PUBLIC

SAP BusinessObjects Business Intelligence platform

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SAP BusinessObjects Explorer Online Help

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1 SAP BusinessObjects Explorer overview

SAP BusinessObjects Explorer is a data discovery and visualization tool. You use pre-defined datasets called Information Spaces and associated Exploration view sets to explore, visualize, and analyze corporate data. .

You explore your data using keyword searches for information spaces or exploration view sets that contain the most relevant data to answer a business question. An information spaces contains data organized in facets, and its associated exploration view sets allow you to visualize the data using multiple charts optimized for the type of data being explored.

You can create filters to refine the data and apply measures to analyze data changes. The changes are plotted automatically in charts, which can be changed at any time for any one in a wide selection of charts to suit many types of data.

SAP BusinessObjects Explorer can be accessed directly as a separate application in the SAP BusinessObjects Business Intelligence platform or from the Documents tab in the BI Launch pad.

SAP BusinessObjects Explorer is used by the following user groups:

Role	Description
Explorer	Users who search and explore data in information spaces and exploration views. The explorations are saved, shared, or exported to other applications.
Creator	Users who create information spaces. These users require authorization to the data sources used to build information spaces.
Administrator	IT specialists who set up and manage corporate deployments of SAP BusinessObjects Explorer, including assigning security rights to end users and scheduling Information Spaces for indexing, so they can be searched by the Explorer search engine.

2 Getting started

2.1 Accessing SAP BusinessObjects Explorer

Depending on your license agreement, you can access SAP BusinessObjects Explorer as a separate application installed with the SAP BusinessObjects Business Intelligence platform, or from the BI launch pad. SAP BusinessObjects Explorer is also available as an application on the iPad and iPhone.

The iPad and iPhone versions of SAP BusinessObjects Explorer are installed with documentation specific to the iOS environment.

If you launch SAP BusinessObjects Explorer as application, you can explore, create, and manage information spaces. You can create exploration view sets containing views that allow explorations to be shared with other users. You can schedule the indexing of information spaces, which allows them to be updated and refreshed.

If you access SAP BusinessObjects Explorer from the BI launch pad, you can explore information spaces and exploration views, but you can not create or manage information spaces.

> **i Note**
>
> After BOE and Explorer Add-on have been installed, create Explorer objects in the Explorer tool and import to BOE. They will then be available in the Fiorified BI Launch pad.

2.2 Getting started with SAP BusinessObjects Explorer

The following is an overview of one of many ways that you can use SAP BusinessObjects Explorer. The process is not a linear one, and you can pass from one step back or forward according to your exploration needs.

Steps to explore your data	What can you do?	Go here for information
Search for relevant information	Search for relevant information	Searching for information [page 10]
Choose a data source	• Information space • Exploration view	• What is an Information Space? [page 8] • What is an Exploration view? [page 8]
Explore and analyze your data	• Add values from facets • Filter values • Add and change measures • Add a second dimension to charts • Change analysis types	• Exploring data with information spaces [page 14] • Analyzing data visually [page 22]

Steps to explore your data	What can you do?	Go here for information
Analyze your data visually	• Save an exploration as an exploration view set to allow further analysis • Add multiple charts • Add different exploration view sets	Visualizing data with exploration views [page 29]
Share the results of your exploration and analysis	• Export information spaces • Save explorations to different formats	Exporting exploration results [page 32]
Create, manage and customize your data sources	• Create and modify information spaces • Publish information spaces to the Home page • Personalize the information available and access to information spaces. • Schedule publication of information spaces.	• Overview guide to creating information spaces [page 35] • Managing information spaces [page 51]

2.3 Start exploring from the Home tab

The Explorer Home tab appears each time you log into Explorer. The Home tab is the starting point for performing keyword searches, and exploring information spaces and exploration view sets.

The Home tab contains the following components:

Home tab components	Description
Search box	The search box, located at the top of the tab is the entry point to searching. Start a search by entering a search phrase in the box and clicking the *Search* button. Once a search has been carried out you are taken to the *Search results* tab.
Information space and Exploration view set pane	Central section of the tab that displays the list of available Information spaces and Exploration view sets. Click an information space or exploration view set name to launch the Exploration tab and begin exploring. **i Note** You can only see the information spaces and view sets that you have the rights to access. If the information space or view set is stored within a certain folder with restricted access, you may not be able to access it.
Show properties button and Properties pane	When clicked, the Properties pane appears to the left of the Home tab. The Properties pane lists general information for a selected information space or view set. Depending on what is selected you have the following properties shown: • Information Space: Measures, facets, and view sets defined for the information space. • Exploration view set: Exploration views defined in the view set.
Upload a spreadsheet to explore pane	You browse to a local Excel file for exploration.

2.4 What is an Information Space?

An information space is a collection of objects that map to corporate data for a specific business operation or activity, for example product sales, employee performance, product inventory, delivery tracking, or player statistics for a sporting event.

SAP BusinessObjects Explorer users type in key words related to a business question for analysis, to retrieve the information spaces that contain the relevant data.

The data in information spaces is organized in data sets called facets. A facet is a list of values available for an object in the information space. For example, a facet called "Vehicle" could include values such as "Car", "Bicycle", "Motorbike", "Truck", and other types of vehicles. Facets contain the data that you are interested in exploring to find variance and trends.

Information spaces are created in the Managing Spaces part of Explorer by power users on top of corporate data providers for example SAP Hana, universes, BWA, and Excel spreadsheets.

2.5 What is an Exploration view?

An exploration view is a saved exploration on an information space. Exploration views are organized thematically within folders called exploration view sets. An exploration view can be used to show a detailed analysis on a targeted area of the data; for example, an exploration view set called Rugby World Cup 2011 could contain exploration views dealing with specific aspects of the tournement such as offensive statistics, defensive statistics, or player rankings per game.

You access an exploration view from its exploration view set which is listed in the Explorer Home tab. An exploration view can only have one information space as its data source. Within an exploration view you can edit charts, tables, and filters exposed by the exploration view set.

An exploration view set is a container for one or more exploration views. It can include exploration views from different information spaces, so a user can now have quick access to pre-filtered information for a common information theme over different data sources.

i Note

In this guide and in certain parts of the Explorer user interface, the following abbreviations can be used for exploration views and associated components:

Full name	Abbreviated name
Exploration view set	View set
Exploration view	View
View element	Element

Related Information

Creating an exploration view set and adding views [page 29]

3 Exploring data in an information space

3.1 Searching for information

You can search for information spaces or exploration views that are the most likely candidates for your data exploration. You can also search the data within the information spaces and exploration views. The two search types are described as follows:

Search for	By
The correct information space or exploration view	Enter search keywords in the *Search* box on the *Home* tab either for the active *Information Spaces* or *Exploration View Sets* lists. The search returns results for information space data and metadata. For exploration view sets the search returns results for metadata matches.
Data within the information spaces or exploration view	Enter search keywords in the *Find* box for an active information space or exploration view. In information spaces the result data is highlighted in both facets and the visual display. In exploration views the result data is highlighted in facets only.

Related Information

Searching for information spaces or exploration views [page 10]
Searching for data within information spaces and exploration views [page 12]
Search tips and wildcards [page 12]

3.1.1 Searching for information spaces or exploration views

You search for the correct information space or exploration view by entering key words for the information you require in the *Search* box at the top of the *Home* tab.

The results are shown in a *Search Results* tab. You have the following search tools to help you find the correct information:

Search tools	Applies to	Description
Matched metadata highlighting	Information space and exploration view sets	Matched words are highlighted when the searched text matches the metadata defined for an information space or exploration view. These include: • Words in the title of an object • Description of an object • Keywords defined • Datasource and owner name
Matched data highlighting	Information spaces only	Matched data objects for example, measure and facet names, facet values, and dimensions on a chart. On the *Search results* tab, each possible information space is listed with data found, for example a dimension or measure name. Within the *Explore* tab, the facets, legend, and visualization are highlighted.
Search result ranking	Information space and exploration view sets	On the *Search results* tab, each object is assigned a score rating ranging from 1 to 5. There is a dependence upon the relevance of an object to the search input. Each score rating is represented with a set of graphical bars, for example a score of five bars signifies the object is a strong match. A score of one signifies a weak match.
Did you mean search assistance	Information space and exploration view sets	Spelling corrections are suggested for search queries. Explorer suggests, and in certain cases, automatically executes alternative queries with spelling corrections on the original query, for metadata and data. **i Note** The *Did you mean* feature applies to metadata, and not data, searches for SAP HANA and Business Warehouse Accelerator (BWA).

1. From the *Home* tab, type one or more keywords in the *Search* box.

   i Note

   You can enter a variety of search words to ensure you find the best fit information space, for example if you enter a measure name, a dimension name, as well as the type of data source, you increase the information used by the search engine, and increase the probability that the most probably information space is returned. The search on data from the *Home* tab is limited however to information spaces. The results for exploration view sets is based on a keyword search on exploration view metadata.

2. Do one of the following:
   - Click the *Information Spaces* link to see the results for likely information spaces found
   - Click the *Exploration Views Set* link to see the results for likely exploration views found.

   The *Search results* tab shows the results with the likely information spaces or exploration views matches ranked for the most probable matches.

Related Information

Searching for data within information spaces and exploration views [page 12]
Search tips and wildcards [page 12]

3.1.2 Searching for data within information spaces and exploration views

You search for information within information spaces and exploration views by entering in key words in the *Find* box at the top of the information space or exploration view set tab. Depending on whether you search in an information space or exploration view set, you can have the following results:

Search for data in a ...	Search results are...
Information space	Highlighted in facets and in the chart. If a measure is returned as a result, the measure is active. The facets are reordered based on relevance to the keywords. Facet names are highlighted. For example, if you search for **`Product Sales France 2011`**, the Sales measure becomes the selected measure. The Product, Country, and Year facets are promoted to be the most relevant facets for exploration, and matching values highlighted.
Exploration view set	Highlighted in facets only. Facet names are highlighted.

> **i Note**
>
> When searching data in an SAP HANA data source, empty, or null values in the database are displayed as `#NA`. This is the notation used to indicate null values, and is not a searchable string.

Type one or more keywords into the *Find* box at the top of either an information space or exploration view set pane.
Search results are highlighted in facets and charts for information spaces, and facets only in exploration views.

Related Information

Searching for information spaces or exploration views [page 10]
Search tips and wildcards [page 12]

3.1.3 Search tips and wildcards

By including certain operators and wildcards, you can refine your search criteria to extend or limit the search results. When you perform a search on facet values using wildcards, a maximum of 1024 matches is returned.

> **Note**
>
> Search is not case sensitive. However, you should ensure that the search syntax terms, for example "AND", are always typed in upper case so that the search isn't performed on "and" rather than using the "AND" as part of the search definition.

Search Functionality	Syntax	Example
Retrieve content that matches a string exactly as it is typed.	Insert quote marks before and after the string.	• **`"annual sales growth"`** • **`"New Orleans"`** **Note** This applies to many geographical location names, for example **`"New York"`** returns the city New York, if the search words were **`New York`** entered without the quote marks, than other places containing either New or York would be returned.
Retrieve content that matches one or more words contained in a string.	Two options: • insert a space between each word • type "OR" between each word **Note** Insert a space before and after "OR"	• **`Europe EMEA`** • **`Europe OR EMEA`** Returns content that includes **`Europe`** or **`EMEA`** or that contains both words.
Retrieve content that matches all the words contained in a string.	Two options: • type "+" before each word • type "AND" between each word. **Note** Insert a space before and after "AND"	• **`+Europe +EMEA`** • **`Europe AND EMEA`** Returns content that includes both **`Europe`** and **`EMEA`**.
Do not retrieve content that matches specific words.	Two options: • type "-" before each word you want to exclude from the search • type "AND NOT" before each word you want to exclude from the search. **Note** Insert a space before and after "AND NOT"	• **`Americas -USA -US`** • **`Americas AND NOT USA AND NOT US`** Returns content for **`Americas`** that does not include **`USA`** and that does not include **`US`**.

Search Functionality	Syntax	Example
Retrieve content that includes words that begin with a specific string.	Type "*" after a partial string. **i Note** For Japanese, Chinese and Korean languages , the "*" wild card is not necessary because the search is indexed on single characters. If you search for one character, the search returns any content that includes that character. If you search for a set of characters, the search returns content that includes all of those characters, but does not return content that includes only one of those characters.	• **Eur*** Returns: **Eur**, **Euro**, **Europe**, **Europa**, **European** etc. • 東 Returns: 東, 東京, 東大阪 etc. • 東京 Returns: 東京, 東京支社 etc. Does not return: 東, 京, 下京 etc.

3.2 Exploring data with information spaces

You explore data using information spaces. Each information space displays data in lists called Facets. The data can be refined using filters, analyzed by applying different measures, and the information is immediately plotted on a chart.

An information space contains a single visualization. Once you have obtained an exploration that can serve as a basis for further visual analysis, you can save it as an Exploration view set, which can then serve as a container to add multiple visualizations based on the information space called exploration views. Each exploration view set can be saved and shared on the *Home* tab.

To add facets or measures not available in the initial exploration view set, you can return to the information space that serves as the basis for the exploration view to implement the additions, which are immediately available in the view set.

When you select an information space on the *Home* tab, the information space opens for exploration on the *Explore* tab. If you open multiple information spaces, each appears in a separate tab.

You explore an information space using the following types of viewing modes:

Explore tab viewing mode	Display is organized in panes as follows...
Facets	• Measures to the left • Facets to the right • Filters at the bottom
Split	• Measures to the left • Facets to the right • Filters in center • Chart at the bottom

Explore tab viewing mode	Display is organized in panes as follows...
Visualization	• Filters at the top • Chart in the middle

You change viewing modes by clicking the *Facets*, *Split*, or *Visualization* menu buttons.

You can create filters in any mode by clicking the "+" arrow in the filter pane. This allows you to select a facet, then one or more values to filter the data.

Related Information

Filtering facet data [page 17]
Navigating through an information space [page 15]

3.2.1 Navigating through an information space

You explore data in an information space by navigating through facets, applying filters and measures to refine and analyze data changes in the facets:

Explore using	Description
Facets	A facet is a list of related values. Facets contain data that is stored in columns from a data source, for example a database table, or a spreadsheet. Facets provide the data for exploration in the information space
Filters	A filter is a selected facet value that is used to sort the other facet values. Selecting one or more values in a facet filters the display in a chart, for example, if you click 2009 in a Year facet, you create a filter for 2009 which is implemented in the chart to display dimension values for 2009. Filters appear in the filter bar below the facet panel.
Measures	A measure is an aggregation calculation that is applied to facet data. Measures are listed in the measure panel in the Exploration tab on the left hand side of the facet pane. Measures are the basis of your exploration as facet members change depending on the measure applied.

> **i Note**
>
> When exploring facets containing large amounts of data, you may receive a time out message if the loading time exceeds the default limit. Refer to the Request timeout limit section in the Explorer Administrator's Guide for information to extend the request time out parameter for large data sets.

Navigate through your data as follows:

- Select one and then multiple measures as a focus for exploration.
- Create one then multiple filters on different facets.

1. Select a *measure* that you want to use as the focus for your exploration.
   When you open an information space, one measure is already selected. The selected measure is used in the facet and in the visualization pane. Select another measure to change the focus. The change is

immediately taken into account. You can select one measure in the facet pane. This main measure is used for all facets. In the visualization pane, you can add up to three measures. .

2. To select additional measures, press CTRL and click each measure.
   Your visualization changes according to your chosen measures and the additional measures are added to the legend. Use the scrollbar to view facets that are not displayed.
3. Filter facet values using one of the following methods:

To...	Do this...
Filter on a single facet value	Click a value in a facet to filter on that facet value. For example, within a facet called Country, select France.
Filter using multiple facet values	Press CTRL then click different facet values
Filter on facet values not visible in the list	Click *Explore more...* at the bottom of a facet , then from the facet value list, select values and click the arrow heads between the facet and selected list panes to add or remove values. Click *Done* to apply the filters.
Change a filter without removing it from the filter bar	Click the filter and select another value from the facet list.
Add a filter from a facet list that is not visible	Click the + icon on the filter bar, select a facet, then select values from the values list.
Remove the filter from the filter bar	click the *X* in the right corner on each filter.
Remove all filters	Press and hold the shift key before clicking on the + of the last filter on the bar.

Each facet value appears as a filter in the filter bar. The values in the chart change based on each new filter.

Related Information

Calculating measures [page 20]
Selecting multiple values [page 18]
Facet pane scrollbar [page 16]

3.2.2 Working with facets

3.2.2.1 Facet pane scrollbar

The scrollbar in the facet pane is used for navigating through the available facets so you can choose certain facet values for exploration. Since not all facets are displayed at one time, you are able to move through all the facets with the scrollbar.

To see the facets that are not displayed, navigate with the scrollbar forward or back. During the navigation, the tooltip shows the facets that will be displayed when releasing the scrollbar. Once you have found the facet values you are searching for, click the values to select them. The facet becomes selected and the remaining facets are reordered.

if the facet panel is not visible, you can manually view facets by clicking the + button in the filter pane and selecting the facets from the list.

3.2.2.2 Sorting facets

To customize your exploration view, you can apply a sort to facet values.

The methods available for sorting are:

- Explorer sort
  The default sort method arranges the facet values according to relevancy.
- A to Z sort
  Sorts the values in ascending order. For example, a Year facet with values of 2007, 2006, and 2005 is sorted to show 2005, 2006, and then 2007.

  > **i Note**
  >
  > When sorting dimension numeric values, for example if you have a dimension Month that uses numbers 1 to 12 to indicate the months, it is recommended that you place a zero (0) before the numbers 1 - 9 to ensure that the ascending sort is displayed correctly, for example 01, 02 ... 10, 11, 12.

- Z to A sort
  Sorts the values in descending order. For example, a Country facet with values of UK, USA, France, Norway, and Mexico is sorted to show USA, UK, Norway, Mexico, and then France.
- Smallest to Largest (sort on measure)
  Sorts the measure values in ascending order. For example, a Year facet representing sales revenue (with values 2007=$100750, 2006=$90500, and 2005=$200444) is sorted to show: 2006=$90500, 2007=$100750, and then 2005=$200444.
- Largest to Smallest (sort on measure)
  Sorts the measure values in descending order. For example, a Year facet representing sales revenue (with values 2007=$100750, 2006=$90500, and 2005=$200444) is sorted to show: 2005=$200444, 2007=$100750, and then 2006=$90500.

You can apply sorting within the *Objects* tab while creating an Information Space. The dimension objects within the *Measures and Dimensions* pane have an icon indicating their sorting method. By default, objects use default sorting, click the object you wish to sort, then choose the sorting method you wish to apply. For example, click *A to Z*, to change the sorting method. The icon changes to the A to Z sort. To return to the default sort, click *Explorer*.

When navigating, you can overwrite the facet sorting by using the sorting methods on the facets.

3.2.2.3 Filtering facet data

A filter is a constraint applied to a facet that limits the amount of data available to one or more selected facet values. For example you may want to only see revenue for certain product lines and not all product lines available in a facet. You create a filter by selecting the product lines you want to see, so the values displayed in the chart correspond only to those selected product lines.

Filters are shown as individual arrow heads on the filter pane directly under the facet pane in Facets and Split modes, and above the chart in Visualize mode.

If you are in Split or Visualize mode the filter applies immediately to the chart values.

1. Do one of the following:
   - If the facet is visible, click a value directly in a facet, or press CTRL and click multiple facet values to filter. The values appear as filter buttons on the filter bar. The chart changes to show data restricted by the filter.
   - If the facet is not visible then go to the next step.

     > **i Note**
     >
     > If the *Hide this facet pane when opening this information space* option is selected in *Manage Spaces* , the facet panel is not shown to optimize opening time. In this case you need to manually select facets to create filters. This is done in the following steps.

2. Click the "+" button in the filter bar.
   A facet list appears. This lists all of the facets available to your information space.
3. Click facet.
   The *Explore more...* box appears. This box lists all of the values in the facet. You select one or more of these values as filters to apply to your data.
4. Double click a value in the left pane, or click a value and click the right arrowhead. You can select multiple values by clicking values while holding down CTRL, then clicking the right arrowhead.
   The values in the Select values pane are the filters that you want to apply to the data.
5. Click *Done*.
   The new filter appears as a large arrow in the Filter pane. the data in the chart changes to match the new limit imposed by the filter.

   > **i Note**
   >
   > To remove a filter from the Filter pane, click the cross at the top right of a filter arrow.

You can also create filters on a facet by clicking the *Explore more...* option at the bottom of a facet. This option is available in Facet and Split modes only.

Related Information

The Explore more... option for selecting additional values [page 19]

3.2.2.4 Selecting multiple values

Select a value in a facet or a chart is simple by clicking the value. When you click a data table or chart value, the value is highlighted.

You can select multiple values using the following keyboard keys:

Key	Description
Shift	By pressing this key and clicking two values you select multiple values in a given range.
Control	By pressing this key and clicking different values, you select discontinuous multiple values where you indicate.

> **i Note**
>
> Data value selection is independent from where the values are located. For example, a facet, the data table, a chart.

3.2.2.5 The Explore more... option for selecting additional values

The *Explore more...* option allows you to access data values that are not currently displayed. For example, a facet representing color can have numerous values.

To accommodate the other values, the *Explore more...* option appears below the top ten facet values. The option, when clicked, displays all values in the *Explore more...* dialog box.

Click the values you want to use, use multi selection if required, and move them into the *Selected Values* pane, using the arrow buttons situated on the right. If there are a lot of values, scroll through them and click the values you want. Ensure you keep the Shift or Control key pressed when performing multiple selection.

> **i Note**
>
> As default a maximum of 100 values can be selected within the *Explore more...* dialog box.

You can also sort the values to view the top or bottom values by clicking the headers. Use the *Refine* option to filter the list of values. When you have chosen your desired values click *Done* to finish your selection.

> **i Note**
>
> When you perform a search on facet values in the *Explore more...* dialog box, the facet values that match the search criteria are not highlighted.

Related Information

Selecting multiple values [page 18]

3.2.3 Working with measures

3.2.3.1 Calculating measures

To calculate a measure, the Information Space needs to contain at least two original measures from a data source.

With this function, you can define measures based on existing measures in the Information Space. You can use the calculated measures during exploration for each facet and for visualization. You can export the exploration results to a CSV file or as a WebIntelligence query.

To define a calculated measure:

1. Select *Add Calculation* in the measure panel.
2. Enter name and description for the new calculation
3. Select the first measure for the calculation
4. Select an operator for the calculation (add, subtract, multiply or divide)
5. Select the second measure for the calculation
6. Select *OK*

The new defined measure is available in the measure panel. You can use it for exploration as other measures.

To edit or delete calculated measure, use the icons next to the affected measures.

To save calculated measures for other session, bookmark the exploration to your browser. When you call it from your browser favorite list, the calculated measures are available as before.

You can export the exploration results to a CSV file or as a WebIntelligence query. In a CSV file, the result of the calculated measure is displayed. In a WebIntelligence query, the calculated measure is displayed as formula.

Related Information

Navigating through an information space [page 15]

3.2.4 Exploring local Excel files

The Excel file must be available on your computer.

To explore a local Excel file:

1. On the *Home* tab, go to *Upload a spreadsheet to explore* and browse for an Excel file (.xls or .xlsx) on your computer and upload it.
2. Optional: Select *Preview and Configure*, if you want to configure your data.
   You can define for each column in your file, if it should be displayed as dimension or measure. You can also hide a column.
3. Select *Explore Now*.

You can explore your file like an Information Space.

Related Information

Creating information spaces with Excel files [page 49]
Navigating through an information space [page 15]

3.2.5 Saving exploration results as a bookmark

You can save an exploration as a bookmark in web browsers.

1. In the exploration view within an information space, click the *Bookmark* button located above the exploration facets.
   Your web browser displays a bookmark dialog box.

   > **i Note**
   >
   > If your browser does not have a bookmark button, a message box appears advising you to manually copy the URL to your browser to create the bookmark or favorite.

2. Save the bookmark and click *OK*.
   Your exploration context is saved as a bookmark. When you load the bookmark, SAP BusinessObjects Explorer displays the exploration view. If you are logged out, log back into SAP BusinessObjects Explorer.

Consider the following information for these browsers:

Browser	Description
Mozilla	When saving an exploration view as a bookmark using the Mozilla Firefox browser, you need to edit the bookmark properties to ensure the exploration view opens in the main window and not the side pane. Do this as follows: 1. In the Firefox browser, right click the bookmark and select *Properties* from the context list. 2. Clear the *Load this bookmark in the sidebar* check box, and click *Save*. You can create bookmarks in SAP BusinessObjects Explorer in Mozilla Firefox versions prior to Mozilla Firefox 23.
• Google Chrome • Safari • Microsoft Internet Explorer 10	These browsers do not allow you to use the *Bookmark* button to create a bookmark. To create a bookmark with these browsers, do as follows: 1. In SAP BusinessObjects Explorer, click the *Share this view by email* button located above the navigation facets. An email containing the bookmark URL appears. 2. Copy and paste this URL from the email to the bookmarks of your web browser. You can create bookmarks in SAP BusinessObjects Explorer in Microsoft Internet Explorer (IE) versions prior to IE 10.

4 Analyzing data in an information space

4.1 Analyzing data visually

You analyze data visually when exploring by using charts and tables. When exploring data in an information space, you create a chart that can contain a lot of information depending on the complexity of your exploration. To allow a more refined analysis, you can save the exploration as an Exploration view set. Within the view set you can create multiple exploration views, each view using several charts to illustrate an aspect of the exploration from a different perspective.

The visual analysis tools that you use in an information space are also common to an exploration view. You can pass back to an information space from an exploration view to add or modify the data in the exploration, then return to the view, which is automatically updated with the changes.

You can share an exploration on an information space as a bookmark, or export the exploration to another file format. However, sharing exploration views is much simpler, as you can share exploration views by saving the Exploration view set to the Home tab. The views are then available to all users that have access to the Home tab.

Using exploration views to visualize your data explorations is an easy and very efficient way to share your explorations immediately with other users.

Related Information

Working with a chart in an information space [page 25]
Working with charts and tables in an exploration view [page 31]
Visualizing the data in a chart [page 28]

4.2 Finding your way around the visualization pane

SAP BusinessObjects Explorer automatically creates a chart that corresponds to the facets in your exploration. The chart displays in the Visualization pane below the facet panel and the filter bar. The chart is an initial representation of your exploration that you can then qualify and improve working directly on the chart.

The Visualization pane can be used either as a full pane replacing the view of the Data pane, or in split view, retaining the view of the data and allowing you to build visualizations below while always keeping the data visible. The Visualization pane has the following components:

Visualization pane components	Description
Analysis types	Side panel to the left of the chart. It contains the analysis types that group chart families. You select your chart type from this panel.
Dimension and measure bar	Menu bar at the top of the chart. It contains a drop down list for each dimension and one for measures available in the information space. You select the dimensions and measures for the chart from the appropriate drop down list.
Chart	The chart that displays the dimensions and measures selected in the bar above.
Legend table	Table to the right of the chart. It contains the dimension values in a table form selected in the chart. It is interactive with the chart, selections and sorts made in the chart are displayed in the table, and the same applies to the chart for selections and sorts in the table.

Related Information

Choosing the correct chart for your data [page 26]
Working with a chart in an information space [page 25]
Visualizing the data in a chart [page 28]

4.3 Selecting dimensions and measures for a chart

The data in a facet is represented as a dimension in a chart. Depending on the type of chart, you can select up to two dimensions and three measures for a chart.

SAP BusinessObjects Explorer automatically creates a chart based on an exploration. The dimension and measure names are displayed in a bar above the chart. Each dimension and measure name contains a drop down list that allows you to select which dimension and which measure you want to apply to the chart.

By default, SAP BusinessObjects Explorer applies the Best Guess mode to the first dimension name in the bar above the chart. The Best Guess mode always selects the first facet on the far left of the facet panel and applies it to the chart. You define the order of the facets in the *Objects* tab of the information space.

The Best Guess mode also inherits the sorting type of the dimension. If you apply a sort to a facet in the facet panel, the Best Guess mode applies this sort to the dimension in the chart.

For example, you open an information space that contains two dimensions: City and State. In the facet panel, City is on the left and State is on the right. If you select "Los Angeles" from the City dimension to add a filter to the chart, the Best Guess mode applies the State dimension to the chart. In this case, the chart displays "California" because the value "Los Angeles" corresponds to this state in the State dimension.

> **i Note**
>
> You can add a second dimension to the following type of charts:
>
> - Trend line chart
> - Bar chart

> Adding a second dimension to a chart allows you to visualize a second axis of analysis for your data within the same chart. You can continue to add and change measures as you would for a single dimension analysis, the operations are affected to both dimensions. If you select a second dimension in a chart, the Best Guess mode disappears but the first dimension remains the same as before. You can click a dimension name to select another dimension.
>
> The Best Guess mode is not available in Exploration view sets.

Select dimensions and measures in a chart as follows:

1. Click the down arrow in a dimension name on the bar above the chart.
   A contextual list shows all the facets available in the information space with the following options:

Facet sort options	Description		
Sort priority	What values to you want to be shown by priority for the dimension ? You have the following choices:		
	Sort	All values are displayed to a maximum of 1000 rows.	
	Top	The top ranking values are displayed. .	You define the number of rows to include in the Number of Rows box.
	Bottom	The bottom ranking values are displayed	
	First	The first values in the list are displayed.	
	Last	The last values in the list are displayed	
Number of rows	How many values for the dimension do you want to appear in the chart?		
Sort criteria	Based on the sort priority selected, what sort of values for the dimension do you want to prioritize?		
	Sort		Select either dimension or a measure
	Top or Bottom		Select a measure
	First or Last		You can only select the current dimension

2. Select a dimension in the list.
3. Select the dimension sort options and Click OK.
   The dimension appears as an axis on the chart.
4. Click the down arrow in the measure name on the bar above the chart.
   A drop down list appears that shows all of the measures defined in the information space.
5. Select check boxes for one or more measures then click in the chart.
   The dimension values plotted update for the measure selected.
6. To select a second dimension do the following:
   a. Ensure that your chart is either a trend line or a bar chart.
   b. Click the dimension drop down list box next to the current dimension.
   c. Select a dimension and options from the contextual list and click OK.

   The second dimension is displayed. For bar charts with a second dimension you have the display options that appear as radio buttons under the chart. These allow you to change the display as follows:

Bar chart second facet display option	Description
Left button	Default single color display for all values. The second dimension values are shown in a grid under the chart for the first facet.
Center button	Shows a different color for each second dimension value but all values are combined on a single bar for the first facet
Right button	Shows a different color for each value.

4.4 Working with a chart in an information space

SAP BusinessObjects Explorer builds a chart automatically in an information space based on your facet data as you add filters, change chart types, remove or add facets, and apply measures to your explored data.

> **i Note**
>
> When facet values are represented graphically on a chart they are spread out as a dimension of at least one measure. The facet name is referred to as a dimension in a chart.

Working with a chart in an information space shares some common actions with charts in an exploration view, but there are a number of differences. Refer to the section in Related Topics for information on working with charts and tables in an exploration view.

You can perform the following different actions within your chart:

To perform this action	Do this
Use a chart	Click the Chart icon to the left of the chart. The chart is the default visual. It is automatically created when an information space is created. However, you can also view data as a table. Use this to return the visual to a chart.
Use a table	Click the Table icon to the left of the chart.
Filter facet values	• Double click a value in the chart. Or • Click a value in the chart and click the icon *Filter the facet(s) with the selection* at the bottom right of the chart. The filter is added to the Filter pane.
Highlight facet values	Position the cursor over a value.
Select a value	Click a value in the chart. The same value is also highlighted in the facet list.
Multiple selection	• Hold down the Shift key then click and drag your cursor over the facet values, for example drag over the bars in a bar chart. • Hold down the CTRL key and click individual facet values. The facet values in the legend table next to the chart are also selected.

To perform this action	Do this
Choose a different type of chart	Click the down arrow beside an analysis type in the pane to the left of the chart, and select a chart type. An analysis type is a group of charts that can be used for a particular type of data. See Related Topics for information in using analysis types.
Get tool tip information on part of a chart	Hover the mouse cursor over any value plotted on a chart.
Resize	• Click and drag a divider between panes. • Click the Visualize button at the top of the tab to maximize the chart.
Sort dimension values alphabetically or numerically	Click the arrow head for the dimension or measure name in the legend table to the right of the chart. The up arrow sorts by ascending order or A - Z, down arrow sorts by descending order or Z - A.

4.5 Choosing the correct chart for your data

Charts are grouped into families called Analysis types. Analysis types are shown in the analysis bar to the left of the visualization pane. Each analysis type offers various charts and tables to view and analyze a specific type of data. Not all charts are suitable for all types of data, so depending on your data, certain analysis types may not be available.

SAP BusinessObjects Explorer automatically chooses the best chart to use for your information space data and ranks other charts as follows:

- Charts that are not suited for the provided data cannot be selected.
- Charts that a suitable are enabled.
- Charts that are the most suitable are highlighted with a yellow star.
- The chart that you select appears on the analysis type button. For each analysis type that you haven't selected, the most suitable chart is highlighted with a yellow star and also appears on the analysis type button.

> **i Note**
>
> If you select more than one measure, the enabled chart types change. For example, a vertical bar chart with two y axes becomes enabled under the comparison analysis type

There are five analysis types available:

Analysis type	Description	Available charts
Comparison	Use to view the differences between values. It provides the simple comparison of categorical divisions of measures. It is the default analysis type. For example, you could use a bar chart to compare the differences in your sales revenue between different countries.	• vertical bar chart • horizontal bar chart • bar chart with two y axes • radar chart • multiple radar chart • surface chart • tag cloud chart

Analysis type	Description	Available charts
Percentage	Use to show the percentage of parts to a whole. It shows values as ratios to a whole. The legend shows the percentage and the total values. The chart types available are: For example, use a pie chart to see who had the highest sales as part of a total sales value directly: Total sales = $200, Paul had 10% ($20), David had 65% ($130), and Susan had 25% ($50).	• pie • multiple pie chart • vertical 100% stacked bar chart • horizontal 100% stacked bar chart • treemap
Correlation	Use for viewing the relationship between values. It is useful for comparing multiple measure values. For example, you can view the correlation of two measures, and understand the impact of the first measure on the second measure.	• scatter chart • bubble chart The size of bubbles within the chart is determined by a third measure.
Trend	Use to show a trend in the data values. This analysis type is particularly useful for dimensions that are time based such as Year. It is useful for seeing progression of your data and possible patterns. For example, you can use a line chart to view sales revenue trends of a product throughout a range of years.	• line chart • line chart with two y axes • Multi-bar chart • Multi-line chart (multiple measures)
Geography	Use to show a map of the country object used in the analysis. The data for dimensions sorted by country are shown on the map. This is useful to see the geographical spread of data for any single country. **i Note** The Geography analysis type is only available for dimensions defined as the type Geography. Refer to Related Topics for the section that describes how to set up a Geography type for dimensions based on a universe or an Excel spreadsheet data source.	Country chart

Related Information

Defining a geography dimension for a map display [page 46]

4.5.1 Changing the chart type

You change a chart by selecting a new chart in an Analysis type. Analysis types are grouped in a pane at the bottom left of the visualization pane. Depending on the type of data in your information space, not all analysis types may be available.

1. Click the Chart button to ensure that the chart view is active.
   The visualization changes to the default analysis type.
2. Click the down arrow on an analysis type that contains charts applicable to your data.
   A list of available chart icons appears.
3. Click a chart type.
   Your data is plotted on the new chart.

4.6 Visualizing the data in a chart

The data for the dimension values plotted in a chart is shown in a legend table to the right of the chart. The legend table color codes values when you use a colored chart type.

The legend table changes and updates according to changes or added dimensions in the chart. For example, changing the dimension from Year to Product Line also updates the legend table with the new dimension.

Any value or multiple values highlighted or selected in the chart are also automatically selected in the legend table.

> **i Note**
>
> The average displayed in the chart legend is computed from the filtered dataset, not the initial dataset.

Related Information

Working with a chart in an information space [page 25]

5 Visualizing data with exploration views

5.1 Visualizing data with exploration views

An exploration view is a saved exploration that can include multiple charts and is available in an exploration view set from the *Home* tab.

You use exploration views to visualize your explored data using multiple charts that allow you to analyze data from different perspectives. An exploration view is useful to give a more detailed view of one part of an information space.

The main difference between visualizing your exploration in the information space and an exploration view, is that you can include many different charts in a single exploration view. You can also save exploration views from different data sources within the same exploration view set. This allows you to include related explorations that are based on different data sources, within a common view set.

Many of the graphical tools you use to build your charts in an exploration view are the same as those used in information spaces.

If you need to explore an exploration view further, for example to modify the initial exploration, add measures, change filters, or add facets, then you can return to the information space, make the modification, and then return to the exploration view, which is automatically updated with the changes.

Related Information

Creating an exploration view set [page 30]
Adding an exploration view to a view set [page 30]
Working with charts and tables in an exploration view [page 31]

5.2 Creating an exploration view set and adding views

An exploration view set is a saved exploration on an information space. It serves as a container for one or more visualizations called exploration views that you can add to the view set. You access exploration views from within its parent exploration view set, available from the *Home* tab.

Before you create an exploration view, you must have an existing exploration view set to store the view. You can create an exploration view set either:

- From the properties pane for an information space on the *Home* tab.
- Directly from an exploration on an information space.

Once you have an exploration view set, you can add exploration views directly from further explorations within the view set, or add exploration views from different information spaces.

Related Information

Creating an exploration view set [page 30]
Adding an exploration view to a view set [page 30]

5.2.1 Creating an exploration view set

You can create an exploration view set directly from an information space exploration, or from the properties pane for an information space on the *Home* tab.

- From an exploration in an information space, click *Create View Set* from the menu bar. The exploration is saved as a view set. You can add exploration views from the *Exploration View* drop down list on the menu bar.
- From the *Home* tab, click an information space and click *Create View Set* from the properties pane for the information view. An empty exploration view set appears, you can start exploring and save the exploration as an exploration view set.

Related Information

Adding an exploration view to a view set [page 30]

5.2.2 Adding an exploration view to a view set

You create an exploration view by adding an exploration to an existing exploration view set. If you do not already have an exploration view set to store the exploration view, you need to create an exploration view set.

1. From an exploration in an information space, or an existing exploration view set, Click *Add to View Set*.
2. Select a view set to store the exploration view.
3. Click OK.
   The exploration view appears in the *Exploration View* drop down list in the menu bar.

Related Information

Creating an exploration view set [page 30]

5.3 Working with charts and tables in an exploration view

You can visualize explorations in an exploration view as follows:

Task	Action	
Add a chart or table	In the *Visual elements* panel to the left of the visualization pane, select a chart or table type and drag it onto the visualization pane.	
To add or change dimensions, measures, or filters	Click the *Explore* button for the chart. The chart opens as an information space and you can explore as with any information space. Once you have finished, click *Done* and the updated chart appears in its exploration view.	
To show only the exploration view visualization	Click the Hide/Show Toolbox and the exploration view button to the left of the Exploration View drop down list. You either hide the properties pane and maximize the charts view, or have both the view properties pane and the charts displayed together.	
Lock the data filter	Available on tool bar at bottom of chart. Click the *Show/Hide toolbar* icon next to the Explore button to activate or hide the chart tool bar.	Click the *Lock the data filter icon* . The filter defined on the chart is locked to the chart. Any other global filters defined in the filter bar to not apply to the chart.
Change the chart type		Click the *Change the chart type* icon and select a different chart from the drop down list.
Hide/Show legend		Click the *Hide/Show legend* icon. The chart legend appears to the right side of the chart.

Related Information

Creating an exploration view set [page 30]
Adding an exploration view to a view set [page 30]

6 Sharing exploration results

6.1 Exporting exploration results

You can export your exploration and analysis results from the Explorer tab, filtered based on your exploration.

> **i Note**
>
> Export options depend on the data provider used to construct the information space. For example exporting to Web Intelligence query is unavailable for an information space based on an Excel data source.

You can send your results to:

- a data file as format CSV (Comma-Separated Values) file which is spreadsheet compatible
- an Excel file
- a Web Intelligence query
- an image file as PNG (Portable Network Graphic) format.

6.1.1 Exporting exploration results to a data (.CSV) file

1. Click the *Export* button located above the navigation facets.
   The button expands showing the export methods available to you.
2. Click *Data*.
3. Choose what data set you want to export.

Option	Description
Entire dataset (All columns)	Exports the entire dataset filtered by your facet selection. For example, if you have selected Texas within the State facet, the data is filtered, and only data related to Texas is exported.
Partial dataset	Exports only the data that the visualization and legend represent. For example, the visualization and legend are showing the sales revenue from 2004 through 2007 for stores in Texas. Only this data is exported.

   - Click the *entire dataset* option to export all of the data filtered by your facet selection.
   - Click the *partial dataset* option to export the data represented within the visualization and legend.

4. Click *OK*.
   Your browser alerts you that the CSV file is available for download.
5. Download the file.

Your current exploration results (the data set) have been saved with the extension of `.csv.txt`, you can view them by importing the CSV file within your spreadsheet application.

> **i Note**
>
> The export only includes raw data. For example, units (such as currency) are not exported and formatting is not applied.

6.1.2 Exporting exploration results to an Excel file

You can export your exploration to an Excel spreadsheet. To manage the export of large data sets, limitations can be placed on the number of rows or cells that can be exported. Refer to the Explorer Administration Guide for information on setting export limitations for Excel.

1. Click the *Export* button located above the navigation facets.
2. Click *Excel*
3. Click an export option. You can either export the entire data set filtered by the values selected in the active exploration or export only the data within the visualization and legend.
4. Click OK.
5. Select a target directory for the Excel file and click Save.

6.1.3 Exporting exploration results as a Web Intelligence query

1. Click the *Export* button located above the navigation facets.
2. Click *Web Intelligence* .
3. Check *Refresh On Open* if you want to see the data returned by the query when you open the document, or if you want to refresh or schedule the WebIntelligence document later.

   > **i Note**
   >
   > If you do not select *Refresh On Open* the document is blank when you open it in *Web Intelligence*. This is because the query has not been refreshed. To ensure that you can see the data when you open the document, ensure you select *Refresh On Open* before exporting.

4. Type a *Name* to give to the query.
5. Click *OK*.
   The dataset is exported filtered by your facet selection.

   For example: if you selected "Texas" within the "State" facet, only data related to Texas is exported.

Your exploration results are saved as a Web Intelligence query within your SAP BusinessObjects BI launch pad Inbox.

> **i Note**
>
> If your information space contains one or more contexts that prompt the user to select a context when the information space is refreshed, you must select the option *Reset contexts on refresh* in the Web Intelligence*Query properties* page for the query.

6.1.4 Exporting exploration results as an image

Exporting is accomplished within the exploration tab using *Actions*.

This section describes how you can export your exploration results (the visualization) to a PNG image.

1. Click the *Export* button located above the navigation facets.
   The button expands showing the export methods available to you.
2. Click *Image* within the left pane.
3. Type a chart title within *Title:*.

   You can change the chart title by clicking it.
4. Select *Show legend* if you want the legend exported.
5. Use the *Size:* text fields to choose the desired dimensions (in pixels) of the chart.

   Select *Keep ratio* to keep the image ratio.

   Click *Update Preview* to refresh the image preview.
6. If the chart resembles what you want, click *OK*.
7. Using your internet browser, select where you want to save the image, type its name if necessary, and then click *OK*.

The chart is saved as an image, which you can now copy into other document formats.

7 Setting up information spaces

7.1 Overview guide to creating information spaces

An information space is the basis for data exploration in SAP BusinessObjects Explorer.

The following is an overview of the process you use to create an information space. Use this as a way to understand the process and to go quickly to specific tasks to modify existing information spaces. For a detailed procedure, see the related topic on creating an information space.

Information space creation overview and guide to specific tasks:

What you do	Information is here...
Start Manage Spaces	
Select a data source	Selecting a data source for an information space [page 38]
Name the information space and enter property information.	Setting information space properties [page 39]
Select the dimensions or attributes, and measures.	• Adding facets to an information space [page 44] • Adding measures to an information space [page 41]
Specify properties for the facets and measures	
Specify display properties for the facets.	Ranking values in the facet display [page 45]
Validate the information space structure.	
Index the information space.	Indexing an information space [page 57]

Once you have created an information space that is for end user exploration, once it is indexed it is available in the *Home* tab. From the *Manage Spaces* tab, you manage the information space by scheduling refresh times and personalize the access to certain parts of the information spaces depending on user profile. Refer to Related Topics for more information.

Related Information

Creating an information space [page 36]
Scheduling information spaces for refresh [page 58]
Personalizing an information space [page 53]

7.2 Creating an information space

To create information spaces you need Space Creator rights. If you don't have the necessary rights, contact your IT administrator.

You create information spaces from the Manage Spaces tab.

1. Click *Manage Spaces* at the top of the SAP BusinessObjects Explorer window.
   The *Manage Spaces* tab opens. The available data sources are listed in the *Source* pane to the left of the tab. For more information on selecting data sources, see the related topic.
2. Expand a data source node and click the data source that you want to use to build an information space.
3. Click *New*
   The Create Information Space dialog box appears. The *Properties* is the default tab. You specify identifying, availability, storage, and locale information.
4. Click the *Properties* tab and type or select information for its properties.
   The Name that identifies the information space must be unique in the CMS. For more information on setting properties, see the related topic.
5. Click the *Objects* tab.
   You build the information space on the *Objects* tab using the following panes:

Object tab pane	Description	Refer here for more information
Data source objects	Pane to the left of the tab that contains dimensions, attributes, and measures depending on the data source.	Changing data source for an information space [page 51]
Measures, facets, and filters	Central pane that contains the measures, facets, and filters in the information space.	○ Adding facets to an information space [page 44] ○ Adding measures to an information space [page 41]
Details	Properties that can be set for measures, and facets selected in the central pane.	Ranking values in the facet display [page 45]

> **i Note**
>
> The *Objects* pane is different for Excel data sources. For more information on creating information spaces with Excel data sources, see the related topic.

6. Expand attribute, dimension, and measure folders, then add objects to the central pane in any of the following ways:
   - Double click objects
   - Select objects then click the Add arrow between panes. Click the Remove arrow to remove an object from the central pane.
   - Drag and drop objects into the central pane. Drag and drop objects out of the central pane to remove them.

   The attributes or dimensions are added under the *Facets* folder in the central pane.

   You must select at least one attribute or dimension. The default measure Occurrences is included to ensure that the information space contains a default measure. You can remove this measure once you add other measures to the central pane.

7. Click each dimension and measure in the central pane and set the properties for the object in the *Details* pane to the right of the central pane.
   You can edit the name, description, dimension or measure type, sorting and facet display preferences, depending on the type of object selected. For more information on facet and measure properties, see the related topics on adding facets and measures.
8. Optional: Create new facet groups to organize objects that need to be linked together semantically or that need to be displayed in a specific order in the information space: Click the *New* button at the top of the central pane and select *Add Facet Group* from the drop down list.
9. Click the *Preferences* node, then in the *Details* pane to the right, set display preferences for facets in the information space.
   For example, you can specify the display order for facets, or whether to hide the facet panel when opening an information space to optimize opening time. For more information on setting display preferences, see the related topic.
10. Click *Validate* to test the compatibility of objects. If further input is required, you can be prompted as follows:
    - If a context can be applied to the information space, you are prompted to choose the context to use. This only applies to universe data sources.
    - If you selected any objects that require your input, you are prompted to choose values.

    i Note

    You can do the following other tasks from the *Manage Spaces* tab at any time:

Other Manage spaces tasks	Refer here for information
Schedule the information space to be refreshed at pre-defined times.	Scheduling information spaces for refresh [page 58]
Personalize an information space to make only specific data available to defined users	Personalizing an information space [page 53]

11. Click *OK* to save the information space. If the information space shares the same name as an existing information space, you are prompted to change the name.
    The new information space is listed on the Information Space pane of the *Manage Spaces* tab.
12. If you want to make the information space available for exploration immediately, click *Index Now*, in the *Action* column of the list.

    i Note

    An information space is only available on the *Home* tab after indexing. You can schedule an indexation at a later date, or manually index at any time. For information on indexation, see the related topic.

13. If you indexed the new information space, go to the *Home* tab and click *Refresh list*.
14. Click *Information Spaces*.
    The new information space appears in the list.

Related Information

Selecting a data source for an information space [page 38]

Setting information space properties [page 39]
Creating information spaces with Excel files [page 49]
Adding facets to an information space [page 44]
Adding measures to an information space [page 41]
Ranking values in the facet display [page 45]
Indexing information spaces [page 56]

7.3 Selecting a data source for an information space

You can create an information space on any of the following data sources:

Information space data source	Description
SAP HANA appliance	• SAP HANA database views • SAP BW cubes
Universes (*.unv)	SAP BusinessObjects universes created with Universe Designer
Excel spreadsheets	Excel files published to BI LaunchPad.
Universes (*.unx)	SAP BusinessObjects universes created with the Information Design Tool
Source unavailable	Deprecated data sources: Sources no longer used by current information spaces, but still available as data sources.

You can change a data source for an information space. Refer to Related Topics for information.

> **i Note**
>
> Information spaces built on universes are subject to the accuracy and design robustness of the universe. If an exploration of data in an information space results in unusual or unexpected results that are not explained by an analysis of the data, then you can check with your administrator to ensure that the problem is not due to incorrect universe design.

1. Click *Manage Spaces* at the top of the SAP BusinessObjects Explorer window.
   The *Manage Spaces* tab opens. The available data sources are listed in the *Sources* pane to the left of the tab.
2. Expand a data source node and click the data source that you want to use to build an information space.
   The information spaces already using the selected data source are listed in the *Information Spaces* pane to the right of the *Sources* pane.
3. Do one of the following:

Do one of the following with a selected data source	Go here for more information
Click *New* to create a new information space on the data source.	Creating an information space [page 36]
Click an existing information space to edit its properties.	Editing an information space [page 60]

7.4 Setting information space properties

When you create an information space, you must identify it with a name unique in the CMS. You can set a number of properties to administer the information space, for example facilitate its retrieval by keyword search, specify its availability or not on the Home tab. You can set the following properties for an information space:

Properties	Description
Name	Name to identify the information space. It must be unique in a CMS.
Description	You can add comments help users to know the contents of the information space. This comment field appears with the information space name in the Home tab.
Keywords	Keywords used by Explorer to search for the information space. Enter words that identify the content and goal of the information space.
Availability	When selected, the information space is visible on the Home tab. When not selected the information space is available in Manage Spaces, but not listed on the Home tab. Use this option for information spaces that are used for technical reasons, for example an information space used as the source to personalize an information space for specific user groups.
Folder	Where the information space is saved in the CMS
Regional settings	Locale of information space
Use end user settings	Use the locale of the current user.

1. Click *Manage Spaces* at the top of the SAP BusinessObjects Explorer window.
   The *Manage Spaces* tab opens. The available data sources are listed in the *Sources* pane to the left of the tab.
2. Click a data source in the *Sources* pane.
   The information spaces associated with the data source are listed in the *Information Spaces* pane.
3. Do one of the following:
   - Click an information space name in the list.
   - Click *New* to create a new information space.

   The *Manage Spaces* page opens to the *Properties* tab.
4. Enter property information for the information space.
5. Click *OK* if you are finished.
6. Click other tabs to continue modifying or creating the information space.

7.5 Setting information space display preferences

You have the following options to determine how facets are displayed in an information space:

Facet display preference	Description
Hide the facet panel when opening this information space	SAP BusinessObjects Explorer does not display the facet pane when you open an information space. This means that information spaces open quickly, even if they contain many facets and facet values, because SAP BusinessObjects Explorer does not need to retrieve that information before displaying the information space. To add facet value filters, use the large arrowhead button on the filter bar. To display the facet pane, click the *Facets* or *Split* buttons. **i Note** If the *Order facets by filtering capacity* preference is selected, the facets and their values are still retrieved for calculation purposes, so the information space takes longer to open. **i Note** If you perform a search from the *Home tab* and then open an information space from the *Search Results* tab, SAP BusinessObjects Explorer ignores this facet display preference and displays the facet panel. **i Note** If the `client.optimizationBehaviorMode=AvoidFacetPanelUse` property is set in the Explorer Application's Advanced properties pane of the CMC, the *Facets* and *Split* buttons are grayed out and you cannot display the facet pane. Only users with the appropriate profile can acces the CMC.
Show facets in the defined order	Facets and facet groups are presented for exploration in the same order as displayed on the Objects tab. This is the default option.
Show a representative for each group	One facet for each facet group is displayed in an initial sort order. By default the first facet in each group is displayed, but the user can choose which representative facet is given display priority by clicking the facet group. The other facets in each group are available, but displayed separately after the initial single facet display order.

Facet display preference	Description
Order facets by filtering capacity	Facets and facet groups are displayed in an order determined by Explorer. The order is calculated based on optimizing the number of unique rows available for each dimension. The facets are prioritized on the ability to return search values. **i Note** When selected, this option is not compatible with *Hide the facet panel*. Though the facet panel is hidden during exploration, the optimization is cancelled to ensure the ordering of facets by their filtering capacity.

1. Open *Manage Spaces* and select an information space to edit.
2. Click the *Objects* tab.
3. Click the *Preferences* node at the top of the tree view.
   The facet options appear in the Details pane.
4. Select the facet display options described in this section.
   Click OK.
5. Re -index the information space to apply the facet preferences.

Related Information

Filtering facet data [page 17]

7.6 Adding measures to an information space

You add measures to an information space as follows:

1. Create a new, or open an existing, information space for editing in Manage Spaces.
2. Click the Objects tab.
3. Expand a node that contains measures in the left hand data source pane.
4. Do one of the following:
   - Double click one or more measures
   - Click and drag one or more measures over to the Measures folder in the Facets, Measure, and Filters pane.
5. Click a measure to set its properties. The following properties are available:

Measure properties	Description
Label	Measure name

Measure properties	Description
Description	Comments defined in the measure definition from the data source.
Type	Data type of measure
Trend	You can set the color of the measure in a chart based on whether it represents a positive or negative trend.

> **i Note**
>
> The following restrictions exist when you create an information space based on a BusinessObjects universe:
>
> - Measures that have an aggregation method of 'None' cannot be used in the information space facets, although the values do appear in the data table.
> - Measures that have an aggregation method of "Database delegated" are not supported.
> - Measures of non-numeric type are not supported. For example: character, long name, and date.
> - Detail objects on universes are not supported.

Related Information

What aggregation methods are applied by measures? [page 42]
Specifying measure polarity by color [page 43]
Creating a calculated measure [page 44]

7.6.1 What aggregation methods are applied by measures?

When defining an information space you choose objects from a data provider, for example an SAP BusinessObjects universe. You can maintain the measure objects and their values that have been previously created for the data provider.

A measure object is often aggregated meaning it has been created using aggregation methods (None, Count, Sum, Min, Max, and Average) during design time. The aggregation methods determine how measure values are calculated and displayed. The aggregation methods are described as follows:

Method	Description	Example
None	The measure is never aggregated and therefore does not appear in measure facets. However, values are displayed within the table view.	

Method	Description	Example
Count	The measure is established upon the total number of records that are based upon a grouping. For example, the number of employees within a department.	Number of Employees: 25 Departments: Sales, Marketing, and Finance Count of Employees in the Sales Department: 10
Sum	The measure is based upon the sum of records that match a grouping. For example, the sales revenue for a country throughout two years.	Country: UK, Sales 2001:20000, Sales 2002: 45000. Sum = 65000
Min	The measure is based upon the minimum value of a set of records that match a grouping. For example, the minimum sales revenue for a country throughout two years.	Country: UK, Sales 2001:20000, Sales 2002: 45000. Min = 20000
Max	The measure is based upon the maximum value of a set of records that match a grouping. For example, the maximum sales revenue for a country throughout two years.	Country: UK, Sales 2001:20000, Sales 2002: 45000. Max = 45000
Average	The measure is based upon the average value of a set of records that match a grouping. For example, the average sales revenue for a country throughout two years.	Country: UK, Sales 2001:20000, Sales 2002: 45000. Average = 32500

> **i Note**
>
> For further information on aggregation methods, refer to the *SAP BusinessObjects Information Design Tool* documentation available at: http://help.sap.com.

You can build an information space using aggregated values and navigate through the corresponding data using these values.

7.6.2 Specifying measure polarity by color

You can specify whether a measure indicates good or poor performance by setting the trend polarity of the measure. For example, a measure that calculates carbon emissions from different car models needs to be interpreted differently from a measure calculating income or sales; a high result in carbon emission is an indication of poor performance, so it is more realistic that these values are indicated in red, not green

Measure polarity can be customized for measures and calculated measures in the following charts:

- Geography regional
- Percentage Treemap

1. From Manage Spaces, click the Objects tab.
2. Click a measure in the central pane.

3. In the Details pane, select one of the following polarity values for the measure from the *Trend is good when* drop down list:

Measure polarity	Description
Increasing	Values are green when increasing values are considered positive.
Decreasing	Values are green when decreasing values are considered good.
Neutral	Neutral colors are used that are not necessarily associated with good or poor performance.

4. Click OK.
   The change in color is implemented in the geography or percentage treemap charts.

7.6.3 Creating a calculated measure

A calculated measure is a measure that is a combination of two or more calculations. It is saved in the information space and is always available for exploration.

You create a calculated measure as follows;

1. From the *Objects* tab of *Manage Spaces* , select *Calculated measure* from the *New* drop down list box at the top of the tab.
   The *Add Calculate Measure* box appears.
2. Enter name and description for the new calculation
3. Select the first measure for the calculation
4. Select an operator for the calculation (add, subtract, multiply or divide)
5. Select the second measure for the calculation
6. Select *OK*
   The new calculated measure appears in the *Facets, Measures, and Filters* pane.

Related Information

Calculating measures [page 20]

7.7 Adding facets to an information space

You add facets to an information space as follows:

1. Create a new, or open an existing, information space for editing in Manage Spaces.
2. Click the Objects tab.
3. Expand a node that contains dimensions or attributes in the left hand data source pane.

> **i Note**
>
> The following HANA data types objects : BINARY, BLOB, CLOB, NCLOB, TEXT, VARBINARY, are not supported in SAP BusinessObjects Explorer and will not appear in the Information Space.

4. Do one of the following:
   - Double click one or more dimensions or attributes
   - Click and drag one or more dimensions or attributes over to the Facets folder in the Facets, Measure, and Filters pane.
5. Click a facet to set its properties. The following properties are available:

Measure properties	Description
Label	Facet name
Description	Comments defined in the facet definition from the data source.
Dimension	Depending on the type of dimension, you can chose how to display the dimension on a chart: ○ Standard: The dimension is displayed as its actual values. ○ Days: Day data is displayed as successive daily values (Monday to Sunday). ○ Geography: Geographical data is displayed on a map. This dimension must be defined further; Click the ellipsis button to define a Geography analysis type. ○ Months: Month data is displayed as successive monthly values (January to December).
Default sorting	How the values are sorted in the facet.

6. Set the properties for each facet.

Related Information

Ranking values in the facet display [page 45]
Defining a geography dimension for a map display [page 46]
Working with prompts defined in your data sources [page 47]
Using predefined filters in a universe data source [page 48]

7.7.1 Ranking values in the facet display

You can specify the order that values appear in a facet.

1. From the *Objects* tab in *Manage Spaces*, click a facet in the *Facets, Measures, and Filters* pane.
2. Click the Default Sorting drop down list and select one of the following sort options for the facet values:

Option	Description
A to Z	Arranges the object values within facets in ascending (A to Z sort) order.

Option	Description
Z to A	Arranges the object values within facets in descending (Z to A sort) order.
Smallest to Largest	Arranges the object values within facets according to their measure values in ascending order.
Largest to Smallest	Arranges the object values within facets according to their measure values in descending order.
Explorer	Arranges the object values within facets according to their relevancy (default sort).

The sort order you specify here, determines the order in which the values are displayed in the facets within the Information Space at exploration time. If you don't select a sort order, the default sorting is applied.

3. Click OK to confirm the sort display choice.

> **i Note**
>
> Ensure that you index the information space to update the version available on the *Home* tab.

7.7.2 Defining a geography dimension for a map display

You can add a Geography analysis type in the analysis bar to the left of the visualization pane. You use Geography to analyze data by geographical distribution directly on a geographical location map. This type of chart can help visualize differences in cities or regions directly while visualizing the targeted country map.

You can also customize how different locations can be associated with each other by manually associating a location to a geographical area.

You set up the Geography analysis type in the information space by setting the Geography property for a dimension based on a universe or column in an Excel data source.

1. Click an Information space.
2. Click Manage Spaces.
3. Depending on the data source, click one of the tabs:
   - Objects
   - Configure Excel File
4. Do one of the following:

For this data source	Do this...
Universe	Click a geography dimension. From the Details pane, select the property Geography from the Dimension drop down list. Click the button next to the drop down list.
Excel spreadsheet	Click a geography column. From the Dimension drop down list, select Geography as a property for the column.

A geographic parameters box appears. You set the hierarchical level of the geography dimension that you want to appear on a map.

5. Select one of the following geographical levels from the drop down list:

Geographical level	Description
Country	Country
Level 1	Depending on the administrative organization of a country, this could be state, or region.
Level 2	Depending on the administrative organization of a country, this could be department, or county.
Cities	Capitals and cities of 100,000 inhabitants are displayed.

6. Click Load.
   A geographic parameters box shows the matching values found for each dimension or row value. Geographical matches that can not be found with certainty are indicated with colored icons. For uncertain matches you have proposition options to manually select or specify a matching location, or to hide the unmatched location in the geography map.
7. If you have uncertain matches, or want to edit the found matches, select one of the following options from the Proposition column drop down list.

Proposition	Description	Further action
Select a location	A list of suggested location matches is proposed.	
Use a nearby location	You can specify a location that maps to the geographical location that has not been matched. For example you specify Samoa to locate a zone called Oceania, which may not be easily located because of its size and diversity.	When selected, a Nearby location box appears. Type the location and click Find. Explorer presents matches to your text. Select a match and click OK.
Hide in Geography chart	When selected the selected value does not appear in the Geography chart in exploration.	

8. Click OK.
9. Re-index the information space.
   The next time the information space is explored, the Geography analysis type appears as a chart option for the affected dimension.

Related Information

Creating information spaces with Excel files [page 49]

7.7.3 Working with prompts defined in your data sources

When you create or configure an information space, a prompt might appear when you validate an object in your data source. For example, if you select the Year dimension you are prompted to select the years that you want to analyze.

There are several prompt types:

Prompt types	Description
SAP HANA variables	A HANA variable is surfaced as a prompt requiring user input.
Context resolution for a BusinessObjects universe	Asks you to choose the appropriate business context when a universe contains more than one path to resolve a query.
Prompt defined in a BusinessObjects universe object	Asks you to choose one or more values for a dimension on a universe.

You are asked to resolve prompts when you validate an information space. If a prompt is not resolved, the indexation cannot be completed, and the new or updated information space is not available on the Home tab.

Prompt values, after information space validation, are viewed in the *Summary* tab.

To change or remove any prompt values, configure your information space and validate it again. The prompt dialog wizard appears allowing you to reconfigure the values.

> **i Note**
>
> Prompt values that are persisted within an information space can be different from the values used for indexing. Refer to the last indexing date and last modified date to determine if the prompt values within a space are included within the last indexed version.

> **i Note**
>
> Virtual Data Models (VDMs) allow you to access data in one component and use it in another, without having to persist the data a second time. In SAP HANA, for calculation views that use VDMs, SAP BusinessObjects Explorer is unable to parse the value from one component to the other.

7.7.4 Using predefined filters in a universe data source

If you are creating an information space on a BusinessObjects universe, you can select predefined filters to refine the data selection. These filters are created at the universe level and cannot be modified using SAP BusinessObjects Explorer.

Filters enable you to:

- Make data more secure if you do not want certain users to view it.
- Limit the size of an information space as there will not be as much data included.
- Retrieve only the data that will answer your business questions, for example: you can filter the Year dimension to view only the sales revenue for 2003 or filter the Annual Income dimension to view only customers whose annual income is equal or greater than $1000000.

> **i Note**
>
> You can only edit filters if you have the appropriate security rights.

7.8 Creating information spaces with Excel files

The Excel file must be published in a public folder in InfoView. The file formats have to be *.XLS* or *.XLSX.*

> **i Note**
>
> To ensure that the Excel files can be successfully used for information space creation, it is recommended that the Excel files are kept as simple as possible, and do not contain complex formatting, images, filters, hyperlinks, and other additions that could prevent the Excel file being treated as a flat file.

To create an Information Space with an Excel file:

1. Select *Manage Spaces*.
2. Select a file in *Excel spreadsheets*.
3. Select *New*.
   The Space Creation dialog box appears with the tabs: *Properties*, *Configure Excel File*, *Scheduling* and *Personalization*. Specify information in the Properties, Scheduling and Personalization tabs in the same way as you do for information spaces based on universes.
4. On the tab *Configure Excel file*, you can define each column to be displayed as a dimension or measure. You can also hide a column. You also have the following options for certain dimension types:

Column type	Available display option
Time	You can select the dimension to be displayed with month or day labels.
Geography	You can select Geography to display geographical data as a map.

5. Re-index the information space.
   The new information space based on an Excel sheet is available in the *Home* tab for exploration. Ensure you refresh the *Home* tab to see the new information space.

Related Information

Defining a geography dimension for a map display [page 46]

7.9 Using object formats defined in a universe

Information spaces built on SAP BusinessObjects universes can have inbuilt object formatting that is available to an information space.

Universe object formatting implemented by the SAP BusinessObjects Information Design Tool provides an insight to your raw data. For example, by applying a dollar sign to a numeric value indicates it is a currency. Universe object formatting is applied to information spaces and their objects.

Formatting changes the content specifications of the data to make it more readable to you. Data can have numeric, date, currency, and scientific notation formatting applied to it. This formatting is applied to data via

Information Design Tool, for further information on object formatting, see the SAP BusinessObjects Information Design Tool documentation available at: http://help.sap.com.

The predefined formatting that is given to objects in universes includes:

- String formatting
- Locale settings - formatting that is specific to a country or region such as number, currency, date/time, scientific, and percentage.
  For example, in the US, dates are: MM/DD/YYYY.

This formatting is retained.

Overriding universe object formatting

You can override universe object formatting by changing the locale settings when creating or editing Information Spaces. For example, applying a French locale to revenue data with a US locale (format settings of `$#,##0.00`) changes the following:

- the format setting to `$# ##0,00`
- the data to follow the new format setting
  for example: $10,000.00 becomes $10 000,00
- regional formatting
  such as decimal and thousands separators - date format

8 Managing information spaces

8.1 Managing information spaces

An Information Space is a collection of objects mapped to data for a specific business operation or activity. For example, an information space designed to provide information on regional retail outlets could contain objects mapped to data for Sales Revenue, Region, Store Name, and Year.

Power users with the Space Creator user profile create the information spaces on top of corporate data providers.

Only one data provider can be selected when you create an information space. However, you can create multiple information spaces on a single data provider. Each information space can contain a sub-set of the total data available, so that analysts can focus easily on a specific area of interest.

On the *Manage Spaces* tab, you can:

- View the available data providers and the information spaces created on them.
- Create information spaces on the available data providers.
- Schedule existing information spaces for indexing.
- Edit an existing information space.
- Duplicate an information space, make modifications and save it as a new one.
- Personalize an information space for different users.
- Delete an information space.
- Specify how facets are displayed
- Show or hide the facet panel when an information space is opened. This allows you to optimize the time to open an information space when there are many facets to load.

8.2 Changing data source for an information space

You can change the data source for an information space. This allows an information space to be connected to another data source if the original has been moved, changed, or deleted. When you change data source you manually map objects of the original data source to the target data source. The following data sources can be changed:

Changed From/To	BWA	Hana	UNV	UNX	Excel
BWA	Yes	Yes	No	No	No
Hana	No	Yes	Yes	No	No
UNX	No	Yes	No	Yes	No
UNV	No	Yes	Yes	Yes	No

Changed From/To	BWA	Hana	UNV	UNX	Excel
Excel	No	No	No	No	No

> **i Note**
>
> When you change the data source for an information space, you must ensure that you re-index the information space after the change to ensure that the data is refreshed for the new data source.

1. Open *Manage Spaces* .
2. Click a data source. This is the current data source for the information space that you want to change to use another data source.
3. In the *Action* column to the right of the *Manage Spaces* tab, select *Change Source* from the drop down list box.
   A message box appears. It explains that you need to map current objects to the equivalent objects in the new data source. Scheduling information and metadata is conserved, and all other data is reset.
4. Click *OK* to proceed.
   A change data source configuration pane appears. The current data source is listed at the top of the pane. You have the following options:

Change data source options	Description
New Data Source	List of available data sources
Measures / Facets tab	Measures and facets to be manually mapped are listed on the respective tabs.
Map Current Objects	The objects in the current information space that must be mapped to corresponding objects available in the target data source. **i Note** If you do not select a corresponding object in the new data source for each measure and facet, the original measure and facet is removed from the information space when it changes data source.
To New Objects	Measures and facets you have selected in the target data source to replace the current measures and facets. This column is populated by choices made in the New data source objects pane to the right.
New data source objects pane	Measures and facets available in the selected new data source. These are the measures and facets that you select to replace the existing ones in the current information space.

5. Select a new data source from the *New Data Source* drop down list.
6. Click the *Measures* tab.
   The current measures are listed in the Map Current Objects column. The measures available in the new data source are listed in the new data source objects pane to the right of the configuration pane.
7. Click a measure, then do one of the following:
   - Click the new data source measure to replace the current measure, then click the left arrow head.
   - Double click the new data source measure.

   The new measure is listed in the *To New Objects* column.

8. Repeat the previous step for the *Facets* tab.
   Each new measure and facet is listed with the current object that it replaces when the information space is changed to use the new data source.
9. Do one of the following:
   - Click *Save* to apply the new data source.
   - Click *Save and Configure* to apply the new data source and open the Manage Spaces tab to further configure the information space.
   - Click *Cancel* to keep the information space 's current data source.
10. Re-index the information that now has a new data source.

8.3 Personalizing an information space

You can personalize an information space to restrict exploration for specified facet values. The personalized information space references one or more facets in a reference information space that imposes a filter on the facet values.

Personalizing an information space allows you to control what data can be explored by different users. For example, if a reference information space contains a facet called Store managers for stores in different countries, you can set up the personalized information space so that names in the Store Managers facet can only see information for stores in their own country.

You have the following requirements to create and use a personalized information space:

Information space type	Personalization requirement	Description
Reference information space	User name facet	The user facet contains user names. These are the values used to personalize an information space. You can do this using an Excel spreadsheet to create the reference information space. An Excel spreadsheet that contains columns used to filter values, for example User name and Country. You can create an information space with these two facets, and these two are referenced in the personalized information space, so that a user name value only explores data related to their country.
	Indexed	The reference information space must be indexed.
	Not explorable and searchable (optional)	When the Explorable and searchable check box on the Home tab is cleared, the reference information space is not visible to users. This can be a preferred option, as the reference information space is a technical solution and not necessarily useful to end users.
Personalized information space	Facets listed in the Personalization tab of Manage Spaces.	You assign the user facet from the referenced information space to the corresponding user name facet in the personalized information space. This is done from the Personalization tab of Manage Spaces.

Information space type	Personalization requirement	Description
	Indexed	The personalized information space must be indexed.
	Checked as Explorable and searchable	The Explorable and searchable check box on the Home tab must be selected.

> **i Note**
>
> Ensure that the same data formats are used for columns in the reference and personalized information spaces. For example the dates in SAP HANA use the Text format. You would need to ensure that the format in the personalized information space is a Date format.

You create two information spaces:

- Reference information space: This contains a user name facet and all the facets that you require for exploration. It must be indexed.
- Personalized information space: The information space that contains a user name facet that references the user name facet in the reference information space. Different users only see the facets that are permitted for their user name. It is indexed and is made explorable on the Home tab.

1. Create the reference information space as follows:
   a. Start Manage Spaces, select a data provider and click *New*.
   b. Enter the information space properties. Clear the checkbox *Explorable and searchable* if you don't want the reference information space to appear on the *Home* tab.
   c. From the *Objects* tab, select the user facet that contains the users that you want to personalize in the information space, then select the facets that contain data you want to be explored.
   If the user facet data is one or more columns in an Excel spreadsheet, you must upload the Excel file to the *Folders* folder in the CMC, so it is available as a data source to build an information space. You have the following personalization options when using an Excel file as a reference data source:

Excel option	Description
Wildcard (*)	By specifying `"*"` as a parameter of the Explorer application property `com.businessobjects.explorer.personalization.selectall.wildcard=` the user can select all values of a facet during exploration instead of duplicating lines for that user in the reference information space. In the Explorer Application's Advanced properties pane in the CMC, set explorer application property to: `com.businessobjects.explorer.personalization.selectall.wildcard='*'` For example, in you reference information space you have the following:

Excel option	Description
	<table><tr><th>User</th><th>Country</th></tr><tr><td>William Bush</td><td>*</td></tr></table> The personalized information space will show all countries for user William Bush during exploration. **i Note** If the Explorer application property is omitted, and the wildcard is specified as a facet value in the reference information space, then no value is selected for this facet during exploration.
Wildcard (*) to filter over multiple columns	You can use the wildcard to implement a filter over multiple columns. For example: <table><tr><th>User</th><th>Country</th><th>Stores</th></tr><tr><td>James Waitemata</td><td>New Zealand</td><td>*</td></tr><tr><td>James Waitemata</td><td>Australia</td><td>Koala shoes</td></tr><tr><td>William Bush</td><td>Australia</td><td>Emu shoes</td></tr></table> During exploration of the personalized information space, James Waitemata can see all stores from New Zealand and only Koala shoes from Australia. William Bush can see only Emu Shoes from Australia.

> **i Note**
>
> Personalization is case sensitive. For example facet value “France” from a reference information space mapped to “france” in a personalized information space will not apply the filter on exploration.

d. Click *OK* then index the information space.
   The reference information space is available in *Manage Spaces* .
e. Index the information space.

2. Create a new information space that you want to personalize, or open an existing information space to personalize by editing. Personalize as follows:
   a. Click the *Personalization* tab.
   b. Select *Personalize information space exploration*
   c. From the *Select an information space* drop down list, select the reference information space that you created to personalize the current information space.
      The facets for the personalized information space appear in the left pane, the facets in the reference information space in the right pane.
   d. Click the *User name* object in the left pane and select the user name facet in the right pane.
   e. Click another facet, for example if your Excel data provider included a column for Country, select the Country reference facet for the Country in the left pane.

f. Click *OK* then index the personalized information space.
g. Index the information space.
When the personalized information space is explored, a user can now only explore facets that correspond to the assigned filter in the reference information space, for example if John.B is a user name facet value, he can see data for France which is the country assigned to him in the Excel data source.

8.4 Indexing information spaces

Indexation refreshes the data and metadata in information spaces. After indexing, any new data on the corporate data providers upon which those information spaces are based becomes available for search and exploration. When you modify an information space you need to index it in order for your modifications to be available to other users.

You can index an information space as follows:

- Index manually to update it immediately.
- Schedule indexing at a specified time, for example, evenings or weekends when your corporate network is least used.

Note the following information on the indexation of information spaces:

indexing an information space...	
has no effect on navigation.	Indexing is a background task so you do not see it in operation and it has no effect while you navigate through an information space . You can see the progress of indexation from the *Information Spaces* pane on the *Manage Spaces* tab.
allows you to see updates	• when indexation is finished • on the refreshed information space even while another user is still exploring the old version. This ensures that other users do not block you from exploration.
ensures that you always see the latest version on	the *Search Results* tab.

Related Information

Indexing an information space [page 57]
Indexing information spaces on universes [page 57]
Scheduling information spaces for refresh [page 58]
Interpreting indexation status icons [page 57]

8.4.1 Indexing an information space

You index an information space to organize and refresh the data. You must index an information space before it can be made available on the *Home* tab. Information spaces should be indexed after any editing to ensure that the modifications are taken into account. If an information space is not re-indexed after reconfiguration, it is not updated on the *Home* tab.

1. Open *Manage Spaces*.
2. Click a data source in the left pane.
   The information spaces associated with the data source are listed in the *Information Spaces* pane.
3. In the *Actions* column, select *Index Now* from the drop down list for the information space.
   When the indexation is successful a green icon appears beside the drop down list box.
4. Go to the *Home* tab and click the *Information Spaces* link.
5. Click the *Refresh* button.
   The updated information space is available in the list.

Related Information

Interpreting indexation status icons [page 57]
Indexing information spaces on universes [page 57]

8.4.2 Indexing information spaces on universes

information spaces based on BusinessObjects universes cannot be indexed correctly if partial results are returned at the query level, because SAP BusinessObjects Explorer lacks sufficient data. Partial results are returned when the universe has been configured with a row limit that limits the query results.

To ensure indexing is successful for your information space open the underlying universe within SAP BusinessObjects Information Design Tool and increase the universe query limits.

8.4.3 Interpreting indexation status icons

Indexing status is available on the *Information Spaces* pane in the *Manage Spaces* tab and the *Scheduling* tab within *Manage Spaces*.

The indexing status icons are as follows:

- From the *Information Spaces* pane in the *Manage Spaces* tab
  Hold the mouse cursor over an icon to see the status in a tooltip. The icons appear in the *Status* column. This column shows two icons: the icon on the left is the scheduling state; the icon on the right indicates the last indexing state.

Icon	Description	Tooltip example
No icon	When there is no icon for the status, then no action has occurred. For example, no scheduling.	
	The last indexing was successful.	Latest indexing succeeded Start date: 2009/05/01 14.56 End date: 2009/05/01 14.56
	The latest indexing failed.	Latest indexing failed Start date: 2009/05/01 14:56 End date: 2009/05/01 14:59 Server, myServer.IndexingServer.ddindexing, generated the following messages: Index creation failed: the Information Space has no data.
	Indexing has started.	Indexing Started: 2009/05/01 14:56
	The Information Space has been scheduled for indexing.	Next indexing scheduled for: 2007/05/01 14.56

- *Scheduling* tab within *Manage Spaces* .
  The status is displayed within the *Status* pane in the *Properties* tab. It includes information on the start and end dates of the scheduling and the indexing status.

If the indexation is successful, the start and end date of the indexing is displayed to you. If the indexation failed, the start date, end date, and the cause of failure is displayed.

> **i Note**
>
> You can cancel the indexing of an information space within the *Manage Spaces* tab. *Index Now* located beside the information space changes to *Cancel Indexing* during indexing. To cancel, click *Cancel Indexing*.

8.5 Scheduling information spaces for refresh

Scheduling synchronizes your information spaces by specifying when indexing occurs. Scheduling ensures that the data is refreshed regularly.

Scheduling is defined on the *Manage Spaces* tab. It allows you to index information spaces directly in the information space list with the *Index Now* button. You can also schedule information spaces to be indexed on a regular basis:

- Once
- Hourly
- Daily
- Monthly

You can schedule an information space for periodical indexing on the *Scheduling* tab in the *Editing Information Spaces* dialog box.

All indexing runs as a background task but progress can be monitored from the list of information spaces within the *Manage Spaces* tab. For example, within the *Manage Spaces* tab, you can see if the information space is fully indexed and ready for full exploring, or if the indexing failed because of irretrievable data.

Every time you modify and save an information space by clicking *Ok* on the *Edit Information Space* screen of the *Manage Spaces* tab, the information space is re-scheduled according to its scheduling settings.

Scheduling settings

The following types of scheduling are available:

Scheduling type	Description
Now	The indexing runs as a background task immediately. Available via the *Index Now* button in the Information Space list on the *Mange Spaces* tab.
None	There is no indexing, this setting is the default for new Information Spaces.
Once	The indexing runs once according to a date and time you specify. It is set via a start time value, and when the value is in the past scheduling runs immediately.
Periodically	You can define below, if the scheduling should run on a by-minute, hourly, daily or weekly basis.
Minutes	The indexing runs on a by-minute basis based upon the minutes value you define. You state when you want the indexing to start and when to end. The first index is created on the start time you have specified.
Hourly	The indexing runs on an hourly basis based upon the hour values you define. You state when you want the indexing to start and when to end. The first index is created on the start time you have specified.
Daily	The indexing runs once every N number of days based upon a start time and an end time. You state when you want the indexing to start and when to end. The first index is created on the start time you have specified.
Weekly	The indexing runs on selected days based upon a start time and an end time you have defined. For example, you can index every week on Monday, Thursday, and Sunday. The first index is created on the start time you have specified.

In the *Scheduling Details* area, enter a user ID in the *Account to Run Scheduling* field and the corresponding password. The user needs to have the authorization to schedule indexing.

In the *Scheduling Time Range* area, you can enter date and time directly or choose dates directly with the calendar. The calendar is a dialog that allows you to choose a date directly.

Some values that you enter for the start and end times of the indexing, are not valid:

- negative values
- non numeric values
- setting an End Time before the Start Time

Related Information

Indexing information spaces [page 56]

8.5.1 Scheduling indexing for an information space

You can schedule information spaces to be refreshed at specified times. An information space is refreshed when it is indexed.

On the *Scheduling* tab, choose the index scheduling for the information space:

Option	Description
None	There is no indexing, this setting is the default for new Information Spaces.
Once	Indexing occurs when desired.
Minutes	Indexing occurs every N number of minutes.
Hourly	Indexing occurs every N number of hours.
Daily	Indexing occurs every N number of days.
Weekly	Indexing occurs every N number of days during a week.

- Click *None* if you do not want scheduling to occur.
- Click *Once* and define when the scheduling occurs.
- Click *Periodically* and define if you want indexing to run every N number of minutes, hours, days, or weeks. Ensure that you define the start date and end date.

> **i Note**
>
> You must have Space Creator or Administrator rights to schedule indexing.

Related Information

Scheduling information spaces for refresh [page 58]
Indexing information spaces [page 56]

8.6 Editing an information space

You edit existing information spaces from the *Manage Spaces* tab. When configuring an information space you follow the same process as creating one.

1. Open the *Manage Spaces* tab and click a data source in the left pane.
   The information spaces available for the data source appear in the right pane.

2. In the *Action* column, select *Configure* from the drop down list for the information space that you want to edit.

> **i Note**
>
> You must have edit rights for the information space, be the owner of the information space, or be an administrator before you can perform this step.

The *Edit information space* dialog box appears containing the tabs: *Properties*, *Objects*, *Scheduling* and *Personalization*.

3. Click a tab and edit the information space properties as required.

To modify	Refer here for information
Any part of the information space	Creating an information space [page 36]
Properties	Setting information space properties [page 39]
Display preferences	Setting information space display preferences [page 39]
Facets and Measures	○ Adding facets to an information space [page 44] ○ Adding measures to an information space [page 41]
indexation settings	Indexing information spaces [page 56]
Personalization	Personalizing an information space [page 53]
Scheduling	Scheduling information spaces for refresh [page 58]

4. Click *OK* to register your configuration and to save the information space.
The Manage Spaces tab appears.

> **i Note**
>
> For changes to be visible to users accessing the information space, it must be indexed. Either click *Index Now* to index the edited information space immediately or wait for the scheduled index to be processed.

8.7 Deleting an information space

You can delete an information space when it is no longer required.

> **i Note**
>
> Only Administrators and information space creators can delete information spaces.

1. Click *Manage Spaces* located on the title bar (if you have Manage privileges).
You are taken to the Manage Spaces tab.
2. Click a data source located within the left pane to select it (for example, a universe).

> **i Note**
>
> Data sources are organized in a repository and arranged in a folder structure.

Any existing Information Spaces created from the data source appears in the right pane.

3. Locate the Information Space you want to delete within the right pane.

   There are several buttons located beside the Information Space including Delete.

4. Click *Delete* beside the Information Space.
   A confirmation message appears when you have rights to delete, otherwise you cannot delete the Information Space.

   > **i Note**
   >
   > If the Information Space is being explored, it is not deleted until it is no longer used.

5. Click *OK* to confirm you want the Information Space to be deleted.
   The confirmation message disappears.

The Information Space is deleted and is no longer accessible by you and other users. If you have the Information Space in your preexisting search results list, you cannot explore it anymore.

8.8 Duplicating an information space

Instead of building a new Information Space from scratch you can duplicate an existing Information Space, make modifications and then save it with a new name.

To duplicate an Information Space:

1. Click the Manage Spaces tab to display the Information Spaces you can modify.
2. Navigate through the available folders to display the link to the Information Space you want to duplicate.
3. In the Action column, click the Duplicate button.
   Duplicate Information Space dialog appears.
4. Type a new name into the Name field.
   This is the name that will appear on the Home tab once the duplicate Index Space has been indexed.
5. Specify the properties, objects and schedule information as normal.
6. Optional: to test whether the Information Space is configured correctly, click Validate.
   The Information Space is validated automatically and an error message appears if you need to change anything.
7. Click *OK*.

The Information Space needs to be indexed before it can appear on the Home tab and be searchable. You can either index it manually, by clicking *Index Now* or schedule it for indexing at a specific time.

Related Information

Scheduling information spaces for refresh [page 58]

9 Working with favorites

You can mark content objects as favorites for easy accessibility. Objects marked as favorites are present in *My favorites*.

You can access favorites by navigating to *Home* > *My Favorites*. To change the view of favorites, switch between the list view and grid view.

9.1 Adding an object to favorites

In Fiorified BI Launch pad, you can add an object to your list of favorites. Favorites are listed in *My Favorites*.

1. Log on to the Fiorified BI Launch pad.
2. Select an object and click *** (More).
3. Choose *Mark As Favorite*.

The selected object is added to the favorite list.

9.2 Removing an object from favorites

When an object has been made a favorite, it's easy to remove it from favorites.

1. Select an object previously marked as a favorite and click *** (More).
2. Choose *Remove From Favorites*.
3. Alternatively, click the star icon on the object previously marked as a favorite. ★ *(Favorite)*

   You can perform the above actions on favorite objects in both list and grid view.

10 Accessibility

SAP BusinessObjects Explorer provides an accessible usage for users who use the keyboard to navigate in the application. The keyboard access is always available in the tool for all user and do not require special installations or settings.

You can search, select and explore information spaces and Microsoft Excel files.

Related Information

Keyboard Access for Explorer [page 64]

10.1 Keyboard Access for Explorer

The table below lists the most important tasks in Explorer and shows you the actions of each task and the keyboard commands accosiated with these actions.

A detailed documentation of these tasks is available in the corresponding chapters in the Online Help.

General keyboard commands

Task	Action	Keyboard Command
General Keyboard Navigation	Navigate to next UI element	`Tab`
	Navigate to previous UI element	`Tab + Shift`
	Focus in complex elements	`F2`
	Focus out complex elements	`Esc`
	Move to next list element	`Arrow right / Arrow down`
	Move to previous list element	`Arrow left / Arrow up`
	Move to the top / bottom element of the list	`Home / End`
	Move to the the top / buttom element of the currently visible list	`Page Down / Page Up`
	Select an element	`Space`

Task	Action	Keyboard Command
Navigating between tabs	Move to next tab	`Arrow right`
	Move to previous tab	`Arrow left`
	Switch to tab	`Space`
	Close tab	`Ctrl + Shift + F4`

Keyboard commands on the Home tab

Task	Action	Keyboard Command
Searching an Information Space on the Home tab	Navigate to search text box	`Tab / Tab + Shift`
	Enter search text	
	Navigate to search button	`Tab / Tab + Shift`
	Start search	`Space`
Selecting an Information Space on the Home tab	Navigate to the UI element with the available Information Spaces	`Tab / Tab + Shift`
	Focus in Information Space list	`F2`
	Focus out Information Space list	`Esc`
	Select an Information Space	`Arrows up / down`
	Expand / Collapse Information Space details	`Arrows left / right`
	Navigate to Information Space at the top / bottom of the list	`Home / End`
	Navigate to Information Space at the top / buttom of the currently visible list	`Page Down / Page Up`
Refreshing the Information Space list	Navigate to the Refresh button	`Tab / Tab + Shift`
	Start refresh	`Esc`
Managing Information Spaces	Navigate to the Manage Spaces button	`Tab / Tab + Shift`
	Open the Manage Spaces tab	`Space`
	Select the Data Source area	`Tab / Tab + Shift`
	Navigate to a data source	`Arrows up + down`
	Open a folder in the Data Source area	`Space`
	You can check the data sources and their Information Spaces.	
Uploading a Microsoft Excel file	Navigate to the Browse button	`Tab / Tab + Shift`

Task	Action	Keyboard Command
	Open the system file dialogue to select a file	`Space`
	Navigate in the system file dialogue	`Arrows up / down`
	Select a file in the system file dialogue	`Enter`
Previewing and configuring an Excel file	Navigate to the Preview and Configure button	`Tab / Tab + Shift`
	Open the configuration dialogue	`Space`
Exploring an Excel file directly	Navigate to the Explore Now button	`Tab / Tab + Shift`
	Start the exploration.	`Space`

Keyboard commands on the Explore tab

Task	Action	Keyboard Command
Selecting an option in the toolbar	Navigate to the option button (e.g. visualization or Bookmark)	`Tab / Tab + Shift`
	Select the button	`Space`
Searching in the Explore tab	Navigate to the search field	`Tab / Tab + Shift`
	Enter the search text	
	Start the search	`EnterTab / Tab + Shift`
Exploring the measure panel	Navigate to the measure panel	`Tab / Tab + Shift`
	Move to next / previous measure	`Arrows up /down`
	Select a measure	`Space`
	Move to next / previous measure without selecting it	`Ctrl + Arrows up / down`
	Select an additional measure. You can select up to 3 measures.	`Ctrl + Space`
Adding a calculation	Navigate to Add Calculation...	`Tab / Tab + Shift`
	Open the calculation dialogue box	`Space`
	Enter Name and Description	
	Select the first / second measure	`Ctrl + Arrow down` -> `Enter`
	Select the operand	`Arrow right /left` -> `Space`
	Select OK	`Space`
Exploring the facets	Navigate to the facet container	`Tab / Tab + Shift`
	Focus in the facet container	`F2`

Task	Action	Keyboard Command
	Navigate to the next / previous facet	`Arrow right /left`
	Focus in a facet	`F2`
	Navigate to the next / previous facet value	`Arrows up /down`
	Select a value for filtering	`Space`
	Select multiple values in a given range for filtering	`Shift + Arrows up /down`
	Select single multiple values for filtering	`Ctrl + Arrows up /down` -> `Space`
	Select Explore more... in a focused facet	`Tab / Tab + Shift` -> `Space`
	Select the sort button in a focused facet	`Tab / Tab + Shift` -> `Space`
	Close a focused element	`Esc`
Modifying filters	Navigate to the filter pane	`Tab / Tab + Shift`
	Focus in a filter	`F2`
	Navigate to next / previous filter	`Arrow right /left`
	Open a filter	`Space`
	Select another filter value. You can also select multiple values using Shift and Ctr commands.	`Arrow right /left` -> `Space`
	Delete the filter	`Ctrl + Shift + F4`
Modifying the visualization	Navigate to the Chart or Table button	`Tab / Tab + Shift`
	Select the button	`Arrow right /left` -> `Space`
	For charts, open the drop down list for Comparison, Percentage, Correlation or Trend	`Ctrl + Arrow down`
	Select a list element	`Tab / Tab + Shift` -> `Space`
	Navigate to the chart elements You can modify the values in these elements with the general keyboard commands.	`Tab / Tab + Shift`
	In the legend table, increase or decrease the column size.	`Shift + Arrow right / left`

Keyboard commands on the Exploration views tab

Task	Action	Keyboard Command
Selecting a button in the EView	Navigate to the button/option you want to use.	**Tab / Tab + Shift**
	Select the button	**Space**
Change Exploration View or add new Exploration View	Navigate to the Eview List	**Tab / Tab + Shift**
	Open the drop down list	**Ctrl + Arrow down**
	Move up or down in the list	**Arrows Up / Down**
	Select the EView or the "Add Exploration View" option	**Enter**
Exploring the measure panel	Navigate to the measure list	**Tab / Tab + Shift**
	Open the drop down list	**Ctrl + Arrow down**
	Move to next / previous measure	**Arrows up /down**
	Select a measure	**Enter**
Filter from an array Element	Navigate to the Array element	**Tab / Tab + Shift**
	Enter the Array	**F2**
	Move up or down in the list	**Arrows Up / Down**
	Select one or several rows	**Ctrl + Arrows Up/Down + Space** ->
	Navigate to the Filter element	**Esc + Esc + Tab** ->
	Open the filter drop down list	**Ctrl + Arrow Down**
	Move to one or another option	**Arrows Up / Down**
	Select the option	**Enter**
Filter from a facet filter element	Navigate to the facet filter	**Tab / Tab + Shift**
	Select one or more values to filter on	**Ctrl + Arrows Up/Down + Space**

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