Understanding BEx Query Designer: Part-5 Query Element Properties

Applies to:

SAP NetWeaver BW.

Summary

This document is the fifth installment of a 6 part Query Designer Training guide for Beginners. It deals with understanding the need and use manipulating the properties of the query elements and the query itself to get the desired result. This document will also be helpful to intermediate and advanced level users to learn some usually ignored but helpful facts about the Query Designer.

Author: Shyam Uthaman

Company: Accenture Services Pvt. Ltd.

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Author Bio

Shyam Uthaman is working as SAP-BI Consultant.

He is working simultaneously on multiple projects for different clients in Accenture.

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The BEx Query Designer

Definition

It is an Independent desktop application for defining queries.

Use

You analyze the dataset of the Business Information Warehouse by defining queries for InfoProviders using the BEx Query Designer. By selecting and combining InfoObjects (characteristics and key figures) or reusable structures in a query, you determine the way in which you navigate through and evaluate the data in the selected InfoProvider.

Integration

You open the Query Designer from Start/Programs/Business Explorer/Query Designer.

You can also call up the BEx Query Designer from the following components:

- BEx Analyzer
- BEx Web Application Designer
- Crystal Reports (Crystal Reports ≥ 8.5 incl. CR add-ons for SAP)

Features

The BEx Query Designer contains the following functions:

- You can use the queries that you define in the query designer for OLAP reporting and also for tabular reporting.
- You can parameterize the queries by using variables for characteristic values, hierarchies, hierarchy nodes, texts, or formulas.
- You can select InfoObjects more precisely by:
    - · Restricting characteristics to characteristic values, characteristic intervals and hierarchy nodes
    - · Defining formulas
    - · Defining selections
    - · Defining reusable calculated and restricted key figures.
    - · Using local or reusable structures
    - · Defining exceptions
    - · Defining conditions

The most significant components of the query definition are the filter and navigation:

- Selections in the **filter** have a limiting effect on the whole query. When defining the filter, you select characteristic values from one or more characteristics or from a key figure. All of the InfoProvider data is aggregated using the filter selection of the query. The filter selection cannot be changed by navigation.
- For navigation**,** you select user-defined characteristics and determine the content of the rows and columns of the query. You use this selection to determine the data areas of the InfoProvider over which you want to navigate. The arrangement of the contents of the rows and columns also determines the default view of the query and the rows and columns axes in the results area.

  After it is inserted into the Web browser, a query is displayed in the default initial view. By navigating through the query, you can generate different views of the InfoProvider data, by dragging one of the user-defined characteristics into the rows or columns of the query, for example, or by filtering a characteristic according to a single characteristic value.

With the definition of a query, the InfoProvider data can be evaluated specifically and quickly. The more detail in which the query is defined, the quicker its execution and navigation.

Query Element Properties

All components of query including the query itself have their own set of properties. These properties determine the behavior of the element. The properties for the selected query element are visible in the properties screen area of the BEx Query Designer. Also, you can select a query element for which you have to define the properties from the dropdown available in the Properties screen area.

This document will explain all the settings contained in the Properties pane of the query designer.

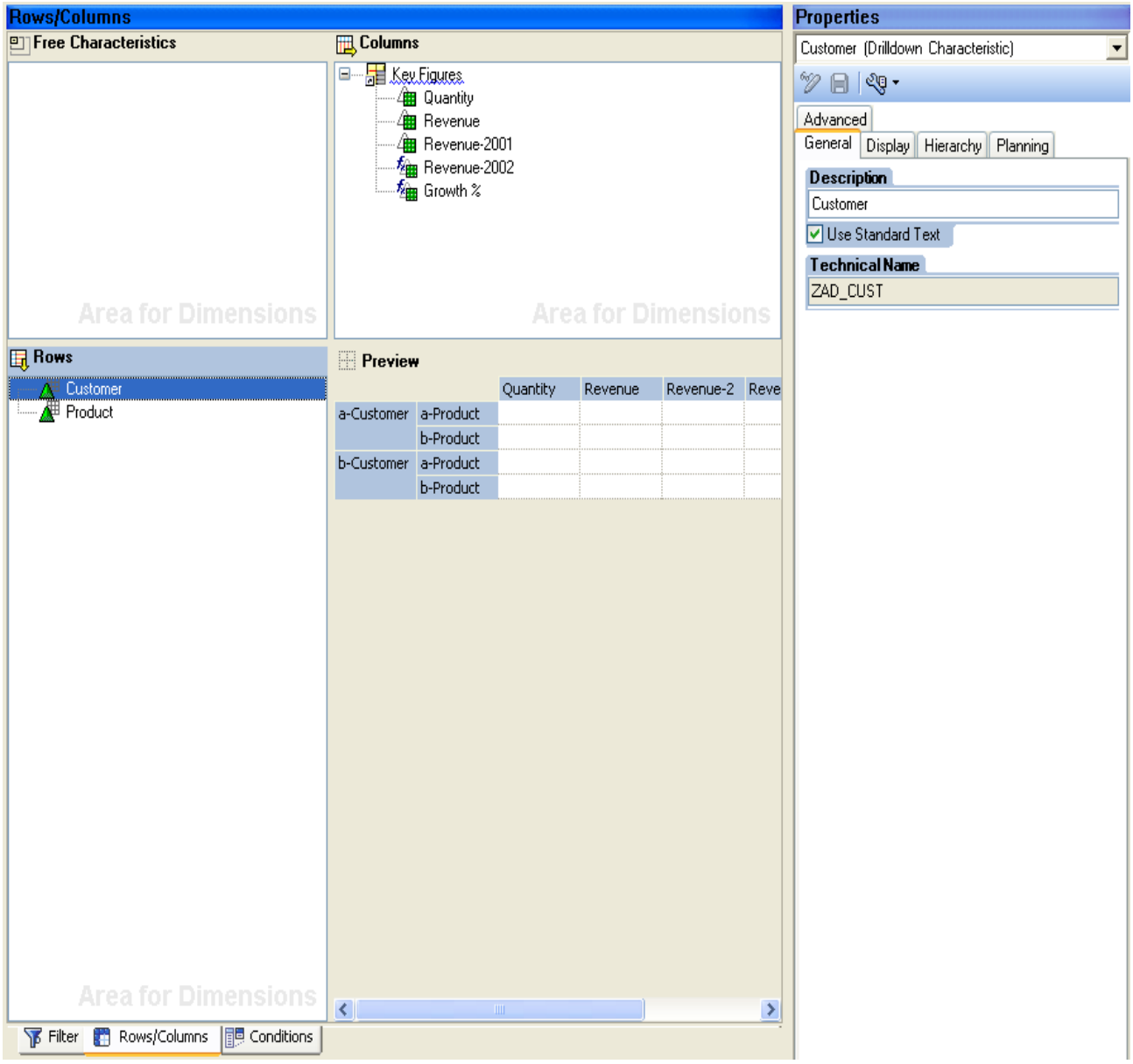
We will be discussing the following:

- Characteristic Query Element Properties
- Key Figure Query Element Properties
- Query Properties

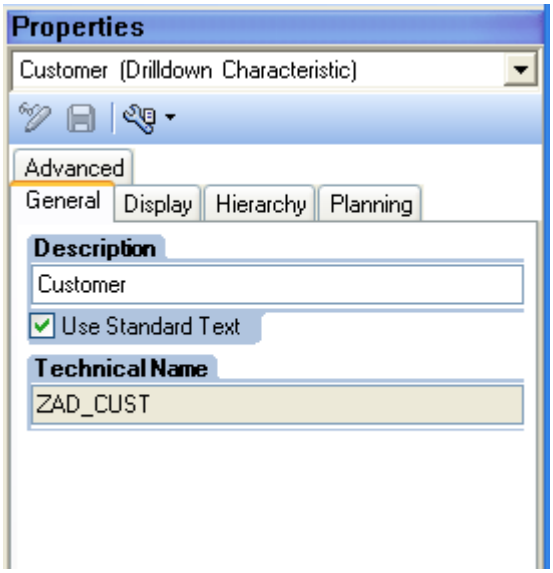
in detail.

Characteristic Query Element Properties

We will explain the different properties that correspond to a characteristic query element. Select the characteristic for which you want to define the properties as shown below.



Characteristic Properties: General tab

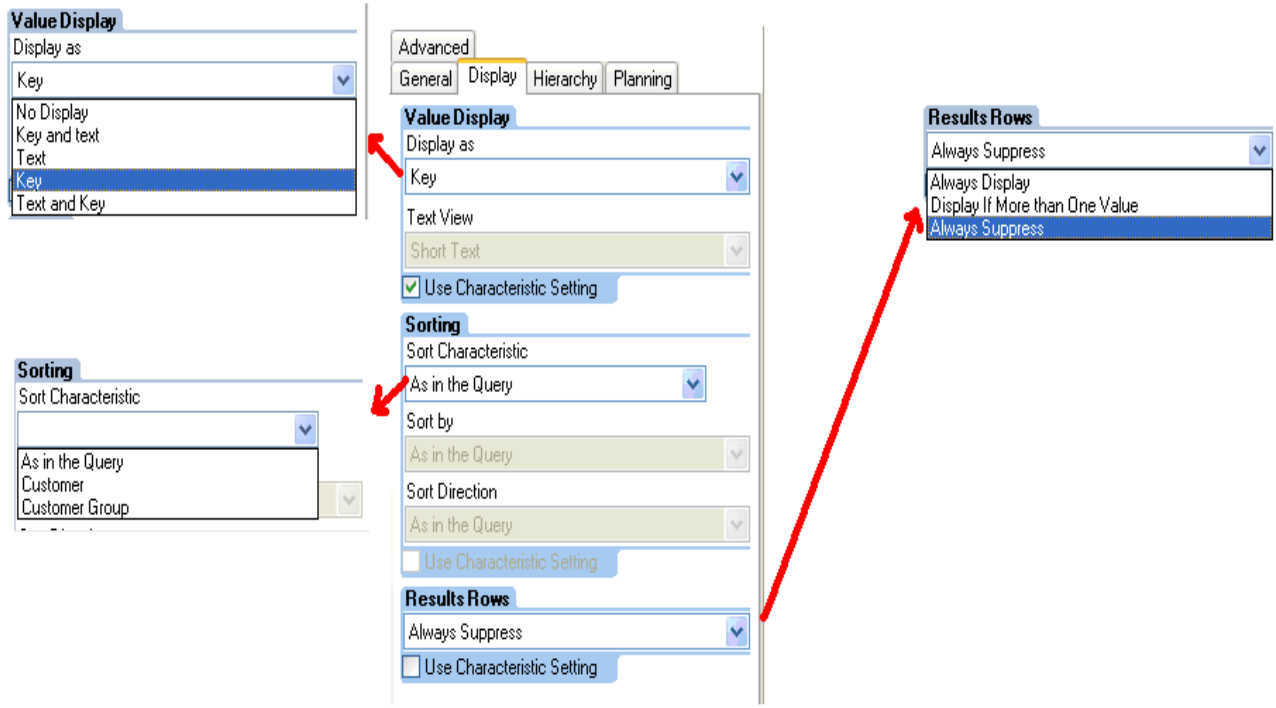


In the general tab, you maintain the description of the characteristic of the query which will be displayed in the query output when it is executed.

If you use the 'Use Standard Text' checkbox, the description as mentioned in the InfoObject definition is selected.

The Technical name of the Characteristic will also be displayed as seen below.

Characteristic Properties: Display tab



The Display Tab is divided into the following 3 sections:

1. **Value Display Section**

   To select the way the characteristic values should be displayed.(No Display, Key and Text, text, key or text and key)

   In the text view drop down, you can specify if you want the short, medium or long text to be displayed.

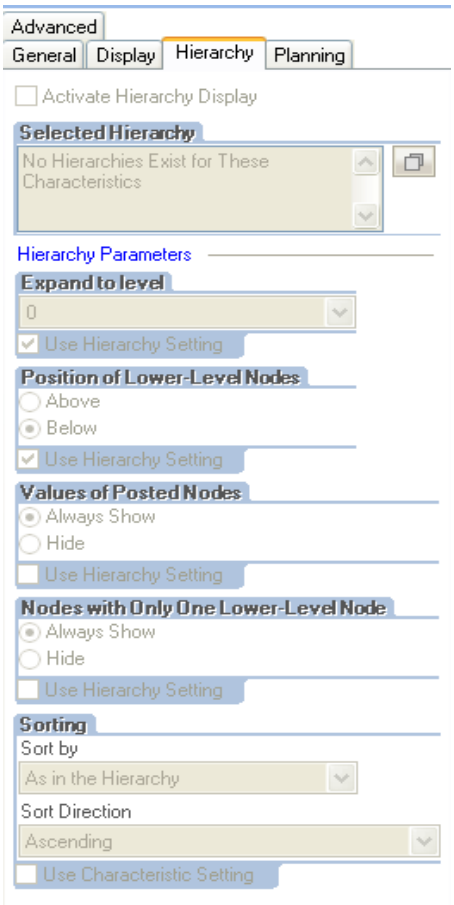
2. **Sorting Section**

   In this section, you will define if the characteristic will be sorted in ascending or descending in the query output.

3. **Result Rows Section**

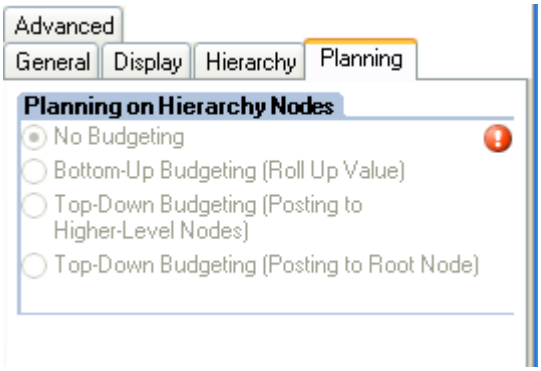
   The result rows section allows you to set the display options of the summations in the query output.

Characteristic Properties: Hierarchy tab



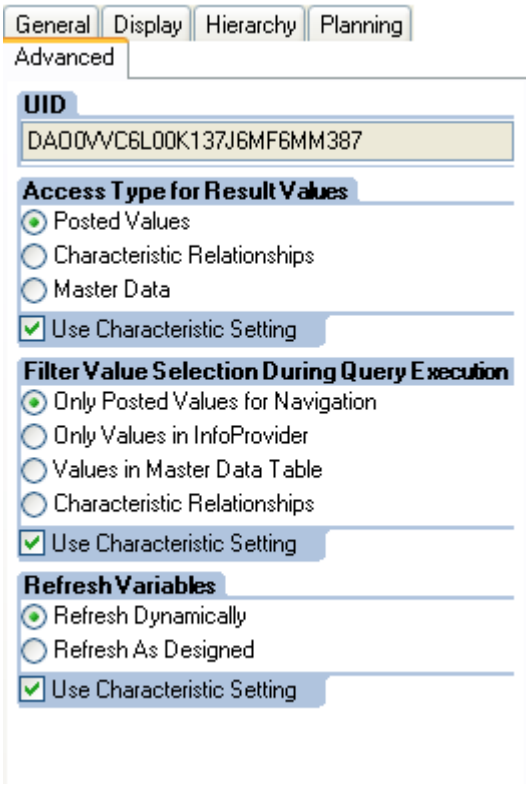
If the characteristic, for which properties are being maintained, contains hierarchies built on it, then you can set different properties on the Hierarchy tab. On this tab, you can select the hierarchy to be used in the query, and you can define the display sorting settings for the selected hierarchy.

Characteristic Properties: Planning tab



The option specific to planning on hierarchy nodes are available on the Planning tab of characteristic properties. This setting is relevant for input-ready queries only.

Characteristic Properties: Advanced tab



The properties related to data access and data selection are maintained on the Advanced tab of the characteristic properties.

The Advanced Tab is divided into the following 3 sections:

1. **Access Type for Result Values**

   In this section you can define what values of the characteristic should be displayed in the query output. These options are:

- **Posted Value:** Upon selection of this option, only posted values of the characteristics are displayed in the query output.
- **Characteristic Relationships:** Upon selection of this option, you can display the data as per characteristic relationships.
- **Master data:** Upon selection of this option, all the characteristic values from the master data are displayed irrespective of whether transaction data exists for those values or not.

2. **Filter Value Selection During Query Execution**

   This setting determines the list of values you would get while selecting a filter value during query execution.

3. **Refresh Variables**

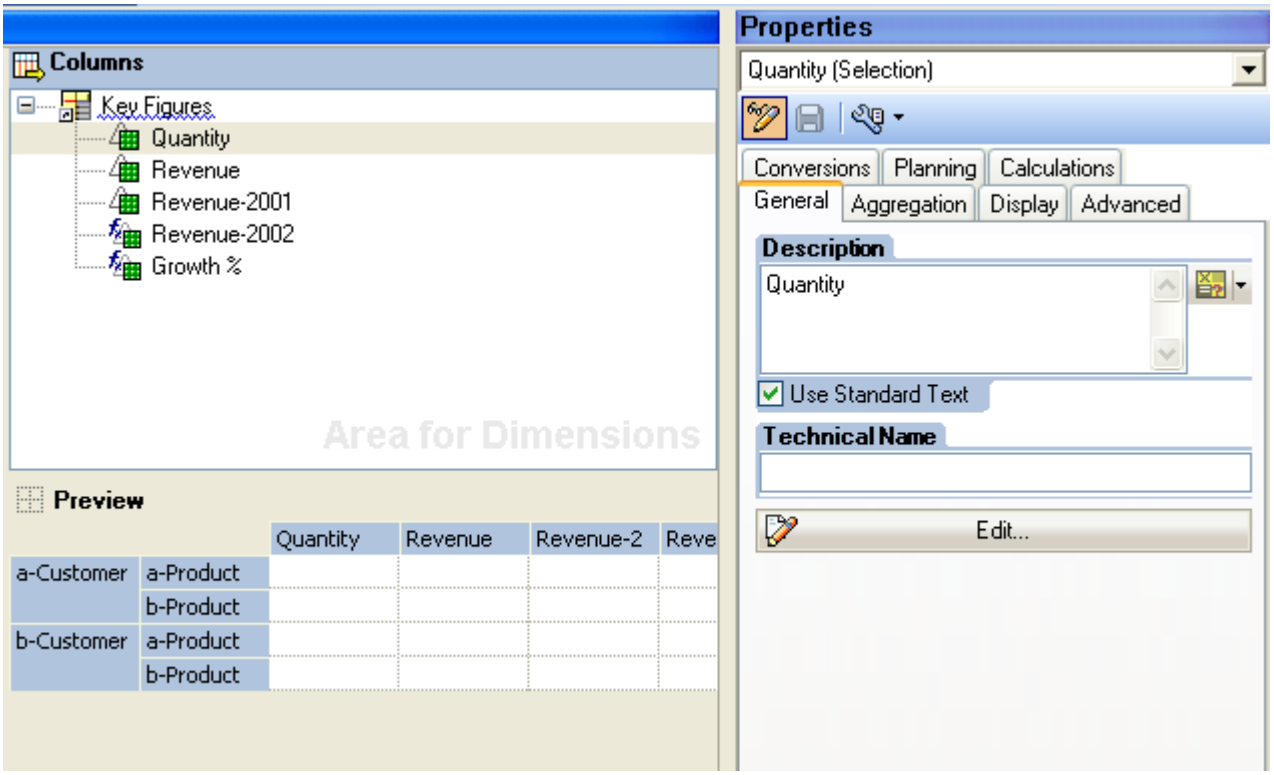
   Here you can make variable refresh settings using either of the following options available:

   - **Refresh Dynamically**
     If you choose this option, the system refreshes the workbook or Web application using the settings from the current navigation view.
   - **Refresh as Designed**
     If you choose this option, the system refreshes the workbook or Web application using the hierarchy and filter settings from Query Designer.

Key Figure Query Element Properties

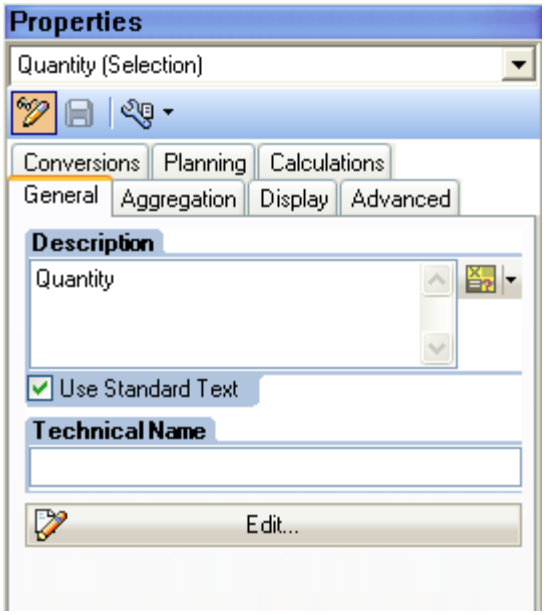
Now, we will look at the different properties for key figure query elements.

Click on the key figure whose properties have to be modified. The properties pane will display the key figure settings as shown below.



We will now look at the different tabs available under key figure properties pane.

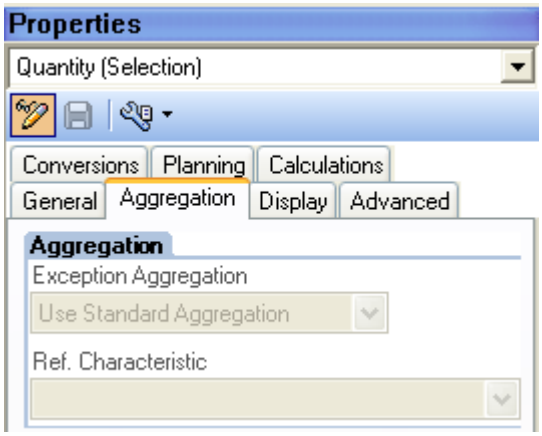
Key figure Properties: General tab



You can maintain the description and technical name of the query element in this tab. To maintain the default description, click on the 'Use Standard Text' checkbox. Or else you can uncheck this checkbox and provide your own description to be shown in the query output.

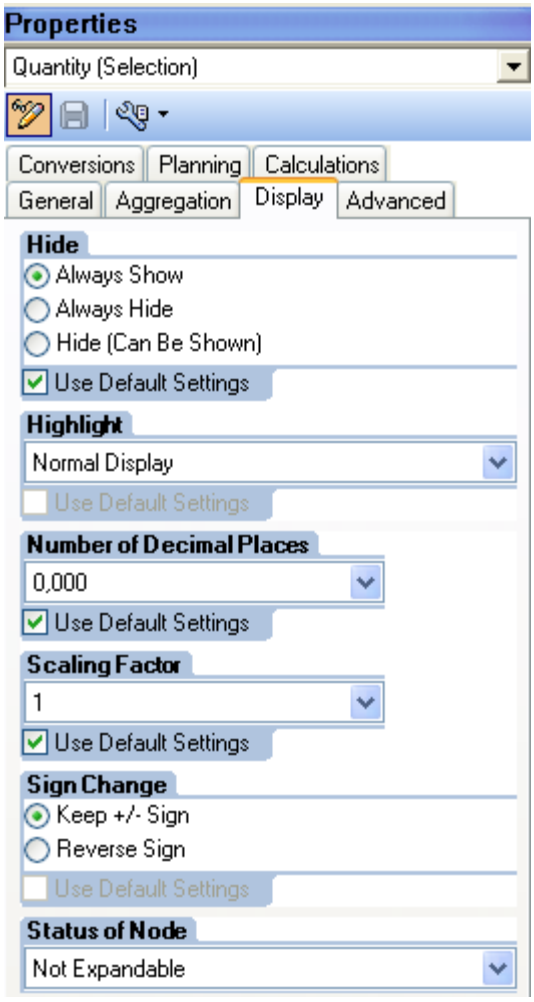
You can also edit the definition of this element by clicking the Edit button.

Key figure Properties: Aggregation tab



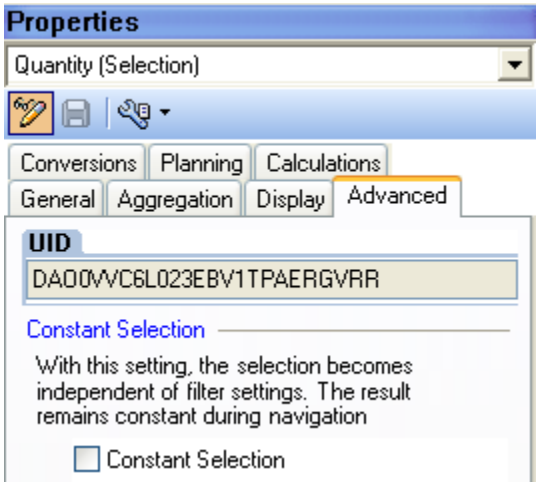
Here you can specify how the aggregation should take place for the key figure when the query is executed. This tab is enabled only for the query elements of type formula or Calculated Key Figures.

Key figure Properties: Display tab



Use the settings under the Hide section if you want to hide the key figure in the output. There is also an option available to highlight the key figure value under the Highlight section. Additional settings related to the number of decimal places, scaling factor, and so on, can be set under the display tab.

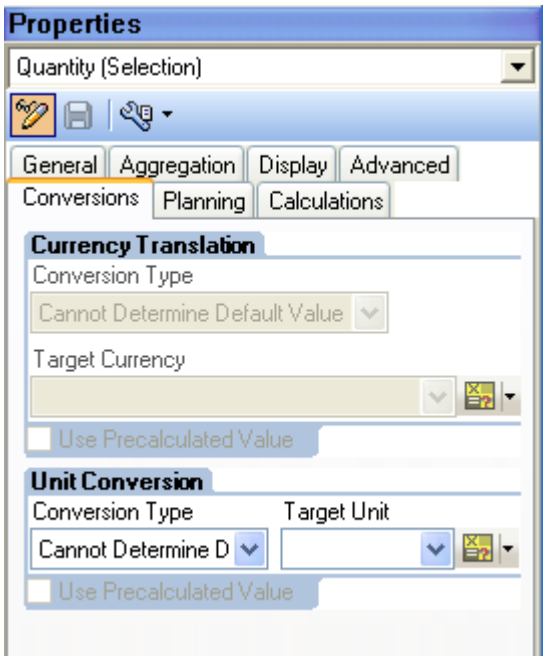
Key figure Properties: Advanced tab



The constant selection setting is available only for the elements of type selections or Restricted key figures.

The setting of constant selection is used if you want to keep the characteristic selections mentioned in the definition of the selection/RKF as a constant. It means that during the query execution, the restrictions applied on the key figure do not change.

Key figure Properties: Conversions tab

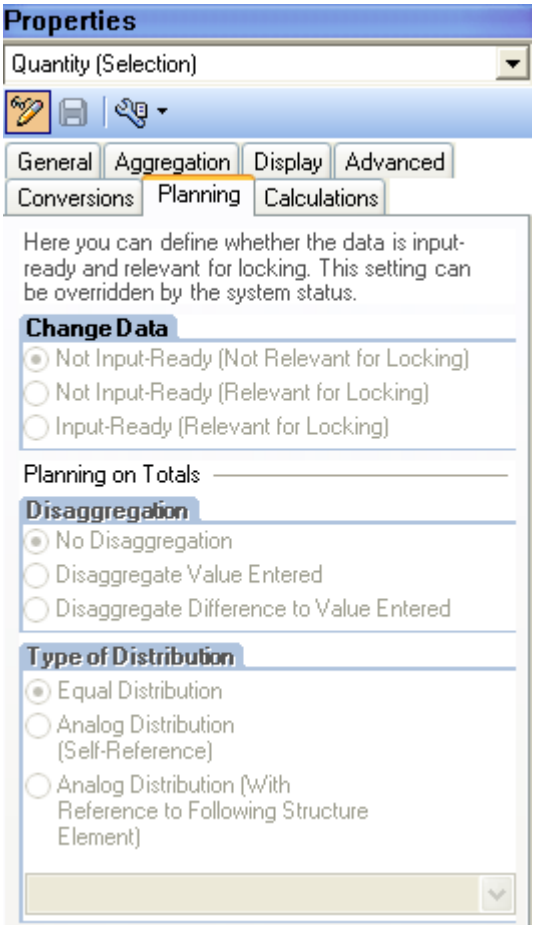


The settings on the Conversions tab are useful if there is a key figure of type amount or quantity included in the query element definition, and you need to convert the amount or quantity in the uniform currency/unit.

The currency Translation section of this tab is available for key figures of the type amount. Here, you can define the way the amount needs to be converted by specifying the Conversion type and the Target Currency to which the key figure value is translated.

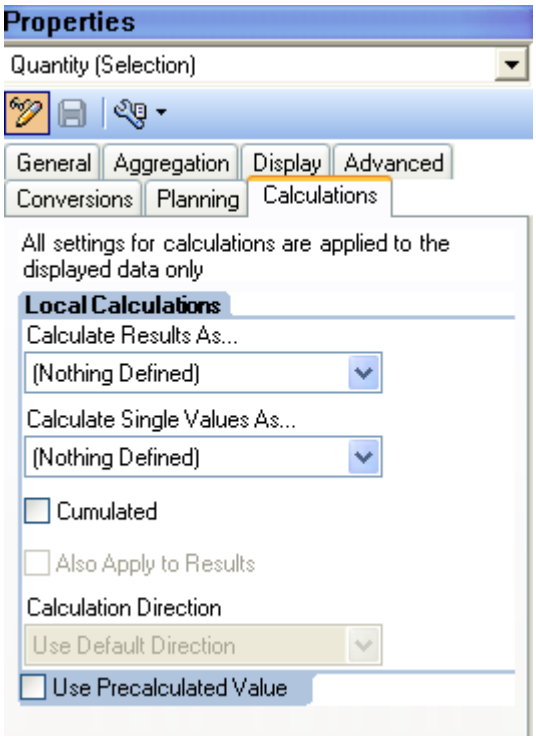
The key figure is of type quantity, the Unit conversion section of this tab is enabled. Similar to the settings for currency translation, here you have to define the Conversion Type and the Target Unit as parameters for unit conversion.

Key figure Properties: Planning tab



The Planning tab allows you to set the properties for a key figure included in an input-ready query.

Key figure Properties: Calculations tab

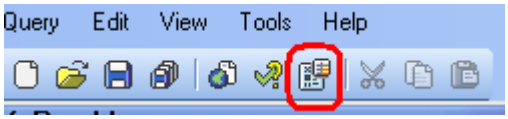


The calculations tab allows you to define the way you want the results and the single values to be calculated for the report output.

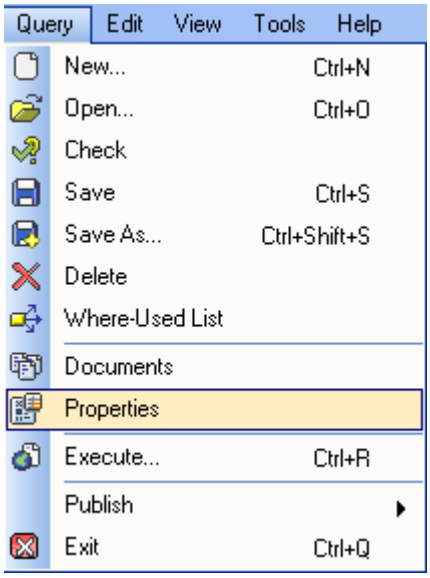
The option you choose in the Calculate Result As area will recalculate the result per the selected option. Similarly, the option you select under Calculate Single Value As will influence the way single values are recalculated for the query output display.

Query Properties

Different properties are defined at query level. To display these properties, click on the Query properties button from the menu bar as shown below.



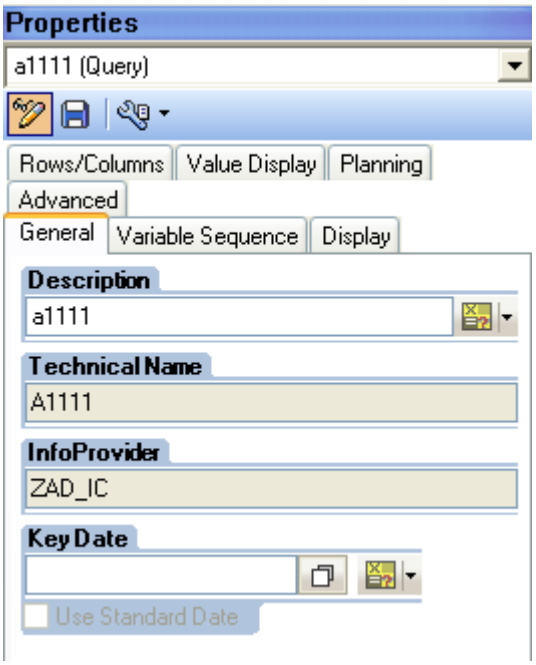
Alternatively open the Query properties by selecting Query→ Properties as shown below.



There are seven different tabs where you can set the query properties.

These tabs will now be explained in detail.

Query Properties: General tab

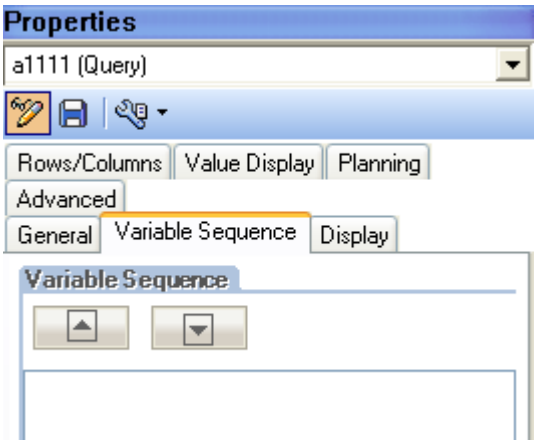


The general tab of the query properties displays the technical name and allows you to maintain the description of the query. This description is visible to the report user when the query is executed.

If the query involves time-dependant master data, then the date specified in the Key Date field is used to derive the values from the time-dependant data. You can maintain any specific date in the query, or you can use a characteristic variable on the date as a more flexible option.

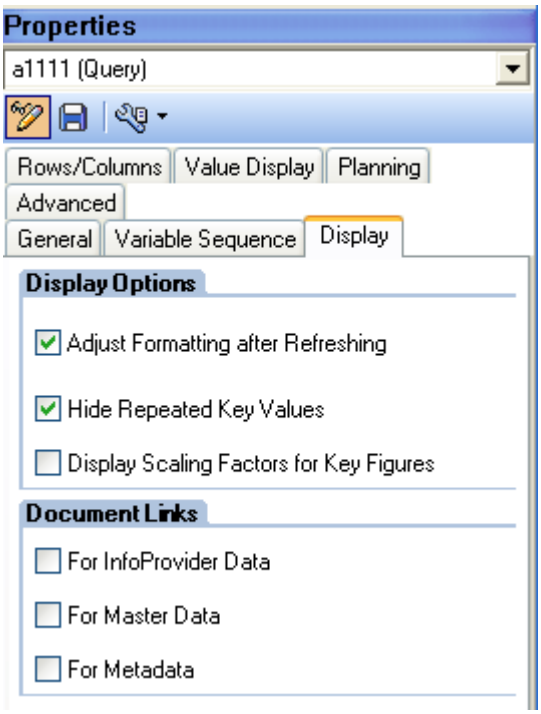
If nothing us included I the Key Date settings of the query, then the date of query execution is considered as the key date for that query.

Query Properties: Variable Sequence Tab



It displays the list of all the variables that are enabled for user entry. You can change the order in which the variable should appear in the selection screen, when it is executed.

Query Properties: Display tab

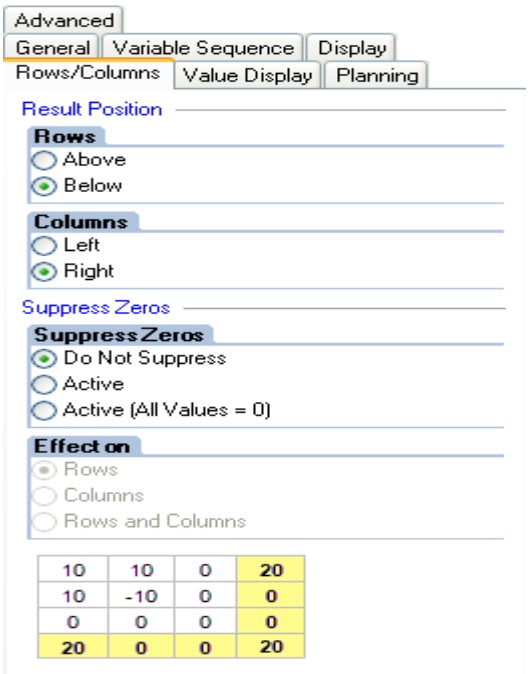


The formatting, display of key values, and display of scaling factors settings are done in the Display Options section.

When you use the Hide Repeated Key Values setting, the key values that are repeated in successive records are hidden, and only the first record displays the characteristic value, which is repeated.

You can also select if you want to provide document links in the query by selecting the relevant Checkboxes.

Query Properties: Rows/Columns tab



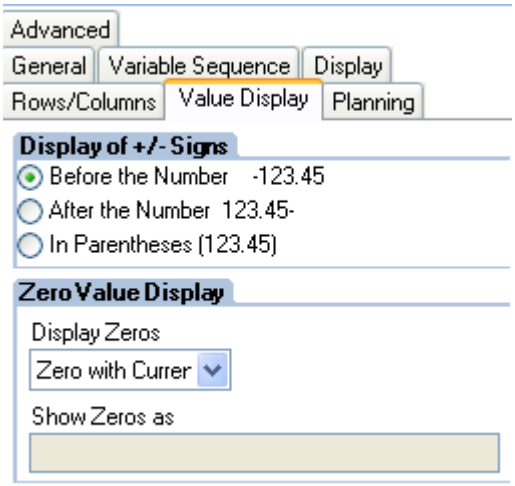
This tab allows you to maintain settings related to rows and columns displayed in the query result.

The position of the result rows and result columns is determined based on the settings maintained under the Result Position section.

You can also decide to suppress the zero values from the query output in the Suppress Zeros section.

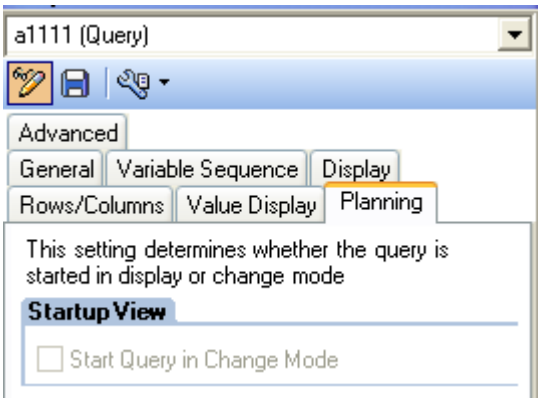
Here, you can decide if you want to apply the suppression either to rows or columns or to both rows and columns in the Effect On section. This tab also displays a preview of the settings chosen on this tab.

Query Properties: Value Display tab



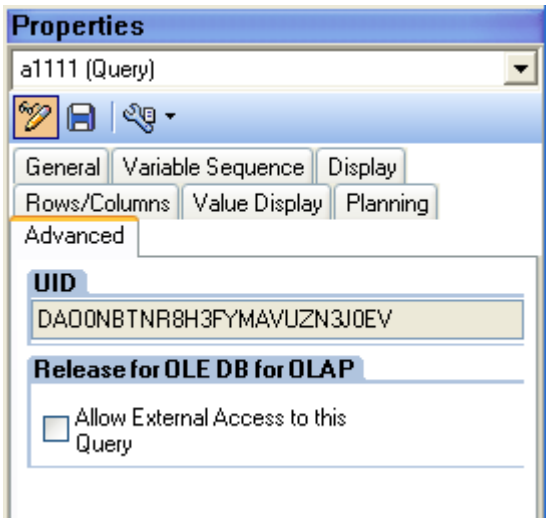
The settings related to key figure display, such as display of +/- signs or display of zero values, are maintained on the Value Display tab.

Query Properties: Planning tab



The planning tab is relevant only to the input-ready queries where you can make the setting to open the query in change mode. This means users can enter and change the key figure values that are enabled for input.

Query Properties: Advanced tab



The Allow External Access to This Query setting on this tab determines if the query can be executed through OLE DB for OLAP.

Related Content

http://help.sap.com/saphelp_erp2004/helpdata/en/4d/e2bebb41da1d42917100471b364efa/content.htm

http://sapdocs.info/sap/bw-bi-bobj/sap-bex-query-designer/

http://help.sap.com/saphelp_nw04/helpdata/en/f1/0a569ae09411d2acb90000e829fbfe/content.htm

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