Analytical Dimensions
Sage Intelligence Reporting
Sage ERP X3

DH
19 01 2015
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About Analytical Dimensions

Sage ERP X3 supports user defined analytic dimensions for budgeting allocations and analysis. Dimensions can be financial and quantity based. Most organizations use a general ledger structure that separates business entities into different categories using dimensions.

Analytical Accounting/Dimensional ledgers enable transactions to be tagged and reported by user-defined dimension codes representing financial, date, or statistical information.

In the image below, Market Area, Sales Region and Product Category represent individual dimensions.

It is often useful to report on GL accounts using analytical dimensions. Dimensions are typically used to represent items such as Sales Regions, Product Categories, Departments and Locations.
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When reports are generated, these values combine to pull specific analytical financial records from the source data. Once dimensions are set up in Sage ERP X3, you can use the dimensions in your Sage Intelligence report layout formulas.

**Note:** Dimensions can only be used on Analytical formulas.

Dimensions allow you to specify a name value pair.

You can use one of the following syntax methods:

- `DimensionTypeCode=DimensionCode`
  
  `PRD=EDU`

- `DimensionTypeCode=DimensionCode,DimensionCode,DimensionCode`
  
  `PRD=EDU,CHD,ASD`

- `DimensionTypeCode=DimensionCode; DimensionTypeCode=DimensionCode,DimensionCode`
  
  `PRD=EDU; SR=NORTH,WEST`

- `DimensionTypeCode=DimensionCode,DimensionCode; DimensionTypeCode=DimensionCode,DimensionCode,DimensionCode`
  
  `PRD=EDU,CHD; SR=NORTH,WEST,EAST`

For example you can request to view Sales values only for Educational products in the North and West Sales regions (as per the diagram above) by specifying the Sales/Revenue accounts range as `70????` in the Account parameter of the formula. You can then add the Dimension parameters, `PRD=EDU; SR=NORTH,WEST` or add the dimension parameters in Reporting Trees and specify the ReportingTreeUnitPath in the formulas.

**Tip:** You can use a space to report off blank dimensions, for example,

`PRD= (space)`

`PRD=EDU, ,ASD`

`PRD= ; SR=NORTH`
Options to use Dimensions in Report Designer Reports

There are three options available to add dimension information to a report layout.

- You can specify a dimension in the **Dimension** parameter in the **Function Arguments** window.

- You can specify the dimension information in the Reporting Tree definition and reference the dimension reporting trees in the ReportingUnitPath in the formula function arguments in the Task Pane, or in the Reporting Tree Unit filter in the Layout Generator layout options.

- You can also use a **combination of both of the above** to filter by multiple dimensions.
Viewing the Dimension Type Codes Available

You are able to view the Dimension Type Codes that you created in Sage ERP X3, which will then be available to use in your report layout created with Sage Intelligence Reporting, using the task pane.

1. Open a blank worksheet in a Report Designer workbook.
2. In the task pane, select Lists.
3. Drag and drop the Dimensions list onto the blank worksheet.

This will list all of the dimension type codes which you have set up in Sage ERP X3. The first column is the codes which can now be used to filter your report layouts in Sage Intelligence Reporting.
Specifying a Dimension in the Formula Parameter

Formulas are dragged into the excel workbook to allow you to return balances from the Sage ERP X3 general ledger based on provided parameters. The formula parameters provided in the Function Arguments window will be used to specify what data is retrieved by the formula. Each setting serves as a filter to retrieve the data. You can specify a dimension in the Dimension parameter.

1. In your report layout, create either column headings or row headings for the dimensions you want to report on. Type in the dimension name value pair. A column and a row example is shown below:

Tip: Multiple dimensions can be inserted by using a comma, and multiple dimension types must be separated by a semi colon. Click here to view the correct syntax to use.
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2. Drag and Drop the formula you want to use onto your spreadsheet in the same row as your first account.

3. Edit the formula to link to the correct function arguments.

4. Ensure your formulas are referencing the cell where your dimensions are, that you specified above.

Tip: Change to absolute cell referencing where the cells remain constant. Refer to the topic Using Relative or Absolute Cell Referencing in the help file.

5. Copy the formula to other cells requiring the same change.
Specifying a Dimension in a Reporting Tree

Sage Intelligence Reporting in Sage ERP X3 supports dimensions in Reporting Trees. One of the options available to add dimension information to a report layout is to specify the dimension information in the Reporting Tree definition, and reference the dimension reporting trees in the ReportingUnitPath in the formula function arguments.

Creating a Reporting Tree using Dimensions

1. In the task pane, click the trees tab.
2. Click Manage.
3. Click Add to create a new tree or edit to edit an existing tree.
4. You can now add dimensions specifying the dimension parameters as per the example below:

   Tip: Multiple dimensions can be inserted by using a comma, and multiple dimension types must be separated by a semi colon. Click here to view the correct syntax to use.

5. Click Apply.
6. Click OK.
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Using a Dimension Reporting Tree in the Task Pane.

1. Ensure your formulas are referencing the `ReportTreeUnitPath` in the function arguments window.

2. On the trees tab, click the arrow to expand the dimension reporting tree.

3. You can now drag the dimensions into the report layout into the `ReportTreeUnitPath` filter cell. Your data will automatically be updated to reflect the data for the dimension you have dragged in.
Using a Dimension Reporting Tree in the Layout Generator.

1. On the BI Tools tab, click Quick Edit to edit the layout you want to add dimension Reporting Trees to.

2. On the layout options page, click the Reporting Tree Unit magnifying glass.

3. Click the Reporting Tree.

4. Click Ok.

5. Select the unit you want to report on.

6. Click Ok.
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7. Click Save Layout.
8. Click Generate.
9. Notice the layout has been filtered by the Reporting Unit you added previously.

10. To change the Reporting Tree unit, on the trees tab, click the arrow to expand the dimension reporting tree.
11. You can now drag the dimensions into the report layout into the `ReportingTreeUnitPath` filter cell. Your data will automatically be updated to reflect the data for the dimension you have dragged in.
Reporting Unit Rollups

Reporting trees can include the amounts from child reporting units at the parent reporting unit level. This inclusion is called rolling up the data.

Sage Intelligence Reporting uses the following rules to roll up amounts to parent units in a reporting tree:

- Within a reporting tree, all child units must have dimensions specified. Parent units usually do not use a dimension filter in a reporting tree.

**Warning:** Using a dimension filter for both child and parent units could cause duplication of data in the report.

- Parent reporting units that do not use a dimension filter in the reporting tree correspond to the row amount that is in the child unit report and roll up the amount to the specified parent unit. For example, if the parent unit has five child units and a dimension filter is not used in the reporting tree for that parent unit, all five child units are rolled (aggregated) up to the specified parent unit.
Creating a Report using Multiple Dimensions

You may want to create a report layout that uses multiple dimensions. For example, you may want to report on specific products by specific customers. You can also use a combination of reporting trees and formula parameters to achieve this.

**Note:** Dimensions can only be used on Analytical formulas.

Creating a Reporting Tree using Dimensions

1. In the task pane, click the trees tab.
2. Click Manage.
3. Click Add to create a new tree or edit to edit an existing tree.
4. You can now add dimensions specifying the dimension parameters as per the example below:

   ![Edit Reporting Tree](image)

   **Tip:** Click here to view the correct syntax to use.
5. Click Apply.
6. Click OK.
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Using the Dimension Reporting Tree and a Dimension Parameter in the Task Pane.

1. Ensure your formulas are referencing the ReportTreeUnitPath and the Dimension in the function arguments window of the formulas.

   ![Formula example](image1.png)

   **Tip:** You can use a space to report off blank dimensions.

2. On the trees tab, click the arrow to expand the dimension reporting tree.

   ![Tree expansion](image2.png)

3. You can now drag the dimensions into the report layout into the ReportTreeUnitPath filter cell.

   ![Dimension drag](image3.png)

Your data will automatically be updated to reflect the data for the dimension you have dragged in, as well as the dimension in each row.