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Possible F4 Modes

The mode being passed to the value help processor dictates where (which database table) the data is to be fetched from. In BW you can set 3 F4 modes:

- **M-mode** ("Values in Master Data Table"): in this case all the master data values present in the master data tables (P,Q tables) are fetched for the value help request.
- **Q-mode**: ("Only Posted values for navigation"): in this case only the values that are present as a part of query result are fetched for the value help request.
- **D-mode**: ("Only values in infoprovider"): in this case only the values of the characteristics booked in the infocube dimensions are fetched for the value help request.
- **A-mode**: a special mode, only used by navigation attributes, see below.

The F4-modes are effective using the input-help dialog in the following areas:

- (QD) in BEX Query-Designer when calling the input-help for characteristic-restriction
- (VAR) in the variable-screen when calling the input-help of a variable for characteristic-restriction
- (SF) in the query-result when calling the context-menu choosing “Select Filter Values”

See also note 1565809. I the following we rather focus on the query runtime(VAR and SF) than on the query design time(QD).

Setting the F4 Mode

The 3 F4-modes can be set on the following levels:

1. Infoobject-level in transaction RSD1/BW Modeling Tools

In transaction RSD1, you have the following settings located in the tab "Business Explorer":

- "Query Execution Filter Val. Selection": This setting is relevant for areas VAR and SF.
- "Query Def.Filter Value Selection": Only relevant for area QD. Only modes M and D supported.
In Modeling Tool, you can set F4 mode in option "Selected Filter Values for Query Execution" located in tab "BI Clients"("Selected Filter Values for Query Definition" is only relevant for QD):
2. Infoprovider-level in transaction RSA1/BW Modeling Tools

In transaction RSA1 you need to right-click on the characteristic of the infoprovder and set the F4-mode in the provider-specific properties:
In Modeling Tool, you can set F4 mode in option "Filter Values Selection" located in tab "Output".
3. Query-level in Query Designer

In the Query Designer you can set the F4-mode in the properties of the characteristic:
4. Frontend-level in BEX Analyzer/Web

In Bex Analyzer 7.x or Java web query, you can set the F4 mode in 'User Settings'.
Validity of F4 Modes

The F4-mode can be set on different levels, but only some F4-modes are valid in the areas shown above (QD, VAR, SF). The valid F4-modes in the different areas depend on the infoprovider the BW-query is based on:

<table>
<thead>
<tr>
<th>Infoprovider Type</th>
<th>QD</th>
<th>VAR</th>
<th>SF</th>
</tr>
</thead>
<tbody>
<tr>
<td>InfoCube, DSO, HybridProvider</td>
<td>M, D</td>
<td>M or D ★</td>
<td>M, D or Q ★</td>
</tr>
<tr>
<td>Multiprovider only containing InfoCubes, DSOs or HybridProviders</td>
<td>M, D</td>
<td>M or D ★</td>
<td>M, D or Q ★</td>
</tr>
<tr>
<td>Other Infoproviders</td>
<td>M</td>
<td>M</td>
<td>if mode is not set to Q, system uses M ★</td>
</tr>
</tbody>
</table>
F4-mode can be set on different levels. In the areas VAR and SF the F4-mode set in a level gets overridden by the higher level.

**Variable Screen (VAR):**

The F4 mode in the variable-screen can be set on Infoobject-level in RSD1 (level 1) and on Infoprovieder-level in RSA1 (level 2). The setting on Infoprovieder-level overrides the setting done on Infoobject-level. If the setting on Infoprovieder-level is not set, the setting on Infoobject-level is taken into account.

If variables get melted (in a BEX workbook or a web-template), only F4 mode M can be used -> F4 setting on any level is not relevant anymore.

**Select Filter Value (SF):**

The F4 mode in "Select Filter Value" can be set on all 4 levels. The higher-level setting supersedes the lower-level setting with the infoobject-level being the lowest and the frontend-level being the highest level.

**Special Cases**

- For 3.X web-queries (f.e. RSRT -> html-mode) the F4-mode is by default Q and can be set using the parameter BOOKED VALUES.
- In a workbook, if you set the F4-mode in the "user settings" to default, the system will take the setting on query-level (level 3). If the setting on query-level is changed after the workbook was saved, the workbook will still take into account the old setting on query-level, since the workbook is a snapshot of the query-navigation-status at the time the workbook was saved.

For further details see note 1565809.

**F4 Modes for Units and Currencies**

For such special characteristics like 0UNIT and 0CURRENCY, it is not possible to specify the F4 mode when maintaining the InfoObject(settings not offered at all in RSD1/Hana BW Tools). By default, the mode D is used. You can only change this setting on InfoProvider level. E.g. for an HCPR in the Hana BW Tools:
F4 Mode for Navigation Attributes

The F4-mode for navigation-attributes is handled differently from normal basic infoobjects. We still have the readmodes M, D and Q for a navigation-attribute A__B, but the system also uses readmode A which CANNOT be set. Readmode A displays all available values of infoobject B contained in the masterdata-table of infoobject A (for a navigation-attribute A__B). In web-queries the system uses readmode A by default. For readmode D the system joins the X-table of infoobject A with the dimension-table of the infoprovider.