

# OLAP Retail LAB

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## Objectives

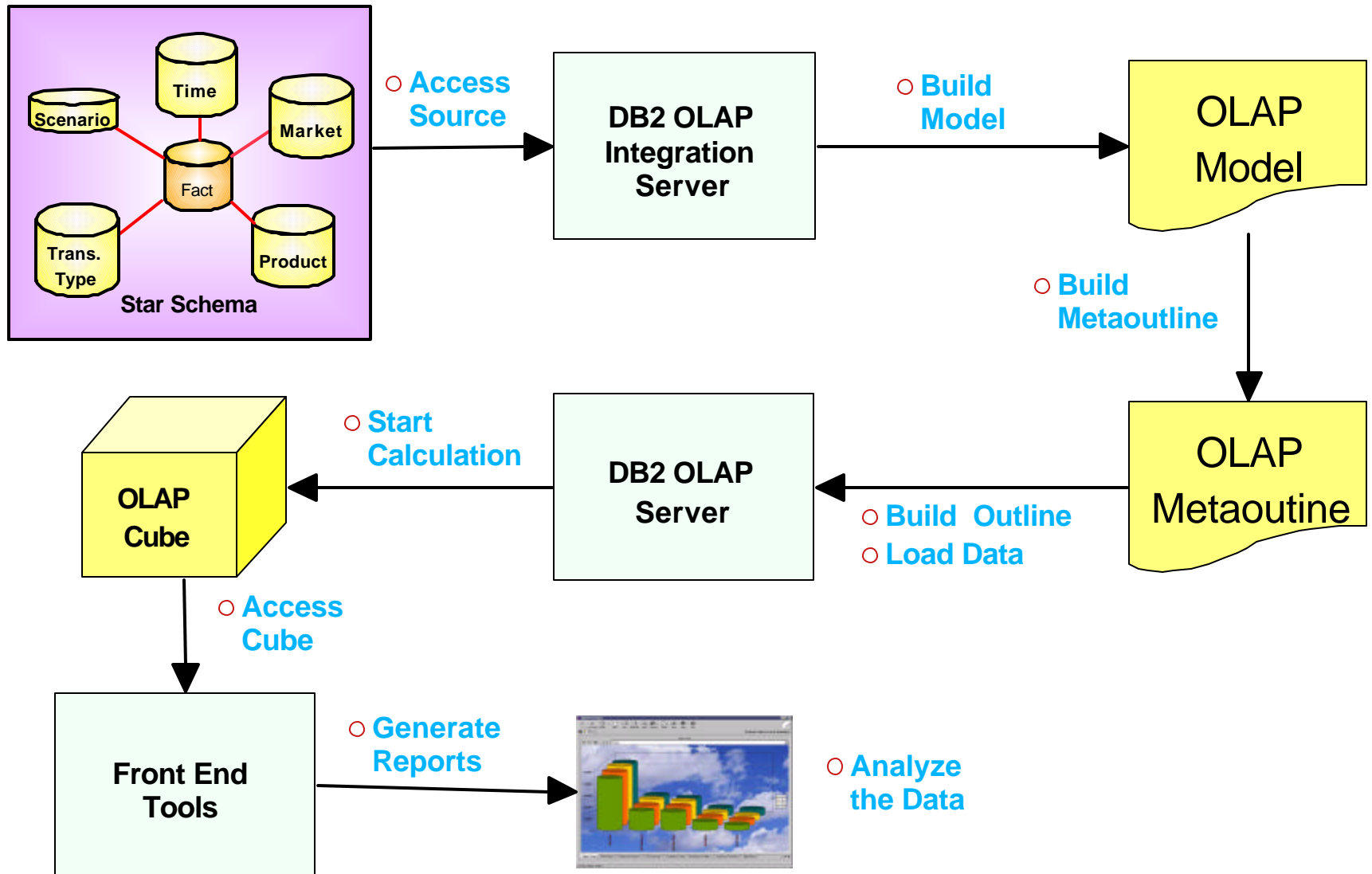
- Create OLAP Models and Metaoutlines including hybrid Dimensions, Attribute Dimensions, Drill Through Reports and load data on OLAP cubes.

## Exercises

ID	Exercise Description	Required ?	Model/Metaoutline Name	OLAP Application	OLAP Database	Estimated Time
OLR1	Data Preparation	Not Required	N/A	N/A	N/A	N/A
OLR2	Create Base Retail Model	Required	Retail Base Model	Retail	N/A	15 Minutes
OLR3	Create Base Retail Metaoutline	Required	Retail Base Metaoutline	Retail	Basic	12 Minutes
OLR4	Create Retail/Basic OLAP Cube	Required	Retail Base Metaoutline	Retail	Basic	3 Minutes
OLR5	Create Drill-Through Reports	Optional	Retail Drill-Through Metaoutline	Retail	DrillIT	5 Minutes
OLR6	Create Hybrid Cube	Optional	Retail Hybrid Metaoutline	Retail	Hybrid	3 Minutes

ITSO iSeries Technical Forum  
BL04

# OLAP Process Flow



# LAB Components

## Files Retail

LAB	Table Name	Library	Description
★ <b>DB2/400</b>	Product	BIDEMO	Retail Product Master
	Channel	BIDEMO	Retail Channel - Internet/Store/Call Center ...
	Fact_Table	BIDEMO	Retail Fact Table
	Generic_Scenarios	BIDEMO	Generic Scenarios Table - Actual/Budget/Prior Year
	Generic_TIME	BIDEMO	Generic Time dimension down to months
	Generic_Market	BIDEMO	Generic Market dimension, region/state/city
	Note: <b>x</b> below is team number		
★ <b>OIS</b>	OLR2 <b>x</b> - Retail Base Model	DB2OLAP	OLAP Base Model for Retail
	OLR3 <b>x</b> - Retail Base Metaoutline	DB2OLAP	OLAP Base Metaoutline for Retail
	OLR5 <b>x</b> - Retail Drill-Through Metaoutline	DB2OLAP	OLAP Drill-Through Metaoutline for Retail
	OLR6 <b>x</b> - Retail Hybrid Metaoutline	DB2OLAP	OLAP Hybrid Metaoutline for Retail
★ <b>DB2 OLAP</b>	Basic	RETAIL <b>x</b>	Basic retail cube without drill through or Hybrid
	Drillt	RETAIL <b>x</b>	Basic cube with drill through to DB2/400 retail data
	Hybrid	RETAIL <b>x</b>	Basic cube with Hybrid Analysis to DB2/400 data

# OLR2 - Starting DB2 Olap Integration Server (OIS)

❑ Click on

**Start** → **Programs** → **IBM DB2 OLAP Server 8.1 - iSeries** → **IBM DB2 OLAP Integration Server** → **Desktop**.

The **Login** window is displayed:

## Connection Information

❑ Integration Server Services

- **Server** = Computer hostname
- **Catalog** = Computer hostname
- **User Name** = teamx
- **Password** = password

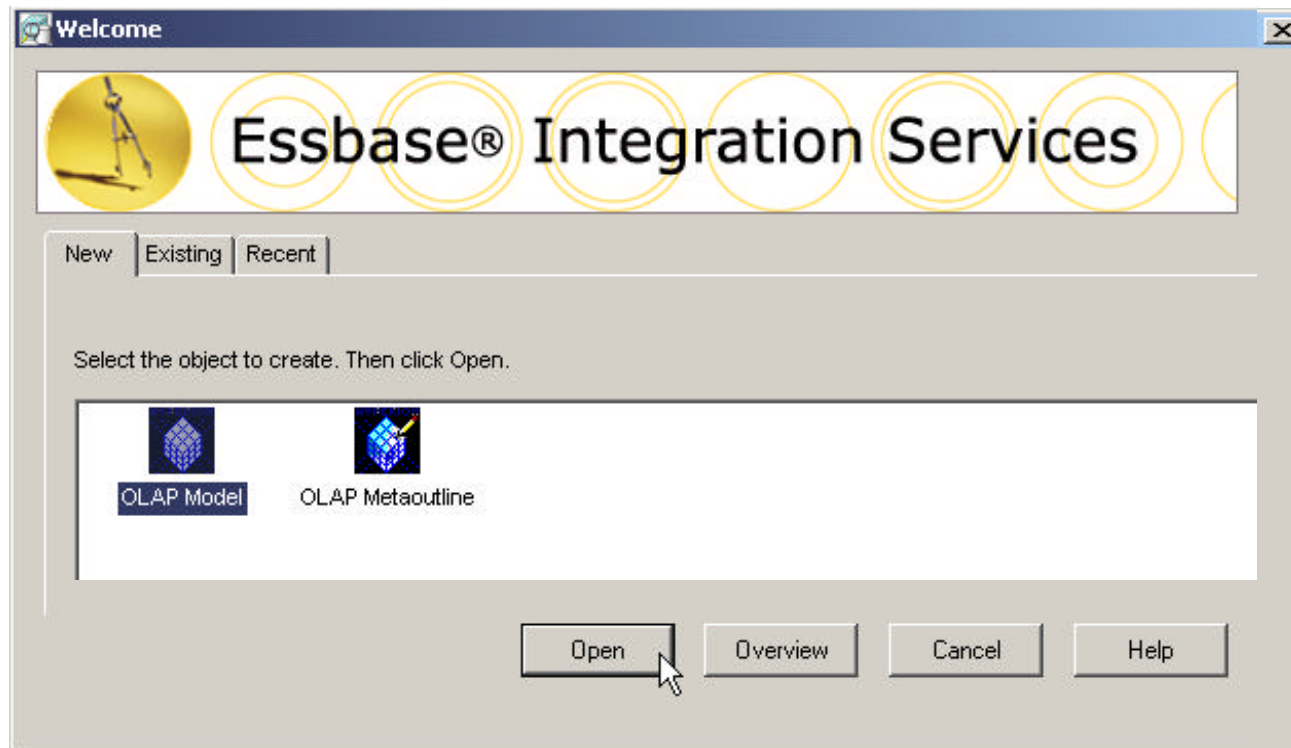
❑ Essbase OLAP Server

- **Server** = Computer hostname
- **User Name** = teamx
- **Password** = password

The screenshot shows the 'Login' window for Essbase Integration Services. The window is titled 'Login' and has a header with the Essbase logo and the text 'Essbase® Integration Services'. The main area is divided into two sections: 'Essbase Integration Services' and 'Hyperion Essbase OLAP Server'. The 'Essbase Integration Services' section has fields for 'Server' (dropdown with 'Hostname'), 'OLAP Metadata Catalog' (dropdown with 'olapcatd'), 'User Name' (dropdown with 'db2admin'), and 'Password' (text field with 'xxxxxxx'). A 'Set Login Defaults' button is at the bottom. The 'Hyperion Essbase OLAP Server' section has a 'Hide Login Options' button, a note 'When working with a metaoutline, specify Essbase login information.', and fields for 'Server' (dropdown with 'Hostname'), 'User Name' (dropdown with 'db2admin'), and 'Password' (text field with 'xxxxxxx'). At the bottom are 'OK', 'Cancel', and 'Help' buttons.

# OLR2 - Creating a New OLAP Model

- ❑ On **Welcome** Panel, **New** Tab,
  - ❑ Select **OLAP Model** and
  - ❑ Click on **Open** button and the **Data Source** window will appear



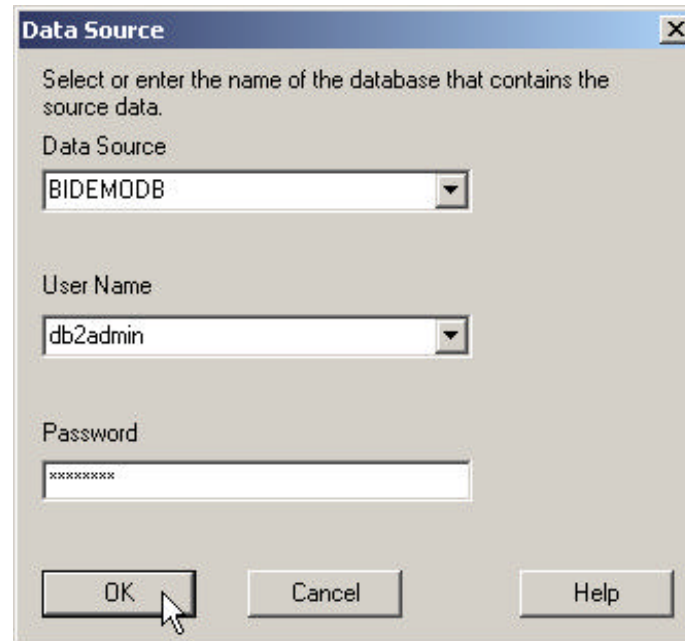
**Note:** If the screen above **does not** appear to you, then do the following:

- ❑ .From the **Main Menu**, Select **File > New** or, Press **Ctrl+N**

# OLR2 - Connecting to Source Database

## ❑ On **Data Source** Panel

- ❑ Select Computer Host Name from the **Data Source** drop-down list
- ❑ Use your team user name and password
- ❑ Click on **OK** button and the **Integration Services Console** will appear.



**Note:** Data Source points to the iSeries with the relational Source Database that contain all sources tables i.e. Fact table, Dimension tables. Libraries available from the data source system are based on the job description used to start the Integration Server.

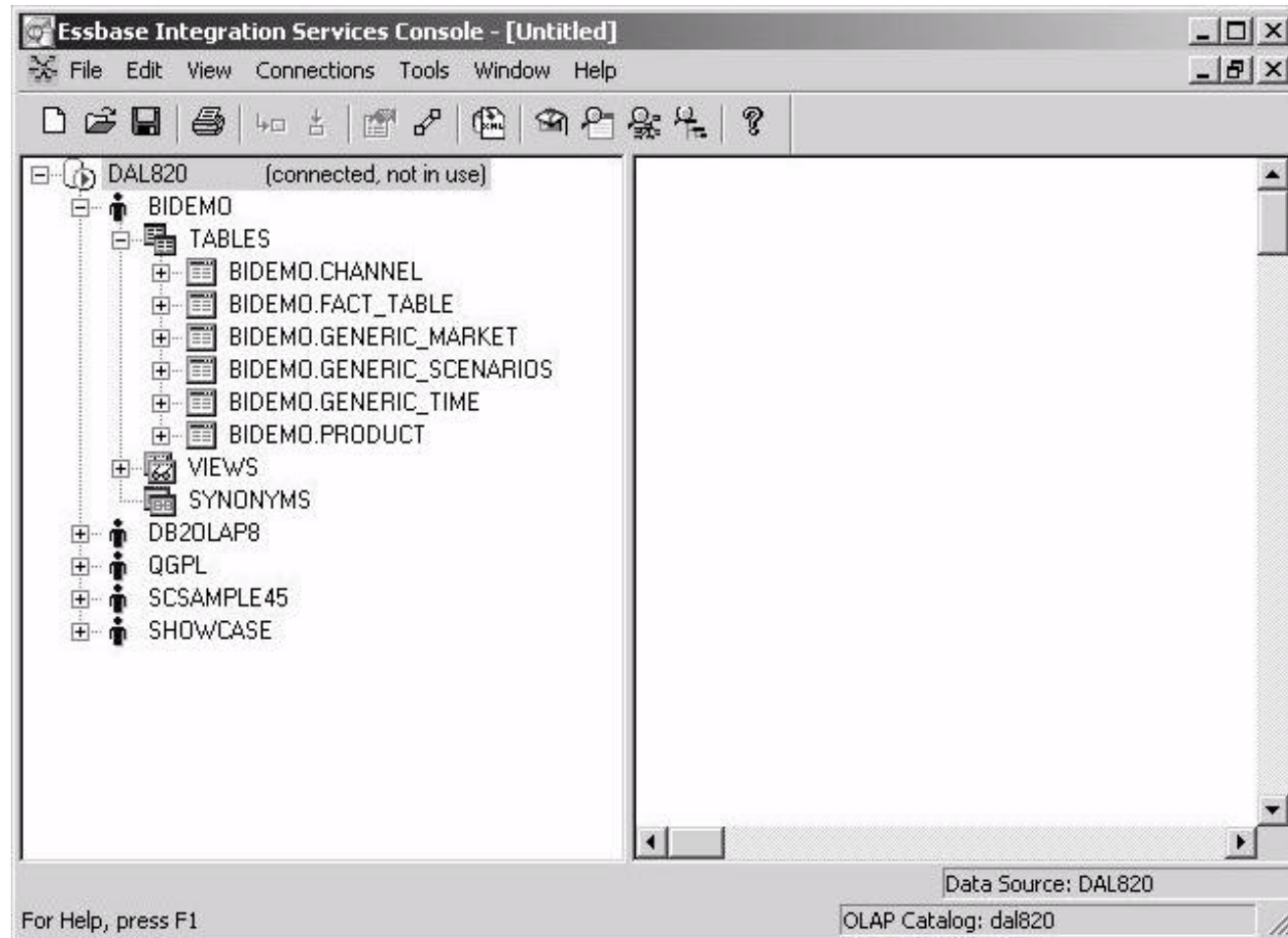
# OLR2 - OIS Data Model Console Editor

## Left Panel - Source Data Information

- Contain libraries and database objects
  - Tables names, views, columns names, schemas
- Libraries listed are from the OIS server job description

## Right Panel - Work Area to Design Model

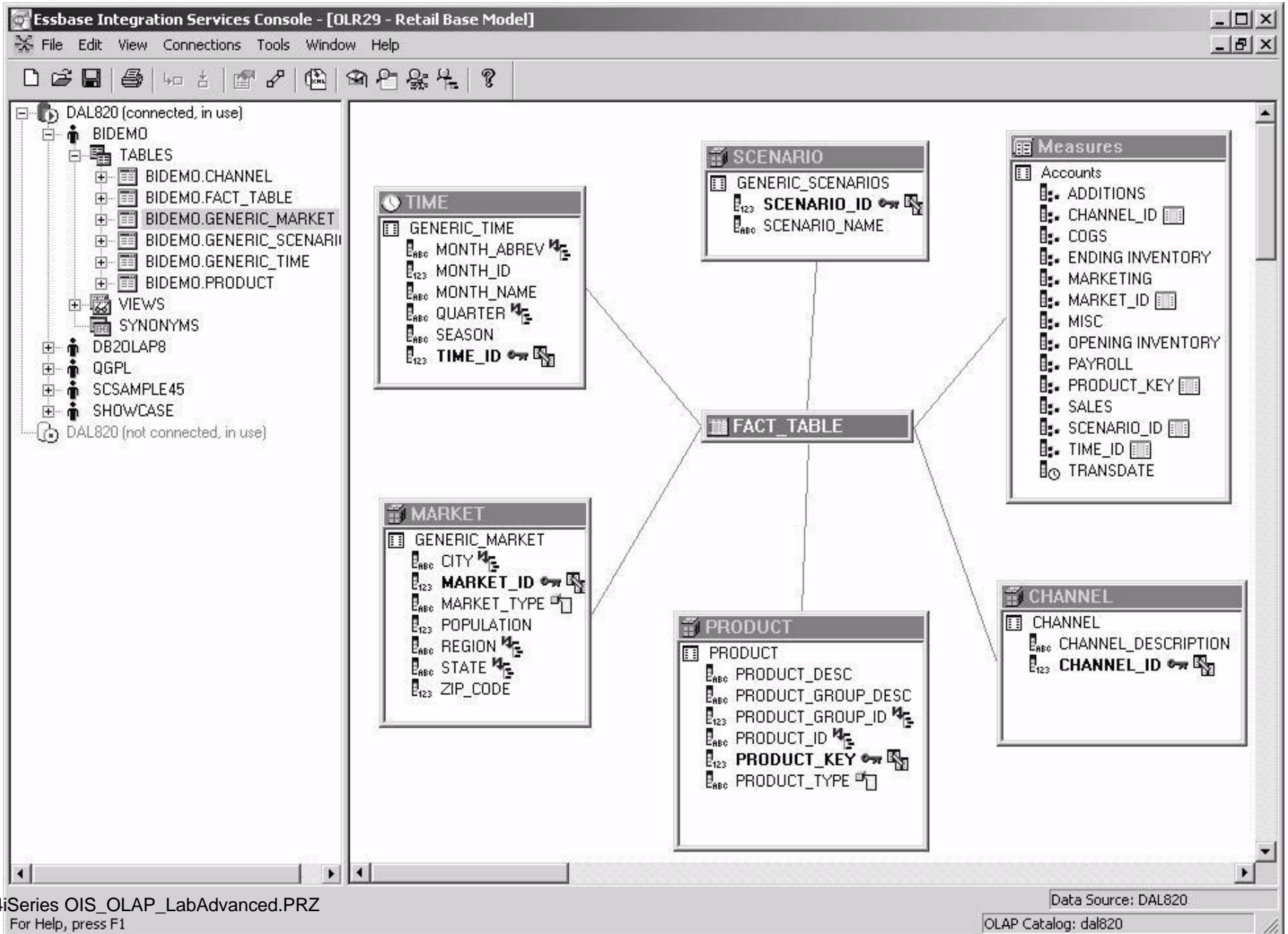
- Drag and drop tables into this area
- Create dimension and accounts
- Link the dimensions to the Fact Table
- Define Joins, Hierarchies, Transformations





# OLR2 - Base Retail OLAP Model

- Sample Final Model to be created

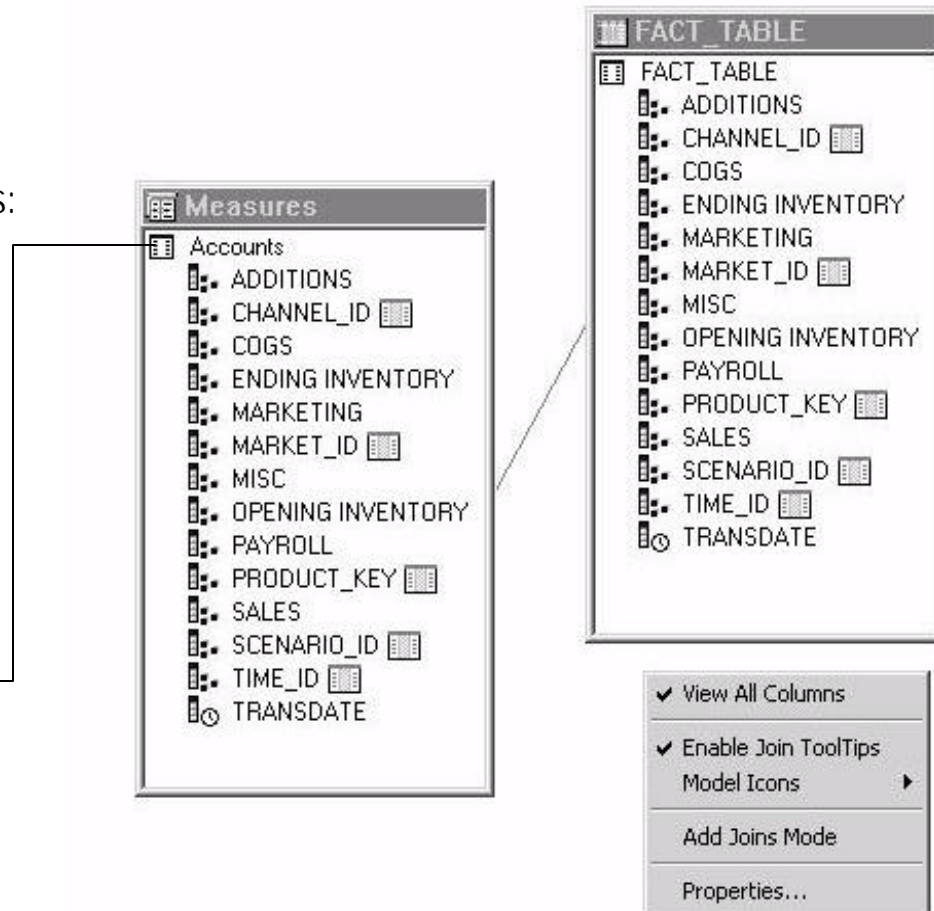




# OLR2 - Creating the Account Dimension (Measures)

The base table to create the **Accounts** Dimension is the **Fact\_Table**.

- ❑ From the left frame **drag** the table **BIDEMO.FACT\_TABLE** and **drop** it into the right frame
  - ❑ Click on **No** to not add the **Time** Dimension
  - ❑ Click on **Yes** to add an **Account** Dimension
- ❑ Renaming the Accounts dimension to Measures:
  - ❑ Double Click on the **Accounts** dimension to open the **properties** dialog box
  - ❑ In the **General** tab, in the **Name** field, change **Accounts** to **Measures** and click on **OK**
- ❑ Expanding Column Names
  - ❑ On **empty area** on the right side panel
  - ❑ **Click** with the **Right** mouse button
  - ❑ Select **View all Columns**
- ❑ Changing Columns Properties on Measures
  - ❑ Select the **Accounts** table object,
  - ❑ Press **Double Click**



*Follow instructions on next page....*

# OLR2 - Changing Columns Properties on Measures

In order to provide a clean dimension for the metaoutline, hide the non-used fields.

## 1) Hidding non-used fields on Measures:

❑ In the Table **Properties** window, go to the **Columns** tab

❑ Select the following columns:

- CHANNEL\_ID
- MARKET\_ID
- PRODUCT\_KEY
- SCENARIO\_ID
- TIME\_ID

❑ Click on **Hide** button

## 2) Renaming Members

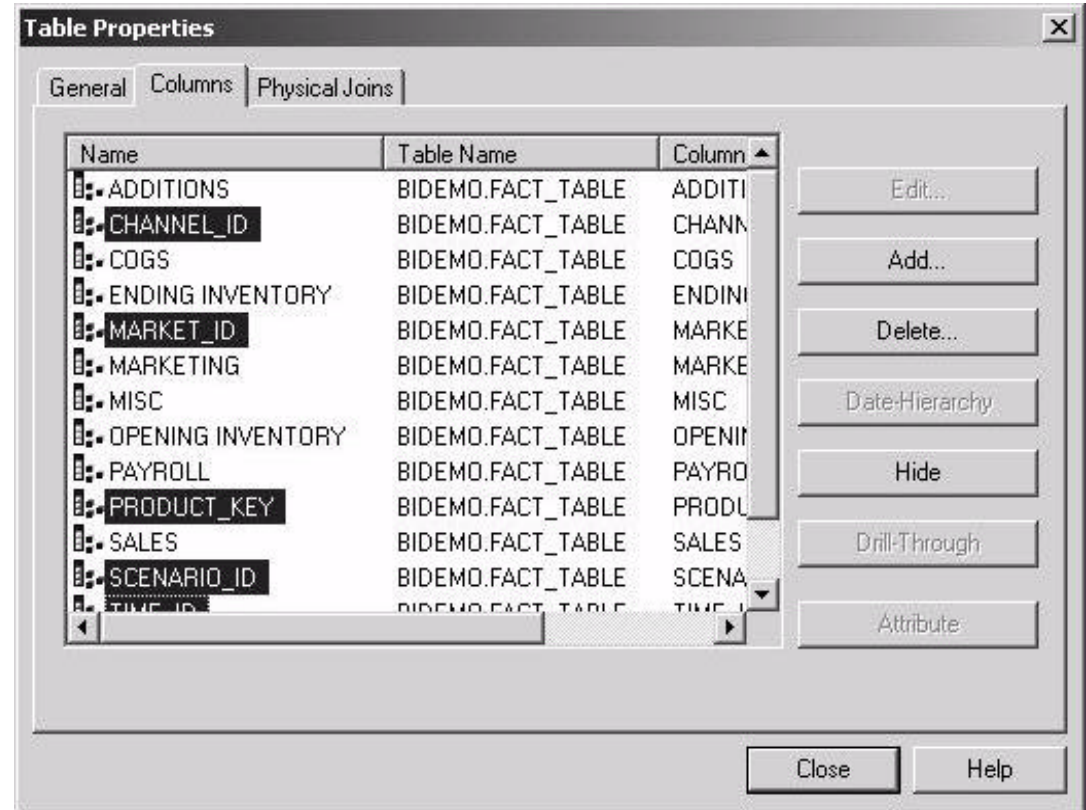
❑ Select the member OPENING\_INVENTORY

❑ **Edit** and Rename to **OPENING INVENTORY**

❑ Select the member ENDING\_INVENTORY


❑ **Edit** and Rename to **ENDING INVENTORY**

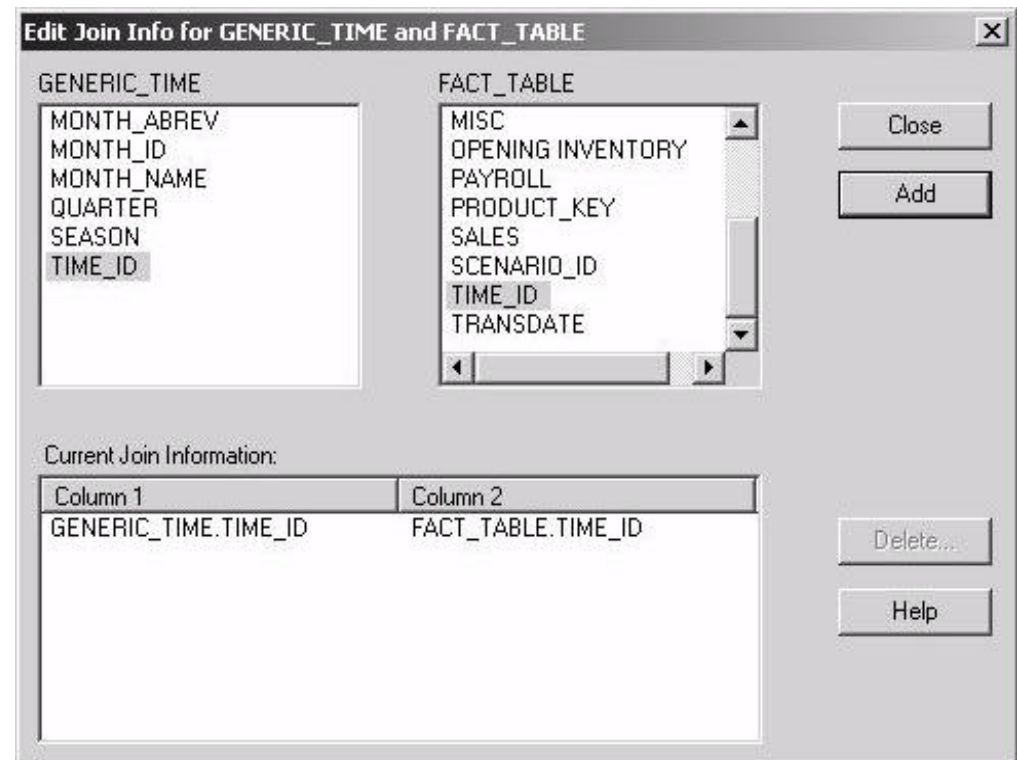
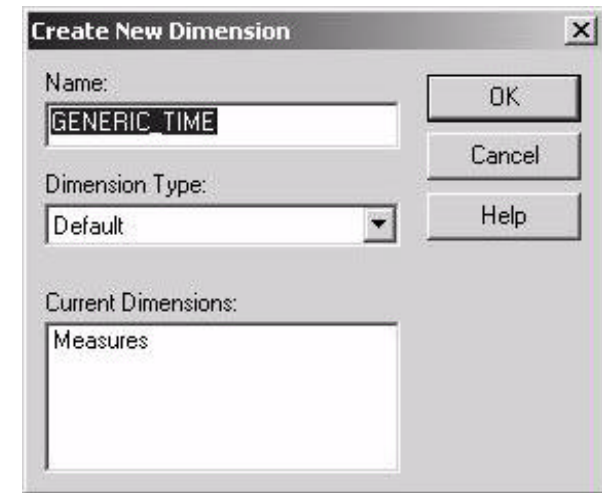
❑ Click on **Close** button



*Go to create time dimension  
on next page....*

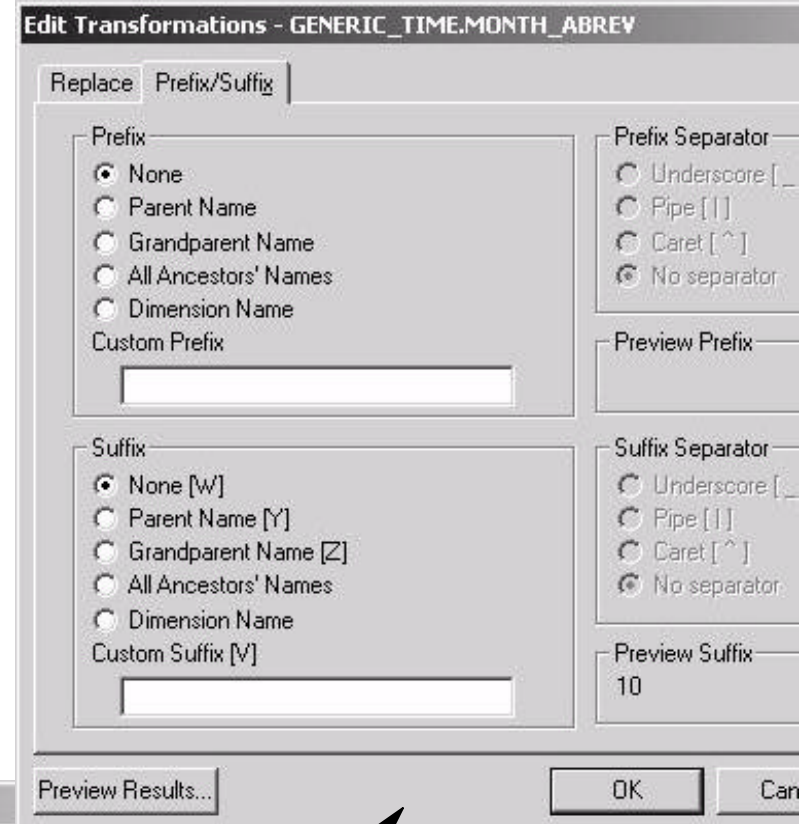
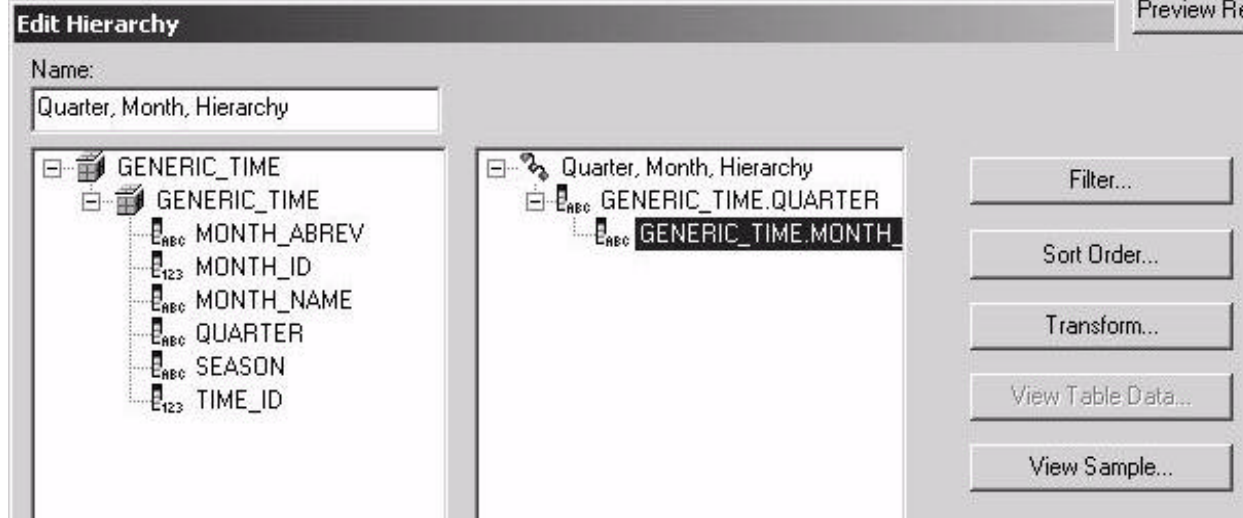
# OLR2 - Creating the Time Dimension

- ❑ From the left frame **drag** the table **GENERIC.TIME** and,
  - ❑ **Drop** it into the right panel
  - ❑ Click on **OK** to add the dimension
- ❑ Show Columns
  - ❑ Right click on new TIME dimension
  - ❑ Select **View Columns**
- ❑ Switch to Joins mode
  - ❑ Click on **Joins mode** 
- ❑ Connect TIME table to the FACT\_TABLE
  - ❑ **Link** the **GENERIC.TIME** table to the **FACT\_TABLE**
  - ❑ Enter **Time** for **Name**:
  - ❑ Select the **Time** for **Dimension Type**
  - ❑ Click on **OK**
- ❑ Adding a Join key
  - ❑ Select **TIME\_ID** column on both **TIME** and **FACT\_TABLE** tables
  - ❑ Click on **Add** to add a join and,
  - ❑ Click on **Close** to accept it



# OLR2 - Defining the Time Hierarchy

- ❑ Double click on **Generic\_Time** dimension (to access the dimension **Properties**).
- ❑ Select the **Hierarchies** tab.
- ❑ Click **Add...** push button. The Edit Hierarchy window opens.
- ❑ Type **Quarter, Month Hierarchy** in the **Name** field text box
- ❑ In the left pane, expand the **Generic\_Time** tree.
  - ❑ Double Click on QUARTER
  - ❑ Double Click on MONTH\_ABREV
- ❑ Select **Generic\_TIME.MONTH\_ABREV** on the right pane and,
  - ❑ Click **Transform** push button.
- ❑ Go to **Prefix/Suffix** tab.
  - ❑ In the **Prefix** pane, select **None** radio button
  - ❑ Click **OK**.
- ❑ Click on **View Sample** push button to preview results (not currently working as designed on iSeries)
- ❑ Click **OK** and click **OK** again to close the Dimension Properties window.



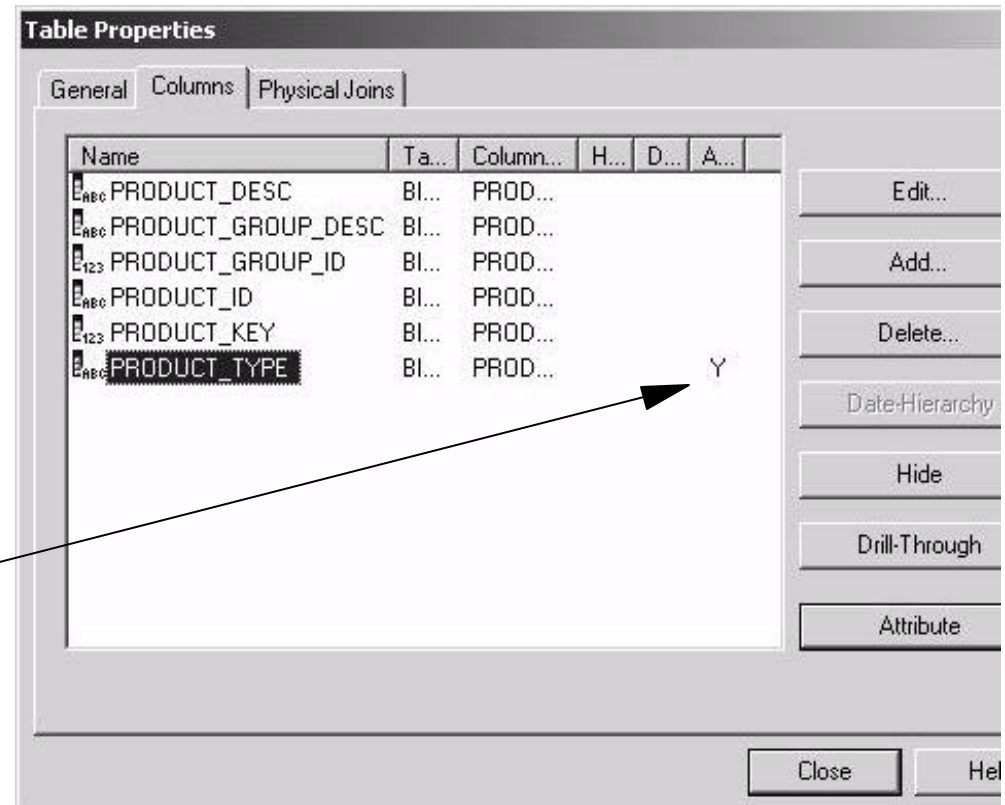
# OLR2 - Creating the Product and Product Type Dimension

## 1) Defining the Product Dimension

- Drag and Drop the **BIDEMO.PRODUCT** table to the right frame
  - Click on **OK** to add the dimension
- Switch to **Joins mode** (if not in Joins mode yet)
- Join the **PRODUCT** table to the **FACT\_TABLE**
  - Link the **PRODUCT** table to the **FACT\_TABLE**
  - Click on **OK**
- Adding a Join key
  - Select **PRODUCT\_KEY** on both **PRODUCT** and **FACT\_TABLE** tables
  - Click on **Add** to add a join and,
  - Click on **Close** to accept it

## 2) Defining the Product Type Attribute Dimension

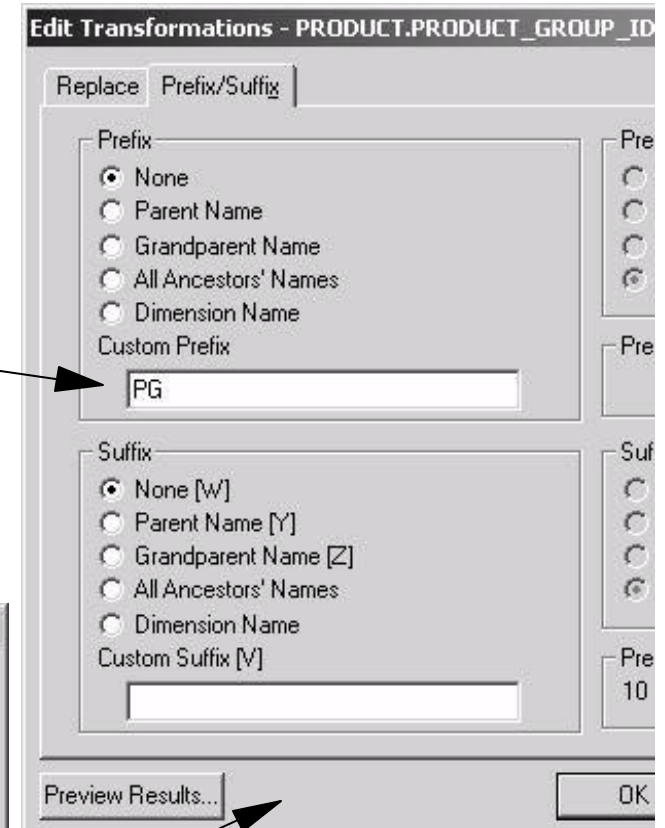
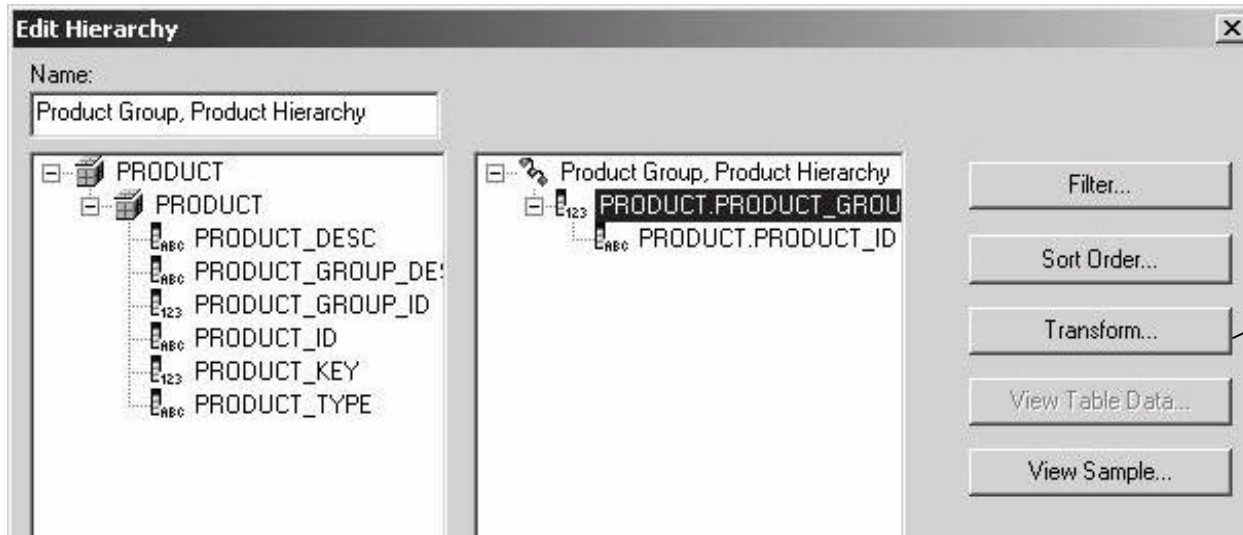
- Right click on **PRODUCT**
  - Select **View Columns** option
- Right click on **PRODUCT** table and,
  - Select **Properties** option
- Select the **Columns** tab
- Select the field **PRODUCT\_TYPE** and,
  - Click on **Attribute**
- Look on the **attribute** column to make sure there is a 'Y'
- Click on **Close**





# OLR2 - Defining the Product Hierarchy

- ❑ Select **PRODUCT** dimension and, **Double click** on it (to open the properties panel)
- ❑ Select the **Hierarchies** tab and click on **Add**
  - ❑ Type **Product Group, Product Hierarchy** in the **Name** field text box
  - ❑ Double Click on **PRODUCT\_GROUP\_ID**
  - ❑ Double Click on **PRODUCT\_ID**
- ❑ Select **PRODUCT.PRODUCT\_GROUP\_ID** on the right pane and,
  - ❑ Click **Transform** push button.
- ❑ Go to **Prefix/Suffix** tab.
  - ❑ In the **Custom Prefix** field (in the Prefix pane), type **PG**
- ❑ Click **OK**.
- ❑ Click on **View Sample** push button to preview results
- ❑ Click on **OK** twice to close the **Dimension Properties** window.



# OLR2 - Creating the Scenario and Channel Dimensions

## 1) Creating the Scenario Dimension

- From the left frame **drag** the table **BIDEMO.GENERIC\_SCENARIOS** and **Drop** it into the right frame
  - Click on **OK** to add the dimension
- Switch to **Joins mode** (if not in Joins mode yet)
- Link** the **SCENARIO** table to the **FACT\_TABLE**
  - In the **Name** text box type **SCENARIO** for the dimension name
  - Select the **Default** for **Dimension Type**
  - Click on **OK**
- Select **SCENARIO\_ID** column on both **SCENARIO** and **FACT\_TABLE** tables
  - Click on **Add** to add a join and,
  - Click on **Close** to accept it

## 2) Creating the Channel Dimension

- From the left panel **drag** the table **BIDEMO.CHANNEL** and **Drop** it into the right panel
  - Click on **OK** to add the dimension
- Switch to **Joins mode** (if not in Joins mode yet)
- Link** the **CHANNEL** table to the **FACT\_TABLE**
  - Select the **Default** for **Dimension Type** and Click on **OK**
- Select **CHANNEL\_ID** column on both **CHANNEL** and **FACT\_TABLE** tables
  - Click on **Add** to add a join and,
  - Click on **Close** to accept it



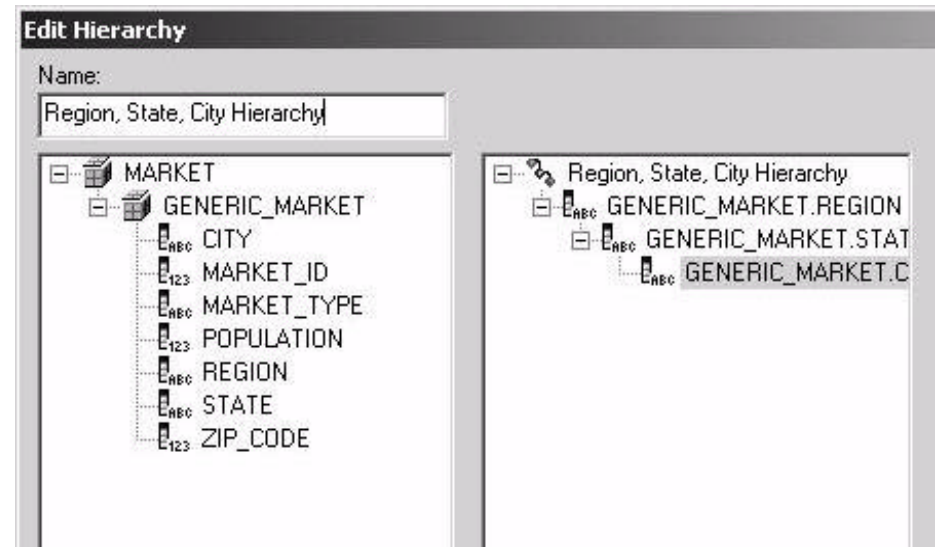
# OLR2 - Creating the Market Dimension

## 1) Defining the MARKET Dimension

- From the left panel **drag** the table **BIDEMO.GENERIC\_MARKET** and **Drop** it into the right panel
  - Click on **OK** to add the dimension
- Switch to **Joins mode** (if not in Joins mode yet)
- Link** the **MARKET** table to the **FACT\_TABLE**
  - In the **Name** text box type **MARKET** for the dimension name
  - Select the **Default** for **Dimension Type** and click on **OK**
- Select **MARKET\_ID** column on both **MARKET** and **FACT\_TABLE** tables
  - Click on **Add** to add a join and, Click on **Close** to accept it

## 2) Defining the MARKET hierarchy

- Double click on **MARKET** dimension
  - Select the **Hierarchies** tab
  - Click on **Add** to add a new hierarchy
  - Type **Region, State, City Hierarchy** on **Name** field text box
  - Expand the **MARKET** tree
    - Double click on **REGION > STATE > CITY**
- Click on **View Sample** push button to preview results
- Click **OK** .Click **OK** again to close the Dimension Properties window.



## 3) Defining the Market Type Attribute Dimension

- Right click on **MARKET**
  - Select **View Columns** option
- Right click on **MARKET** table and Select **Properties** option
- Select the **Columns** tab
- Select the field **MARKET\_TYPE** and, Click on **Attribute**
  - Click on **Close**

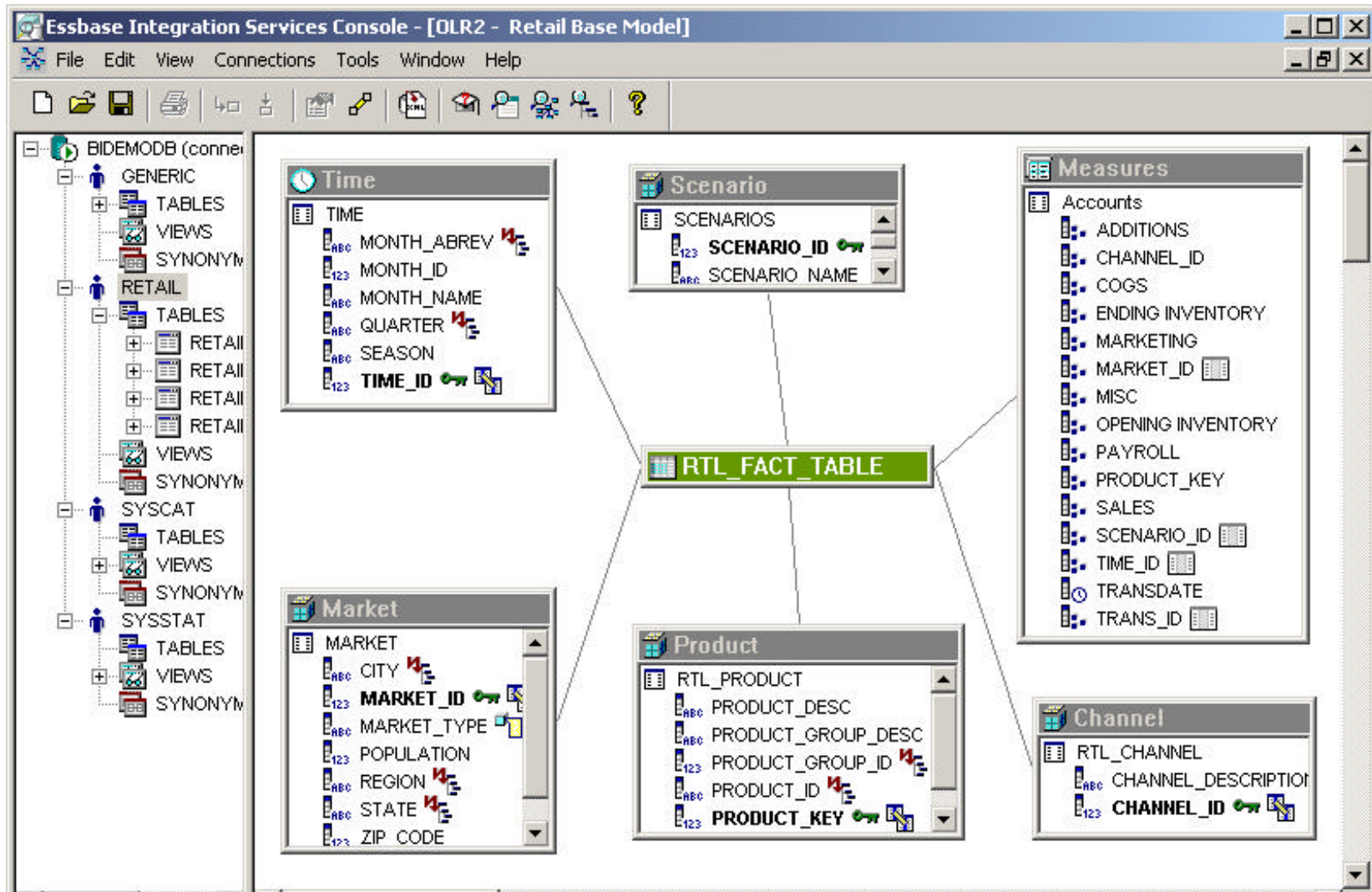
# OLR2 - Validate and Save the Model

## Verifying errors in your model

- From the **File** Main Menu Bar
  - Select **Verify** to check errors on your data model
  - Click on **OK**

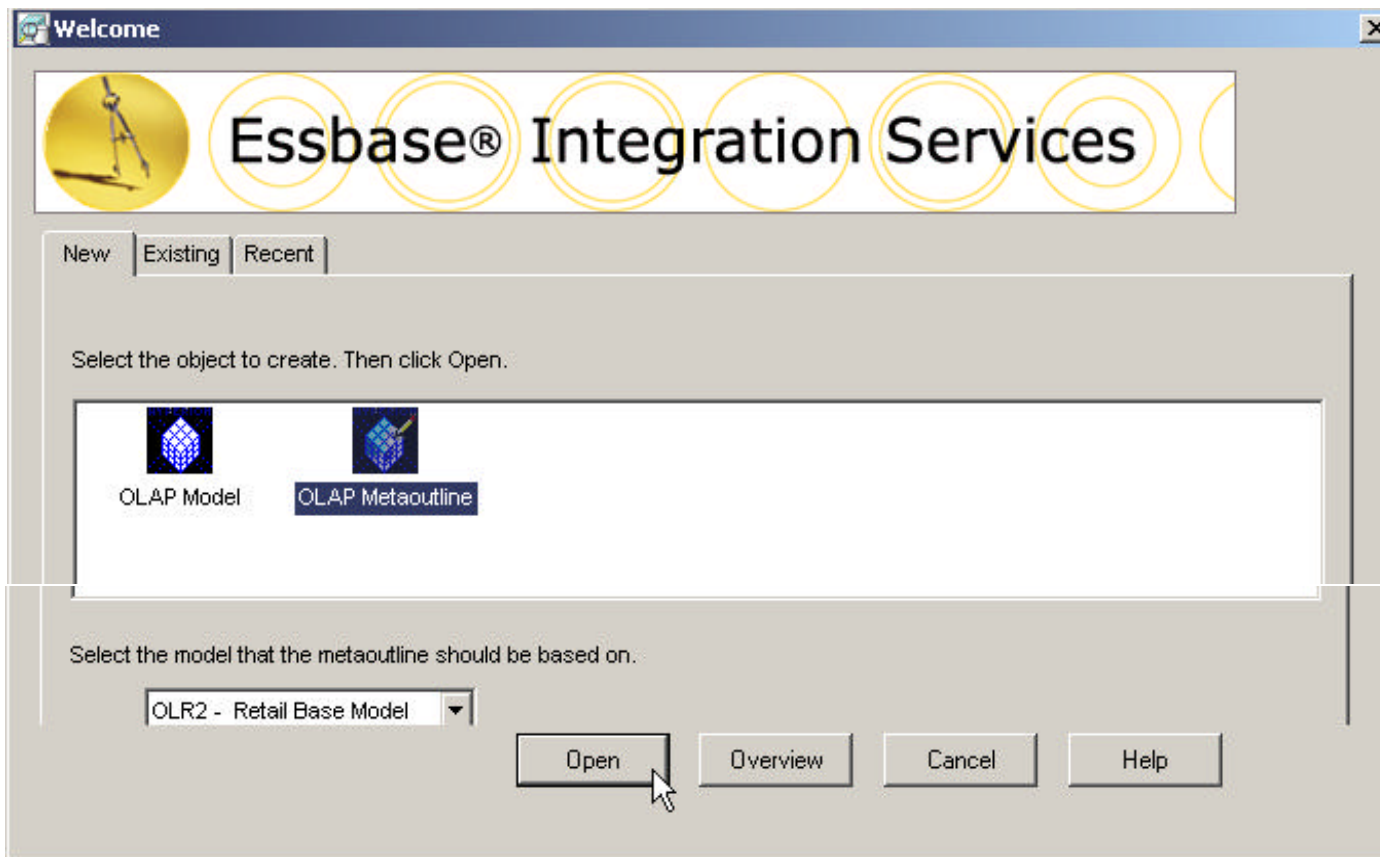
## Saving the model

- From the **File** Main Menu Bar, Select **File** > **Save As..**
  - Type **OLR2xx - Retail Base Model** in the **Olap Model Name** field
  - Click on **OK**



# OLR3 - Creating a New OLAP Metaoutline

- ❑ From the **File** Main Menu Bar
  - ❑ Select **New...** (or press CTRL+N)
- ❑ On the **Welcome** pane, **New** Tab
  - ❑ Select **OLAP Metaoutline**
  - ❑ Select **OLR2xx - Retail Base Model** from the drop-down list
  - ❑ Click on **Open** push button
  - ❑ If required, Login with **Database** Information (Data Source, Userid and Password)



# OLR3 - Metaoutline Console Editor

## Left Frame - Dimension Model

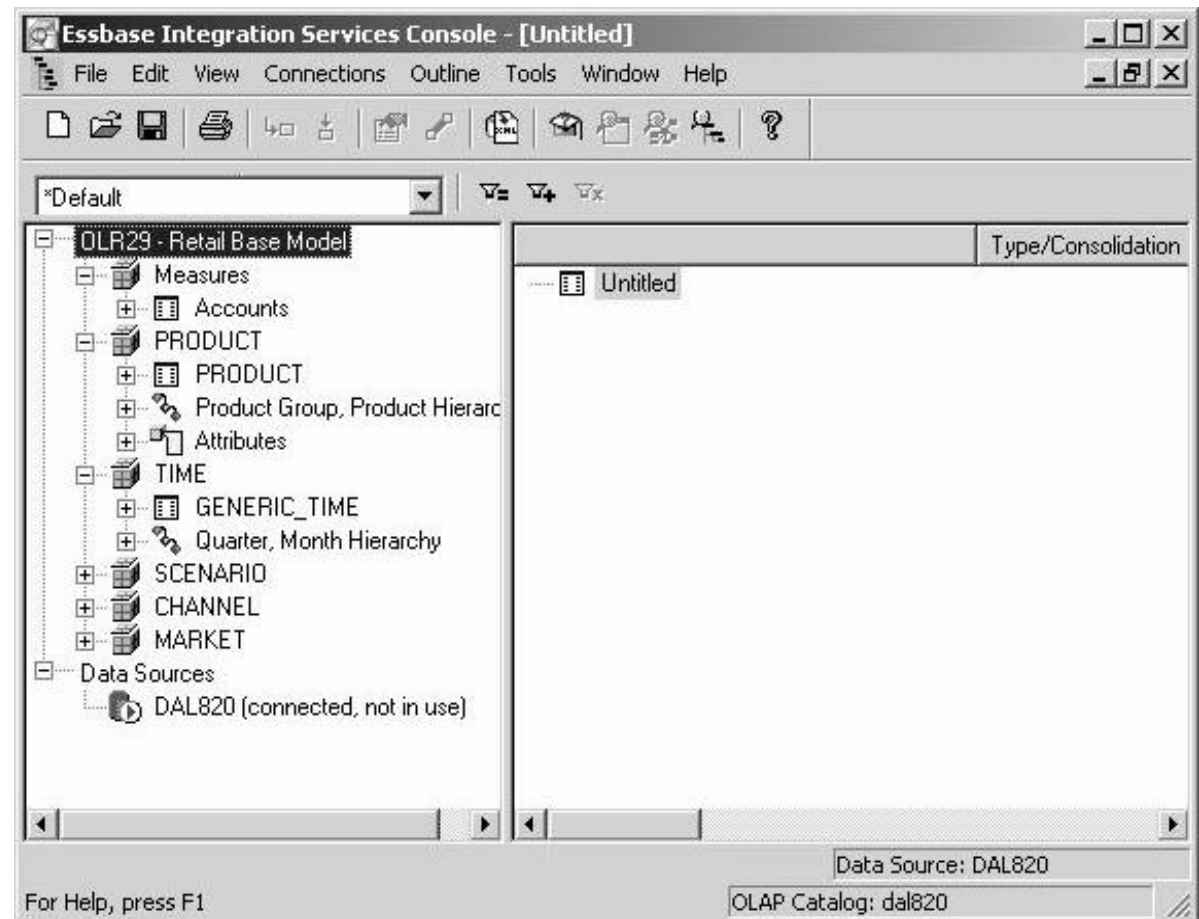
- Contain Dimensions Objects
  - Dimensions, Hierarchies, Members
- Contain Connection Information

## Menu Bar

- Connections to Catalog and DB2 OLAP Server
- Edit Drill-Through Reports
- Create Outlines, Member Load, Data Load

## Right Frame - Work Area to Design Metaoutline

- Drag and drop Dimensions Objects on this area
  - Dimensions, Hierarchies, Members
- Create new objects
  - Dimensions, Hierarchies, Members





# OLR3 - Sample Retail Base Metaoutline

- The following is the metaoutline that you need to create:

	Type/Consolidation	Alias/Member Properties	Formula
OLR2 - Retail Base Model			
Measures			
Accounts			
ADDITIONS			
COGS			
ENDING INVENTORY			
MARKETING			
MISC			
OPENING INVENTORY			
PAYROLL			
SALES			
TRANSDATE			
Time			
TIME			
Quarter, Month Hierarchy			
Market			
MARKET			
Region, State, City Hierarchy			
Attributes			
Product			
RTL_PRODUCT			
Product Group, Product Hierarchy			
Attributes			
Scenario			
SCENARIOS			
Channel			
Data Sources			
BIDEMODB (connected, in use)			
OLR3 - Retail Base Metaoutline			
Measures	Accounts	(Dense) (Label Only)	
Profit	(+)	(Dynamic Calc)	
Margin	(+)	(Dynamic Calc)	
COGS	(-)		
SALES	(+)		
Total Expenses	(-)	(Dynamic Calc)	
MARKETING	(+)		
MISC	(+)		
PAYROLL	(+)		
Inventory	(~)	(Label Only)	
ADDITIONS	(~)		
ENDING INVENTORY	(~)		
OPENING INVENTORY	(~)		IF(NOT @ISMBR(Jan))
Ratios	(~)	(Label Only)	
Profit %	(+)	(Dynamic Calc) (Two-Pas...	Profit % Sales;
Margin %	(+)	(Dynamic Calc) (Two-Pas...	Margin % Sales;
Time	Time	(Dense) (Dynamic Calc)	
TIME.QUARTER	(+)	(Dynamic Calc)	
TIME.MONTH_ABREV	(+)		
Scenario		(Dense) (Label Only)	
SCENARIOS.SCENARIO_N...	(+)		
Channel		(Sparse)	
RTL_CHANNEL.CHANNEL...	(+)	(Alias: CHANNEL_DESCRIP...	
Product { Product Type }		(Sparse)	
RTL_PRODUCT.PRODUCT...	(+)	(Alias: PRODUCT_GROUP...	
RTL_PRODUCT.PROD...	(+)	(Alias: PRODUCT_DESC) (...	
Market { Market Type }		(Sparse)	
MARKET.REGION	(+)		
MARKET.STATE	(+)		
MARKET.CITY	(+)	(Assoc: MARKET.MARKE...	
Product Type	(Text)		
RTL_PRODUCT.PRODUCT...			
Market Type	(Text)		
MARKET.MARKET_TYPE			

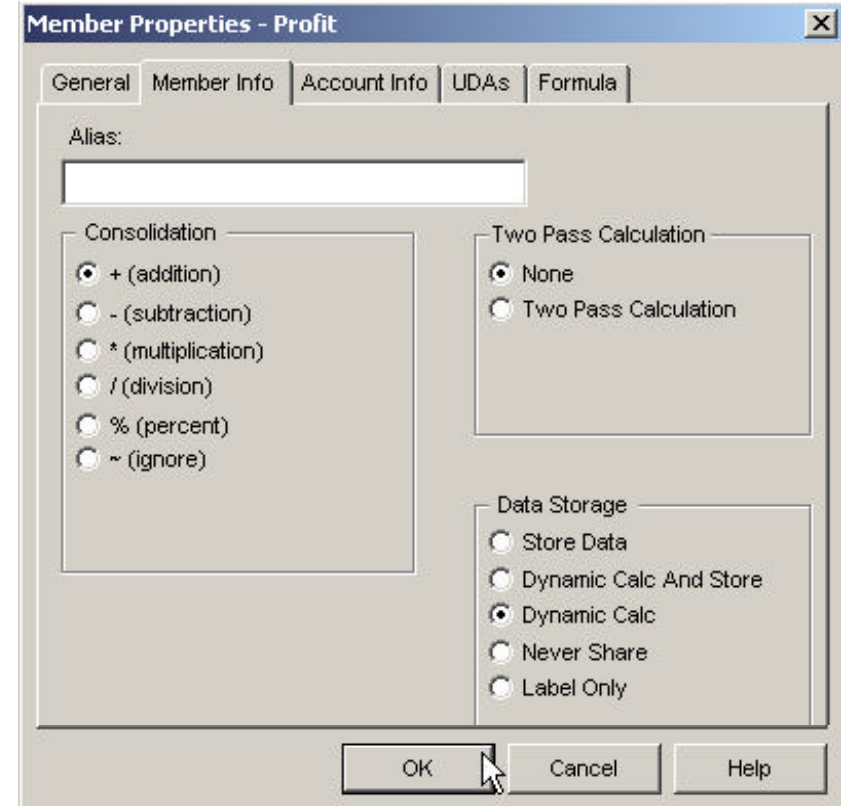
# OLR3 - Creating the Measures Dimension

## 1) Adding the Measures Dimension

- ❑ Drag the **Measures** dimension from the **left frame** and drop it into the **right frame**
- ❑ Right click on **Measures** and select **Properties**.
- ❑ Go to the **Member Info** tab
- ❑ Change the **Data Storage** to (~) Label Only

## 2) Creating a Profit consolidation member

- ❑ On the right frame click on **Measures** and then do the following:
- ❑ From the **Edit** menu, select **Add Member as Child...**
- ❑ Type **Profit** for new member's name and press enter.
- ❑ Right click on **Profit** and select **Properties**.
- ❑ Go to the **Member Info** tab
- ❑ Change the **Data Storage** to **Dynamic Calc**
- ❑ Click **OK**.
- ❑ Create two children members for **Profit** member:
- ❑ Create a member **Margin** and,
  - ❑ Define Data Storage: **Dynamic Calc**
- ❑ Create a member **Total Expenses**
  - ❑ Define Data Storage: **Dynamic Calc**
  - ❑ Define Consolidation: **(-) Subtraction**
- ❑ Drag and Drop the **COGS** member onto **Margin**
  - ❑ Define Consolidation: **(-) Subtraction**
- ❑ Drag and Drop the **SALES** member onto **Margin**
- ❑ Drag and Drop the **MARKETING, MISC** and **PAYROLL** members onto **Total Expenses**

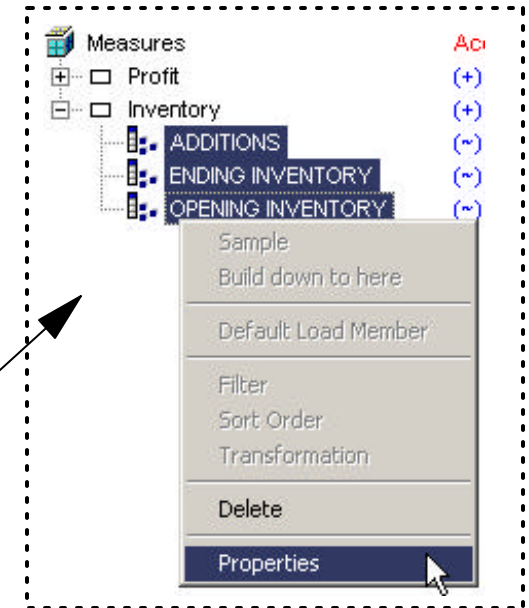


	Type/Consol...	Alias/Member Properties
Measures	Accounts	(Dense) (Label Only)
Profit	(+)	(Dynamic Calc)
Margin	(+)	(Dynamic Calc)
COGS	(-)	
SALES	(+)	
Total Expenses	(-)	(Dynamic Calc)
MARKETING	(+)	
MISC	(+)	
PAYROLL	(+)	

# OLR3 - Creating the Measures Dimension *(continued)*

## 3) Creating the Inventory consolidation member

- ❑ On the right frame click on **Profit** and then do the following:
- ❑ From the **Edit** menu, select **Add Member as Sibling...**
  - ❑ Type **Inventory** for new member's name and Click **OK**.
  - ❑ Right click on **Inventory** and select **Properties**.
  - ❑ Go to the **Member Info** tab and change:
    - ❑ **Data Storage** to **Label Only**
    - ❑ **Consolidation** to **~ (ignore)**
- ❑ On the **left** frame select the members (use **CTRL** key for multiple selections)  
**ADDITIONS, ENDING INVENTORY, OPENING INVENTORY**
- ❑ Drag and Drop them onto **Inventory** (right frame)
- ❑ On the **right** frame select the members (use **CTRL** key for multiple selections)  
**ADDITIONS, ENDING INVENTORY, OPENING INVENTORY**
- ❑ **Right click** and select **Properties**.
- ❑ Define Consolidation: **~ (ignore)**

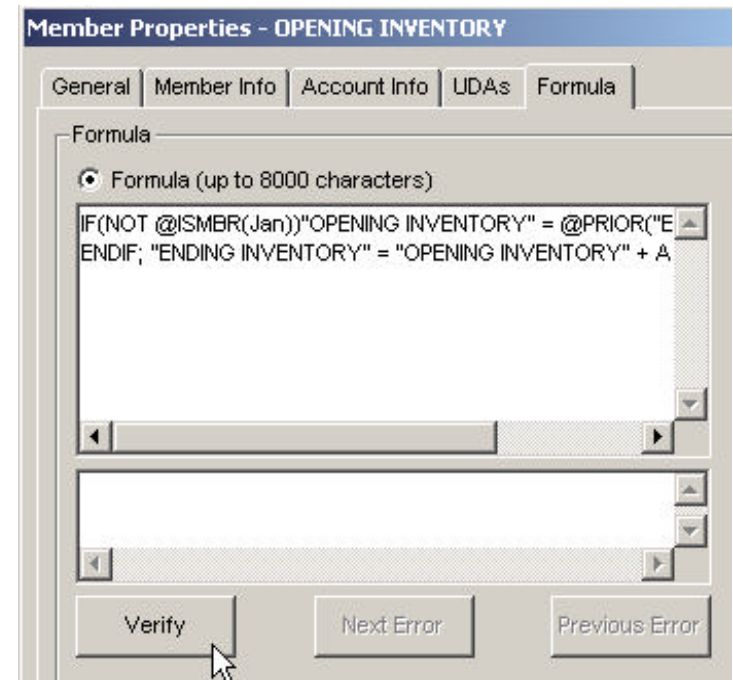


## 4) Adding a formula to Open Inventory member

- ❑ On the right frame select **Properties** for the member **Inventory**
- ❑ Go to the **Formulas** tab and type the following:

```
IF(NOT @ISMBR(Jan))"Opening Inventory" = @PRIOR("Ending Inventory");ENDIF;
"Ending Inventory" = "Opening Inventory" + Additions - Sales;
```

- ❑ Click on **Verify** push button to check syntax
- The member **Jan** does not exist on the metaoutline yet, so ignore the message:  
**(line 1): unknown member name [Jan] in function [@ISMBR]**



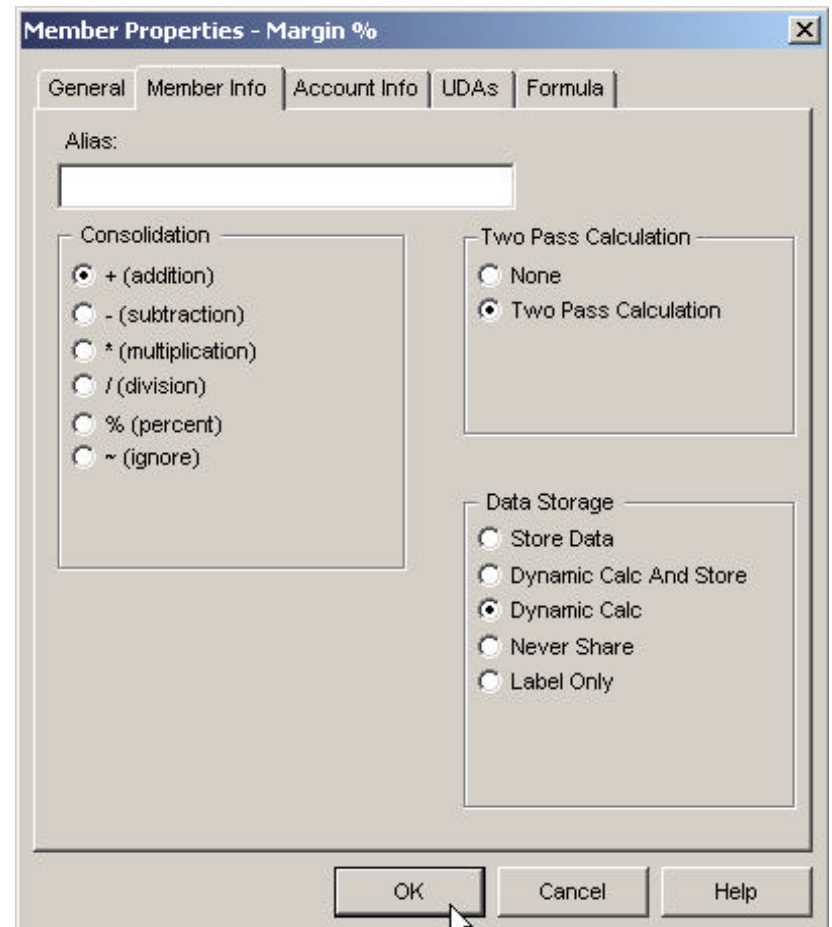
- ❑ Click on **IBM Data Management Software**



# OLR3 - Creating the Measures Dimension *(continued)*

## 5) Creating the Ratios consolidation member

- ❑ On the right frame click on **Inventory** and from the **Edit** menu, select **Add Member as Sibling...**
  - ❑ Type **Ratios** for new member's name and Click **OK**.
  - ❑ Right click on **Ratios** and select **Properties**.
  - ❑ Go to the **Member Info** tab and change: **Data Storage** to **Label Only**
    - ❑ **Consolidation** to **~ (ignore)**
- ❑ Create two members as children for the **Ratios** member. Use the following information:
  - ❑ Member Name: **Margin %**
    - Data Storage: **Dynamic Calc**
    - Two Pass Calculation: **Two Pass Calculation**
    - Formula: **Margin % Sales;**
  - ❑ Member Name: **Profit %**
    - Data Storage: **Dynamic Calc**
    - Two Pass Calculation: **Two Pass Calculation**
    - Formula: **Profit % Sales;**



	Typ...	Alias/Member Properties	Formula
Untitled			
Measures	Acc...	(Dense) (Label Only)	
Profit	(+)	(Dynamic Calc)	
Inventory	(+)		
Ratios	(~)	(Label Only)	
Profit %	(~)	(Dynamic Calc) (Two-Pass Calc)	Profit % Sales;
Margin %	(+)	(Dynamic Calc) (Two-Pass Calc)	Margin % Sales;

# OLR3 - Creating Time, Scenario and Channel Dimensions

## 1) Adding the Time Dimension

- On the left frame expand the **Time** dimension model.
- Drag the member **Quarter, Month Hierarchy** and drop it into the right frame
- On the **right** frame select the member **Generic\_TIME**
  - Change the **Name:** to **TIME**
  - Change the **Data Storage** to **Dynamic Calc**
- On the **right** frame select the members **TIME.QUARTER**
  - Change the **Data Storage** to **Dynamic Calc**

## 2) Adding the Scenario Dimension

- On the left frame expand the **Generic\_Scenarios** dimension model.
- Drag the member **SCENARIO\_NAME** and drop it into the right frame
- On the **right** frame select **Properties** for the member **Generic\_Scenarios**
  - Change the **Name:** to **Scenario**
  - Change the **Dimension Storage** to **Dense**

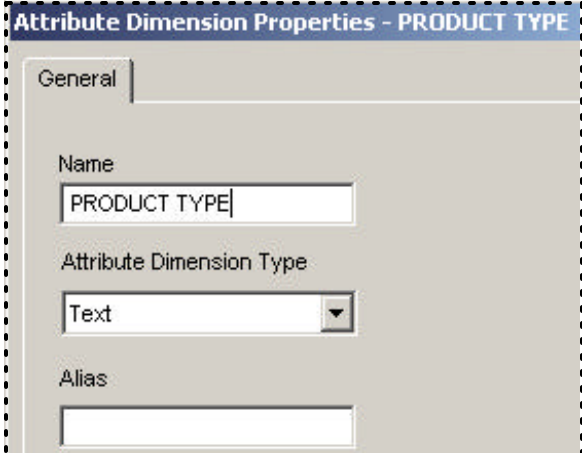
## 3) Adding the Channel Dimension

- On the left frame expand the **Channel** dimension model.
- Drag the member **CHANNEL.CHANNEL\_DESCRIPTION**

# OLR3 - Creating the Product and Product Type Dimensions

## 1) Adding the PRODUCT Dimension

- On the left frame expand the **Product** dimension model.
- Drag the member **Product Group, Product Hierarchy** and drop it into the right frame
- On the **right** frame
- Select the **Properties** for the member **PRODUCT.PRODUCT\_GROUP\_ID**
  - Go to the **Member Info** tab and
  - On the **Alias** drop-down list, select **PRODUCT\_GROUP\_DESC**
  - Click on **OK**
- Select the **Properties** for the member **PRODUCT.PRODUCT\_ID**
  - Go to the **Member Info** tab and
  - On the **Alias** drop-down list, select **PRODUCT\_DESC**
  - Click on **OK**



Attribute Dimension Properties - PRODUCT TYPE

General

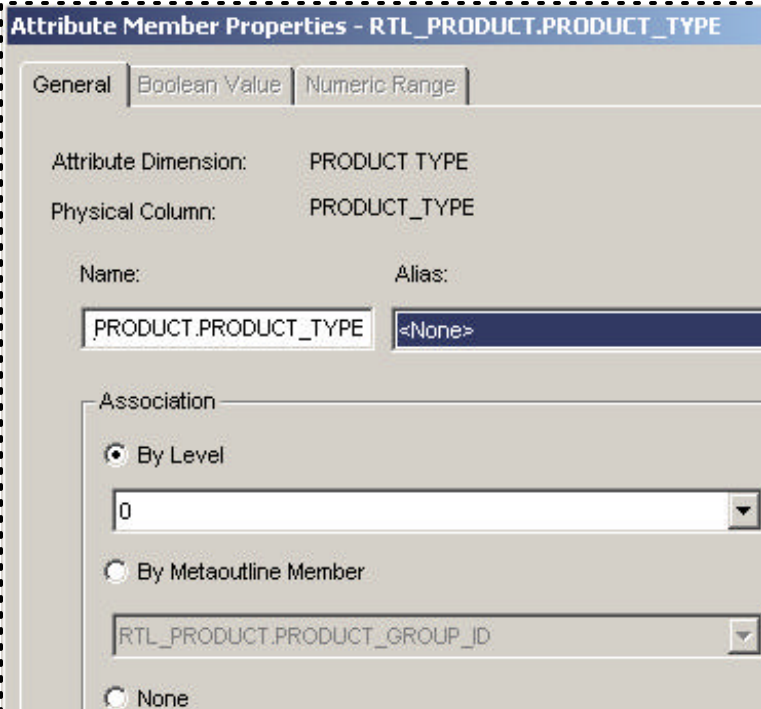
Name: PRODUCT TYPE

Attribute Dimension Type: Text

Alias:

## 2) Adding the Product Type Attribute Dimension

- On the **left** frame, expand the **Product** > Expand **Attributes**
  - Drag the member **PRODUCT.PRODUCT\_TYPE**
  - Drop it into the right frame On the **right** frame
  - Select the **Properties** for the member **PRODUCT\_TYPE**
  - On the **General** tab, On the **Name** text field Type **PRODUCT TYPE**
    - Click on **OK**
- Select the **Properties** for the member **PRODUCT.PRODUCT\_TYPE**
  - On the **General** tab, for **Association**
    - Select the **By Level** radio button
    - Select **0** (zero) on the drop-down list
    - Click on **OK**



Attribute Member Properties - RTL\_PRODUCT.PRODUCT\_TYPE

General Boolean Value Numeric Range

Attribute Dimension: PRODUCT TYPE

Physical Column: PRODUCT\_TYPE

Name: PRODUCT.PRODUCT\_TYPE Alias: <None>

Association

By Level

0

By Metaoutline Member

RTL\_PRODUCT.PRODUCT\_GROUP\_ID

None

# OLR3 - Creating the Market and Market Type Dimensions


## 1) Adding the MARKET Dimension

- On the left frame expand the **MARKET** dimension model.
- Drag the member **Region, State, City Hierarchy** and drop it into the right frame
- Select the **Properties** for the member **Generic\_Market**
  - On the **General** tab, On the **Name** text field Type **Market**, Click on **OK**

## 2) Adding the Market Type Attribute Dimension

- On the **left** frame, expand the **MARKET** > Expand **Attributes**
  - Drag the member **GENERIC\_MARKET.MARKET\_TYPE**
  - Drop it into the right frame On the **right** frame
  - Select the **Properties** for the member **MARKET\_TYPE**
    - On the **General** tab, On the **Name** text field Type **Market Type**, Click on **OK**
- Select the **Properties** for the member **MARKET.MARKET\_TYPE**
  - On the **General** tab, for **Association**
    - Select the **By Level** radio button
    - Select **0** (zero) on the drop-down list
    - Click on **OK**

## 3) Verifying and Saving the Metaoutline

- From the **File** Main Menu Bar
  - Select **Verify** to check errors on your data model
  - Click on **OK**
- From the **File** Main Menu Bar, Select **File** > **Save**
  - Type **OLR3xx - Retail Base Metaoutline** in the **Olap Model Name** field
  - Click **OK**  **Data Management Software**

# OLR4 - Creating the Retail/Basic OLAP Cube

- From the **Outline** menu bar,
  - Select **Member and Data Load**.
- On the **Essbase Application and Database** window:
  - Type **Retailx** on **Application Name** field
  - Type **Basic** on **Database Name** field
- Select the **Use Default Calc Script** radio button
- Leave all other default options and **click** on **Next** push button
- Accept the defaults values for Schedule options and **click** on **Finish** push button
- You should get similar results:

Member and Data Load				
OLAP Model:		Application:		
OLR2 - Retail Base Model		Retail		
Metaoutline:		Database:		
OLR3 - Retail Base Metaoutline		Basic		
Load Type	Records Loa...	Records Reje...	Time Elapsed	Status
Member Load	157	0	00:00:00	Load Initi.
Data Load	62195	0	00:00:06	Member L
Calculation			00:00:21	Data Loa
			00:01:03	Database

**Essbase Application and Database**

Essbase Name

Application Name: Retail

Database Name: Basic

Delete all members first  
 Modify Essbase users  
 Incremental update

Calc Scripts

None  
 Use default calc script  
 Specify calc script

View Script...

Member Load Filter: \*Default  
 Data Load Filter: \*Default

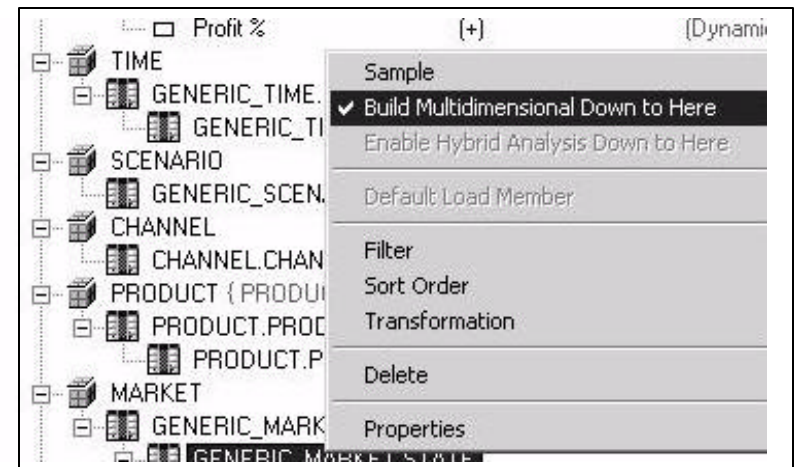
Command Scripts:

< Back    Next >

# OLR5 - Creating the Drill Through Report

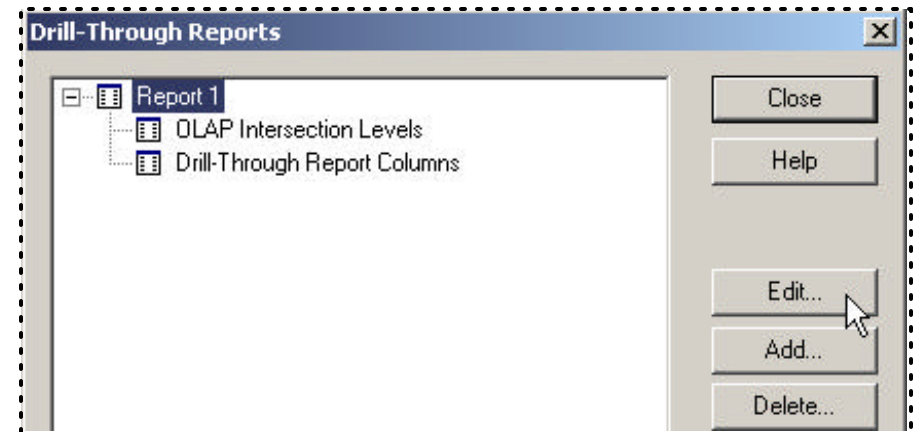
## 1) Creating a new Metaoutline

- ❑ If not open, then open the **OLR3xx - Retail Base Metaoutline**
- ❑ **SAVE** the metaoutline **OLR3xx - Retail Base Metaoutline AS OLR5xx - Retail Drill Through Metaoutline**
- ❑ Remove ( **delete** ) the Dimension **Market Type**
- ❑ On the **right** frame, expand the **Market** Dimension
  - ❑ Right Click on **GENERIC\_MARKET.STATE** member
  - ❑ Select **Build Multidimensional Down to Here**



## 2) Creating the Drill-Through Report

- ❑ From the **Edit** menu, Select the **Drill-Through Reports..**
  - ❑ Click on **Add** push button
  - ❑ Select **Report 1** and click on **Edit**
  - ❑ Type **Product Sales Report** on **Name** field,
  - ❑ Click on **OK**



## 3) Defining the Intersection Level

- ❑ Select **OLAP Intersection level** for **Product Sales Report**
  - ❑ Click on **Add** push button
- ❑ Expand the **TIME** dimension members
  - ❑ Move ( > ) to the **right** frame: **GENERIC\_TIME.MONTH\_ABRFV**
- ❑ Expand the **SCENARIO** dimension members
  - ❑ Move ( > ) to the **right** frame: **GENERIC\_SCENARIOS.SCENARIO\_NAME**
- ❑ Expand the **MARKET** dimension members
  - ❑ Move ( > ) to the **right** frame: **GENERIC\_MARKET.STATE**
- ❑ Click on **OK**





# OLR5 - Creating the Drill Through Report (continued)

## 4) Defining the Drill-Through Columns

- ❑ Select **Drill-Through Report Columns** for **Product Sales Report**

- ❑ Click on **Add** push button

- ❑ Expand the **MARKET** table columns

- ❑ Move (>) to the **right** frame, REGION  
STATE  
CITY

- ❑ Expand the **PRODUCT** table columns

- ❑ Move (>) to the **right** frame: PRODUCT\_GROUP\_DESC  
PRODUCT\_DESC  
PRODUCT\_TYPE

- ❑ Expand the **FACT\_TABLE** columns

- ❑ Move (>) to the **right** frame: TRANSDATE  
SALES

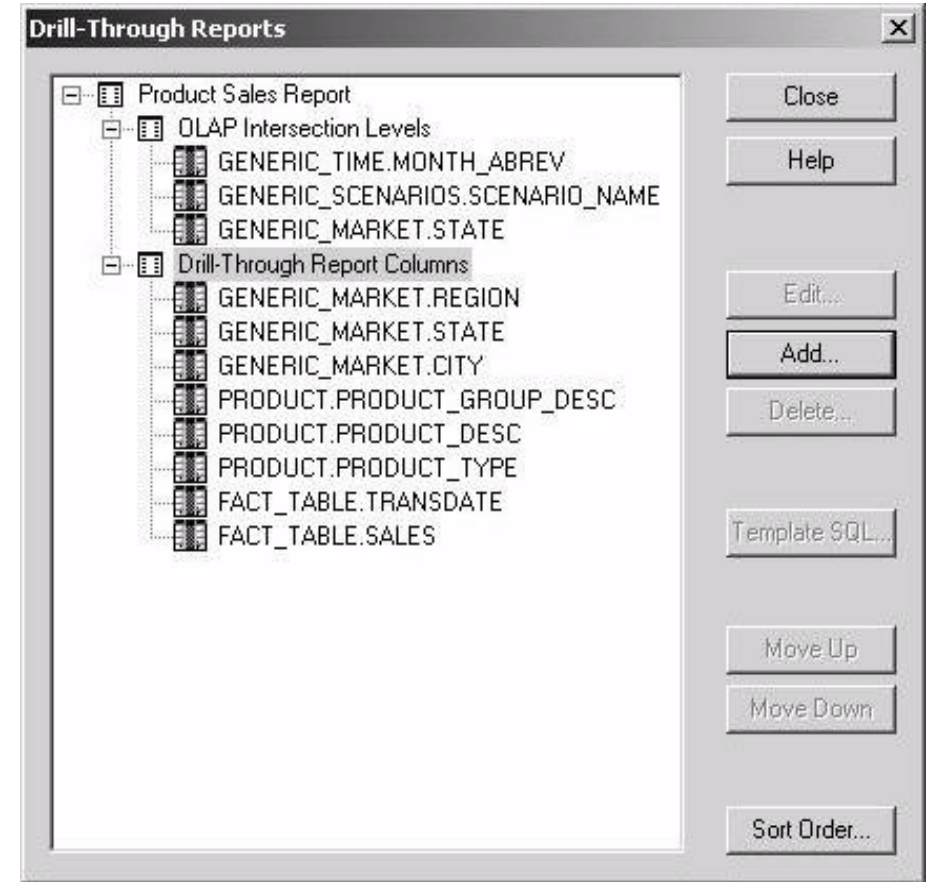
- ❑ Click on **OK**

## 5) Defining a Sort Order for the Report

- ❑ Click on **Sort Order** push button

- ❑ Move (>) to the **right** frame, the fields: MARKET.REGION  
MARKET.STATE  
MARKET.CITY  
PRODUCT.PRODUCT\_GROUP\_DESC  
PRODUCT.PRODUCT\_DESC  
FACT\_TABLE.TRANSDATE

- ❑ Click on **OK** and Click on **Close**





# OLR5 - Creating the Drill Through Report *(continued)*

## 6) Creating the Retail/Drill OLAP Cube

- Save the metaoutline **OLR5xx - Retail Drill-Through Metaoutline**
- From the **Outline** menu bar,
  - Select **Member and Data Load**.
- On the **Essbase Application and Database** window:
  - Type **Retailxx** on **Application Name** field
  - Type **DrillIT** on **Database Name** field
- Select the **Use Default Calc Script** radio button
- Leave all other default options and **click** on **Next** push button
- Accept the defaults values for Schedule options and **click** on **Finish** push button
- You should get similar results:

**Member and Data Load**

OLAP Model: OLR2 - Retail Base Model  
Application: Retail  
Time Started: Friday, January 17, 2003 01:25:59 AM

Metaoutline: OLR4 - Retail Drill-Through Metaoutline  
Database: Drillj

Load Type	Records Loa...	Records Reje...	Time Elapsed	Status
			00:00:00	Load Initialization in Progress
Member Load	154	0	00:00:06	Member Load in Progress
Data Load	34855	0	00:00:09	Data Load in Progress
			00:00:45	Load completed.

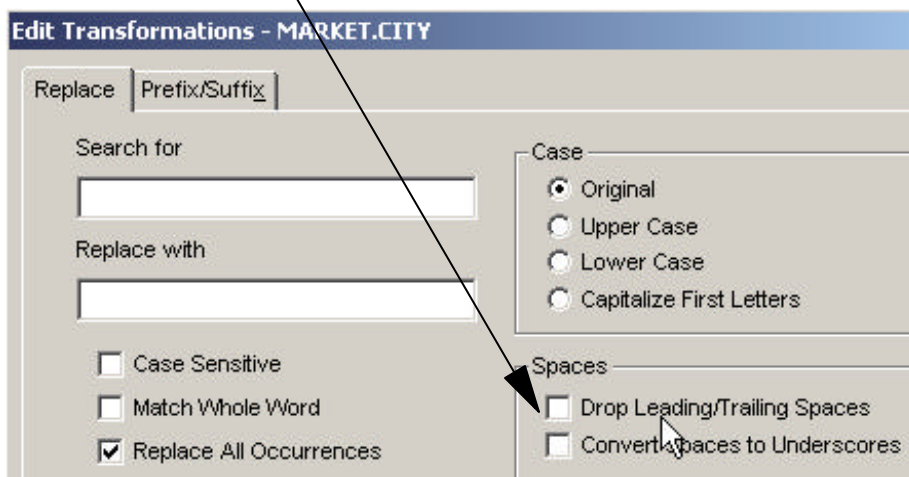
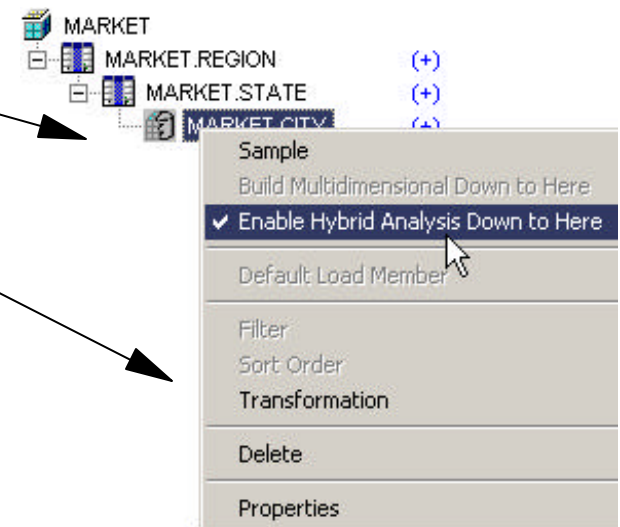
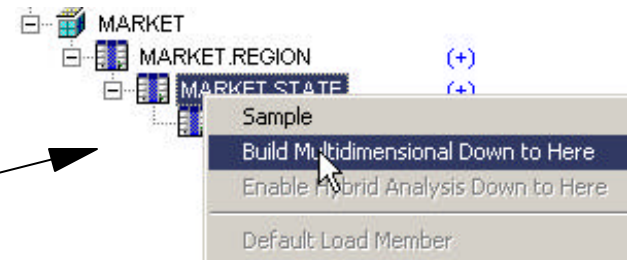
# OLR6 - Creating Hybrid OLAP Cubes

## 1) Creating a new Metaoutline

- ❑ If not open, then open the **OLR3xx - Retail Base Metaoutline**
- ❑ **SAVE** the metaoutline **OLR3xx - Retail Base Metaoutline AS OLR6xx - Retail Hybrid Metaoutline**
- ❑ Remove ( **delete** ) the Dimension **Product Type**
- ❑ Remove ( **delete** ) the Dimension **Market Type**

## 2) Creating the Hybrid Dimension

- ❑ On the **right** frame, expand the **MARKET** Dimension
  - ❑ Select the member **GENERIC\_MARKET.STATE** and,
    - ❑ Select the option **Build Multidimensional Down to Here**
  - ❑ On the member **GENERIC\_MARKET.CITY** and,
    - ❑ Select the **Enable Hybrid Analysis Down to Here**
    - ❑ Select the **Transformation**, and
    - ❑ On the **Replace** tab, **Spaces** frame
      - ❑ **Deselect** the **Drop Leading/Trailing Spaces**



# OLR6 - Creating Hybrid OLAP Cubes *(continued)*

## 3) Creating the Retail/Hybrid OLAP Cube

- Save the metaoutline **OLR6xx - Retail Hybrid Metaoutline**
- From the **Outline** menu bar,
  - Select **Member and Data Load**.
- On the **Essbase Application and Database** window:
  - Type **Retailx** on **Application Name** field
  - Type **Hybrid** on **Database Name** field
- Select the **Use Default Calc Script** radio button
- Leave all other default options and **click** on **Next** push button
- Accept the defaults values for Schedule options and **click** on **Finish** push button
- You should get similar results:

Member and Data Load				
OLAP Model:	OLR2 - Retail Base Model	Application:	Retail	Time
Metaoutline:	OLR6 - Retail Hybrid Metaoutline	Database:	Hybrid	Time
Load Type	Records Loa...	Records Reje...	Time Elapsed	Status
			00:00:00	Load Initialization in Progress
Member Load	152	0	00:00:03	Member Load in Progress
Data Load	34855	0	00:00:12	Data Load in Progress
			00:00:57	Load completed.