Working with OLAP Reports

Intellicus Enterprise Reporting and BI Platform

Enterprise Reporting and
Business Insights Platform

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Acknowledgements

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OLAP feature offers users the ability to explore large complex data sets with drag-and-drop techniques, drilling down through levels of detail to view information from many angles, perform detailed data analysis and retrieve transactional detail.

OLAP Viewer

Use OLAP Viewer to view and analyze OLAP data in the form of grid as well as chart. Any user can open OLAP Viewer page.

Click **Navigation** > **Analytics** > **OLAP Viewer** to navigate to **OLAP Viewer** page.
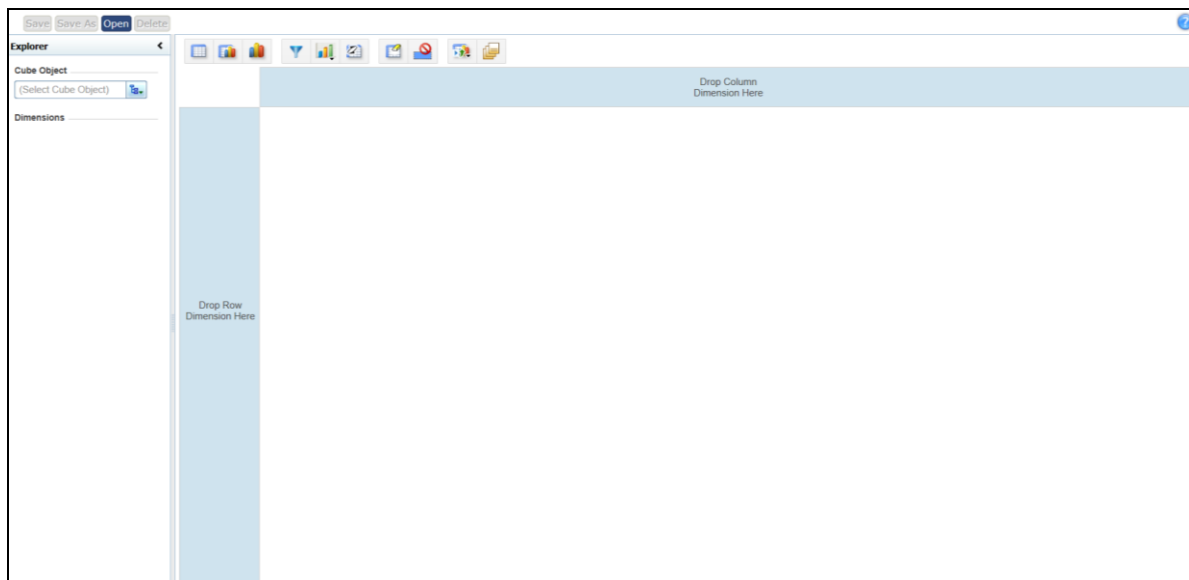

Figure 1: OLAP Viewer

To open an OLAP report and work with OLAP viewer functionalities, you need *Run* rights on the category where layout is available and the layout itself.

To save the changes made on OLAP Report as well as *Save As* the OLAP report, you need to be a super administrator.

On **OLAP Viewer** you may:

- Work with a new OLAP layout

- Open and work with an existing OLAP layout

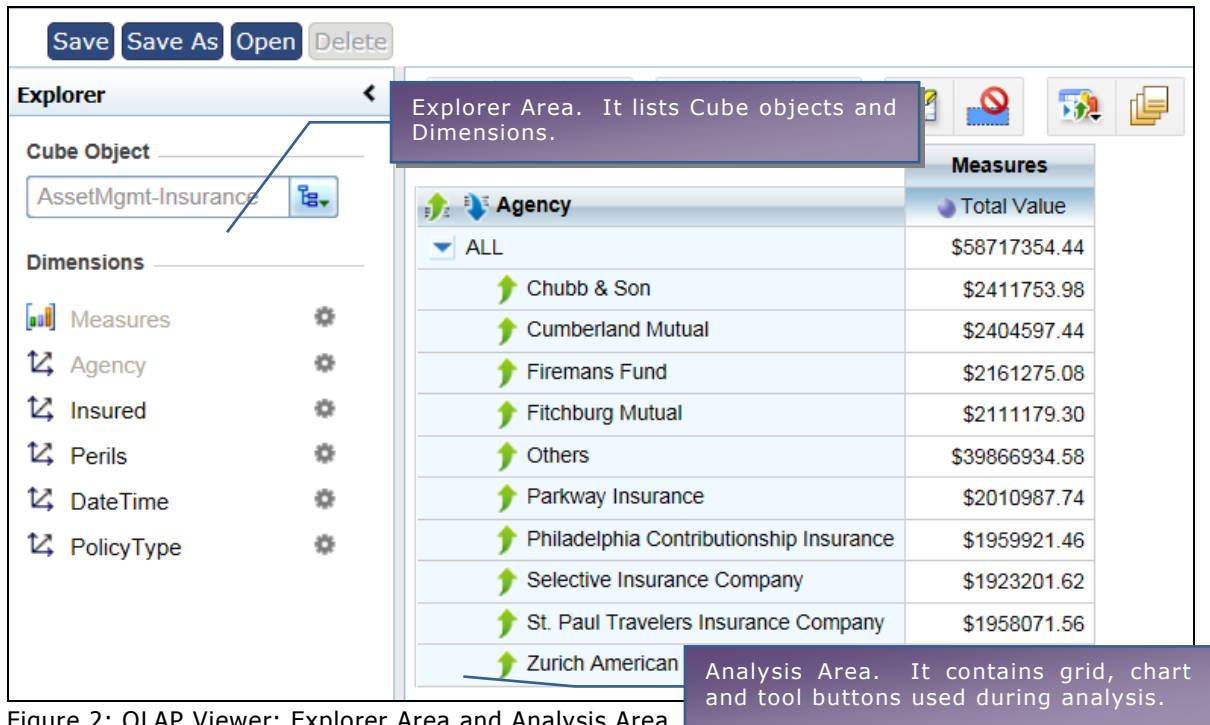OLAP Viewer has Explorer Area and Analysis Area.

Figure 2: OLAP Viewer: Explorer Area and Analysis Area

- **Explorer area:** It lists cube objects as well as measures/dimensions in the selected cube object.

- **Analysis area:** This area contains grid of column axis and row axis where you can add/remove dimensions to analyze data. It also has tool buttons to carryout grid operations.

Cube Object dropdown lists all the cube objects available.

Dimensions box lists measures and dimensions available in the cube object selected in **Cube Object** dropdown.

Filtering

You can filter fields as well as data.

Filtering Fields

Use the Filter on Dimensions List to filter grid / chart by fields.

To get a list of fields (dimension values), click ⚙ button next to **Measures**.

Select fields from under **Select Measures** to be displayed on chart / grid and click OK. You can also set a default value here.
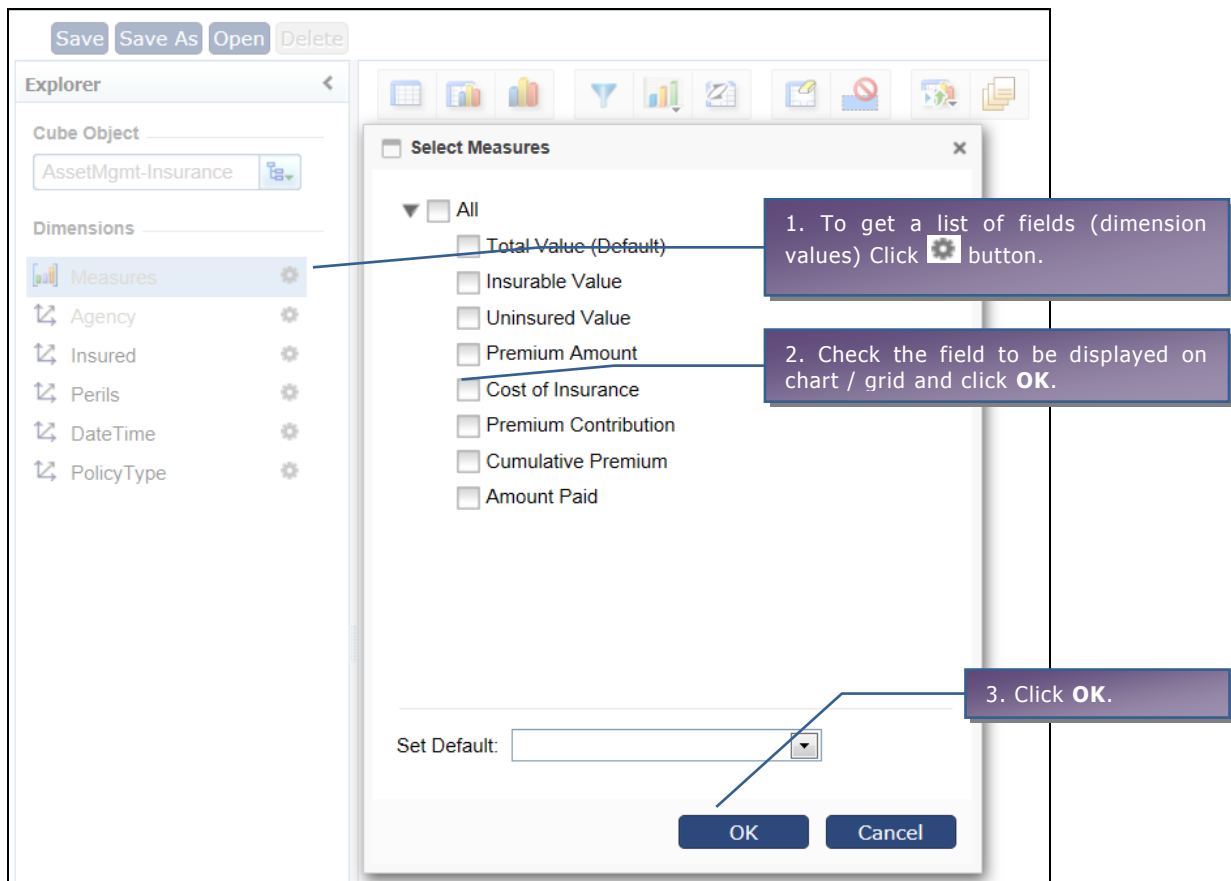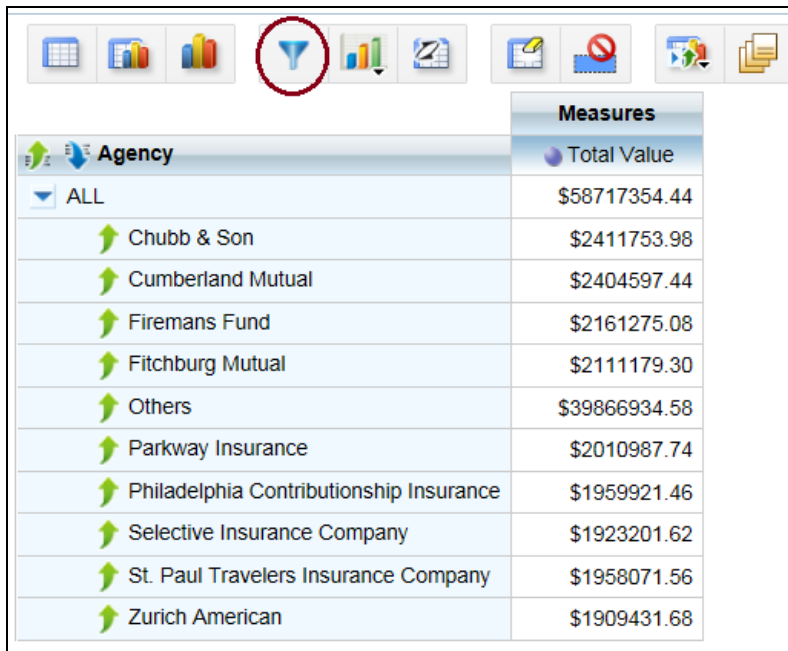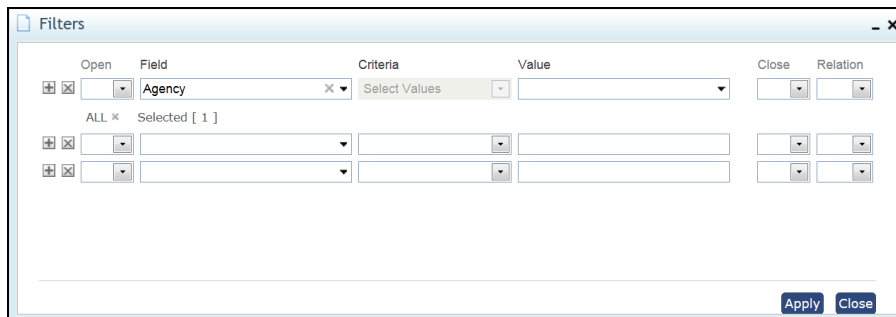

Figure 3: Filtering Fields

Filtering Data

Use **Filter** to filter grid / chart by data values. You can filter data by values of dimensions. Specify the filter criteria and click **Apply**.

Figure 4: Filter button

Figure 5: Specifying Filters Criteria

When you apply a filter by field or data, grid / chart will be immediately re-drawn.

Interacting with the grid

When you select a cube object, data area's grid has the **Measures** value on the column axis that is set Default while creating the Cube Object.

Moving another dimension/measure to column/row axis

To add fields (dimension values), click ⚙ button on the right side of the dimension name. Select either Add to Column or Add to Row to move to column or row respectively. You can also drag and drop the field to its respective location.

Grid will be re-drawn and newly moved dimension/measure will be displayed on the grid.

To remove a dimension/measure from column axis or row axis

Click the title of the dimension/measure, drag and drop it to any area outside the grid. The grid will be re-drawn which will not contain the removed dimension/measure.

> **Important:** Don't remove all the dimensions from the column area. If you do so, the grid will be cleared.

Tool buttons

- **Show Grid Only** : To view only grid in entire data area.

- **Show Grid and Chart** : To view grid as well as chart in data area.

- **Show Chart Only** : To view only chart in entire data area.

- **Filter** : To filter data in data area by specifying filter criteria to fields.

- **Select Chart Type** : To select chart type from the available options.

- **Swap Axes** : To swap the dimensions/measures on column with that on row.

- **Show Empty Rows/Columns** : To show rows or columns that are empty in data area.

- **Clear** : To clear the data from analysis area.

- **Clear Grid Selection** : To clear the selected data in grid from analysis area.

- **All Actions** : You can perform Expand / Collapse and drill-in/ drill-out actions on the OLAP layout. Select the action from: All, Expand/Collapse, Drilling or None.

- **Export** : To export the data from analysis area in specified format.

Creating more space on Analysis area

Close the explorer area. This will result into more on-screen space for analysis area. Click ◀ button to close explorer area. To re-open the explorer area, click ▶ button.

Actions on grid

To display members of a parent (Expand)

Click ▶ on left of expandable member of respective dimension to expand and view members along with parent. When the list is in expanded state, the button turns to ▼.

Figure 6: Displaying members of a parent

To hide members of a parent (Collapse)

Click ▼ on left of expandable member of respective dimension to collapse (hide) its members. When the list is in collapse state, the button turns to ▶.

Sorting

All column titles have a button indicating the current sort order. Clicking the button will sort the grid by "next sorting order in sequence" of values in that column.

- ● : **Natural order**: It is the order in which data is represented initially. Click to sort by ascending order.

- ▲ : **Ascending order:** It is the order that will represent the data in ascending order (Highest to lowest). Click to sort by descending order.

- ▼ : **Descending order:** It is the order that will represent the data in descending order (Lowest to highest). Click to return to natural order.
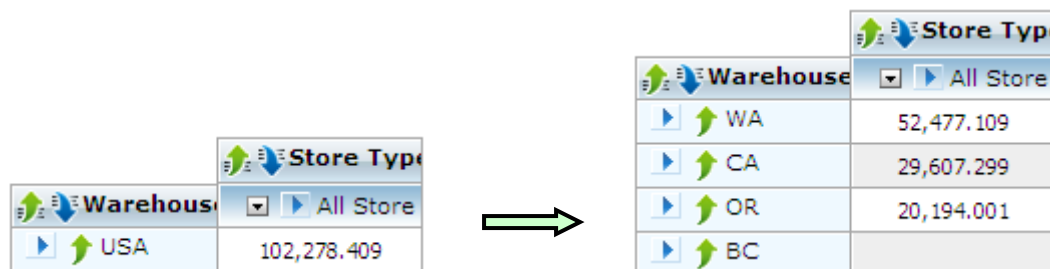
Figure 7: Effect of sorting: Natural order, Ascending order and Descending order

Drilling

Drilling down gets you more details on the grid. When you drill down, parent information is removed from the screen.

◆ : **Drill down level**: Appears at top level. Click to drill down one level.   This will hide parent information and display next level detail.

Figure 8: Effect of drill down on the grid

◆ : **Drill up level**: Appears at top level. Click to hide the detail opened by drilling down and return to one level up.

Figure 9: Effect of drill up on the grid

Drill down member: Click a member to drill down and view its detail.

Figure 10: Effect of drill down member

⬆ : **Drill up member**: Click to close the detail of the member and move up one level.

Figure 11: Effect of drill up member

Interacting with Chart

Actions on Chart

You can carry out expand / collapse and drill actions on chart. To carry out an action on chart, you set the desired chart action, select the interactive dimension and take the action.

To set chart action

Chart action is selected by clicking the button on **Select Chart Action** group button.

- **Expand/Collapse**: Click Expand/Collapse action button.

- **Drill**: Click Drill action button.

To select Interactive Dimension

Select the dimension from **Interactive Dimension** dropdown box.

Taking the action

To Expand

When Expand/Collapse action is selected, click the chart. Chart will be expanded.
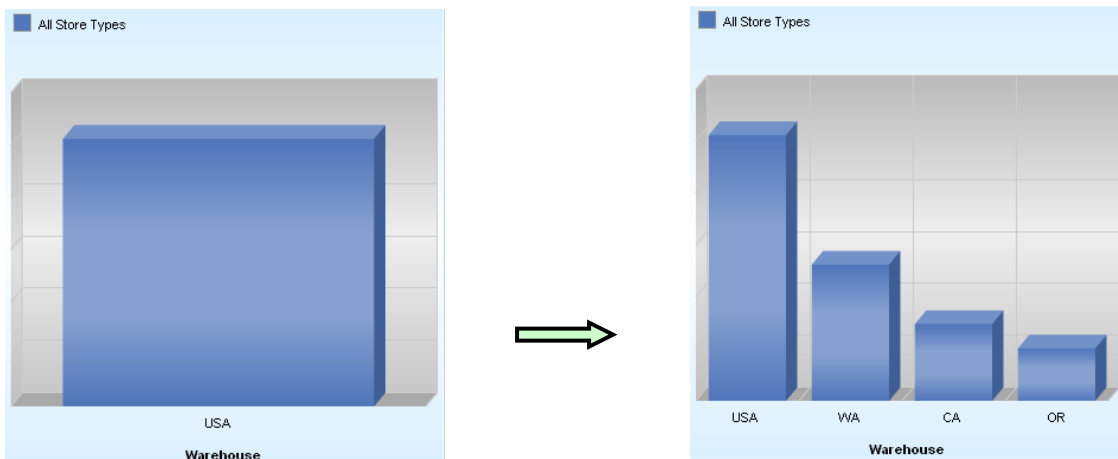
Figure 12: Effect of "Expand" on chart

To Collapse

When Expand/Collapse action is selected, click the chart depicting expandable member (the member on chart you clicked to expand).
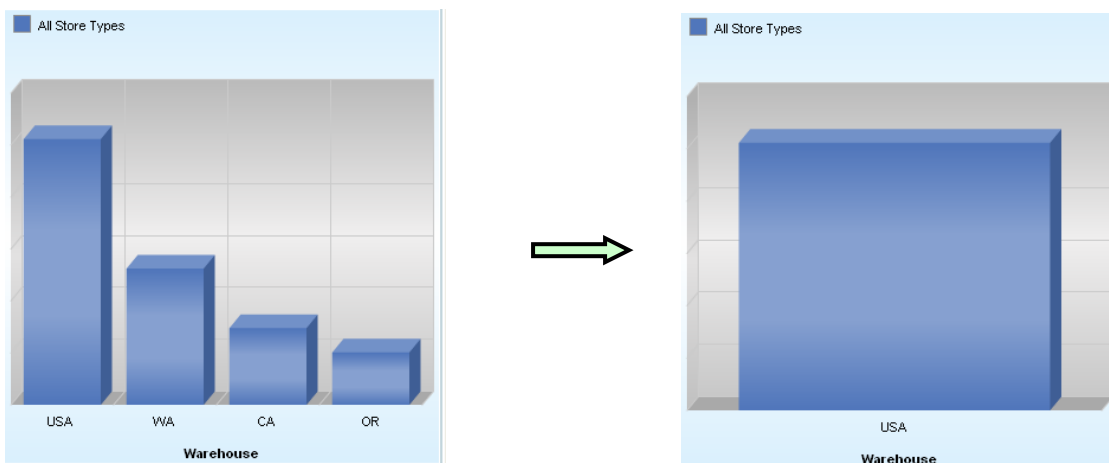
Figure 13: Effect of "Collapse" on chart

Drill down and drill up a level

Drilling down gets you more details on chart. When you drill down, parent information is removed from the screen.
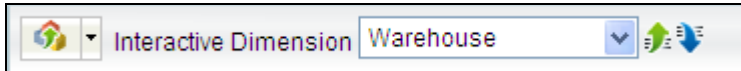
Figure 14: Drill up a level and drill down a level buttons on chart toolbar

 : **Drill down level:** Click this button to drill the entire chart down one level. This will hide parent information and display next level detail.
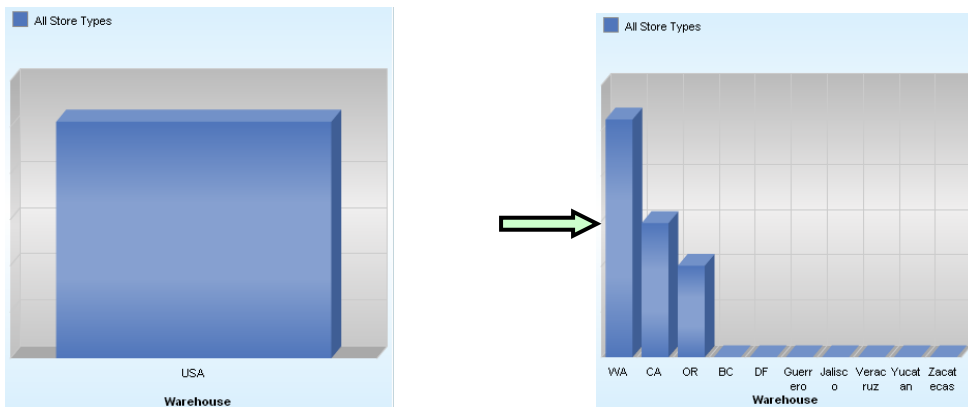
Figure 15: Effect of "Drill down level"

 : **Drill up level:** When chart is already drilled down, click this button to drill up one level.

Drill down a member and drill up

When the chart is not drilled down, click the chart to drill down the member. Chart will be drilled down.

When the chart is already in drilled down state, click the data point / bar representing the member you want to further drill down. Menu will open up. Click Drill Down ↓ icon to drill further down. On the menu, click Drill Up ↑ icon to drill up. Chart will be re-drawn.
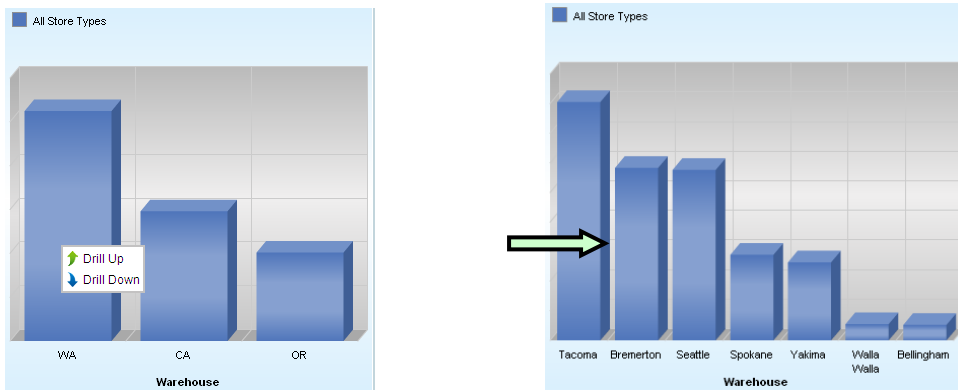
Figure 16: Effect of Drill Down a member

Saving an OLAP Layout

After you create an OLAP layout, you may save it so that next time, you can begin from where you left last time.

Use this dialog box to save the OLAP layout. **Save OLAP Layout As** dialog box opens up when you click **Save** button for the first time after working on a new layout. It also opens up when you click **Save As** button.
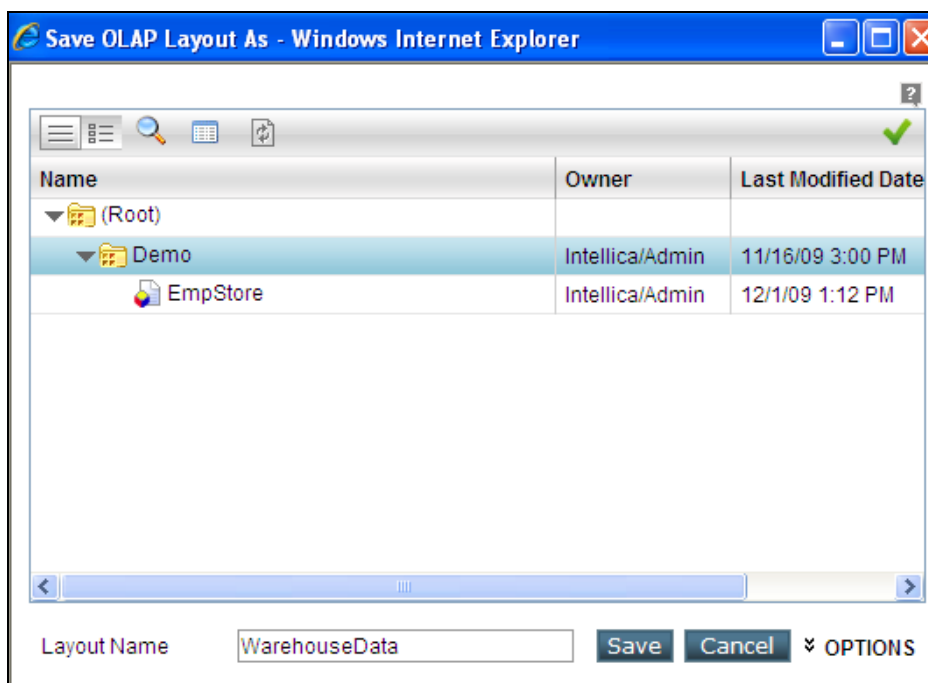
Figure 17: Save OLAP Layout As dialog

OLAP Layouts are saved in a folder. Folders are stored as multi-level structure in the repository and can be viewed on Object Selector. You need to navigate to the folder where you want to save the layout.

At the time of saving, you need to provide a unique **Layout Name**. Naming guidelines are provided later in this section. Along with the layout name application also saves the **ID** of the user who created the layout).

When you click Options link, the dialog box expands. This area has options that you can set for the OLAP Layout being saved.

Specify **Description** of the OLAP Layout and set its scope to **Public** (available to all) or **Private** (available to you).

Click **Save** to save the layout.

Layout naming guidelines

- Layout name needs to be a unique name across all layouts.

- Use alphabets (A - Z, a-z), numbers (0-9), dash (-), space and underscore (_) to form the name.

- A name can up to 256 characters long. It is always good idea to have a smaller name.

Opening an OLAP Layout

To open an OLAP layout, you need to click **Open** button on **OLAP Viewer**. It opens Open OLAP Layout dialog, which will list folders and OLAP layouts accessible to you.
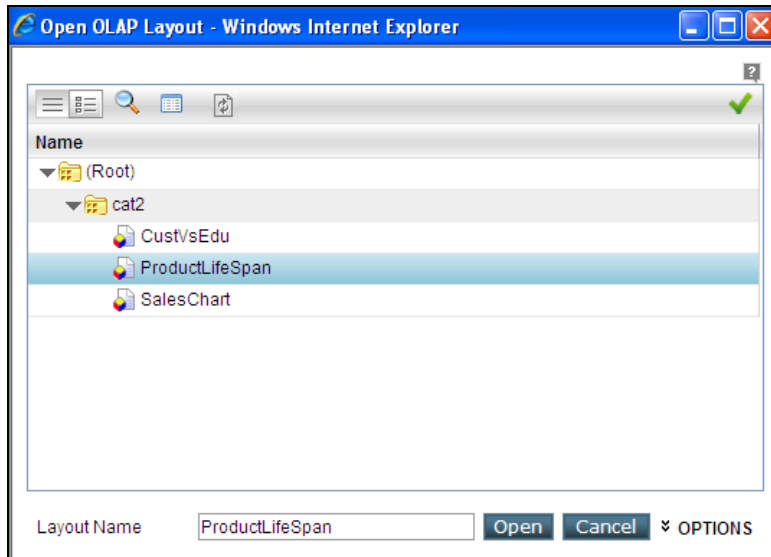
Figure 18: Open OLAP Layout dialog

To open an OLAP Layout

OLAP Layouts are available in a folder. Folders are multi-level structure in the repository and can be viewed on Object Selector. You need to navigate to the desired folder and locate the layout you want to open.

Click **Options** link to view the description and the scope of the OLAP Layout.

Select an OLAP Layout and double-click it or click **Open** button to open it.

> **Tip:** OLAP layout (report) can also be opened from Object Explorer.

Folder and Objects List

Folder and Object List (also known as Object selector) has following features:

- Detailed and List View

- Search

- Sort

Click ▶ to open a folder and list its contents. Click ▼ to close the folder. Double-click on the folder or object will select it.

When dialog opens, List View is active, which lists folders and objects. If you are dealing with large number of objects, you may search objects by attributes like last modified date or the person who created it.

To get such (and other object-based) details, switch to **Detailed View** by clicking ▤ button. In this view, columns of **Owner** (the organization and the user ID used to create the folder/object), **Last Modified Date** and **Content Type** are displayed by default. To get columns that you need,

1. While in **Detailed View**, right-click on title-bar to open a context-menu.
2. Context-menu has checkboxes of columns that can be displayed. Check what you want to view and uncheck what you don't. Respective column will be instantly added / removed from the view.

To close the context-menu, click anywhere on the title-bar.

Changing column-width

If an object name is not completely visible or if a column is too wide hiding other columns in the row, you may wish to adjust respective column-width. To do this, take the mouse pointer towards the right boundary of the column-title till pointer changes to double-headed arrow.
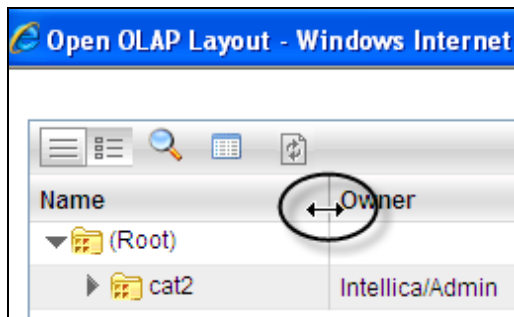

Figure 19: Changing column-width

Now, drag it on the right or left to increase or decrease the column-width respectively.

Sorting the list

It is quicker to find the desired item if the reference is sorted. To sort the list by a column, click its column-title. The list will be sorted in Ascending Order of the column.

Figure 20: Effect of sorting a column

Look for an arrow icon on the right edge of the column. It indicates current sort order. Click the column once more to sort the list in opposite order.   Clicking another column's title will sort the list in Ascending order of that column.

Adding or removing columns

By adding or removing columns in the list, you may include in the list only the columns that you need.

Right-click on title-bar to open a context-menu. Context-menu has checkboxes of columns that can be displayed.

Figure 21: Add or remove columns

Check name of the column to display and clear the column that you don't want to display. The columns will be instantly added / removed from the view.

To close the context-menu, click anywhere on the title-bar.

Filtering the list (Searching)

When a list has a large number of items, it becomes a bit difficult to navigate to the item you are looking for. On this page, you can filter list using Quick Search and Advanced Search to get a smaller list.

Quick Search

Use Quick Search to search the objects by Name. Click **Search** 🔍 to open the search box. In the box, specify a few characters of the name. The list will be refreshed with objects having the characters specified in the search box.
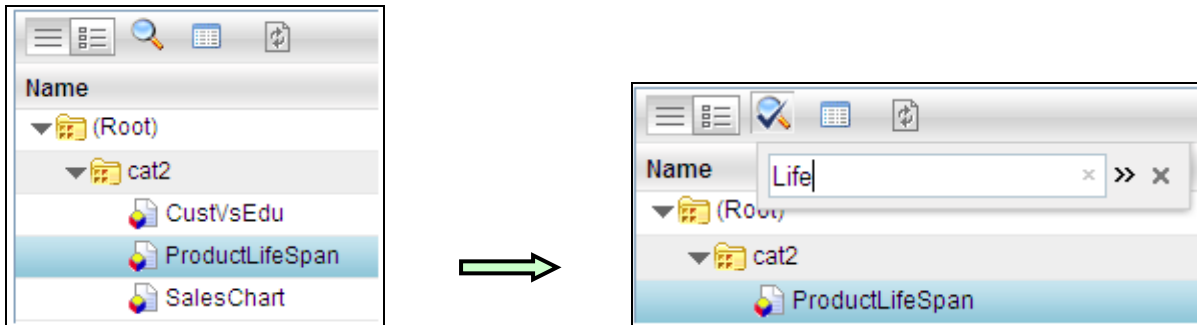

Figure 22: Effect of Quick Search

When you apply a search filter, the 🔍 button turns to 🔍 button (even when the search box is closed). To remove the filter, click ✖ button in the box. To close search box, click **Search** button again.

Advance Search

Use Advance Search to search organizations by multiple attributes like Name, Text in the description and creation date. You can create search criteria using any of the conditional operators like "Is", "Contains", "Starts with" and "Ends with". Multiple criteria set on the same attribute are joined by OR. Multiple criteria set on different attribute are joined by AND.

To specify a search criteria

Click **Search** 🔍 button to open the **Search** box. In **Search** box, click » icon to open **Advance Search** box. When open for the first time, this box will have one criteria row. Specify the criteria.
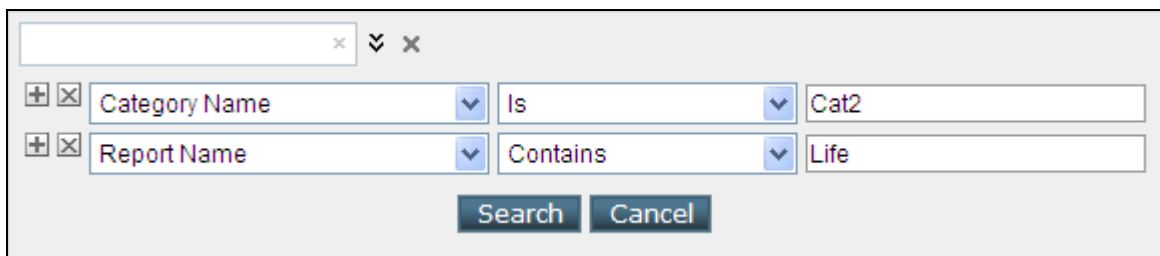

Figure 23: Advance Search dialog

Depending on attribute, value box will remain text box (to type in the value) or change to a dropdown (to select a value from preset values) or a date box (to select a date). Using buttons provided on the left of the row you may open another criteria row ➕ (add filter) or delete current row ⊠ (remove filter).

After specifying the criteria, click **Search** button to start the search.   Filtered organizations will be listed. To return to unfiltered list, click ⬚ button. To view filtered list, click ⬚ button.

To close the **Advance Search** box, click ⌄ button.