Create and edit report filters and consu |
| Reporting: Create and edit sorts and rankings | input controls |
| Reporting: Create and edit formulas, variables, groups and references | Reporting - Create and edit sorts<br>Reporting - Create formulas and variables |
| Reporting: Enable document change | |
| Reporting: Merge objects | Reporting - Enable formatting |
| Reporting: Insert and remove reports, tables, charts, and cells | Reporting - Enable merged dimensions<br>Reporting - Insert and remove reports, tables, chart cells |

In the CMC, the following rights are prefixed with the “Obsolete_” tag since they are either useless in SAP BI 4.3 or their security intent is replaced by customization when it is supported:

- Disable Export to BI On Demand for this user
- Disable Import from BI On Demand for this user
- General - Enable right-click menus
- Interfaces - Enable Rich Internet Application
- Left pane - Enable document structure and filters
- Left pane - Enable document summary
- Desktop interface - Save documents locally

- Desktop interface - Import documents




*CMC: Web Intelligence Application Security Rights*

The following rights are still exposed in the CMC but will be leveraged once the corresponding features are supported:

- Desktop: Send by e-mail

- Desktop: Enable local data providers

- Desktop: Install from BI Launch Pad

- Shared: Publish shared elements

- Shared: Insert shared elements

| The following table lists Web Intelligence document security rights, with their equivalent in SAP BI 4.2.<br><br>**SAP BI 4.3 Security Right** | **Previous SAP BI 4.2 Name** |
|---|---|
| Edit Query | Edit Query |
| Export the cube's data | Save as CSV |
| Export the report's data | Export the report's data |
| Import document locally | N/A |
| Refresh List of Values | Refresh List of Values |
| Refresh the report's data | Refresh the report's data |
| Use Lists of Values | Use Lists of Values |
| View SQL | View SQL |

The Save as Excel or Text and Save as PDF security rights have been removed since exporting or scheduling report's data into PDF, Excel, HTML archive, Text or CSV archive is now simply covered by the Export the report's data right.

Two new rights have been introduced:

- Export the cube’s data: This right allows the user to export a document’s cube data or to schedule it into a CSV file. (Request 134236)

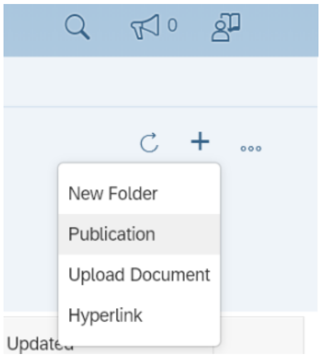
- Import document locally:This new right replaces the previous application Desktop interface - Save documents locally and Desktop interface - Import documents security rights and is used to allow the document to be saved locally so that it can be opened in Web Intelligence Rich Client.

The Publish shared elements right is still exposed in the CMC but will be leveraged only when the corresponding feature is supported.

## Web Intelligence: Publishing and Scheduling ⤒

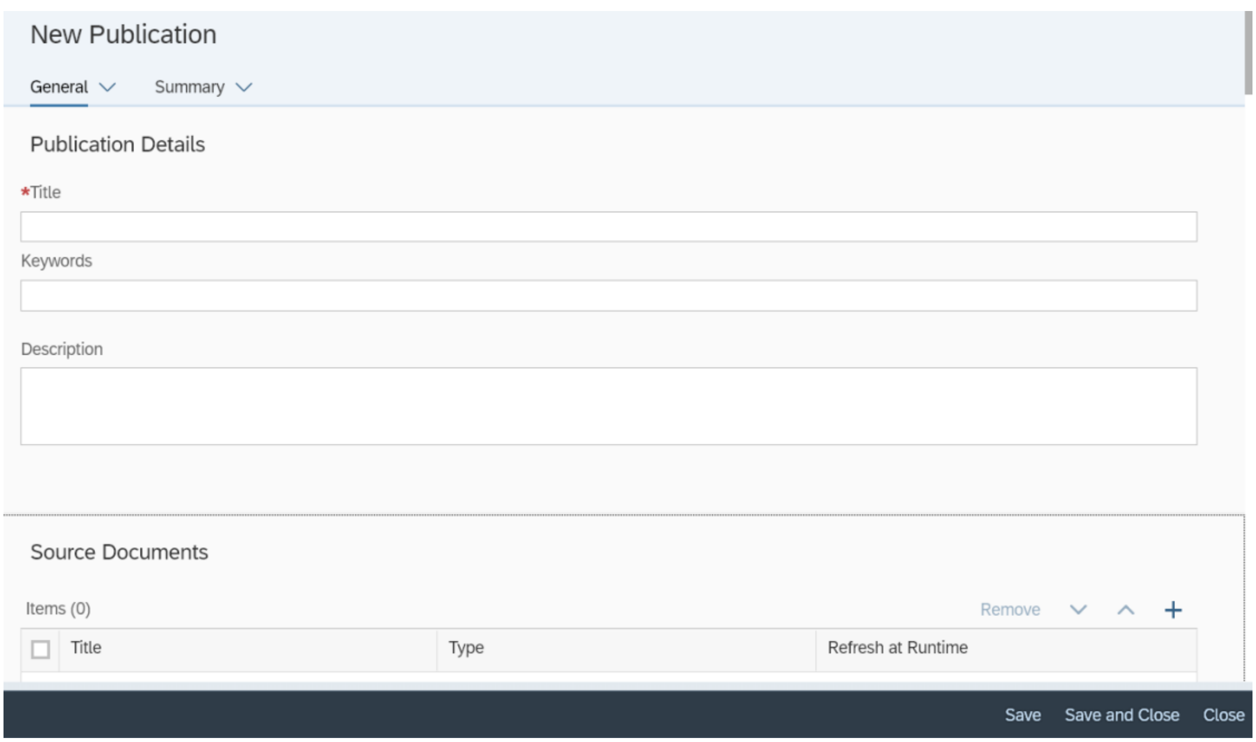
When the new BI Launch Pad was released in SAP BI 4.2 SP4, it was possible to schedule documents but not to distribute them through publications. In SAP BI 4.3, this missing capability has been implemented in BI Launch Pad and offers the same options as in SAP BI 4.2.

To create a publication, go to a folder, click the **Create/upload objects** button (+) at the top of the folder’s page and select **Publication** in the menu.




*BI Launch Pad: Publication in the Create Menu*

In the **New Publication** page, enter the publication parameters. These parameters are organized by sections, displayed in two tabs. Depending on the document type, some parameters appear only after the source documents have been added to the publication.



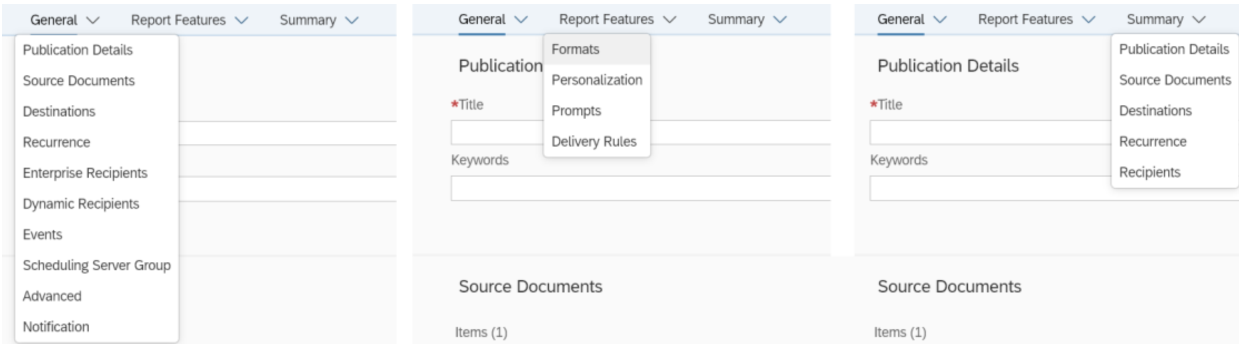
*BI Launch Pad: New Publication*

To navigate into the possible parameters more easily, you may click the following tabs, and select the section in the corresponding menus:

- **General**. This tab contains the generic publication parameters: publication details, source documents, destination, recurrence, enterprise and dynamics recipients, events, …

- **Report Features**. This tab and its sections appear if your publication contains a Web Intelligence or Crystal Reports document. It contains publication properties that are specific to this document type. For Web Intelligence, this covers the publication formats, personalization, prompts and delivery rules.

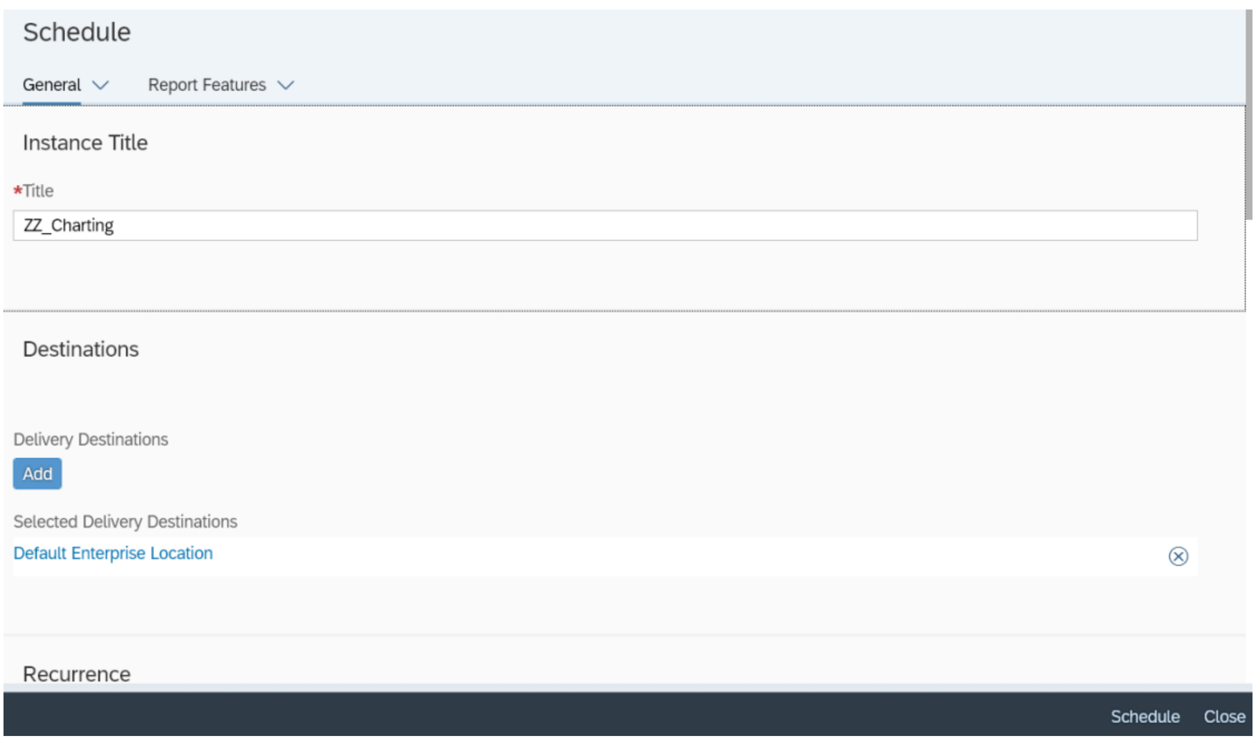
- **Summary**: This tab displays the publication’s most common parameters.




*BI Launch Pad: Publication Menus*

When the publication is defined, click **Save** or **Save and Close**.

In SAP BI 4.3, you can still schedule a document. To provide the same look & feel as in **New Publication** page, the **Schedule** page has been modified.

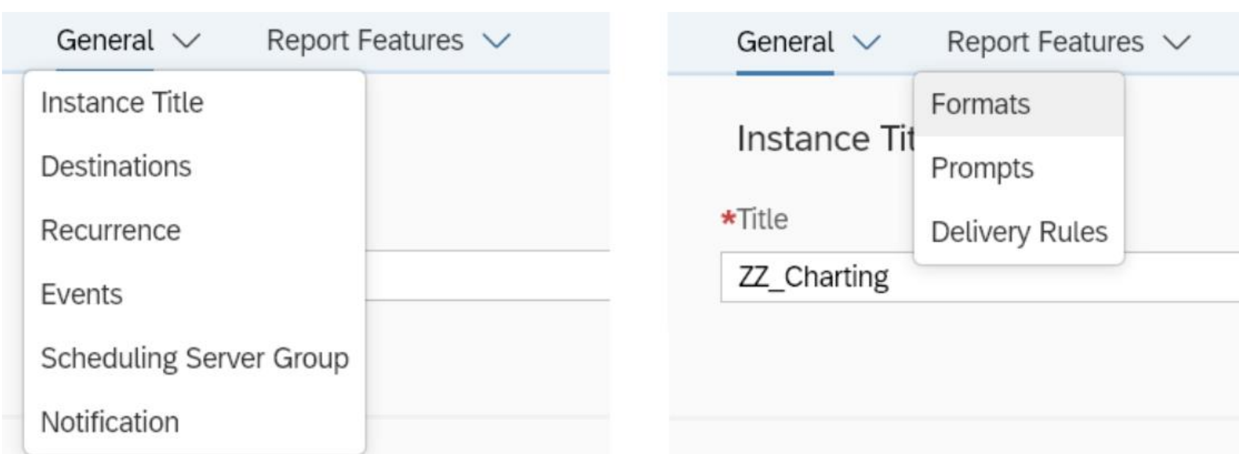


*BI Launch Pad: New Schedule*

When defining a schedule, you can move to specific sections through two tabs and the corresponding menus.

- The **General** tab contains the generic sections that define a schedule, like the schedule's destinations and recurrence, its attached events, ...

- The **Report Features** tab contains the sections specific to a Web Intelligence document. Formats, Prompts and Delivery Rules are available, but Caching properties are not yet implemented.

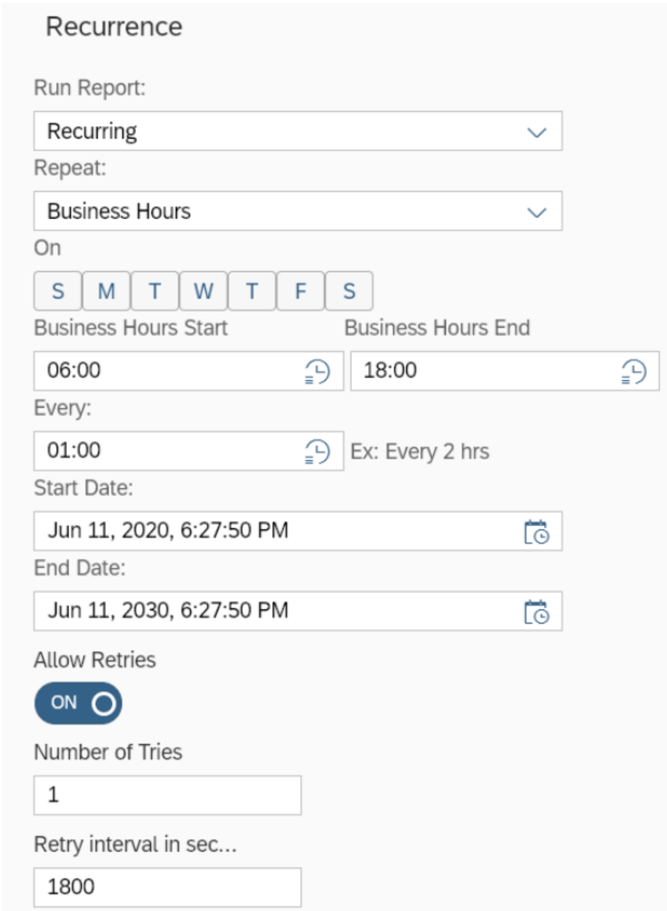


*BI Launch Pad: Schedule Menus*

Both schedule and publication take advantage of the new options introduced in SAP BI 4.3:

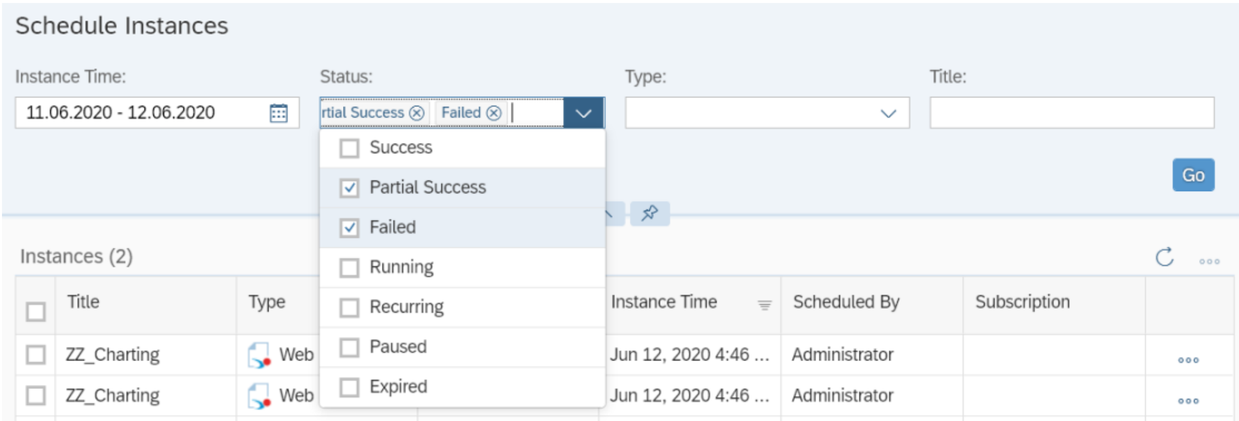
- When you define the publication or schedule frequency in the **Recurrence** section, you can select business days and hours for the schedule to run.

- Another new option, **Allow Retries**, can be used to define if a failed schedule must be re-run and if so, how many times and when.




*BI Launch Pad: Recurrence Options*

- In the BI Launch Pad **Home** page, click the **Instances** tile to display an overview of all schedules and publications run by you and their status. At the top of the page, you can find controls to filter this list by date, status, scheduled object type or just by name.




*BI Launch Pad: Schedule Instances Page*

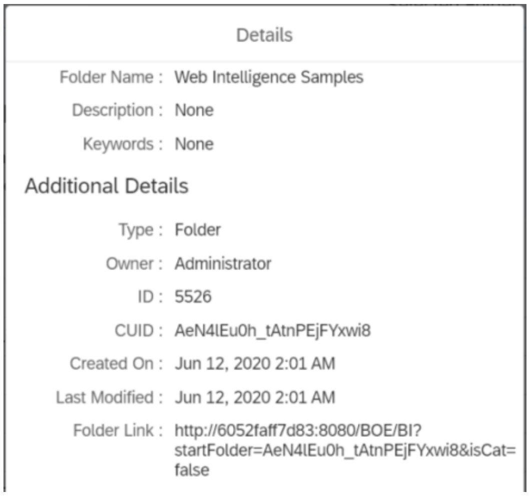
## Web Intelligence: OpenDocument URL

The **Copy Link of the Report/Table/Chart/Cell** commands previously described allow you to directly generate an *Opendoc* URL to access the corresponding item. You can also get the link to access a document by opening the document's contextual menu in BI Launch Pad and selecting the **Details** command. The *Opendoc* URL you can share is provided in the **Document Link** field.


*BI Launch Pad: Document Details Dialog Box*

With the Web Intelligence user interface simplification, the *sViewer* option is no longer used by the *Opendoc* URL and is skipped when it is processed. Some options like instance are not yet supported in SAP BI 4.3 and will be supported in future Support Packages.

To allow your user to directly access a folder, you can select the **Details** command in a folder's contextual menu, and share the URL provided in the **Folder Link**.




*BI Launch Pad: Folder Details Dialog Box*

## Web Intelligence: REST Web Services ⤒

In the Web Intelligence REST Web Services, some new APIs have been added:

- To get, create, edit and delete referenced cells in a document
- To get, create, edit and delete table’s calculations (*Average*, *Count*, *Max*, *Min*, *Percent* or *Sum*)

- To get the details of a publication

Some existing APIs offer additional options and can be used to:

- Purge a document
- Set a table cell as a section
- Change the position of a report element in the layout (front, back…)
- Delete all breaks of a table
- Update or delete all breaks on a table axis
- Get, edit or delete all custom formatting of a report element

- Get the details of a hierarchy member

- Re-order input controls

- Create a custom format for number or datetime

- Get the marker palettes, the gradient orientations and the locales supported by the BI Platform server

## Web Intelligence: Performance Enhancements ⤒

To improve the performance of Web Intelligence, several enhancements have been implemented:

- The most visible one is the progressive disclosure, aka lazy loading: to avoid blocking the user while the document is fully displayed, the document skeleton is computed and displayed first, followed by the charts in the background. The gain is particularly significant on a document that contains many charts.

- The Web Intelligence REST Web Services calls used by the new Web Intelligence interface have been optimized

- Documents with the *Refresh on open* option are automatically purged when saved in order to reduce the document opening time (Request 110058).

- A Web Intelligence document stores details related to the universes it queries. If one of these universes has been modified, the updated details are retrieved from this universe when the document is opened. A warning message is displayed to recommend that you save the document, to avoid the same update next time it is opened.

## Information Design Tool: 64-Bit ⤒

Like other client tools in SAP BI 4.3 (Web Intelligence Rich Client and Universe Design Tool), Information Design Tool and Connection Server drivers are released in 64-bit only (Request 210604).