

MultidimensionalProject14 - Microsoft Visual Studio (Administrator)

File Edit View Project Build Debug Team Database Cube Tools Analyze Window Help

Develop Default Start

SQL Server Object Explor... Sales 1(cube [Design]) Sales(cube [Design]) Sales.dsv [Design]

Cube Struct... Dimension Usage Calculations KPIs Actions Partitions Aggregations Perspectives Translations Browser

Language: Default

Sales 1

Dimension Hierarchy Operator Filter Expression

<Select dimension>

Measure Group: <All>

Sales 1

- Measures
- KPIs
- Channel Dim
- Customer Dim
- Product Dim 1
- Salesman Dim
- Time Dim 1

Metadata

Calculated Members

Drag levels or measures here to add to the query.

Solution Explorer

Search Solution Explorer (Ctrl+Shift+F)

Solution 'MultidimensionalProject14' (1 project)

- MultidimensionalProject14
  - Data Sources
    - Sales.ds
  - Data Source Views
    - Sales.dsv
    - Sales 1.dsv
  - Cubes
    - Sales(cube)
    - Sales 1(cube)
  - Dimensions
    - Product Dim.dim
    - Time Dim.dim
    - Product Dim 1.dim
    - Channel Dim.dim
    - Salesman Dim.dim
    - Customer Dim.dim
    - Time Dim 1.dim
  - Mining Structures
  - Roles
  - Assemblies
  - Miscellaneous

BI "DAY 2" 02:25:05

A

Activate Windows  
Go to Settings to activate Windows.

Sales 1(cube [Design]) Sales(cube [Design]) Sales.dsv [Design]

Cube Struct... Dimension Usage Calculations KPIs Actions Partitions Aggregations Perspectives Translations Browser

Language: Default

SQL Server Object Explor... SQL Server

(localdb)\MSSQLLocalDB (localdb)\ProjectsV13 Projects - Multidimensional

Sales 1

Metadata

Measure Group: <All>

Sales 1

- Measures
- KPIs
- Channel Dim
- Customer Dim
- Product Dim 1
- Salesman Dim
- Time Dim 1

Calculated Members

Dimension Hierarchy Operator Filter Expression Parameter

<Select dimension>

Cube Selection

Select a cube from the following list. Changing the cube from the current selection can change the query.

EmpPerformance  
QtyPerProduct  
Sales  
**Sales 1**

OK Cancel

Solution Explorer

Solution 'MultidimensionalProject14' (1 project)

- MultidimensionalProject14
  - Data Sources
    - Sales.ds
  - Data Source Views
    - Sales.dsv
    - Sales 1.dsv
  - Cubes
    - Sales(cube)
    - Sales 1(cube)
  - Dimensions
    - Product Dim.dim
    - Time Dim.dim
    - Product Dim 1.dim
    - Channel Dim.dim
    - Salesman Dim.dim
    - Customer Dim.dim
    - Time Dim 1.dim
  - Mining Structures
  - Roles
  - Assemblies
  - Miscellaneous

BI "DAY 2" 02:25:15

A

Activate Windows

Go to Settings to activate Windows.

Solution E

MultidimensionalProject14 - Microsoft Visual Studio (Administrator)

File Edit View Project Build Debug Team Database Cube Tools Architecture Test Analyze Window Help

Quick Launch (Ctrl+Q) Sign in

SQL Server Object Explor... Sales.1(cube [Design]) Sales(cube [Design]) Sales.dsv [Design]

Cube Struct... Dimension Usage Calculations KPIs Actions Partitions Aggregations Perspectives Translations Browser

Edit as Text Import... Dimension Hierarchy Operator Filter Expression Parameter

Dimension <Select dimension>

Measure Group: EmpPerformance

EmpPerformance  
Measures  
KPIs

Salesman Dim  
Salesman ID  
Salesman Name  
Salesman Phone

Time Dim 1  
Quarter  
Calendar Year  
Time ID

Calculated Members

Drag levels or measures here to add to the query.

Serve... SSIS T... SQL...

Output Data Tools Operations

Solution Explorer

Search Solution Explorer (Ctrl+.)

Solution 'MultidimensionalProject14' (1 project)

MultidimensionalProject14

- Data Sources
- Sales.ds

Data Source Views

- Sales.dsv
- Sales.1.dsv

Cubes

- Sales(cube)
- Sales.1(cube)

Dimensions

- Product Dim.dim
- Time Dim.dim
- Product Dim 1.dim
- Channel Dim.dim
- Salesman Dim.dim
- Customer Dim.dim
- Time Dim 1.dim

Mining Structures

Roles

Assemblies

Miscellaneous

BI "DAY 2" 02:25:23

A

Activate Windows Go to Settings to activate Windows.

The screenshot shows the Microsoft Visual Studio interface for a multidimensional project named 'MultidimensionalProject14'. The menu bar includes File, Edit, View, Project, Build, Debug, Team, Database, Cube, Tools, Architecture, Test, Analyze, Window, and Help. The toolbar has icons for Save, Undo, Redo, Cut, Copy, Paste, Find, Replace, and others. The title bar says 'MultidimensionalProject14 - Microsoft Visual Studio (Administrator)'. The main window has tabs for 'Sales.1(cube [Design])', 'Sales(cube [Design])', and 'Sales.dsv [Design]'. The 'Sales.1(cube [Design])' tab is active, showing a grid for dragging dimensions and measures. The left sidebar shows the 'SQL Server Object Explorer' with nodes for 'SQL Server', '(localdb)\MSSQLLocalDB', and '(localdb)\ProjectsV13'. The 'Solution Explorer' on the right lists the project structure, including 'MultidimensionalProject14' (solution), 'Data Sources' (Sales.ds), 'Data Source Views' (Sales.dsv, Sales.1.dsv), 'Cubes' (Sales(cube), Sales.1(cube)), 'Dimensions' (Product Dim.dim, Time Dim.dim, Product Dim 1.dim, Channel Dim.dim, Salesman Dim.dim, Customer Dim.dim, Time Dim 1.dim), 'Mining Structures', 'Roles', 'Assemblies', and 'Miscellaneous'. A watermark for 'BI "DAY 2" 02:25:23' and a Windows activation message 'Activate Windows Go to Settings to activate Windows.' are visible at the bottom right.

Develop Default Start

Sales 1.cube [Design]

Sales.cube [Design]

Sales.dsv [Design]

Cube Struct... Dimension Usage Calculations KPIs Actions Partitions Aggregations Perspectives Translations Browser

Edit as Text Import... |



EmpPerformance

Metadata

Measure Group:

&lt;All&gt;

EmpPerformance

Measures

KPIs

Salesman Dim

Salesman ID

Salesman Name

Salesman Phone

Time Dim 1

Calendar Quarter

Calendar Year

Time ID

Dimension

Hierarchy

Operator

Filter Expression

Param...

&lt;Select dimension&gt;

## Cube Selection

Select a cube from the following list. Changing the cube from the current selection can change the query.

EmpPerformance

QtyPerProduct

Sales

Sales 1

OK

Cancel

Calculated Members



MultidimensionalProject14 - Microsoft Visual Studio (Administrator)

File Edit View Project Build Debug Team Database Cube Tools Architecture Test Analyze Window Help

Develop Default Start

SQL Server Object Explor... Sales 1(cube [Design]) Sales.cube [ ]

Analyze in Excel

Choose the perspective you want to view when browsing the model in Excel.

Sales 1  
EmpPerformance  
QtyPerProduct

Measure Group:  
<All>

QtyPerProduct  
Measures  
Fact Sales  
UnitPrice  
KPIs  
Product Dim 1  
Product ID  
Product Name

Calculated Members

OK Cancel Help

Solution Explorer

Solution 'MultidimensionalProject14' (1 project)

- MultidimensionalProject14
  - Data Sources
    - Sales.ds
  - Data Source Views
    - Sales.dsv
    - Sales 1.dsv
  - Cubes
    - Sales.cube
    - Sales 1(cube
  - Dimensions
    - Product Dim.dim
    - Time Dim.dim
    - Product Dim 1.dim
    - Channel Dim.dim
    - Salesman Dim.dim
    - Customer Dim.dim
    - Time Dim 1.dim
  - Mining Structures
  - Roles
  - Assemblies
  - Miscellaneous

BI "DAY 2" 02:25:32

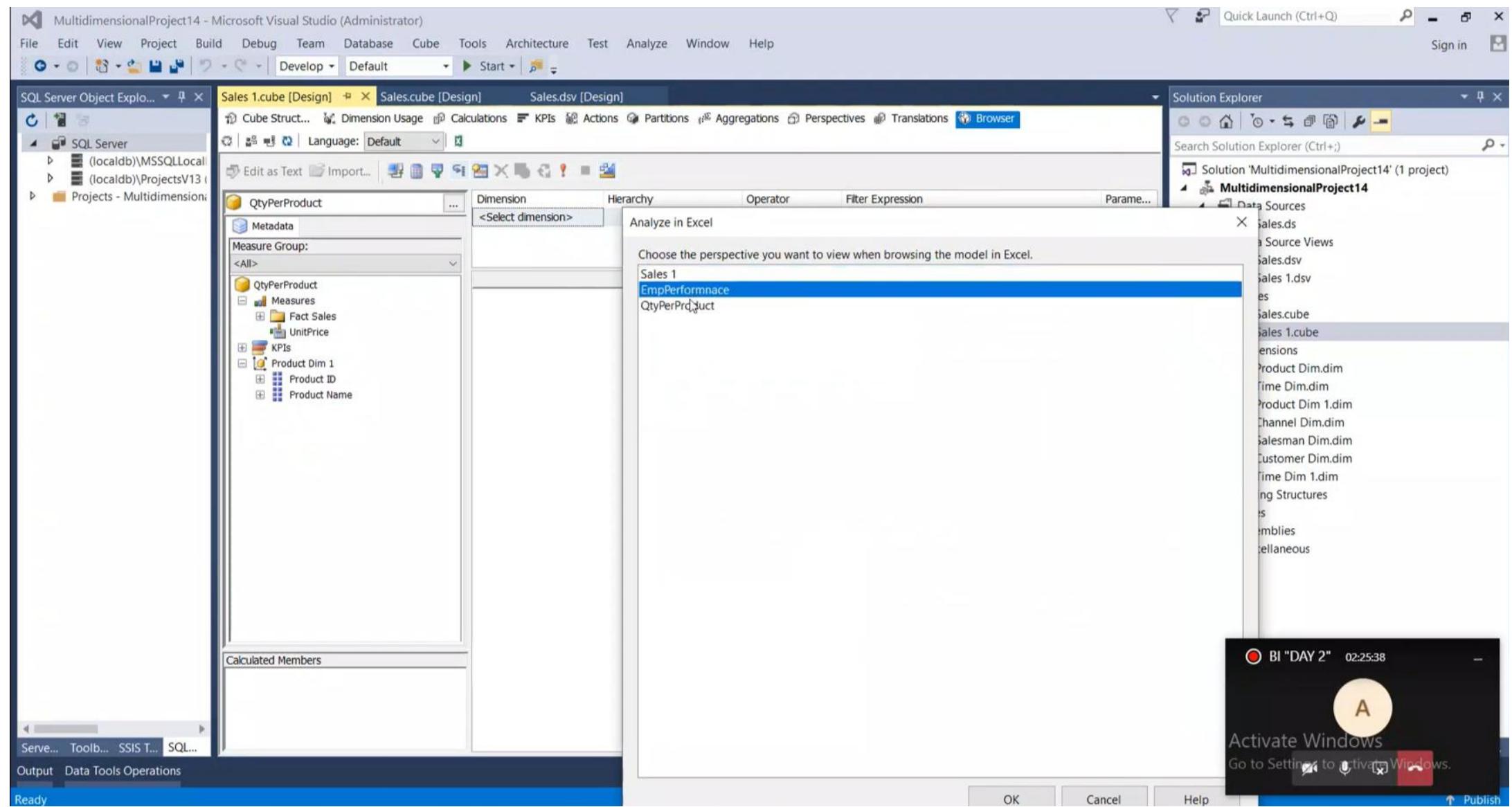
A

Activate Windows

Go to Settings to activate Windows.

Solution Explorer

Output Data Tools Operations



MultidimensionalProject14 - Microsoft Visual Studio (Administrator)

File Edit View Project Build Debug Team Database Cube Tools Architecture Test Analyze Window Help

Quick Launch (Ctrl+Q) Sign in

SQL Server Object Explor... Default Develop Sales 1(cube [Design]) Sales(cube [Design]) Sales.dsv [Design]

Cube Struct... Dimension Usage Calculations KPIs Actions Partitions Aggregations Perspectives Translations Browser

Language: Default

Dimension Hierarchy Operator Filter Expression Parameter

<Select dimension>

QtyPerProduct

Metadata

Measure Group: <All>

QtyPerProduct

Measures

Fact Sales

UnitPrice

KPIs

Product Dim 1

Product ID

Product Name

Calculated Members

Office

Starting...

Solution Explorer

Solution 'MultidimensionalProject14' (1 project)

MultidimensionalProject14

Data Sources

Sales.ds

Data Source Views

Sales.dsv

Sales 1.dsv

Cubes

Sales(cube)

Sales 1(cube)

Dimensions

Product Dim.dim

Time Dim.dim

Product Dim 1.dim

Channel Dim.dim

Salesman Dim.dim

Customer Dim.dim

Time Dim 1.dim

Mining Structures

Roles

Assemblies

Miscellaneous

BI "DAY 2" 02:25:42

A

Activate Windows

Serve... Toolb... SSIS T... SQL...

Book1 - Excel (Product Activation Failed)

PivotTable Tools

File Home Insert Page Layout Formulas Data Review View Add-ins Team Analyze Design Tell me what you want to do...

PivotTable Name: Active Field: PivotTable1

PivotTable1 Options Field Settings PivotTable Drill Down Drill Up Expand Field Group Selection Ungroup Group Field Insert Slicer Timeline Connections Refresh Change Data Source Clear Select Move Fields, Items, OLAP Relationships Tools PivotChart Recommended PivotTables PivotTable Calculations Tools Field List +/- Buttons Headers Show

A1

PivotTable Fields

To build a report, choose fields from the PivotTable Field List

Choose fields to add to report:

Fact Sales

- Qty
- Qty Total Price

Salesman Dim

- Salesman ID
- Salesman Name
- Salesman Phone

Time Dim 1

Drag fields between areas below:

FILTERS COLUMNS

BI "DAY 2" 02:25:49

Activate Windows Go to Settings to activate Windows.

tmp38EF

Ready

The screenshot shows a Microsoft Excel window titled "Book1 - Excel (Product Activation Failed)". The ribbon is set to "PivotTable Tools" under the "Analyze" tab. The main area displays a blank PivotTable named "PivotTable1" in cell A1. A tooltip for "BI 'DAY 2'" is visible in the bottom right corner. The "PivotTable Fields" pane on the right lists fields from three dimensions: Fact Sales (Qty, Qty Total Price), Salesman Dim (Salesman ID, Salesman Name, Salesman Phone), and Time Dim 1. The status bar at the bottom shows "tmp38EF" and "Ready".

PivotTable1

Salesman Name Drill Drill Collapse Field

Options Field Settings Down Up Group

PivotTable

Row Labels

	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T
1	Row Labels	Qty																		
2	Ahmed	185																		
3	khalid	285																		
4	Omar	420																		
5	Grand Total	890																		
6																				
7																				
8																				
9																				
10																				
11																				
12																				
13																				
14																				
15																				
16																				
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22																				
23																				
24																				
25																				
26																				
27																				
28																				
29																				
30																				

PivotTable Fields

Choose fields to add to report:

Search

Fact Sales

- Qty
- Qty Total Price

Salesman Dim

- Salesman ID
- Salesman Name
- Salesman Phone

Time Dim 1

Drag fields between areas below:

FILTERS

COLUMNS

BI "DAY 2" 02:25:51

A

Activate Windows  
Go to Settings to activate Windows.

tmp38EF

Ready

100%

Book1 - Excel (Product Activation Failed)

PivotTable Tools

File Home Insert Page Layout Formulas Data Review View Add-ins Team Analyze Design Tell me what you want to do...

PivotTable Name: Active Field: Salesman Name

PivotTable1 Options Field Settings PivotTable

Active Field: Drill Down Drill Up Expand Field Group Selection Ungroup Group Field Insert Slicer Insert Timeline Connections Refresh Change Data Source Clear Select Move PivotTable Fields, Items, OLAP Relationships Tools PivotChart Recommended PivotTables Tools Field List +/- Buttons Headers Show

A1 Row Labels Qty

	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T
1	Row Labels	Qty																		
2	Ahmed	185																		
3	2007	140																		
4	2008	45																		
5	khalid	285																		
6	2007	120																		
7	2008	165																		
8	Omar	420																		
9	2007	120																		
10	2008	300																		
11	Grand Total	890																		
12																				
13																				
14																				
15																				
16																				
17																				
18																				
19																				
20																				
21																				
22																				
23																				
24																				
25																				
26																				
27																				
28																				
29																				
30																				

ttmp38EF

PivotTable Fields

Choose fields to add to report:

Search

Salesman Dim

Salesman Name

Salesman Phone

Time Dim 1

Calendar Quarter

Calendar Year

Time ID

Drag fields between areas below:

FILTERS

COLUMNS

BI "DAY 2" 02:25:56

A

Activate Windows

Go to Settings to activate Windows.

Book1 - Excel (Product Activation Failed)

PivotTable Tools

Analyze

Design

Tell me what you want to do...

PivotTable Name: Active Field: Salesman Name

PivotTable1 Options Field Settings

Drill Down Drill Up Collapse Field

Group Selection Ungroup Group Field

Insert Slicer Insert Timeline Filter Refresh Change Data Source Clear Select Move PivotTable Fields, Items, OLAP Relationships Tools Calculations

PivotChart Recommended PivotTables Tools Field List Buttons Headers Show

A1 Row Labels

Row Labels Qty

1	Ahmed	185
2	2007	140
3	2008	45
4	khalid	285
5	2007	120
6	2008	165
7	Omar	420
8	2007	120
9	2008	300
10	<b>Grand Total</b>	<b>890</b>
11		
12		
13		
14		
15		
16		
17		
18		
19		
20		
21		
22		
23		
24		
25		
26		
27		
28		
29		
30		

PivotTable Fields

Choose fields to add to report:

Search

Salesman Dim

- Salesman ID
- Salesman Name
- Salesman Phone

Time Dim 1

- Calendar Quarter
- Calendar Year
- Time ID

FILTERS

COLUMNS

BI "DAY 2" 02:26:08

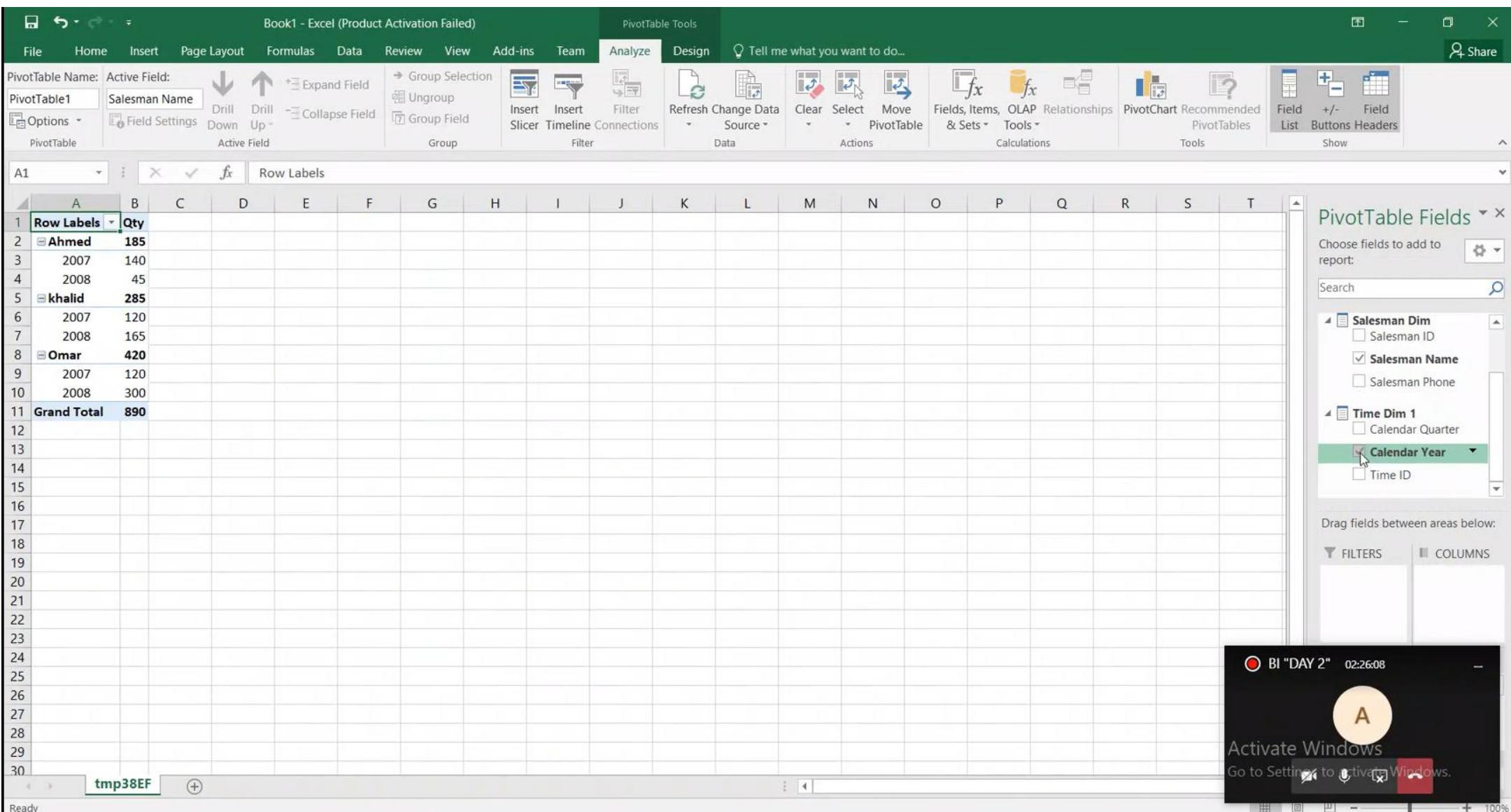
A

Activate Windows

Go to Settings to activate Windows.

tmp38EF

Ready



SSAS perspective is view



All

Images

Flights

Videos

Web

Finance

News

: More

Tools

In simple terms, SSAS Perspective is a view of OLAP cubes where you can filter for any objects in the OLAP Cube. Let us create an perspective in a SSAS OLAP Cube and look at the usage of them in detail. SSAS Perspectives can be created by opening in the cube in visual studio as shown in the below screenshot.

Jul 9, 2020

Book1 - Excel (Product Activation Failed)

PivotTable Tools

File Home Insert Page Layout Formulas Data Review View Add-ins Team Analyze Design Tell me what you want to do...

PivotTable Name: Active Field: Salesman Name Expand Field  
PivotTable1 Options Field Settings Drill Down Drill Up Collapse Field  
Group Selection Ungroup Group Field  
Insert Slicer Insert Timeline Connections Refresh Change Data Source  
Clear Select Move PivotTable  
Fields, Items, OLAP Relationships Tools Calculations  
PivotChart Recommended PivotTables Tools  
Field List Buttons Headers Show

A1 Row Labels Qty

	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T
1	Row Labels	Qty																		
2	Ahmed	185																		
3	2007	140																		
4	2008	45																		
5	khalid	285																		
6	2007	120																		
7	2008	165																		
8	Omar	420																		
9	2007	120																		
10	2008	300																		
11	Grand Total	890																		
12																				
13																				
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19																				
20																				
21																				
22																				
23																				
24																				
25																				
26																				
27																				
28																				
29																				
30																				

PivotTable Fields

Choose fields to add to report:

Search

Salesman Dim  
 Salesman ID  
 Salesman Name  
 Salesman Phone

Time Dim 1  
 Calendar Quarter  
 Calendar Year  
 Time ID

Drag fields between areas below:

FILTERS    COLUMNS

BI "DAY 2" 02:26:16

A

Activate Windows  
Go to Settings to activate Windows.

tmp38EF

Ready

100%

Screenshot of Microsoft Excel showing a 'Confirm Save As' dialog box.

The dialog box asks: "Book1.xlsx already exists. Do you want to replace it?" with 'Yes' and 'No' buttons.

Excel ribbon tabs visible include: Organize, New folder, This PC, 3D Objects, Desktop, Documents, Downloads, Music, Pictures, Videos, Local Disk (C:), Refresh, Change Data Source, Clear, Select, Move, PivotTable, Fields, Items, OLAP Relationships & Sets, Tools, PivotChart, Recommended PivotTables, Field List, +/-, Buttons Headers, Show.

Left sidebar shows a file list:

Name	Date modified	Type
BI Videos	10/02/2020 12:22	File fol
Custom Office Templates	18/08/2019 10:57	File fol
IISExpress	18/08/2019 12:36	File fol
My Data Sources	27/10/2020 13:23	File fol
My Web Sites	18/08/2019 12:36	File fol
Sound recordings	11/11/2019 21:48	File fol
SQL Server Management Studio	25/10/2020 14:02	File fol
Visual Studio 2015	21/10/2020 09:53	File fol

Right sidebar shows the 'PivotTable Fields' pane with sections for Salesman Dim and Time Dim 1, and a status bar at the bottom.

Bottom right corner shows a watermark for "BI 'DAY 2' 02:26:27" and "Activate Windows".

# 2 SQL Server Analysis Service-SSAS.

MultidimensionalProject14 - Microsoft Visual Studio (Administrator)

Sales 1(cube [Design]) Sales(cube [Design]) Sales.dsv [Design]

File New Open Recent Tools Analyze Window Help

SQL Server Object Explorer

Solution Explorer

Quick Launch (Ctrl+Q)

Sign In

Dimension Usage Calculations KPIs Actions Partitions Aggregations Perspectives Translations Browser

Language: Default

Edit as Text Import...

Dimension Hierarchy Operator Filter Expression

Parameter

Measure Group: <Select dimension>

QtyPerProduct

Metadata

Measure Group: <All>

QtyPerProduct

Measures

Fact Sales

UnitPrice

KPIs

Product Dim 1

Product ID

Product Name

Drag levels or measures here to add to the query.

Calculated Members

Solution Explorer

Solution 'MultidimensionalProject14' (1 project)

MultidimensionalProject14

Data Sources

Sales.ds

Data Source Views

Sales.dsv

Sales 1.dsv

Cubes

Sales(cube)

Sales 1(cube)

Dimensions

Product Dim.dim

Time Dim.dim

Product Dim 1.dim

Channel Dim.dim

Salesman Dim.dim

Customer Dim.dim

Time Dim 1.dim

Mining Structures

Roles

Assemblies

Miscellaneous

BI "DAY 2" 02:26:33

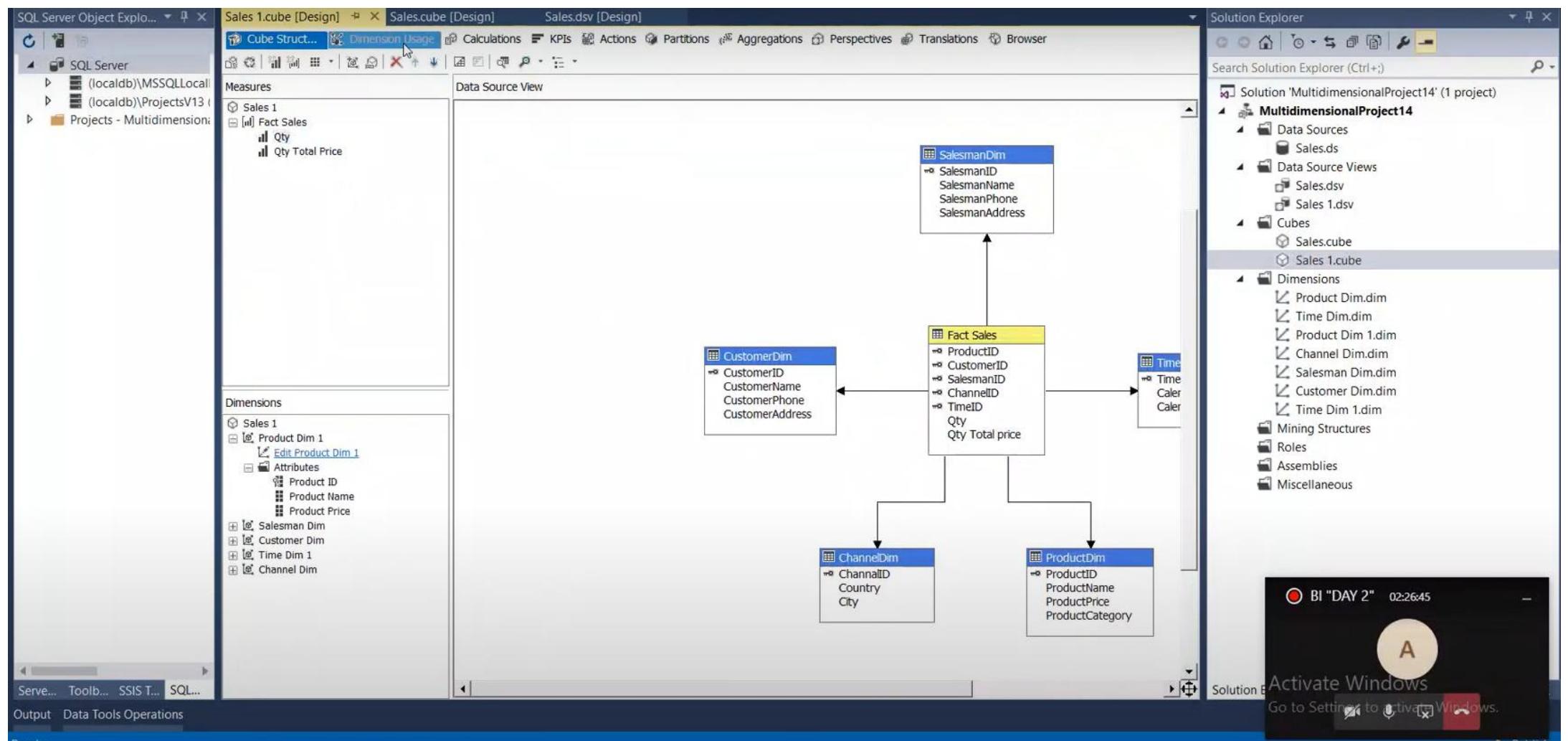
A

Activate Windows

Go to Settings to activate Windows.

Serve... Toolb... SSIS T... SQL...

Output Data Tools Operations



Sales 1(cube [Design]) Sales(cube [Design]) Sales.dsv [Design]

Dimension Usage Calculations KPIs Actions Partitions Aggregations Perspectives Translations Browser

Measure Groups

Dimensions Fact Sales

Product Dim 1 Product ID

Salesman Dim Salesman ID

Customer Dim Customer ID

Time Dim 1 Time ID

Channel Dim Channel ID

SQL Server Object Explor... X

Sales 1(cube [Design]) Sales(cube [Design]) Sales.dsv [Design]

Dimension Usage Calculations KPIs Actions Partitions Aggregations Perspectives Translations Browser

Measure Groups

Dimensions Fact Sales

Product Dim 1 Product ID

Salesman Dim Salesman ID

Customer Dim Customer ID

Time Dim 1 Time ID

Channel Dim Channel ID

Solution Explorer

Search Solution Explorer (Ctrl+.)

Solution 'MultidimensionalProject14' (1 project)

MultidimensionalProject14

Data Sources

Sales.ds

Data Source Views

Sales.dsv

Sales 1.dsv

Cubes

Sales(cube)

Sales 1(cube)

Dimensions

Product Dim.dim

Time Dim.dim

Product Dim 1.dim

Channel Dim.dim

Salesman Dim.dim

Customer Dim.dim

Time Dim 1.dim

Mining Structures

Roles

Assemblies

Miscellaneous

BI "DAY 2" 02:26:54

A

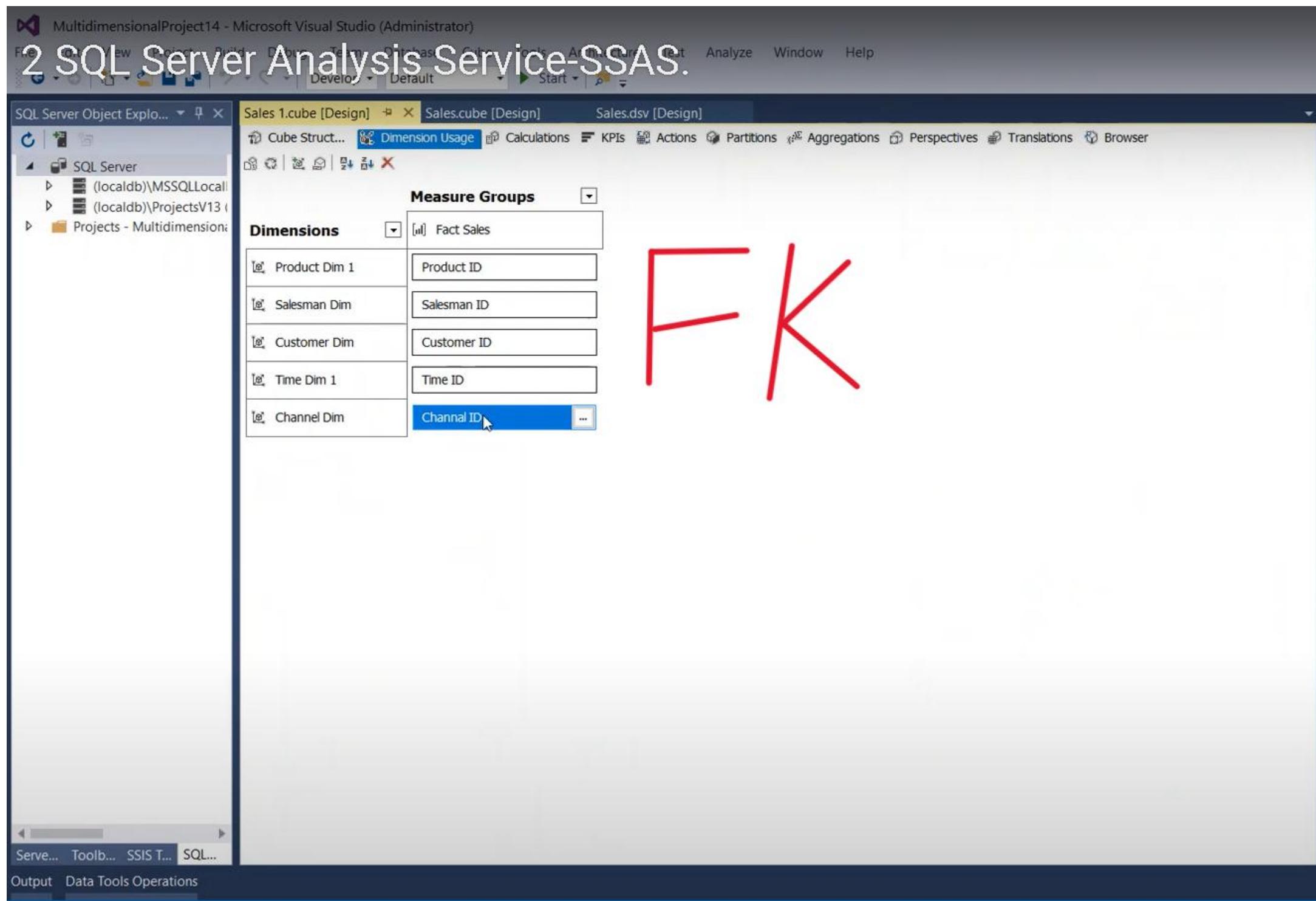
Activate Windows

Go to Settings to activate Windows.

Serve... Toolb... SSIS T... SQL...

Output Data Tools Operations

Ready



MultidimensionalProject14 - Microsoft Visual Studio (Administrator)

File Edit View Project Build Debug Team Database Cube Tools Architecture Test Analyze Window Help

Develop Default Start

SQL Server Object Explor... Sales 1(cube [Design]) Sales(cube [Design]) Sales.dsv [Design]

Cube Struct... Dimension Usage Calculations KPIs Actions Partitions Aggregations Perspectives Translations Browser

Sales 1(cube [Design])

Cube Objects	Object Type	Perspective Name	Perspective Name
Sales 1	Name	QtyPerProduct	EmpPerformance
	DefaultMeas...		
- Measure Groups			
- Fact Sales	MeasureGro...	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Qty	Measure	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Qty Total Price	Measure	<input type="checkbox"/>	<input checked="" type="checkbox"/>
- Dimensions			
- Product Dim 1	CubeDimen...	<input checked="" type="checkbox"/>	<input type="checkbox"/>
- Attributes			
Product ID	CubeAttribute	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Product Name	CubeAttribute	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Product Price	CubeAttribute	<input type="checkbox"/>	<input type="checkbox"/>
+ Salesman Dim	CubeDimen...	<input type="checkbox"/>	<input checked="" type="checkbox"/>
+ Customer Dim	CubeDimen...	<input type="checkbox"/>	<input type="checkbox"/>
+ Time Dim 1	CubeDimen...	<input type="checkbox"/>	<input checked="" type="checkbox"/>
+ Channel Dim	CubeDimen...	<input type="checkbox"/>	<input type="checkbox"/>
- Calculations			
UnitPrice	CalculatedM...	<input checked="" type="checkbox"/>	<input type="checkbox"/>

Solution Explorer

Solution 'MultidimensionalProject14' (1 project)

- MultidimensionalProject14
  - Data Sources
    - Sales.ds
  - Data Source Views
    - Sales.dsv
    - Sales 1.dsv
  - Cubes
    - Sales(cube)
    - Sales 1(cube)
  - Dimensions
    - Product Dim.dim
    - Time Dim.dim
    - Product Dim 1.dim
    - Channel Dim.dim
    - Salesman Dim.dim
    - Customer Dim.dim
    - Time Dim 1.dim
  - Mining Structures
  - Roles
  - Assemblies
  - Miscellaneous

BI "DAY 2" 02:27:29

A

Activate Windows  
Go to Settings to activate Windows.

Sales 1.cube [Design] Sales(cube [Design] Sales.csv [Design])

SQL Server Object Explor... ▾ X

SQL Server (localdb)\MSSQLLocalDB (localdb)\ProjectsV13 Projects - Multidimensional

Cube Struct... Dimension Usage Calculations KPIs Actions Partitions Aggregations Perspectives Translations Browser

Edit as Text Import... Language: Default

Sales 1

Metadata

Measure Group: <All>

Sales 1

- Measures
- KPIs
- Channel Dim
- Customer Dim
- Product Dim 1
- Salesman Dim
- Time Dim 1

Calculated Members

Dimension Hierarchy Operator Filter Expression Parameter

<Select dimension>

Drag levels or measures here to add to the query.

Solution Explorer

Solution 'MultidimensionalProject14' (1 project)

- MultidimensionalProject14
  - Data Sources
    - Sales.ds
  - Data Source Views
    - Sales.ds
    - Sales 1.ds
  - Cubes
    - Sales(cube
    - Sales 1.cube
  - Dimensions
    - Product Dim.dim
    - Time Dim.dim
    - Product Dim 1.dim
    - Channel Dim.dim
    - Salesman Dim.dim
    - Customer Dim.dim
    - Time Dim 1.dim
  - Mining Structures
  - Roles
  - Assemblies
  - Miscellaneous

BI "DAY 2" 02:27:42

A

Activate Windows  
Go to Settings to activate Windows.

Serve... Toolb... SSIS T... SQL...  
Output Data Tools Operations

SQL Server Object Explor... Sales 1.cube [Design] Sales(cube [Design]) Sales.dsv [Design]

Cube Struct... Dimension Usage Calculations KPIs Actions Partitions Aggregations Perspectives Translations Browser

Language: Default

Edit as Text Import... Dimension Hierarchy Operator Filter Expression Parameters

<Select dimension>

Sales 1

Metadata

Measure Group:

<All>

Sales 1

Measures

Fact Sales

Qty

Qty Total Price

UnitPrice

KPIs

Channel Dim

Customer Dim

Product Dim 1

Salesman Dim

Time Dim 1

Calendar Quarter

Calendar Year

Time ID

Calculated Members

Dimension Hierarchy Operator Filter Expression Parameters

Calendar Year Calendar Quarter Qty

Calendar Year	Calendar Quarter	Qty
2007	Quarter1	240
2007	Quarter2	140
2008	Quarter1	160
2008	Quarter2	60
2008	Quarter3	140
2008	Quarter4	150

Solution Explorer

Search Solution Explorer (Ctrl+.)

Solution 'MultidimensionalProject14' (1 project)

MultidimensionalProject14

Data Sources

Sales.ds

Data Source Views

Sales.dsv

Sales 1.dsv

Cubes

Sales(cube)

Sales 1.cube

Dimensions

Product Dim.dim

Time Dim.dim

Product Dim 1.dim

Channel Dim.dim

Salesman Dim.dim

Customer Dim.dim

Time Dim 1.dim

Mining Structures

Roles

Assemblies

Miscellaneous

BI "DAY 2" 02:28:02

A

Activate Windows

Go to Settings to activate Windows.

Serve... Toolb... SSIS T... SQL...

Output Data Tools Operations

SQL Server Object Explor... Sales 1.cube [Design] Sales(cube) [Design] Sales.dsv [Design]

Cube Struct... Dimension Usage Calculations KPIs Actions Partitions Aggregations Perspectives Translations Browser

Language: Default

Edit as Text Import...

Sales 1 Metadata Measure Group: <All>

Sales 1 Measures Fact Sales Qty Qty Total Price UnitPrice

KPIs Channel Dim Customer Dim Product Dim 1 Salesman Dim Time Dim 1

Calendar Quarter

Calculated Members

Dimension Hierarchy Operator Filter Expression Parameters

<Select dimension>

Calendar Year	Calendar Quarter	Qty
2007	Quarter1	240
2007	Quarter2	140
2008	Quarter1	160
2008	Quarter2	60
2008	Quarter3	140
2008	Quarter4	150

Solution Explorer

Search Solution Explorer (Ctrl+)

Solution 'MultidimensionalProject14' (1 project)

MultidimensionalProject14

- Data Sources
- Sales.ds
- Data Source Views
- Sales.dsv
- Sales 1.dsv
- Cubes
- Sales(cube)
- Sales 1.cube
- Dimensions
- Product Dim.dim
- Time Dim.dim
- Product Dim 1.dim
- Channel Dim.dim
- Salesman Dim.dim
- Customer Dim.dim
- Time Dim 1.dim
- Mining Structures
- Roles
- Assemblies
- Miscellaneous

BI "DAY 2" 02:28:02

A

Activate Windows

Go to Settings to activate Windows.

Serve... Toolb... SSIS T... SQL...

Output Data Tools Operations

Sales 1.cube [Design] Sales.cube [Design] Sales.csv [Design]

Cube Struct... Dimension Usage Calculations KPIs Actions Partitions Aggregations Perspectives Translations Browser

SQL Server Object Explor... X

SQL Server (localdb)\MSSQLLocalDB (localdb)\ProjectsV13 Projects - Multidimensional

Edit as Text Import... Language: Default

Sales 1 Metadata Measure Group: <All>

Dimension Hierarchy Operator Filter Expression Parameter

<Select dimension>

Country City Qty

Country	City	Qty
Algeria		210
Egypt	Cairo	515
France	Lyon	60
Moraco		105

Calculated Members

Serve... Toolb... SSIS T... SQL... Output Data Tools Operations

Solution Explorer

Solution 'MultidimensionalProject14' (1 project)

- MultidimensionalProject14
  - Data Sources
    - Sales.ds
  - Data Source Views
    - Sales.csv
    - Sales 1.ds
  - Cubes
    - Sales(cube)
    - Sales 1(cube)
  - Dimensions
    - Product Dim.dim
    - Time Dim.dim
    - Product Dim 1.dim
    - Channel Dim.dim
    - Salesman Dim.dim
    - Customer Dim.dim
    - Time Dim 1.dim
  - Mining Structures
  - Roles
  - Assemblies
  - Miscellaneous

BI "DAY 2" 02:28:17 A

Activate Windows Go to Settings to activate Windows.

Sales 1(cube) [Design] Sales.cube [Design] Sales.csv [Design]

Cube Struct... Dimension Usage Calculations KPIs Actions Partitions Aggregations Perspectives Translations Browser

SQL Server Object Explorer

Language: Default

Sales 1

Metadata

Measure Group: <All>

Sales 1

- Measures
  - Fact Sales
    - Qty
    - Qty Total Price
      - UnitPrice
  - KPIs
  - Channel Dim
    - Channel ID
    - City
    - Country
  - Customer Dim
  - Product Dim 1
  - Salesman Dim
  - Time Dim 1
    - Calendar Quarter
    - Calendar Year
    - Time ID

Calculated Members

Dimension Hierarchy Operator Filter Expression Parameters

<Select dimension>

Country	City	Qty
Algeria		210
Egypt	Cairo	515
France	Lyon	60
Moraco		105

Solution Explorer

Search Solution Explorer (Ctrl+Shift+F)

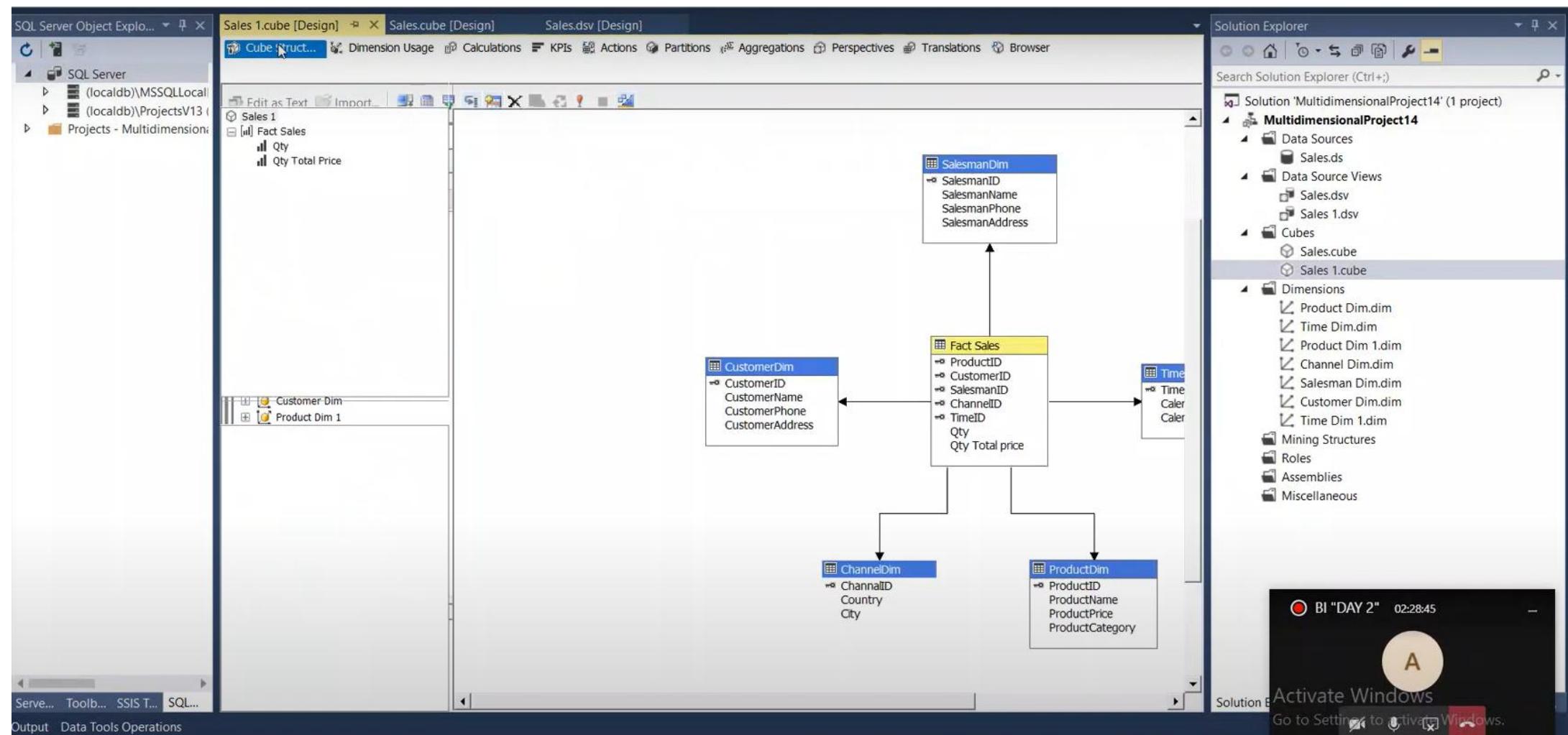
Solution 'MultidimensionalProject14' (1 project)

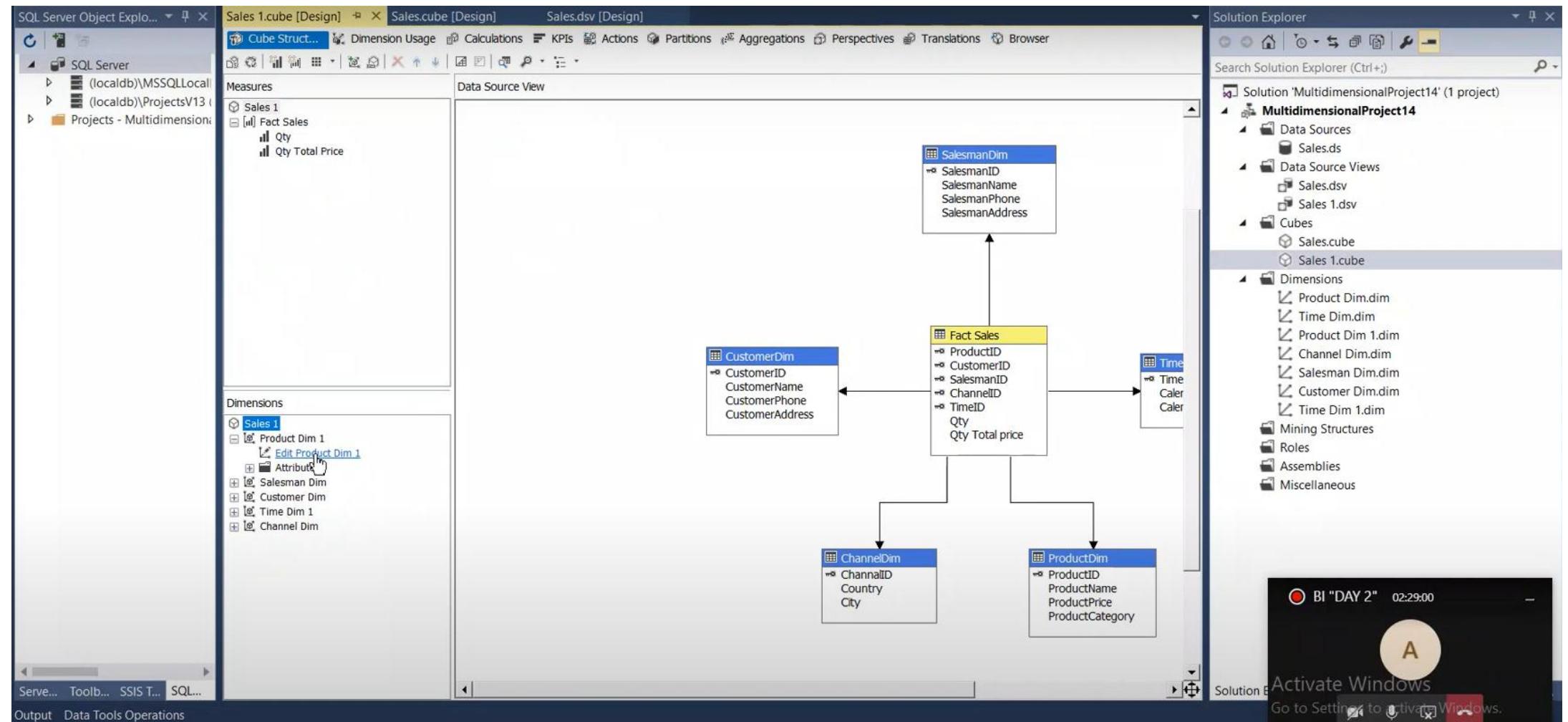
- MultidimensionalProject14
  - Data Sources
    - Sales.ds
  - Data Source Views
    - Sales.csv
    - Sales 1.ds
  - Cubes
    - Sales.cube
    - Sales 1(cube)
  - Dimensions
    - Product Dim.dim
    - Time Dim.dim
    - Product Dim 1.dim
    - Channel Dim.dim
    - Salesman Dim.dim
    - Customer Dim.dim
    - Time Dim 1.dim
  - Mining Structures
  - Roles
  - Assemblies
  - Miscellaneous

BI "DAY 2" 02:28:17

A

Activate Windows  
Go to Settings to activate Windows.





# 2 SQL Server Analysis Service-SSAS.

Sales 1(cube [Design]\*

Time Dim 1.dim [Design]\*

Sales.cube [Design]

Sales.dsv [Design]

Dimension Structure Attribute Relationships Translations Browser

Attributes Hierarchies

Time Dim 1

- Calendar Quarter
- Calendar Year
- Time ID

QtrPerYear

- Calendar Year
- Calendar Quarter
- <new level>

To create a new hierarchy, drag an attribute here.

Data Source View

TimeDim

- TimeID
- CalendarQuarter
- CalendarYear

Serve... Toolb... SSIS T... SQL...

Output Data Tools Operations

# 2 SQL Server Analysis Service-SSAS.

Sales 1.cube [Design]\*

Time Dim 1.dim [Design]\*

Sales.cube [Design]

Sales.csv [Design]

Dimension Structure Attribute Relationships Translations Browser

Attributes

Hierarchies

To create a new hierarchy, drag an attribute here.

Data Source View

TimeDim  
TimeID  
CalendarQuarter  
CalendarYear

SQL...

Serve... Toolb... SSIS T... SQL...

Output Data Tools Operations

The screenshot displays the Microsoft Visual Studio interface for managing SQL Server Analysis Services (SSAS) multidimensional objects. The main window title is "MultidimensionalProject14 - Microsoft Visual Studio (Administrator)". The tab bar at the top includes "Time Dim 1.dim [Design]\*", "Sales 1.cube [Design]\*", "Sales.cube [Design]", and "Sales.csv [Design]". Below the tabs, there are buttons for "Dimension Structure", "Attribute Relationships", "Translations", and "Browser". The central workspace is divided into several sections: "Attributes" (listing "Time Dim 1" with attributes "Calendar Quarter", "Calendar Year", and "Time ID"), "Hierarchies" (showing a hierarchy named ".OtrPerYear" with levels "Calendar Year" and "Calendar Quarter", and a placeholder for a new level), and "Data Source View" (listing attributes "TimeDim", "TimeID", "CalendarQuarter", and "CalendarYear"). A red circle highlights the "Hierarchies" section, specifically the area where a new hierarchy can be created by dragging an attribute. The bottom navigation bar includes links for "SQL...", "Serve...", "Toolb...", "SSIS T...", and "Output Data Tools Operations".

MultidimensionalProject14 - Microsoft Visual Studio (Administrator)

File Edit View Project Build Debug Team Format Database Data Source View Dimension Tools Architecture Test Analyze Window Help

SQL Server Object Explor... Default Start Dimension Structure Attribute Relationships Translations Browser

Channel Dim.dim [Design] Sales 1(cube [Design] Sales(cube [Design] Sales.dsv [Design]

Attributes Hierarchies Data Source View

To create a new hierarchy, drag an attribute here.

ChannelDim  
ChannelID  
Country  
City

Solution Explorer

Search Solution Explorer (Ctrl+Shift+F)

Solution 'MultidimensionalProject14' (1 project)

- MultidimensionalProject14
  - Data Sources
    - Sales.ds
  - Data Source Views
    - Sales.dsv
    - Sales 1.ds
  - Cubes
    - Sales(cube
    - Sales 1(cube
  - Dimensions
    - Product Dim.dim
    - Time Dim.dim
    - Product Dim 1.dim
    - Channel Dim.dim
    - Salesman Dim.dim
    - Customer Dim.dim
    - Time Dim 1.dim
  - Mining Structures
  - Roles
  - Assemblies
  - Miscellaneous

BI "DAY 2" 02:29:33

A

Activate Windows  
Go to Settings to activate Windows.

Serve... Toolb... SSIS T... SQL...  
Output Data Tools Operations

MultidimensionalProject14 - Microsoft Visual Studio (Administrator)

File Edit View Project Build Debug Team Format Database Data Source View Dimension Tools Architecture Test Analyze Window Help

Quick Launch (Ctrl+Q) Sign in

SQL Server Object Explor... Default Start

Channel Dim.dim [Design]\* Sales 1.cube [Design]\* Sales(cube) Design Sales.csv [Design]

Dimension Structure Attribute Relationships Translations Browser

Attributes Hierarchies Data Source View

To create a new hierarchy, drag an attribute here.

Channel Dim Channel ID City Country

ChannelDim ChannalID Country City

Solution Explorer

Search Solution Explorer (Ctrl+;)

Solution 'MultidimensionalProject14' (1 project)

- MultidimensionalProject14
  - Data Sources
    - Sales.ds
  - Data Source Views
    - Sales.ds
    - Sales 1.ds
  - Cubes
    - Sales(cube)
    - Sales 1(cube)
  - Dimensions
    - Product Dim.dim
    - Time Dim.dim
    - Product Dim 1.dim
    - Channel Dim.dim
    - Salesman Dim.dim
    - Customer Dim.dim
    - Time Dim 1.dim
  - Mining Structures
  - Roles
  - Assemblies
  - Miscellaneous

BI "DAY 2" 02:29:37 A

Activate Windows Go to Settings to activate Windows.

Serve... Toolb... SSIS T... SQL... Output Data Tools Operations

MultidimensionalProject14 - Microsoft Visual Studio (Administrator)

File Edit View Project Build Debug Team Format Database Data Source View Dimension Tools Architecture Test Analyze Window Help

Quick Launch (Ctrl+Q) Sign in

SQL Server Object Explor... Channel Dim.dim [Design]\* Sales 1(cube [Design]\* Sales(cube [Design] Sales.dsv [Design]

Dimension Structure Attribute Relationships Translations Browser

Attributes Hierarchies Data Source View

CityPerCounter To create a new hierarchy, drag an attribute here.

ChannelDim ChannelID Country City

Solution Explorer

Search Solution Explorer (Ctrl+;)

Solution 'MultidimensionalProject14' (1 project)

- MultidimensionalProject14
  - Data Sources
    - Sales.ds
  - Data Source Views
    - Sales.dsv
    - Sales 1.ds
  - Cubes
    - Sales(cube
    - Sales 1(cube
  - Dimensions
    - Product Dim.dim
    - Time Dim.dim
    - Product Dim 1.dim
    - Channel Dim.dim
    - Salesman Dim.dim
    - Customer Dim.dim
    - Time Dim 1.dim
  - Mining Structures
  - Roles
  - Assemblies
  - Miscellaneous

BI "DAY 2" 02:29:48 A

Activate Windows Go to Settings to activate Windows.

Serve... Toolb... SSIS T... SQL... Output Data Tools Operations

SQL Server Object Explor... ▾ X Channel Dim.dim [Design]\* ▾ X Sales 1.cube [Design]\* Sales(cube) [Design] Sales.csv [Design]

Dimension Structure Relationships Translations Browser

SQL Server

Attributes

Hierarchies

CityPerCounter

- Country
- City
- <new level>

To create a new hierarchy, drag an attribute here.

Data Source View

Microsoft Visual Studio

Save changes to Dimension [Channel Dim]?

This editor is bound to editors for the following objects:

Cube [Sales 1]

Click Save to close this editor, and to save changes made in this editor and any other editors related to it.

Click Discard to discard changes in this and related editors.

Click Ignore to close this editor. Changes made will remain in the object model.

Click Cancel to cancel the operation and keep this editor open.

Save Discard Ignore Cancel

Solution Explorer

Search Solution Explorer (Ctrl+.)

Solution 'MultidimensionalProject14' (1 project)

- MultidimensionalProject14
  - Data Sources
    - Sales.ds
  - Data Source Views
    - Sales.csv
    - Sales 1.ds
  - Cubes
    - Sales(cube)
    - Sales 1.cube
  - Dimensions
    - Product Dim.dim
    - Time Dim.dim
    - Product Dim 1.dim
    - Channel Dim.dim
    - Salesman Dim.dim
    - Customer Dim.dim
    - Time Dim 1.dim
  - Mining Structures
  - Roles
  - Assemblies
  - Miscellaneous

BI "DAY 2" 02:30:10

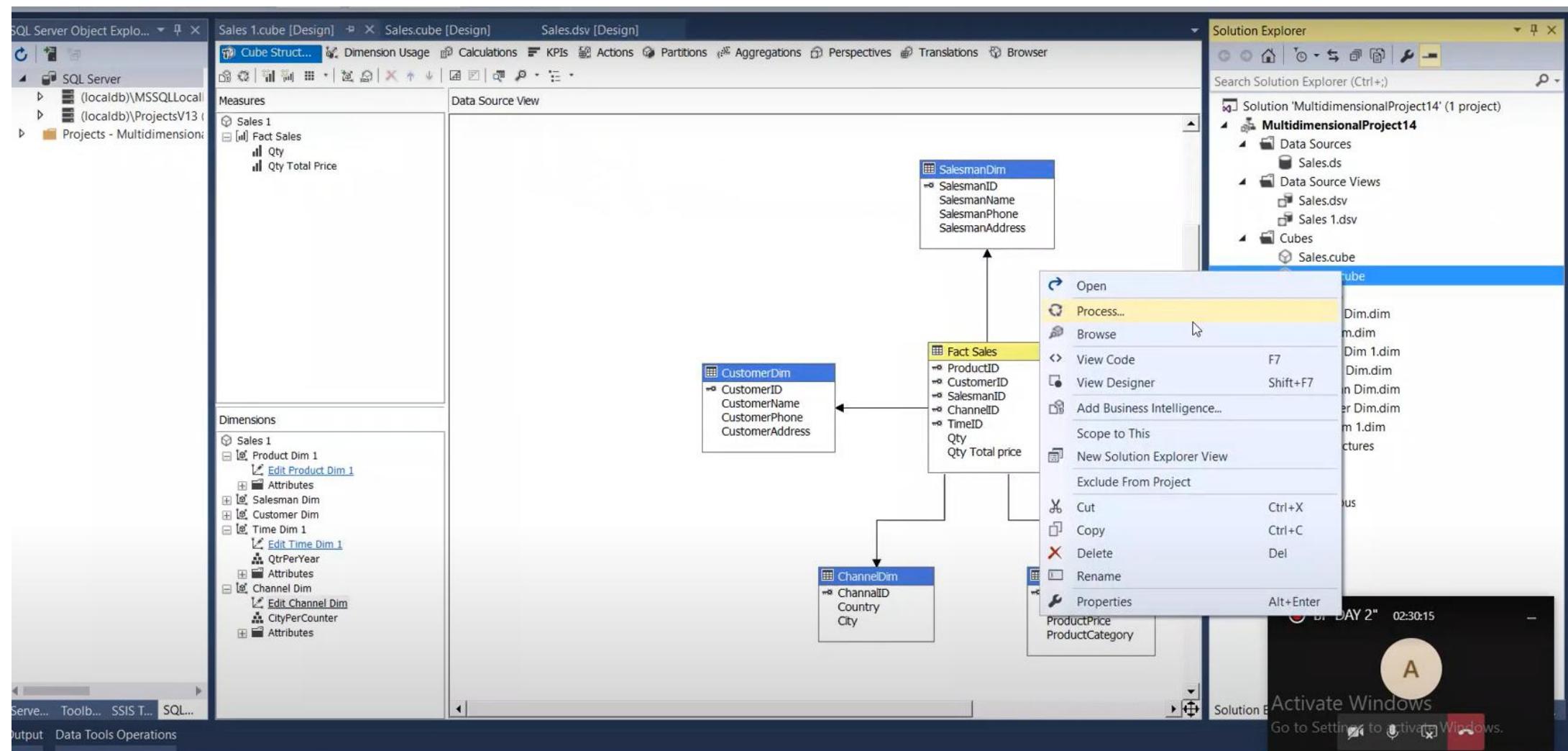
A

Activate Windows

Go to Settings to activate Windows.

Serve... Toolb... SSIS T... SQL...

Output Data Tools Operations



Deployment Progress - MultidimensionalProject14

Server: localhost  
Database: MultidimensionalProject14

2 SQL Server Analysis Service-SSAS.

Object list:

Object Name	Type	Process Options	Settings
Sales 1	Cube	Process Full	

Remove Impact Analysis...

Batch Settings Summary

Processing order:  
Parallel

Transaction mode:  
(Default)

Dimension errors:  
(Default)

Dimension key error log path:  
(Default)

Process affected objects:  
Do not process

Change Settings... Run... Close

Deployment Completed Successfully

Status: ✓

BI "DAY 2" 02:30:25 A

Activate Windows  
Go to Settings to activate Windows.

Sales 1.cube [Design] Sales(cube) [Design] Sales.dsv [Design]

Cube Struct... Dimension Usage Calculations KPIs Actions Partitions Aggregations Perspectives Translations Browser

SQL Server Language: Default

Edit as Text Import... Dimension Hierarchy Operator Filter Expression Parameters

<Select dimension>

Measure Group: <All>

Sales 1

Dimension Hierarchy Operator Filter Expression Parameters

Country City Qty

Algeria		210
Egypt	Cairo	515
France	Lyon	60
Moraco		105

Calculated Members

The cube has been reprocessed on the server. To prevent possible browsing errors, click [Reconnect](#). To hide this message, [Click here](#).

Solution Explorer

Solution 'MultidimensionalProject14' (1 project)

- MultidimensionalProject14
  - Data Sources
    - Sales.ds
  - Data Source Views
    - Sales.dsv
    - Sales 1.dsv
  - Cubes
    - Sales(cube)
    - Sales 1.cube
  - Dimensions
    - Product Dim.dim
    - Time Dim.dim
    - Product Dim 1.dim
    - Channel Dim.dim
    - Salesman Dim.dim
    - Customer Dim.dim
    - Time Dim 1.dim
  - Mining Structures
  - Roles
  - Assemblies
  - Miscellaneous

BI "DAY 2" 02:30:36

A

Activate Windows  
Go to Settings to activate Windows.

Serve... Toolb... SSIS T... SQL...  
Output Data Tools Operations

Sales 1.cube [Design] Sales(cube [Design] Sales.dsv [Design])

Cube Struct... Dimension Usage Calculations KPIs Actions Partitions Aggregations Perspectives Translations Browser

Language: Default

SQL Server Object Explor... SQL Server

Sales 1

Metadata

Measure Group: <All>

Dimension Hierarchy Operator Filter Expression

<Select dimension>

Customer Dim Product Dim 1 Salesman Dim Time Dim 1

Time Dim 1

Calendar Quarter Calendar Year Time ID

QtrPerYear

Members

Calendar Year

Member Properties

2007 2008

Calendar Quarter

Member Properties

Quarter1 Quarter2 Quarter3 Quarter4

Calculated Members

Dimension Hierarchy Operator Filter Expression

Parameter

Calendar Year Calendar Quarter Qty

Calendar Year	Calendar Quarter	Qty
2007	Quarter1	240
2007	Quarter2	140
2008	Quarter1	160
2008	Quarter2	60
2008	Quarter3	140
2008	Quarter4	150

Solution Explorer

Solution 'MultidimensionalProject14' (1 project)

- MultidimensionalProject14
  - Data Sources
    - Sales.ds
  - Data Source Views
    - Sales.dsv
    - Sales 1.dsv
  - Cubes
    - Sales(cube
    - Sales 1.cube
  - Dimensions
    - Product Dim.dim
    - Time Dim.dim
    - Product Dim 1.dim
    - Channel Dim.dim
    - Salesman Dim.dim
    - Customer Dim.dim
    - Time Dim 1.dim
  - Mining Structures
  - Roles
  - Assemblies
  - Miscellaneous

BI "DAY 2" 02:31:20

A

Activate Windows

Go to Settings to activate Windows.

Solution E

Serve... Toolb... SSIS T... SQL...

Output Data Tools Operations

Sales 1(cube [Design] Sales.cube [Design] Sales.csv [Design])

Cube Struct... Dimension Usage Calculations KPIs Actions Partitions Aggregations Perspectives Translations Browser

Language: Default

Sales 1

Dimension Hierarchy Operator Filter Expression

<Select dimension>

Measure Group: <All>

Fact Sales

- Qty
- Qty Total Price
- UnitPrice

KPIs

Channel Dim

- Channel ID
- City
- Country
- CityPerCounter**

- Members
- Country
  - Member Properties
- Algeria
- Egypt
- France
- Moraco

- City
  - Member Properties
- Cairo
- Lyon

Calculated Members

Country City Qty

Country	City	Qty
Algeria		210
Egypt	Cairo	515
France	Lyon	60
Moraco		105

Solution Explorer

Solution 'MultidimensionalProject14' (1 project)

- MultidimensionalProject14
  - Data Sources
    - Sales.ds
  - Data Source Views
    - Sales.dsv
    - Sales 1.dsv
  - Cubes
    - Sales.cube
    - Sales 1(cube [Design])**
  - Dimensions
    - Product Dim.dim
    - Time Dim.dim
    - Product Dim 1.dim
    - Channel Dim.dim
    - Salesman Dim.dim
    - Customer Dim.dim
    - Time Dim 1.dim
  - Mining Structures
  - Roles
  - Assemblies
  - Miscellaneous

BI "DAY 2" 02:31:34

A

Activate Windows

Go to Settings to activate Windows.

Serve... Toolb... SSIS T... SQL...

Output Data Tools Operations

PivotTable Name: Active Field: Product Name

Drill Down Drill Up Expand Field Group Selection Ungroup Insert Slicer Refresh Change Data Source Clear Select Move PivotTable & Sets Tools Calculations

Group Field Insert Timeline Connections Data Actions PivotChart Recommended PivotTables Tools Field List Buttons Headers Show

A1 Row Labels

	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T
1	Row Labels	Qty																		
2	Accessories	305																		
3	Books	155																		
4	Clothing	185																		
5	Components	115																		
6	Sportswear	130																		
7	Grand Total	890																		
8																				
9																				
10																				
11																				
12																				
13																				
14																				
15																				
16																				
17																				
18																				
19																				
20																				
21																				
22																				
23																				
24																				
25																				
26																				
27																				
28																				
29																				
30																				

PivotTable Fields

Choose fields to add to report:

Search

Σ Fact Sales Qty

Product Dim Product ID Product Name Product Price

Time Dim Calendar Quarter

Drag fields between areas below:

FILTERS COLUMNS

BI "DAY 2" 02:32:28

Activate Windows Go to Settings to activate Windows.

A

tmp5305

Ready

100%

PivotTable1 Product Name Drill Drill Collapse Field Ungroup Insert Insert Filter Refresh Change Data Clear Select Move Fields, Items, OLAP Relationships & Sets Tools PivotChart Recommended PivotTables Tools Field List +/- Buttons Headers Show

A1 Row Labels Row Labels

	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T
1	<b>Row Labels</b>	<b>Qty</b>																		
2	<b>Accessories</b>	<b>305</b>																		
3	2007	110																		
4	2008	195																		
5	<b>Books</b>	<b>155</b>																		
6	2007	80																		
7	2008	75																		
8	<b>Clothing</b>	<b>185</b>																		
9	2007	110																		
10	2008	75																		
11	<b>Components</b>	<b>115</b>																		
12	2007	30																		
13	2008	85																		
14	<b>Sportswear</b>	<b>130</b>																		
15	2007	50																		
16	2008	80																		
17	<b>Grand Total</b>	<b>890</b>																		
18																				
19																				
20																				
21																				
22																				
23																				
24																				
25																				
26																				
27																				
28																				
29																				
30																				

tmp5305

PivotTable Fields Choose fields to add to report: Search Product Dim Product Name Product Price Time Dim Calendar Quarter Calendar Year Time ID

FILTERS COLUMNS

BI "DAY 2" 02:32:31 A Activate Windows Go to Settings to activate Windows.

Book1 - Excel (Product Activation Failed)

PivotTable Tools

File Home Insert Page Layout Formulas Data Review View Add-ins Team Analyze Design Tell me what you want to do...

PivotTable Name: Active Field: PivotTable1 PivotTable1 Options Field Settings PivotTable Active Field

Qty Drill Down Drill Up Expand Field Collapse Field Group Selection Ungroup Group Field Insert Slicer Timeline Connections Refresh Change Data Source Clear Select Move PivotTable Fields, Items, OLAP Relationships Tools PivotChart Recommended PivotTables Tools Field List +/- Buttons Headers Show

A1 Qty

	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S
1	Qty	Column Labels																	
2	Row Labels	2007		2008	Grand Total														
3	Accessories		110	195		305													
4	Books		80	75		155													
5	Clothing		110	75		185													
6	Components		30	85		115													
7	Sportswear		50	80		130													
8	Grand Total		380	510		890													
9																			
10																			
11																			
12																			
13																			
14																			
15																			
16																			
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24																			
25																			
26																			
27																			
28																			
29																			
30																			

PivotTable Fields

Choose fields to add to report:

Search

Product Dim

- Product ID
- Product Name
- Product Price

Time Dim

- Calendar Quarter
- Calendar Year
- Time ID

Drag fields between areas below:

FILTERS COLUMNS

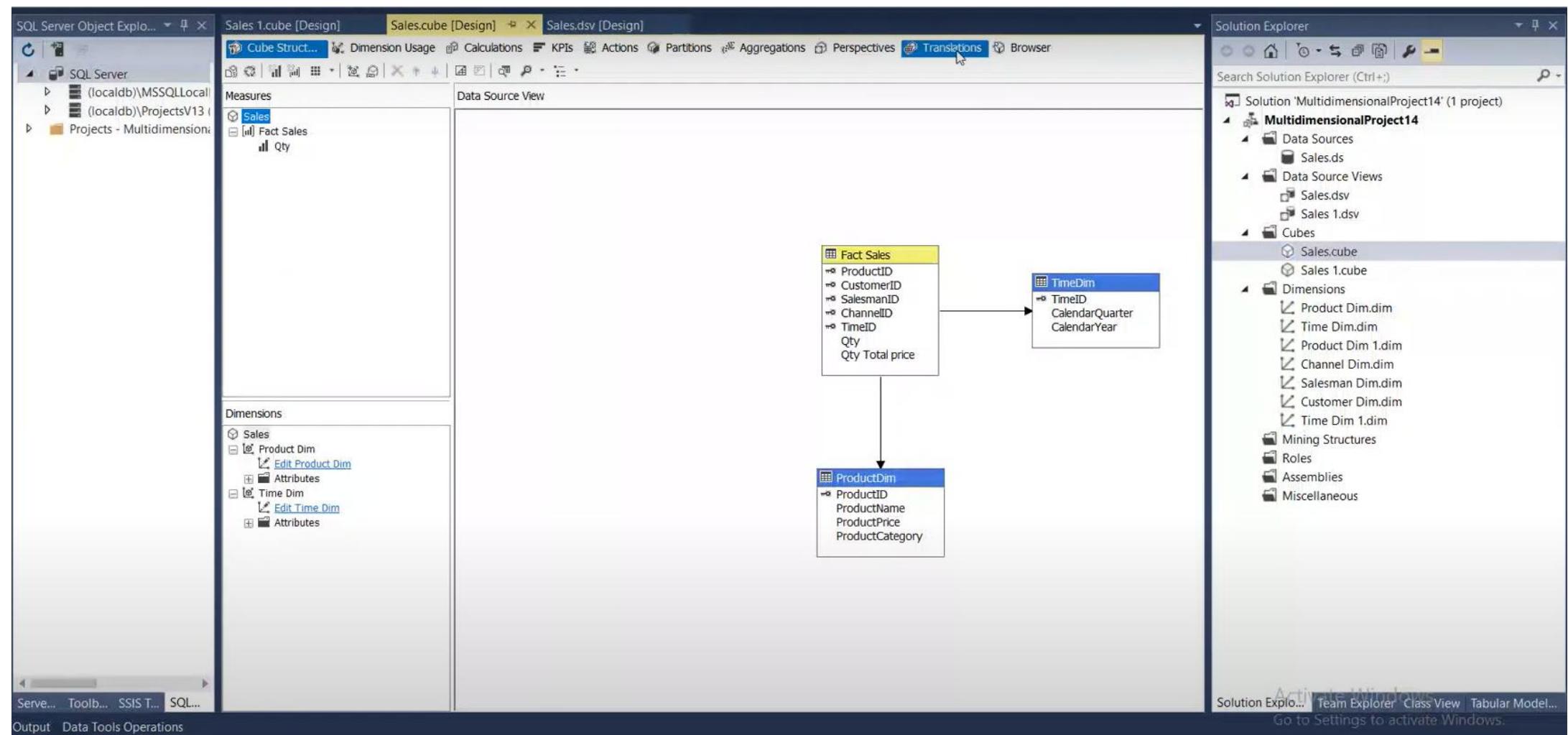
ROWS VALUES

Activate Windows Go to Settings Defer Layout Upd... UPDATE

tmp5305

Ready

100%



The screenshot shows the SQL Server Data Tools (SSDT) interface with the following details:

- Top Bar:** The title bar displays "Sales 1(cube [Design])", "Sales.cube [Design]\*", and "Sales.csv [Design]".
- Left Sidebar:** Shows the "SQL Server" node expanded, with "Sales" selected. Under "Sales", the following items are listed:
  - Measure Groups
  - Fact Sales
  - Dimensions
    - Product Dim
    - Time Dim
- Middle Area:** A table titled "Translations" is displayed, showing the following data:

Default Language	Object...	Arabic (Egypt)
Sales	Capti...	المبيعات
- Measure Groups		
- Fact Sales	Capti...	القيمة
- Dimensions	Capti...	الكمية
Product Dim	Capti...	
Time Dim	Capti...	
- Right Sidebar:** The "Solution Explorer" pane shows the project structure:
  - Solution 'MultidimensionalProject14' (1 project)
    - MultidimensionalProject14
      - Data Sources
        - Sales.ds
      - Data Source Views
        - Sales.csv
        - Sales 1.ds
      - Cubes
        - Sales.cube
        - Sales 1.cube
      - Dimensions
        - Product Dim.dim
        - Time Dim.dim
        - Product Dim 1.dim
        - Channel Dim.dim
        - Salesman Dim.dim
        - Customer Dim.dim
        - Time Dim 1.dim
      - Mining Structures
      - Roles
      - Assemblies
      - Miscellaneous
- Bottom Bar:** The status bar at the bottom includes links for "Activate Windows", "Solution Explorer", "Team Explorer", "Class View", "Tabular Model...", "Go to Settings to activate Windows.", "Output", and "Data Tools Operations".

Sales cube [Design] Sales.cube [Design]\* Sales.dsv [Design]

Cube Struct... Dimension Usage Calculations KPIs Actions Partitions Aggregations Perspectives Translations Browser

SQL Server Object Explorer SQL Server

Sales cube [Design] Sales.cube [Design]\* Sales.dsv [Design]

Cube Struct... Dimension Usage Calculations KPIs Actions Partitions Aggregations Perspectives Translations Browser

Default Language Arabic (Egypt)

Sales

Measure Groups

Fact Sales

Qty

Dimensions

Product Dim

Time Dim

Arabic (Egypt)

المبيعات

القيمة

الكمية

المنتجات

التاريخ

Microsoft Visual Studio

Save changes to Cube [Sales]?

Click Save to close this editor and to save changes.  
Click Discard to close this editor and discard changes.  
Click Cancel to cancel the operation and keep this editor open.

Save Discard Cancel

Solution Explorer

Solution 'MultidimensionalProject14' (1 project)

MultidimensionalProject14

Data Sources

Sales.ds

Data Source Views

Sales.dsv

Sales 1.dsv

Cubes

Sales(cube)

Sales 1(cube)

Dimensions

Product Dim.dim

Time Dim.dim

Product Dim 1.dim

Channel Dim.dim

Salesman Dim.dim

Customer Dim.dim

Time Dim 1.dim

Mining Structures

Roles

Assemblies

Miscellaneous

Serve... Toolbars... SSIS T... SQL...

Output Data Tools Operations

Activate Windows  
Go to Settings to activate Windows.

Sales 1(cube [Design]) Sales(cube [Design]\* Sales.ds [Design]

Cube Struct... Dimension Usage Calculations KPIs Actions Partitions Aggregations Perspectives Translations Browser

SQL Server Object Explor... SQL Server

Default Language Objec... Arabic (Egypt)

Sales Capti... المبيعات

- Measure Groups

- Fact Sales Capti... القيمة

Qty Capti... الكمية

- Dimensions

Product Dim Capti... المنتجات

Time Dim Capti... التاريخ

Microsoft Visual Studio

Save changes to Cube [Sales]?

Click Save to close this editor and to save changes.  
Click Discard to close this editor and discard changes.  
Click Cancel to cancel the operation and keep this editor open.

Save Discard Cancel

Solution Explorer

Search Solution Explorer (Ctrl+.)

Solution 'MultidimensionalProject14' (1 project)

MultidimensionalProject14

Data Sources Sales.ds

Data Source Views Sales.dsviews

Cubes

Sales(cube)

Sales 1(cube)

Dimensions

Product Dim.dim

Time Dim.dim

Product Dim 1.dim

Channel Dim.dim

Salesman Dim.dim

Customer Dim.dim

Time Dim 1.dim

Mining Structures

Roles

Assemblies

Miscellaneous

Serve... Toolb... SSIS T... SQL...

Output Data Tools Operations

Activate Windows

Solution Explor... Team Explorer Class View Tabular Model...

Go to Settings to activate Windows.

MultidimensionalProject14 - Microsoft Visual Studio (Administrator)

File Edit View Project Build Debug Team Database Cube Tools Architecture Test Analyze Window Help

Quick Launch (Ctrl+Q) Sign in

SQL Server Object Explor... Sales 1(cube [Design]) Sales.dsv [Design]

Cube Struct... Dimension Usage Calculations KPIs Actions Partitions Aggregations Perspectives Translations Browser

Language: Default

Sales 1

Dimension Hierarchy Operator Filter Expression

<Select dimension>

Measure Group: <All>

Sales 1

Algeria 210

Egypt Cairo 515

France Lyon 60

Moraco 105

Metadata

Calculated Members

Cube Selection

Select a cube from the following list. Changing the cube from the current selection can change the query.

EmpPerformance  
QtyPerProduct  
Sales  
**Sales 1**

OK Cancel

Solution Explorer

Search Solution Explorer (Ctrl+Shift+F)

Solution 'MultidimensionalProject14' (1 project)

MultidimensionalProject14

- Data Sources
- Sales.ds
- Data Source Views
- Sales.dsv
- Sales 1.dsv
- Cubes
- Sales(cube)**
- Sales 1(cube)**
- Dimensions
- Product Dim.dim
- Time Dim.dim
- Product Dim 1.dim
- Channel Dim.dim
- Salesman Dim.dim
- Customer Dim.dim
- Time Dim 1.dim
- Mining Structures
- Roles
- Assemblies
- Miscellaneous

Activate Windows

Solution Explor... Team Explorer Class View Tabular Model... Go to Settings to activate Windows.

Output Data Tools Operations

The screenshot displays the Microsoft Visual Studio interface for a multidimensional project named 'MultidimensionalProject14'. The Solution Explorer on the right lists the project's components, including data sources, views, cubes, dimensions, and mining structures. A 'Cube Selection' dialog box is prominently displayed in the center, asking the user to select a cube from a list. The 'Sales 1' cube is currently selected. The main workspace shows a table with columns 'Country', 'City', and 'Qty', displaying data for Algeria, Egypt, France, and Moraco. The status bar at the bottom indicates 'Activate Windows' and provides links to Solution Explorer, Team Explorer, Class View, Tabular Model..., and settings for activating Windows.

MultidimensionalProject14 - Microsoft Visual Studio (Administrator)

File Edit View Project Build Debug Team Database Cube Tools Architecture Test Analyze Window Help

Quick Launch (Ctrl+Q) Sign in

SQL Server Object Explor... Default Start

Sales 1.cube [Design] Sales.dsv [Design]

Cube Struct... Dimension Usage Calculations KPIs Actions Partitions Aggregations Perspectives Translations Browser

Language: Default

Edit as Text Import... Dimension Hierarchy Operator Filter Expression Parameter

Dimension <Select dimension>

Measure Group: <All>

Sales

Metadata

Measure Group: <All>

Sales

Measures

KPIs

Product Dim.

Qty

Alg...

Eg...

Fra...

Mo...

Add to Query

Add to Filter

Copy

Calculated Members

Serve... Toolbar... SSIS T... SQL...

Output Data Tools Operations

Solution Explorer

Search Solution Explorer (Ctrl+Shift+F)

Solution 'MultidimensionalProject14' (1 project)

- MultidimensionalProject14
  - Data Sources
    - Sales.ds
  - Data Source Views
    - Sales.dsv
    - Sales 1.dsv
  - Cubes
    - Sales(cube)
    - Sales 1(cube)
  - Dimensions
    - Product Dim.dim
    - Time Dim.dim
    - Product Dim 1.dim
    - Channel Dim.dim
    - Salesman Dim.dim
    - Customer Dim.dim
    - Time Dim 1.dim
  - Mining Structures
  - Roles
  - Assemblies
  - Miscellaneous

Activate Windows  
Solution Explorer Team Explorer Class View Tabular Model...  
Go to Settings to activate Windows.

The screenshot captures the Microsoft Visual Studio interface for a multidimensional project named 'MultidimensionalProject14'. The main workspace is divided into several panes: the top navigation bar includes File, Edit, View, Project, Build, Debug, Team, Database, Cube, Tools, Architecture, Test, Analyze, Window, and Help; the right side features the Solution Explorer listing the project's components; the bottom navigation bar includes tabs for Solution Explorer, Team Explorer, Class View, and Tabular Model..., along with a 'Go to Settings to activate Windows.' message; the central workspace displays the 'Sales 1.cube [Design]' view, which is currently set to 'Default' mode. In this view, the 'Product Dim.' node under the 'Sales' cube is selected, and a context menu is open, showing options such as 'Add to Query', 'Add to Filter', and 'Copy'. The left pane, the SQL Server Object Explorer, shows the connection to '(localdb)\MSSQLLocalDB' and lists 'Projects - Multidimensional' and 'MultidimensionalProject14'. The bottom-left corner shows the output window with 'Data Tools Operations' and other status indicators.

SQL Server Object Explor... Sales.cube [Design] Sales.dsv [Design]

Cube Struct... Dimension Usage Calculations KPIs Actions Partitions Aggregations Perspectives Translations Browser

SQL Server (localdb)\MSSQLLocalDB (localdb)\ProjectsV13 Projects - Multidimensional

Sales cube structure:

- Default Language: Arabic (Egypt)
- Sales:
  - Measure Groups:
    - Fact Sales: قيم
    - Qty: الكمية
  - Dimensions:
    - Product Dim: المنتجات
    - Time Dim: التاريخ

Solution Explorer:

- Solution 'MultidimensionalProject14' (1 project)
  - MultidimensionalProject14
    - Data Sources
      - Sales.ds
    - Data Source Views
      - Sales.dsv
      - Sales 1.dsv
    - Cubes
      - Sales.cube
      - Sales 1(cube)
    - Dimensions
      - Product Dim.dim
      - Time Dim.dim
      - Product Dim 1.dim
      - Channel Dim.dim
      - Salesman Dim.dim
      - Customer Dim.dim
      - Time Dim 1.dim
    - Mining Structures
    - Roles
    - Assemblies
    - Miscellaneous

Serve... Toolb... SSIS T... SQL... Output Data Tools Operations

Activate Windows Solution Explorer Team Explorer Class View Tabular Model... Go to Settings to activate Windows.

Sales.cube [Design] X Sales.dsv [Design]

Cube Structure Dimension Usage Calculations KPIs Actions Partitions Aggregations Perspectives Translations Browser

SQL Server Object Explorer

Measures

- Sales
- [nl] Fact Sales

Dimensions

- Sales
- Product
- Time

Add Cube Dimension... Edit Dimension

- Rename F2
- Delete Del
- Move Up
- Move Down
- New Linked Object...
- Properties Alt+Enter

Data Source View

Fact Sales

- ProductID
- CustomerID
- SalesmanID
- ChannelID
- TimeID
- Qty
- Qty Total price

TimeDim

- TimeID
- CalendarQuarter
- CalendarYear

ProductDim

- ProductID
- ProductName
- ProductPrice
- ProductCategory

Solution Explorer

Search Solution Explorer (Ctrl+.)

Solution 'MultidimensionalProject14' (1 project)

- MultidimensionalProject14
  - Data Sources
    - Sales.ds
  - Data Source Views
    - Sales.dsv
    - Sales 1.dsv
  - Cubes
    - Sales.cube
    - Sales 1.cube
  - Dimensions
    - Product Dim.dim
    - Time Dim.dim
    - Product Dim 1.dim
    - Channel Dim.dim
    - Salesman Dim.dim
    - Customer Dim.dim
    - Time Dim 1.dim
  - Mining Structures
  - Roles
  - Assemblies
  - Miscellaneous

Serve... Tools... SSIS T... SQL... Output Data Tools Operations

Activate Windows Go to Settings to activate Windows.

```
graph TD; FactSales[Fact Sales] --> TimeDim[TimeDim]; FactSales --> ProductDim[ProductDim];
```

Solution Explorer

Search Solution Explorer (Ctrl+)

Solution 'MultidimensionalProject14' (1 project)

- MultidimensionalProject14
  - Data Sources
    - Sales.ds
  - Data Source Views
    - Sales.dsv
    - Sales 1.dsv
  - Cubes
    - Sales.cube
    - Sales 1(cube)
  - Dimensions
    - Product Dim.dim
    - Time Dim.dim
    - Product Dim 1.dim
    - Channel Dim.dim
    - Salesman Dim.dim
    - Customer Dim.dim
    - Time Dim 1.dim
  - Mining Structures
  - Roles
  - Assemblies
  - Miscellaneous

Product Dim.dim [Design] Sales.cube [Design] Sales.dsv [Design]

Dimension Structure Attribute Relationships Transactions Browser

Attributes

Hierarchies

To create a new hierarchy, drag an attribute here.

Data Source View

ProductDim

- ProductID
- ProductName
- ProductPrice
- ProductCategory

Serve... Toolb... SSIS T... SQL... Output Data Tools Operations

Activate Windows  
Solution Explor... Team Explorer Class View Tabular Model... Go to Settings to activate Windows.

SQl Server Object Explor... X Product Dim.dim [Design] Sales(cube) [Design] Sales.dsv [Design]

Dimension Struct... Attribute Relationships Translations Browser

SQL Server

- (localdb)\MSSQLLocalDB
- (localdb)\ProjectsV13
- Projects - Multidimensional

Default Language Objec...

Product Dim Capti...

- Attributes

Product ID	Capti...
Product Name	Capti...
Product Price	Capti...

Solution Explorer

Search Solution Explorer (Ctrl+.)

Solution 'MultidimensionalProject14' (1 project)

- MultidimensionalProject14
  - Data Sources
    - Sales.ds
  - Data Source Views
    - Sales.dsv
    - Sales 1.dsv
  - Cubes
    - Sales(cube)
    - Sales 1(cube)
  - Dimensions
    - Product Dim.dim
    - Time Dim.dim
    - Product Dim 1.dim
    - Channel Dim.dim
    - Salesman Dim.dim
    - Customer Dim.dim
    - Time Dim 1.dim
  - Mining Structures
  - Roles
  - Assemblies
  - Miscellaneous

Activate Windows

Solution Explor... Team Explorer Class View Tabular Model... Go to Settings to activate Windows.

Serve... Toolb... SSIS T... SQL...

Output Data Tools Operations

The screenshot shows the Microsoft SQL Server Data Tools (SSDT) interface. The main window displays the 'Product Dim.dim [Design]' tab, which contains a table with three rows: Product ID, Product Name, and Product Price. The 'Attributes' section is expanded. The 'Solution Explorer' pane on the right shows a project named 'MultidimensionalProject14' containing various components like Data Sources, Data Source Views, Cubes, Dimensions, and Mining Structures. The 'Sales(cube)' cube is currently selected. The bottom status bar indicates 'Activate Windows' and provides links to Solution Explorer, Team Explorer, Class View, Tabular Model..., and Go to Settings to activate Windows.

Sales.dsv [Design]      Sales.cube [Design]

Select Language

Select a language for the new translation:

- Afrikaans (South Africa)
- Albanian (Albania)
- Alsatian (France)
- Amharic (Ethiopia)
- Arabic (Algeria)
- Arabic (Bahrain)
- Arabic (Egypt)**
- Arabic (Iraq)
- Arabic (Jordan)
- Arabic (Kuwait)
- Arabic (Lebanon)
- Arabic (Libya)
- Arabic (Morocco)
- Arabic (Oman)
- Arabic (Qatar)
- Arabic (Saudi Arabia)
- Arabic (Syria)
- Arabic (Tunisia)
- Arabic (U.A.E.)
- Arabic (Yemen)
- Armenian (Armenia)
- Assamese (India)
- Azerbaijani (Cyrillic, Azerbaijan)
- Azerbaijani (Latin, Azerbaijan)
- Bangla (Bangladesh)
- Bangla (India)
- Bashkir (Russia)
- Basque (Basque)
- Belarusian (Belarus)
- Bosnian (Cyrillic, Bosnia and Herzegovina)
- Bosnian (Latin, Bosnia and Herzegovina)

OK Cancel Help

SQL Server Object Explor...      Product Dim.dim [Design]      Sales.cube [Design]

Dimension Structure Attribute Relationships Trans...

Default Language Object... Product Dim Capti... Attributes Product ID Capti... Product Name Capti... Product Price Capti...

Solution Explorer

Search Solution Explorer (Ctrl + F)

Solution 'MultidimensionalProject14' (1 project)

- MultidimensionalProject14
  - Data Sources
    - Sales.ds
  - Data Source Views
    - Sales.dsv
    - Sales 1.dsv
  - Cubes
    - Sales.cube**
    - Sales 1(cube)
  - Dimensions
    - Product Dim.dim
    - Time Dim.dim
    - Product Dim 1.dim
    - Channel Dim.dim
    - Salesman Dim.dim
    - Customer Dim.dim
    - Time Dim 1.dim
  - Mining Structures
  - Roles
  - Assemblies
  - Miscellaneous

Serve... Toolb... SSIS T... SQL... Output Data Tools Operations

Activate Windows  
Solution Explor... Team Explorer Class View Tabular Model... Go to Settings to activate Windows.

The screenshot displays the Microsoft SQL Server Management Studio (SSMS) interface. In the center, a 'Select Language' dialog box is open, prompting the user to choose a language for a new translation. The list includes many languages, with 'Arabic (Egypt)' highlighted. At the bottom of the dialog are 'OK', 'Cancel', and 'Help' buttons. The background shows the 'Sales.cube [Design]' tab is active in the main window, and the 'Solution Explorer' pane on the right shows a project named 'MultidimensionalProject14' with its components like 'Sales.cube', 'Sales 1(cube)', and various dimensions. The status bar at the bottom indicates 'Activate Windows'.

SQL Server Object Explor... X Product Dim.dim [Design]\* Sales(cube) [Design] Sales.dsv [Design]

Dimension Structure Attribute Relationships Translations Browser

Default Language Objec... Arabic (Egypt)

Product Dim Capti... المنتج

Attributes

Product ID	Capti...	رقم المنتج
Product Name	Capti...	اسم المنتج
Product Price	Capti...	السعر

Microsoft Visual Studio

Save changes to Dimension [Product Dim]?

Click Save to close this editor and to save changes.  
Click Discard to close this editor and discard changes.  
Click Cancel to cancel the operation and keep this editor open.

Save Discard Cancel

Solution Explorer

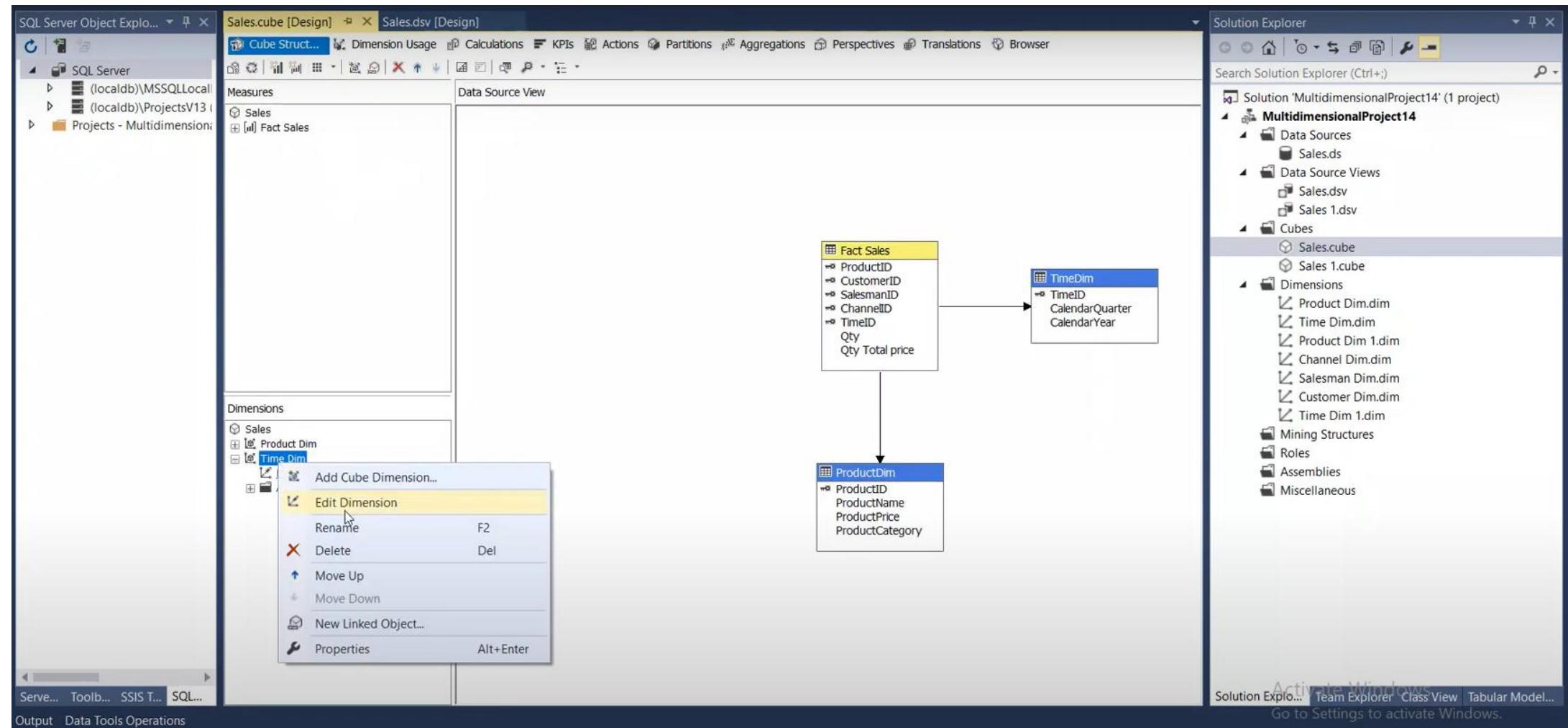
Search Solution Explorer (Ctrl+.)

Solution 'MultidimensionalProject14' (1 project)

- MultidimensionalProject14
  - Data Sources
    - Sales.ds
  - Data Source Views
    - Sales.dsv
    - Sales 1.dsv
  - Cubes
    - Sales(cube)
    - Sales 1(cube)
  - Dimensions
    - Product Dim.dim
    - Time Dim.dim
    - Product Dim 1.dim
    - Channel Dim.dim
    - Salesman Dim.dim
    - Customer Dim.dim
    - Time Dim 1.dim
  - Mining Structures
  - Roles
  - Assemblies
  - Miscellaneous

Serve... Toolb... SSIS T... SQL... Output Data Tools Operations

Activate Windows  
Solution Explor... Team Explorer Class View Tabular Model... Go to Settings to activate Windows.



SQL Server Object Explor... X Time Dim.dim [Design]\* Sales(cube) [Design] Sales.csv [Design]

Dimension Structure Attribute Relationships Translations Browser

Default Language Objec... Arabic (Egypt)

Time Dim Capti... التاريخ

- Attributes

Time ID Capti... الرقم

Calendar Year Capti... السنة

Calendar Quarter Capti... الموسم

Microsoft Visual Studio

Save changes to Dimension [Time Dim]?

Click Save to close this editor and to save changes.  
Click Discard to close this editor and discard changes.  
Click Cancel to cancel the operation and keep this editor open.

Save Discard Cancel

Solution Explorer

Search Solution Explorer (Ctrl+.)

Solution 'MultidimensionalProject14' (1 project)

MultidimensionalProject14

Data Sources

Sales.ds

Data Source Views

Sales.csv

Sales 1.ds

Cubes

Sales(cube)

Sales 1(cube)

Dimensions

Product Dim.dim

Time Dim.dim

Product Dim 1.dim

Channel Dim.dim

Salesman Dim.dim

Customer Dim.dim

Time Dim 1.dim

Mining Structures

Roles

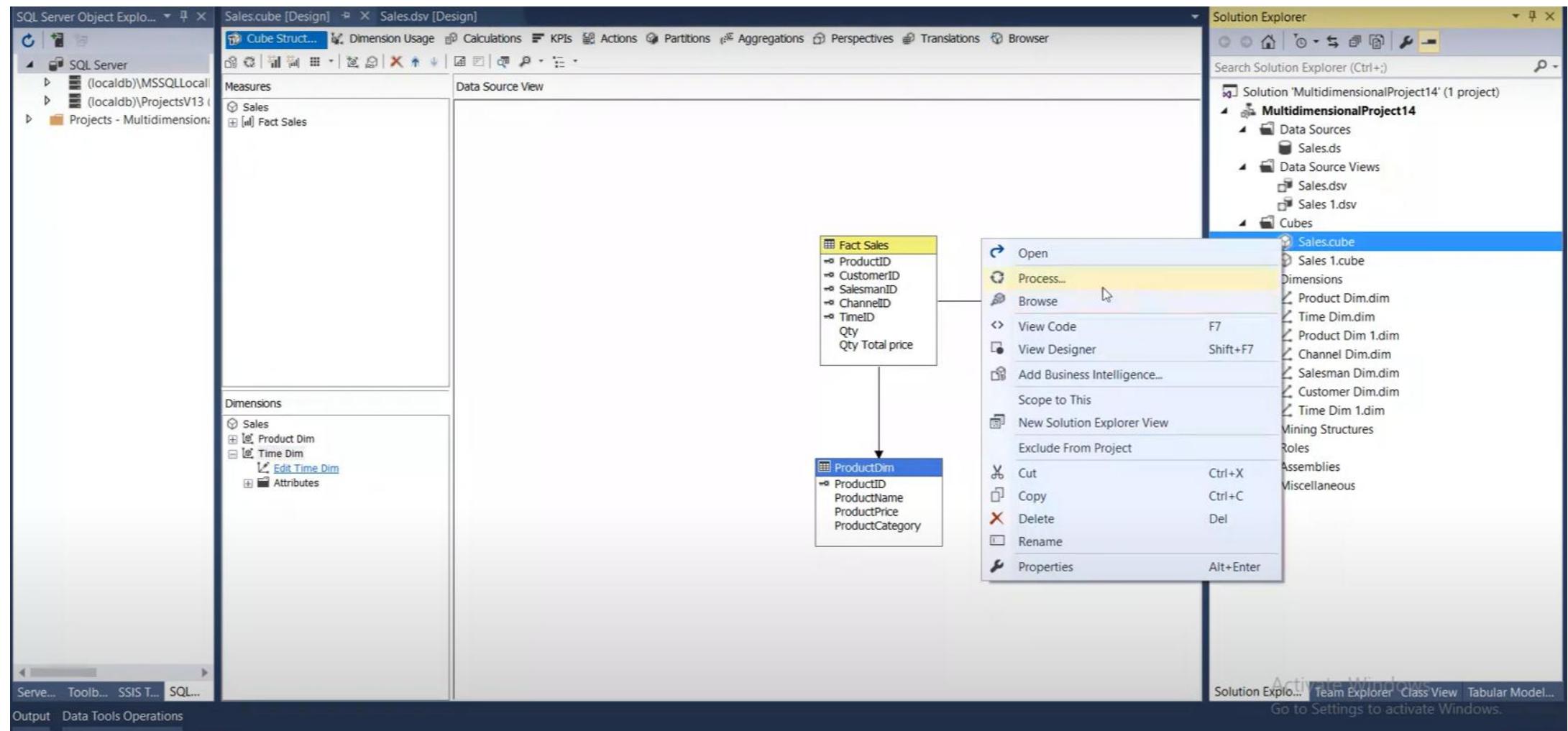
Assemblies

Miscellaneous

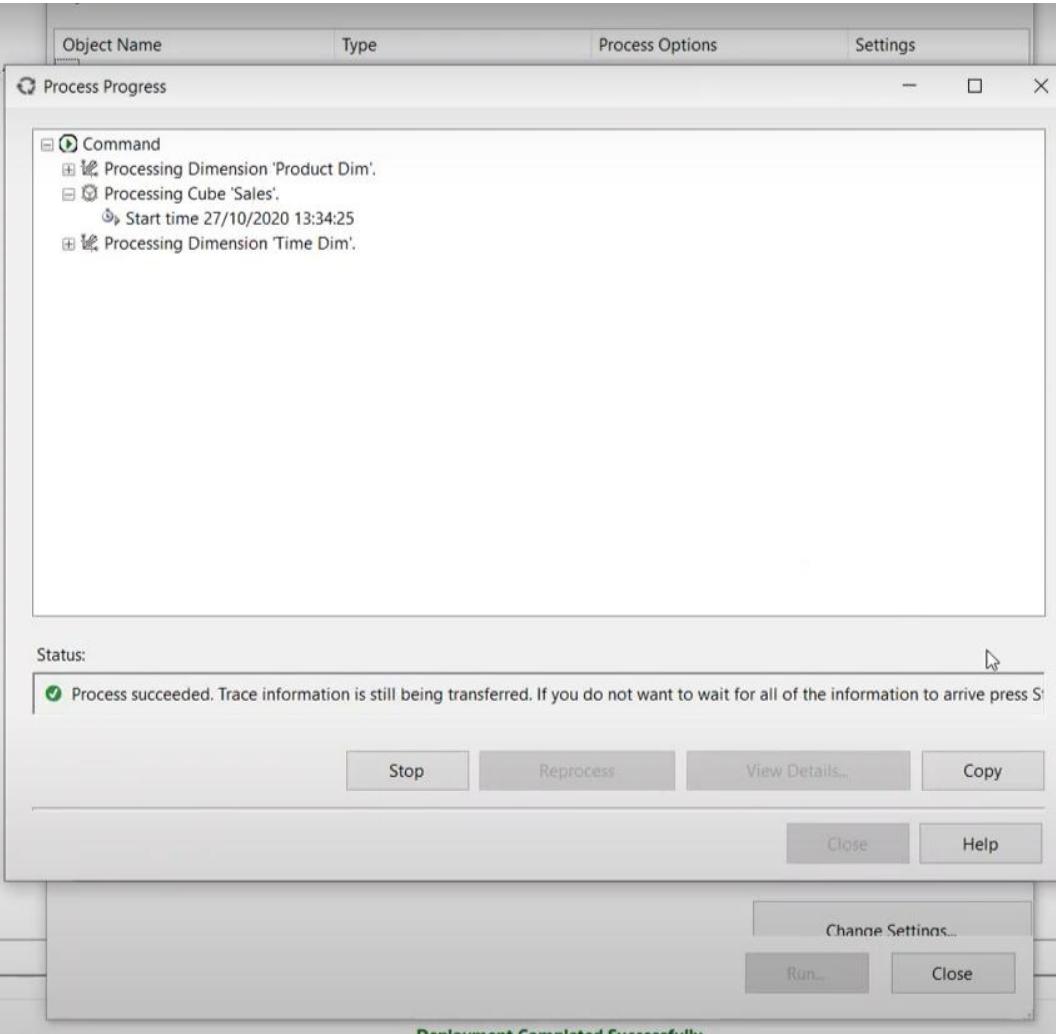
Serve... Toolb... SSIS T... SQL...

Output Data Tools Operations

Activate Windows  
Solution Explor... Team Explorer Class View Tabular Model...  
Go to Settings to activate Windows.



+ Processing Dimension 'Product Dim' completed.  
+ Processing Cube 'Sales' completed.  
Start time: 27/10/2020 13:34:18; End time: 27/10/2020 13:34:  
+ Processing Measure Group 'Fact Sales' completed.  
+ Processing Dimension 'Time Dim' completed.



Static:

Activate Windows  
Go to Settings to activate Windows.

Sales.cube [Design] Sales.dsv [Design]

Cube Structure Dimension Usage Calculations KPIs Actions Partitions Aggregations Perspectives Translations Browser

Language: Default

Edit as Text Import

Sales

Metadata

Measure Group: <All>

Sales

Measures

KPIs

Product Dim

Time Dim

Afrikaans (South Africa)

Albanian (Albania)

Alsatian (France)

Amharic (Ethiopia)

Arabic (Algeria)

Arabic (Bahrain)

Arabic (Egypt)

Arabic (Iraq)

Arabic (Jordan)

Arabic (Kuwait)

Arabic (Lebanon)

Arabic (Libya)

Arabic (Morocco)

Arabic (Oman)

Arabic (Qatar)

Arabic (Saudi Arabia)

Arabic (Syria)

Arabic (Tunisia)

Arabic (U.A.E.)

Arabic (Yemen)

Armenian (Armenia)

Assamese (India)

Azerbaijani (Cyrillic, Azerbaijan)

Azerbaijani (Latin, Azerbaijan)

Bangla (Bangladesh)

Bangla (India)

Bashkir (Russia)

Basque (Basque)

Belarusian (Belarus)

Dimension Hierarchy Operator Filter Expression Parameters

Select dimension >

Drag levels or measures here to add to the query.

Calculated Members

Serve... Tools... SSIS T... SQL...

Output Data Tools Operations

Solution Explorer

Search Solution Explorer (Ctrl+Shift+F)

Solution 'MultidimensionalProject14' (1 project)

MultidimensionalProject14

Data Sources

Sales.ds

Data Source Views

Sales.dsv

Sales 1.dsv

Cubes

Sales.cube

Sales 1.cube

Dimensions

Product Dim.dim

Time Dim.dim

Product Dim 1.dim

Channel Dim.dim

Salesman Dim.dim

Customer Dim.dim

Time Dim 1.dim

Mining Structures

Roles

Assemblies

Miscellaneous

Activate Windows  
Go to Settings to activate Windows.

MultidimensionalProject14 - Microsoft Visual Studio (Administrator)

File Edit View Project Build Debug Team Database Cube Tools Architecture Test Analyze Window Help

Quick Launch (Ctrl+Q) Sign in

Sales.cube [Design] Sales.dsv [Design]

Cube Struct... Dimension Usage Calculations KPIs Actions Partitions Aggregations Perspectives Translations Browser

Language: Arabic (Egypt)

Edit as Text Import... Dimension Hierarchy Operator Filter Expression Parameters

Dimension <Select dimension>

الكمية 890

Calculated Members

SQL Server Object Explorer

Search Solution Explorer (Ctrl+Shift+F)

Solution 'MultidimensionalProject14' (1 project)

- MultidimensionalProject14
  - Data Sources
    - Sales.ds
  - Data Source Views
    - Sales.dsv
    - Sales 1.dsv
  - Cubes
    - Sales(cube)
    - Sales 1(cube)
  - Dimensions
    - Product Dim.dim
    - Time Dim.dim
    - Product Dim 1.dim
    - Channel Dim.dim
    - Salesman Dim.dim
    - Customer Dim.dim
    - Time Dim 1.dim
  - Mining Structures
  - Roles
  - Assemblies
  - Miscellaneous

Serve... Toolbars... SSIS T... SQL... Output Data Tools Operations

Activate Windows Go to Settings to activate Windows.

Solution Explorer Team Explorer Class View Tabular Model...

MultidimensionalProject14 - Microsoft Visual Studio (Administrator)

File Edit View Project Build Debug Team Database Cube Tools Architecture Test Analyze Window Help

Quick Launch (Ctrl+Q) Sign in

SQL Server Object Explor... Sales.cube [Design] Sales.dsv [Design]

Cube Struct... Dimension Usage Calculations KPIs Actions Partitions Aggregations Perspectives Translations Browser

Language: Arabic (Egypt)

Edit as Text Import... Dimension Hierarchy Operator Filter Expression

Dimension <Select dimension>

Measure Group: <All>

المنتجات

Metadata

Measure Group: <All>

المنتجات

Measures

الكمية

KPIs

المبيعات

اسم المنتج

السعر

رقم المنتج

التاريخ

الرقم

السنة

الموسم

السنة

الموسم

الكمية

السنة	الموسم	الكمية
2007	Quarter1	240
2007	Quarter2	140
2008	Quarter1	160
2008	Quarter2	60
2008	Quarter3	140
2008	Quarter4	150

Calculated Members

Solution Explorer

Search Solution Explorer (Ctrl+F)

Solution 'MultidimensionalProject14' (1 project)

MultidimensionalProject14

- Data Sources
- Sales.ds
- Data Source Views

  - Sales.dsv
  - Sales 1.dsv

- Cubes

  - Sales.cube
  - Sales 1(cube)

- Dimensions

  - Product Dim.dim
  - Time Dim.dim
  - Product Dim 1.dim
  - Channel Dim.dim
  - Salesman Dim.dim
  - Customer Dim.dim
  - Time Dim 1.dim

- Mining Structures
- Roles
- Assemblies
- Miscellaneous

Activate Windows

Solution Explorer Team Explorer Class View Tabular Model... Go to Settings to activate Windows.

Output Data Tools Operations

The screenshot shows the Microsoft Visual Studio interface for a multidimensional project named "MultidimensionalProject14". The main workspace displays the "Sales.cube [Design]" view, which includes a table of sales data:

السنة	الموسم	الكمية
2007	Quarter1	240
2007	Quarter2	140
2008	Quarter1	160
2008	Quarter2	60
2008	Quarter3	140
2008	Quarter4	150

The left pane shows the cube's schema, including dimensions like Product, Time, and Salesman, and measures like Sales, Price, and Quantity. The Solution Explorer on the right lists the project's components, including the Sales cube and various dimensions and mining structures.

Book1 - Excel (Product Activation Failed)

PivotTable Tools

File Home Insert Page Layout Formulas Data Review View Add-ins Team Analyze Design Tell me what you want to do...

PivotTable Name: Active Field: PivotTable1 Options Field Settings Drill Down Drill Up Expand Field Group Selection Ungroup Group Field Insert Slicer Timeline Filter Refresh Change Data Source Clear Select Move PivotTable Fields, Items, OLAP Relationships & Sets Tools PivotChart Recommended PivotTables Tools Field List +/- Buttons Headers Show

A1 A B C D E F G H I J K L M N O P Q R S T

PivotTable1

To build a report, choose fields from the PivotTable Field List

PivotTable Fields

Choose fields to add to report:

Σ Fact Sales  
Qty

Product Dim  
Product ID  
Product Name  
Product Price

Time Dim  
Calendar Quarter

Drag fields between areas below:

FILTERS COLUMNS

ROWS VALUES

Activate Windows  
Go to Settings to activate Windows Defer Layout Update UPDATE

tmpD4A6

Ready

Sales.cube [Design] Sales.dsv [Design]

Cube Structure Dimension Usage Calculations KPIs Actions Partitions Aggregations Perspectives Translations Browser

Language: Arabic (Egypt)

Edit as Text Import... Tools... Options... Help... Dimension Hierarchy Operator Filter Expression Parameters

المحاسبات المبيعات

Measure Group: <All>

المحاسبات

- Measures
  - القيمة
  - الكمية
- KPIs
  - اسم المنتج
  - السعر
  - رقم المنتج
- المراجح
  - الرقم
  - السنة
  - الموسم

Calculated Members

Dimension	Hierarchy	Operator	Filter Expression	Parameters
<Select dimension>				

السنة الموسمن الكمية

السنة	الموسم	الكمية
2007	Quarter1	240
2007	Quarter2	140
2008	Quarter1	160
2008	Quarter2	60
2008	Quarter3	140
2008	Quarter4	150

Solution Explorer

Search Solution Explorer (Ctrl+.)

Solution 'MultidimensionalProject14' (1 project)

- MultidimensionalProject14
  - Data Sources
    - Sales.ds
  - Data Source Views
    - Sales.dsv
    - Sales 1.dsv
  - Cubes
    - Sales.cube
    - Sales 1(cube)
  - Dimensions
    - Product Dim.dim
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    - Product Dim 1.dim
    - Channel Dim.dim
    - Salesman Dim.dim
    - Customer Dim.dim
    - Time Dim 1.dim
  - Mining Structures
  - Roles
  - Assemblies
  - Miscellaneous

Serve... Toolb... SSIS T... SQL... Output Data Tools Operations

Activate Windows  
Solution Explorer Team Explorer Class View Tabular Model... Go to Settings to activate Windows.

Sales.cube [Design] Sales.dsv [Design]

Cube Structure Dimension Usage Calculations KPIs Actions Partitions Aggregations Perspectives Translations Browser

Fact Sales (1 Partition)

Partition Name	Source	Estimated Rows	Storage Mode	Aggregation Design
1 Fact Sales	Fact Sales	0	MOLAP	

New Partition... Storage Settings...

SQL Server Object Explor... X

SQL Server (localdb)\MSSQLLocalDB (localdb)\ProjectsV13 Projects - Multidimensional

Solution Explorer

Search Solution Explorer (Ctrl+.)

Solution 'MultidimensionalProject14' (1 project)

- MultidimensionalProject14
  - Data Sources
    - Sales.ds
  - Data Source Views
    - Sales.dsv
    - Sales 1.dsv
  - Cubes
    - Sales.cube
    - Sales 1(cube)
  - Dimensions
    - Product Dim.dim
    - Time Dim.dim
    - Product Dim 1.dim
    - Channel Dim.dim
    - Salesman Dim.dim
    - Customer Dim.dim
    - Time Dim 1.dim
  - Mining Structures
  - Roles
  - Assemblies
  - Miscellaneous

Activate Windows  
Solution Explorer Team Explorer Class View Tabular Model...  
Go to Settings to activate Windows.

Serve... Toolb... SSIS T... SQL...  
Output Data Tools Operations

Sales.cube [Design] Sales.ds [Design]

Cube Struct... Dimension Usage Calculations KPIs Actions Partitions Aggregations Perspectives Translations Browser

SQL Server Object Explor... ▾ X

SQL Server

(localdb)\MSSQLLocalDB (localdb)\ProjectsV13 Projects - Multidimensional

Sales.cube [Design] Sales.ds [Design]

Fact Sales (1 Partition)

Partition Name Source Estimated Rows Storage Mode Aggregation Design

1 Fact Sales Fact Sales 0 MOLAP

New Partition... Storage Settings...

Solution Explorer

Search Solution Explorer (Ctrl+.)

Solution 'MultidimensionalProject14' (1 project)

MultidimensionalProject14

- Data Sources
- Sales.ds

Data Source Views

- Sales.ds
- Sales 1.ds

Cubes

- Sales.cube
- Sales 1(cube)

Dimensions

- Product Dim.dim
- Time Dim.dim
- Product Dim 1.dim
- Channel Dim.dim
- Salesman Dim.dim
- Customer Dim.dim
- Time Dim 1.dim

Mining Structures

Roles

Assemblies

Miscellaneous

Serve... Toolbar... SSIS T... SQL... Output Data Tools Operations

Activate Windows  
Go to Settings to activate Windows.

Solution Explor... Team Explorer Class View Tabular Model...

MultidimensionalProject14 - Microsoft Visual Studio (Administrator)

File Edit View Project Build Debug Team Database Cube Tools Analyze Window Help

Quick Launch (Ctrl+Q) Sign in

SQL Server Object Explor... Sales.cube [Design] Sales.dsv [Design]

Cube Struct... Dimension Usage Calculations KPIs Actions Partitions Aggregations Perspectives Translations Browser

Develop Default Start

SQL Server (localdb)\MSSQLLocalDB (localdb)\ProjectsV13 Projects - Multidimensional

Fact Sales (1 Partition)

Partition Name Source 1 Fact Sales Fact S

New Partition...

Measure Group Storage Settings - Fact Sales

Standard setting

Real-time HOLAP Medium-latency MOLAP Scheduled MOLAP

Real-time ROLAP Low-latency MOLAP Automatic MOLAP MOLAP

- Measure group data and aggregations are stored in a multidimensional format.  
- The server will listen for notifications when data changes.  
- Processing is performed automatically with no restriction on latency.

Custom setting

To view or modify settings, click Options.

Options...

Changes made to measure group storage settings will not affect existing partitions. The new settings will be used as default values for newly created partitions.

OK Cancel Help

Solution Explorer

Search Solution Explorer (Ctrl+.)

Solution 'MultidimensionalProject14' (1 project)

- MultidimensionalProject14
  - Data Sources
    - Sales.ds
  - Data Source Views
    - Sales.dsv
    - Sales 1.dsv
  - Cubes
    - Sales.cube
    - Sales 1.cube
  - Dimensions
    - Product Dim.dim
    - Time Dim.dim
    - Product Dim 1.dim
    - Channel Dim.dim
    - Salesman Dim.dim
    - Customer Dim.dim
    - Time Dim 1.dim
  - Mining Structures
  - Roles
  - Assemblies
  - Miscellaneous

Activate Windows Go to Settings to activate Windows.

Serve... Toolbars SSIS T... SQL... Output Data Tools Operations

Sales.cube [Design] Sales.ds [Design]

Cube Struct... Dimension Usage Calculations KPIs Actions Partitions Aggregations Perspectives Translations Browser

SQL Server Object Explorer

SQL Server (localdb)\MSSQLLocalDB (localdb)\ProjectsV13 Projects - Multidimensional

Fact Sales (1 Partition)

Partition Name Source  
1 Fact Sales Fact S

New Partition...

Measure Group Storage Settings - Fact Sales

Standard setting

Real-time HOLAP Medium-latency MOLAP Scheduled MOLAP

Real-time ROLAP Low-latency MOLAP Automatic MOLAP **MOLAP**

- Measure group data and aggregations are stored in a multidimensional format.  
- Notifications are not received when data changes.  
- Processing must be either scheduled or performed manually.

Custom setting

To view or modify settings, click Options.

Options...

Changes made to measure group storage settings will not affect existing partitions. The new settings will be used as default values for newly created partitions.

OK Cancel Help

Solution Explorer

Search Solution Explorer (Ctrl+.)

Solution 'MultidimensionalProject14' (1 project)

- MultidimensionalProject14
  - Data Sources
    - Sales.ds
  - Data Source Views
    - Sales.ds
    - Sales 1.ds
  - Cubes
    - Sales.cube
    - Sales 1.cube
  - Dimensions
    - Product Dim.dim
    - Time Dim.dim
    - Product Dim 1.dim
    - Channel Dim.dim
    - Salesman Dim.dim
    - Customer Dim.dim
    - Time Dim 1.dim
  - Mining Structures
  - Roles
  - Assemblies
  - Miscellaneous

Serve... Toolbars... SSIS T... SQL... Output Data Tools Operations

Activate Windows Solution Explorer Team Explorer Class View Tabular Model... Go to Settings to activate Windows.

MultidimensionalProject14 - Microsoft Visual Studio (Administrator)

File Edit View Project Build Debug Team Database Cube Tools Architecture Test Analyze Window Help

Develop Default Start

SQL Server Object Explor... Sales.cube [Design] Sales.dsv [Design]

Cube Struct... Dimension Usage Calculations KPIs Actions Partitions Aggregations Perspectives Translations Browser

Measure Group Storage Settings - Fact Sales

Standard setting

Partition Name: Fact Sales

New Partition...

Real-time HOLAP Medium-latency MOLAP Scheduled MOLAP

Real-time ROLAP Low-latency MOLAP Automatic MOLAP MOLAP

- Measure group data and aggregations are stored in a relational format.  
- The server will listen for notifications when data changes.  
- All queries reflect the current state of the data.

Custom setting

To view or modify settings, click Options.

Options...

Changes made to measure group storage settings will not affect existing partitions. The new settings will be used as default values for newly created partitions.

OK Cancel Help

Solution Explorer

Search Solution Explorer (Ctrl+.)

Solution 'MultidimensionalProject14' (1 project)

- MultidimensionalProject14
  - Data Sources
    - Sales.ds
  - Data Source Views
    - Sales.dsv
    - Sales 1.dsv
  - Cubes
    - Sales(cube)
    - Sales 1(cube)
  - Dimensions
    - Product Dim.dim
    - Time Dim.dim
    - Product Dim 1.dim
    - Channel Dim.dim
    - Salesman Dim.dim
    - Customer Dim.dim
    - Time Dim 1.dim
  - Mining Structures
  - Roles
  - Assemblies
  - Miscellaneous

Activate Windows  
Go to Settings to activate Windows.

Serve... Toolb... SSIS T... SQL...  
Output Data Tools Operations

MultidimensionalProject14 - Microsoft Visual Studio (Administrator)

File Edit View Project Build Debug Team Database Cube Tools Architecture Test Analyze Window Help

Develop Default Start

SQL Server Object Explor... Sales.cube [Design] Sales.dsv [Design]

Cube Struct... Dimension Usage Calculations KPIs Actions Partitions Aggregations Perspectives Translations Browser

Measure Group Storage Settings - Fact Sales

Partition Name: 1 Fact Sales Source: Fact S...

New Partition...

Standard setting

Real-time HOLAP Medium-latency MOLAP Scheduled MOLAP

Real-time ROLAP Low-latency MOLAP Automatic MOLAP MOLAP

- Measure group data is maintained in a relational format, and aggregations are stored in a multidimensional format.  
- The server will listen for notifications when data changes.  
- All queries reflect the current state of the data.

Custom setting

To view or modify settings, click Options.

Options...

Changes made to measure group storage settings will not affect existing partitions. The new settings will be used as default values for newly created partitions.

OK Cancel Help

Solution Explorer

Search Solution Explorer (Ctrl+Shift+F)

Solution 'MultidimensionalProject14' (1 project)

- MultidimensionalProject14
  - Data Sources
    - Sales.ds
  - Data Source Views
    - Sales.dsv
    - Sales 1.dsv
  - Cubes
    - Sales.cube
    - Sales 1(cube)
  - Dimensions
    - Product Dim.dim
    - Time Dim.dim
    - Product Dim 1.dim
    - Channel Dim.dim
    - Salesman Dim.dim
    - Customer Dim.dim
    - Time Dim 1.dim
  - Mining Structures
  - Roles
  - Assemblies
  - Miscellaneous

Serve... Toolbar... SSIS T... SQL...

Output Data Tools Operations

Activate Windows  
Solution Explorer Team Explorer Class View Tabular Model...  
Go to Settings to activate Windows.

MultidimensionalProject14 - Microsoft Visual Studio (Administrator)

File Edit View Project Build Debug Team Database Cube Tools Architecture Test Analyze Window Help

Quick Launch (Ctrl+Q) Sign in

SQL Server Object Explor... Sales.cube [Design] Sales.dsv [Design]

Cube Struct... Dimension Usage Calculations KPIs Actions Partitions Aggregations Perspectives Translations Browser

Fact Sales (1 Partition)

Partition Name Source  
1 Fact Sales Fact S

New Partition...

Measure Group Storage Settings - Fact Sales

Standard setting

Real-time HOLAP Medium-latency MOLAP Scheduled MOLAP

Real-time ROLAP Low-latency MOLAP Automatic MOLAP

MOLAP

- Measure group data and aggregations are stored in a multidimensional format.  
- Notifications are not received when data changes.  
- Processing must be either scheduled or performed manually.

Custom setting

To view or modify settings, click Options.

Options...

Changes made to measure group storage settings will not affect existing partitions. The new settings will be used as default values for newly created partitions.

OK Cancel Help

Solution Explorer

Search Solution Explorer (Ctrl+Shift+F)

Solution 'MultidimensionalProject14' (1 project)

- MultidimensionalProject14
  - Data Sources
    - Sales.ds
  - Data Source Views
    - Sales.dsv
    - Sales 1.dsv
  - Cubes
    - Sales.cube
    - Sales 1(cube)
  - Dimensions
    - Product Dim.dim
    - Time Dim.dim
    - Product Dim 1.dim
    - Channel Dim.dim
    - Salesman Dim.dim
    - Customer Dim.dim
    - Time Dim 1.dim
  - Mining Structures
  - Roles
  - Assemblies
  - Miscellaneous

Serve... Toolb... SSIS T... SQL...  
Output Data Tools Operations

Activate Windows  
Solution Explor... Team Explorer Class View Tabular Model...  
Go to Settings to activate Windows.

The screenshot displays the Microsoft Visual Studio interface for managing a multidimensional project. The main window shows the 'Measure Group Storage Settings' dialog for the 'Fact Sales' partition of the 'Sales.cube' cube. The dialog offers three storage settings: Real-time HOLAP, Medium-latency MOLAP, and Scheduled MOLAP. The 'Medium-latency MOLAP' option is currently selected. Below the settings, a note specifies that changes will not affect existing partitions but will be used as default values for new ones. The Visual Studio ribbon at the top includes tabs for File, Edit, View, Project, Build, Debug, Team, Database, Cube, Tools, Architecture, Test, Analyze, Window, and Help. The Solution Explorer on the right lists the project structure, including Data Sources, Data Source Views, Cubes, Dimensions, Mining Structures, Roles, Assemblies, and Miscellaneous items. The status bar at the bottom provides links for Solution Explorer, Team Explorer, Class View, Tabular Model..., and activation information.

MultidimensionalProject14 - Microsoft Visual Studio (Administrator)

File Edit View Project Build Debug Team Database Cube Tools Architecture Test Analyze Window Help

Develop Default Start

SQL Server Object Explor... Sales.cube [Design] Sales.dsv [Design]

Cube Struct... Dimension Usage Calculations KPIs Actions Partitions Aggregations Perspectives Translations Browser

Partitions

Measure Group Storage Settings - Fact Sales

Standard setting

Partition Name: 1 Fact Sales

New Partition...

Real-time HOLAP Medium-latency MOLAP Scheduled MOLAP

Real-time ROLAP Low-latency MOLAP Automatic MOLAP MOLAP

- Measure group data and aggregations are stored in a multidimensional format.  
- Notifications are not received when data changes.  
- Processing must be either scheduled or performed manually.

Custom setting

To view or modify settings, click Options.

Options...

Changes made to measure group storage settings will not affect existing partitions. The new settings will be used as default values for newly created partitions.

OK Cancel Help

Solution Explorer

Search Solution Explorer (Ctrl+.)

Solution 'MultidimensionalProject14' (1 project)

MultidimensionalProject14

- Data Sources
- Sales.ds

Data Source Views

- Sales.dsv
- Sales 1.dsv

Cubes

- Sales(cube)
- Sales 1(cube)

Dimensions

- Product Dim.dim
- Time Dim.dim
- Product Dim 1.dim
- Channel Dim.dim
- Salesman Dim.dim
- Customer Dim.dim
- Time Dim 1.dim

Mining Structures

Roles

Assemblies

Miscellaneous

Activate Windows

Solution Explorer Team Explorer Class View Tabular Model... Go to Settings to activate Windows.

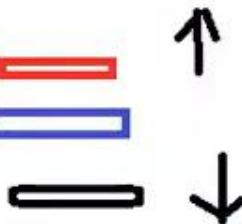
Server... Toolbar... SSIS T... SQL...  
Output Data Tools Operations

# 2 SQL Server Analysis Service-SSAS.

The screenshot shows the Microsoft Visual Studio interface for managing a Multidimensional Project. The title bar reads "MultidimensionalProject14 - Microsoft Visual Studio (Administrator)". The main window displays the "KPIs" tab of the "Sales.cube [Design]" project. A large red arrow points upwards from the bottom of the "KPIs" tab towards the top of the screen. The "Solution Explorer" pane on the right lists the project structure, including "MultidimensionalProject14", "Data Sources", "Data Source Views", "Cubes" (with "Sales.cube" selected), "Dimensions", "Mining Structures", "Roles", "Assemblies", and "Miscellaneous". The status bar at the bottom includes links for "Activate Windows", "Solution Explorer", "Team Explorer", "Class View", and "Tabular Model...".

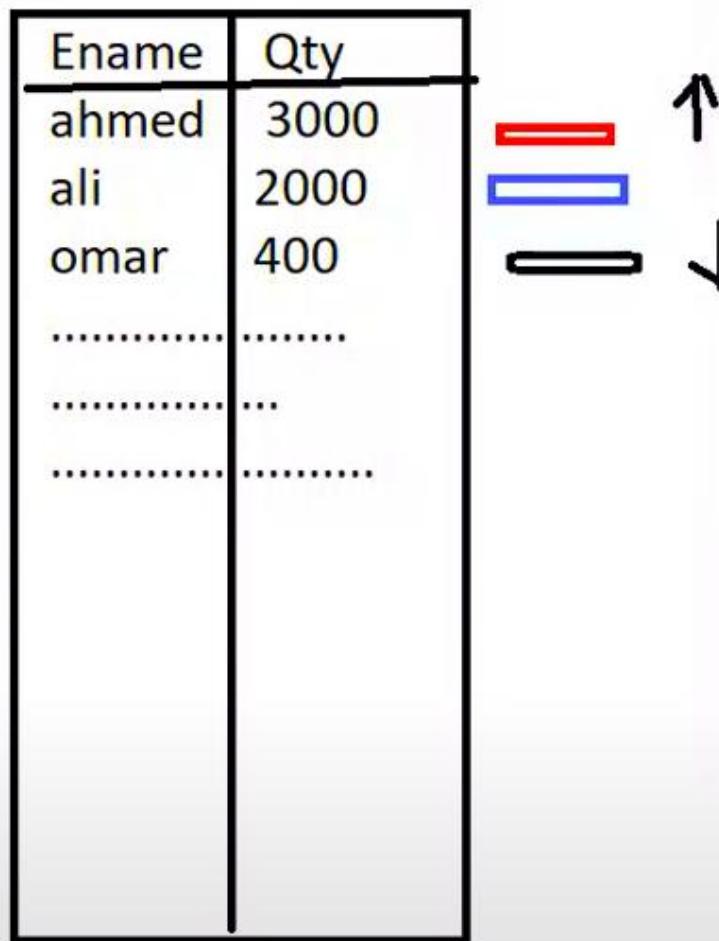
# KPI

Ename	Qty
ahmed	3000
ali	2000
omar	400
.....	
.....	
.....	



KPI  
KPI Name "totalsal"  
KPI Value Qty  
KPI Goal 1000  
KPI Symbol Traffic sign  
KIP status 1 green  
-1 red  
0 yellow

## KPI



KPI  
KPI Name "totalsal"  
KPI Value Qty  
KPI Goal 1000  
KPI Symbol Traffic sign  
KIP status 1 green  
-1 red  
0 yellow

MultidimensionalProject14 - Microsoft Visual Studio (Administrator)

File Edit View Project Build Debug Team Database Cube Tools Architecture Test Analyze Window Help

SQL Server Object Explor... Default Sales.cube [Design] Sales.dsv [Design]

KPI Organizer

Name: MySales

Associated measure group: <All>

Value Expression: [Measures].[Qty]

Goal Expression: 1000

Status

Status indicator: Gauge

Trend

Trend indicator: Standard arrow

Calculation Tools

Measure Group: <All>

Sales

- Measures
  - Fact Sales
    - Qty
  - Product Dim
  - Time Dim

Solution Explorer

Search Solution Explorer (Ctrl+Shift+F)

Solution 'MultidimensionalProject14' (1 project)

- MultidimensionalProject14
  - Data Sources
    - Sales.ds
  - Data Source Views
    - Sales.dsv
    - Sales 1.dsv
  - Cubes
    - Sales(cube)
    - Sales 1(cube)
  - Dimensions
    - Product Dim.dim
    - Time Dim.dim
    - Product Dim 1.dim
    - Channel Dim.dim
    - Salesman Dim.dim
    - Customer Dim.dim
    - Time Dim 1.dim
  - Mining Structures
  - Roles
  - Assemblies
  - Miscellaneous

Activate Windows  
Solution Explorer Team Explorer Class View Tabular Model...  
Go to Settings to activate Windows.

Server... Toolbars SSIS T... SQL...  
Output Data Tools Operations

MultidimensionalProject14 - Microsoft Visual Studio (Administrator)

File Edit View Project Build Debug Team Database Tools Architecture Test Analyze Window Help

Quick Launch (Ctrl+Q) Sign in

SQL Server Object Explorer Default Start

Sales.cube [Design] Sales.dsv [Design]

Cube Struct... Dimension Usage Calculations KPIs Actions Partitions Aggregations Perspectives Translations Browser

KPI Organizer

Name: MySales

Associated measure group: <All>

Value Expression: [Measures].[Qty]

Goal Expression: 1000

Status

Status indicator: Traffic light

Status expression:

```
case
when kpivalue("Mysales")
end
```

Trend

Trend indicator: Standard arrow

Trend expression:

Calculation Tools

Measure Group: <All>

Metadata Functions Templates

Sales

- Measures
  - Fact Sales
    - Qty
  - Product Dim
  - Time Dim

Solution Explorer

Solution 'MultidimensionalProject14' (1 project)

- MultidimensionalProject14
  - Data Sources
    - Sales.ds
  - Data Source Views
    - Sales.dsv
    - Sales 1.dsv
  - Cubes
    - Sales.cube
    - Sales 1.cube
  - Dimensions
    - Product Dim.dim
    - Time Dim.dim
    - Product Dim 1.dim
    - Channel Dim.dim
    - Salesman Dim.dim
    - Customer Dim.dim
    - Time Dim 1.dim
  - Mining Structures
  - Roles
  - Assemblies
  - Miscellaneous

Activate Windows Solution Explorer Team Explorer Class View Tabular Model... Go to Settings to activate Windows.

MultidimensionalProject14 - Microsoft Visual Studio (Administrator)

File Edit View Project Build Debug Team Database Tools Architecture Test Analyze Window Help

SQL Server Object Explor... Sales.cube [Design]\* Sales.dsv [Design]

Cube Struct... Dimension Usage Calculations KPIs Actions Partitions Aggregations Perspectives Translations Browser

KPI Organizer

Name: MySales

Associated measure group: <All>

Value Expression: [Measures].[Qty]

Goal Expression: 1000

Status

Status indicator: Traffic light

Status expression:

```
case
    when kpivalue("Mysales")>1000 then |
end
```

Trend

Trend indicator: Standard arrow

Trend expression:

Solution Explorer

Search Solution Explorer (Ctrl+.)

Solution 'MultidimensionalProject14' (1 project)

- MultidimensionalProject14
  - Data Sources
    - Sales.ds
  - Data Source Views
    - Sales.dsv
    - Sales 1.dsv
  - Cubes
    - Sales.cube
    - Sales 1.cube
  - Dimensions
    - Product Dim.dim
    - Time Dim.dim
    - Product Dim 1.dim
    - Channel Dim.dim
    - Salesman Dim.dim
    - Customer Dim.dim
    - Time Dim 1.dim
  - Mining Structures
  - Roles
  - Assemblies
  - Miscellaneous

Activate Windows  
Solution Explorer Team Explorer Class View Tabular Model...  
Go to Settings to activate Windows.

Serve... Toolb... SSIS T... SQL...

Output Data Tools Operations

Detailed description: This screenshot shows the Microsoft Visual Studio interface for a multidimensional project. The main window displays the 'KPI Organizer' for the 'Sales.cube [Design]' tab. The 'Name' field is set to 'MySales'. The 'Value Expression' is '[Measures].[Qty]'. The 'Goal Expression' is '1000'. In the 'Status' section, the 'Status indicator' is set to 'Traffic light'. The 'Status expression' contains the following CASE statement:  

```
case
    when kpivalue("Mysales")>1000 then |
end
```

Sales.cube [Design] \* Sales.dsv [Design]

Cube Struct... Dimension Usage Calculations KPIs Actions Partitions Aggregations Perspectives Translations Browser

SQL Server Object Explor... SQL Server

KPI Organizer

Name: MySales

Associated measure group: <All>

Value Expression: [Measures].[Qty]

Goal Expression: 1000

Status

Status indicator: Traffic light

Status expression:

```
case
when kpivalue("Mysales")>1000 then 1
end
```

Trend

Trend indicator: Standard arrow

Calculation Tools

Measure Group: <All>

Sales

- Measures
- Fact Sales
- Qty

Product Dim

Time Dim

Solution Explorer

Solution 'MultidimensionalProject14' (1 project)

- MultidimensionalProject14
  - Data Sources
    - Sales.ds
    - Sales.dsv
      - Sales.dsv
      - Sales 1.dsv
  - Cubes
    - Sales(cube)
    - Sales 1(cube)
  - Dimensions
    - Product Dim.dim
    - Time Dim.dim
    - Product Dim 1.dim
    - Channel Dim.dim
    - Salesman Dim.dim
    - Customer Dim.dim
    - Time Dim 1.dim
  - Mining Structures
  - Roles
  - Assemblies
  - Miscellaneous

Serve... Toolb... SSIS T... SQL... Output Data Tools Operations

Activate Windows  
Go to Settings to activate Windows.

MultidimensionalProject14 - Microsoft Visual Studio (Administrator)

File Edit View Project Build Debug Team Database Cube Tools Architecture Test Analyze Window Help

Develop Default Start

SQL Server Object Explor... Sales.cube [Design] Sales.dsv [Design]

Cube Struct... Dimension Usage Calculations KPIs Actions Partitions Aggregations Perspectives Translations Browser

KPI Organizer

Name: MySales

Associated measure group: <All>

Value Expression: [Measures].[Qty]

Goal Expression: 1000

Status

Status indicator: Traffic light

Status expression:

```
case
    when kpivalue("Mysales")>1000 then 1
    when kpivalue("Mysales")<1000 then 1
end
```

Trend

Trend indicators: Standard arrow

Solution Explorer

Search Solution Explorer (Ctrl+Shift+F)

Solution 'MultidimensionalProject14' (1 project)

- MultidimensionalProject14
  - Data Sources
    - Sales.ds
  - Data Source Views
    - Sales.dsv
    - Sales 1.dsv
  - Cubes
    - Sales.cube
    - Sales 1.cube
  - Dimensions
    - Product Dim.dim
    - Time Dim.dim
    - Product Dim 1.dim
    - Channel Dim.dim
    - Salesman Dim.dim
    - Customer Dim.dim
    - Time Dim 1.dim
  - Mining Structures
  - Roles
  - Assemblies
  - Miscellaneous

Activate Windows  
Go to Settings to activate Windows.

Serve... Toolb... SSIS T... SQL...  
Output Data Tools Operations

## 2 SQL Server Analysis Service-SSAS.

MultidimensionalProject14 - Microsoft Visual Studio (Administrator)

Sales.cube [Design] \* Sales.dsv [Design]

SQL Server Object Explor... ×

File Edit View Tools Data Dimensions Analysis Analyze Window Help

KPIs Actions Partitions Aggregations Perspectives Translations Browser

KPI Organizer

Name: MySales

Associated measure group: <All>

Value Expression: [Measures].[Qty]

Goal Expression: 1000

Status indicator: Traffic light

Status expression:

```
case
    when kpivalue("Mysales")>1000 then 1
    when kpivalue("Mysales")<1000 then -1
end
```

Calculation Tools

Measure Group: <All>

Metadata Functions Templates

Sales

- Measures
  - Fact Sales
    - Qty
  - Product Dim
  - Time Dim

Solution Explorer

Search Solution Explorer (Ctrl+Shift+F)

- Solution 'MultidimensionalProject14' (1 project)
  - Cubes
    - Sales.cube
    - Sales 1.cube
  - Dimensions
    - Product Dim.dim
    - Time Dim.dim
    - Product Dim 1.dim
    - Channel Dim.dim
    - Salesman Dim.dim
    - Customer Dim.dim
    - Time Dim 1.dim
  - Mining Structures
  - Roles
  - Assemblies
  - Miscellaneous

Activate Windows

Solution Explorer Team Explorer Class View Tabular Model...

Output Data Tools Operations

Go to Settings to activate Windows.

The screenshot displays the Microsoft Visual Studio interface for managing a Multidimensional Project. The main window is the KPI Designer for the Sales.cube. Key settings shown include:

- Name:** MySales
- Associated measure group:** <All>
- Value Expression:** [Measures].[Qty]
- Goal Expression:** 1000
- Status indicator:** Traffic light
- Status expression:** A CASE statement that returns 1 if the value is greater than 1000, and -1 if it is less than 1000.

The Solution Explorer on the right lists the project structure, which includes a solution named 'MultidimensionalProject14' containing a cube ('Sales.cube'), dimensions ('Product Dim.dim', 'Time Dim.dim', etc.), and mining structures.

Sales.cube [Design] \* Sales.dsv [Design]

Cube Struct... Dimension Usage Calculations KPIs Actions Partitions Aggregations Perspectives Translations Browser

KPI Organizer

Name: MySales

Associated measure group: <All>

Value Expression: [Measures].[Qty]

Goal Expression: 1000

Status indicator: Traffic light

Status expression:

```
case
    when kpivalue("Mysales")>1000 then 1
    when kpivalue("Mysales")<1000 then -1
    else 0
end
```

Trend indicator: Standard arrow

SQL Server Object Explor... X Sales.cube [Design] \* Sales.dsv [Design]

SQL Server (localdb)\MSSQLLocalDB (localdb)\ProjectsV13 (Projects - MultidimensionalProject14)

Solution Explorer

Search Solution Explorer (Ctrl+.)

Solution 'MultidimensionalProject14' (1 project)

- MultidimensionalProject14
  - Data Sources
    - Sales.ds
  - Data Source Views
    - Sales.dsv
    - Sales 1.dsv
  - Cubes
    - Sales.cube
    - Sales 1.cube
  - Dimensions
    - Product Dim.dim
    - Time Dim.dim
    - Product Dim 1.dim
    - Channel Dim.dim
    - Salesman Dim.dim
    - Customer Dim.dim
    - Time Dim 1.dim
  - Mining Structures
  - Roles
  - Assemblies
  - Miscellaneous

Serve... Toolb... SSIS T... SQL... Output Data Tools Operations

Activate Windows  
Solution Explor... Team Explorer Class View Tabular Model... Go to Settings to activate Windows.

MultidimensionalProject14 - Microsoft Visual Studio (Administrator)

File Edit View Project Build Debug Team Database Cube Tools Architecture Test Analyze Window Help

Quick Launch (Ctrl+Q) Sign in

SQL Server Object Explorer Default Start

Sales.cube [Design] Sales.dsv [Design]

Cube Struct... Dimension Usage Calculations KPIs Actions Partitions Aggregations Perspectives Translations Browser

KPI Organizer

Name: MySales

Associated measure group: <All>

Value Expression: [Measures].[Qty]

Goal Expression: 1000

Status indicator: Traffic light

Status expression:

```
case
    when kpivalue("Mysales")>1000 then 1
    when kpivalue("Mysales")<1000 then -1
    else 0
end
```

Trend indicator: Standard arrow

Solution Explorer

Search Solution Explorer (Ctrl+.)

Solution 'MultidimensionalProject14' (1 project)

- MultidimensionalProject14
  - Data Sources
    - Sales.ds
  - Data Source Views
    - Sales.dsv
    - Sales 1.dsv
  - Cubes
    - Sales(cube)
    - Sales 1(cube)
  - Dimensions
    - Product Dim.dim
    - Time Dim.dim
    - Product Dim 1.dim
    - Channel Dim.dim
    - Salesman Dim.dim
    - Customer Dim.dim
    - Time Dim 1.dim
  - Mining Structures
  - Roles
  - Assemblies
  - Miscellaneous

Calculation Tools

Metadata Functions Templates

Measure Group: <All>

Sales

- Measures
  - Fact Sales
    - Qty
- Product Dim
- Time Dim

Serve... Toolbars SSIS T... SQL... Output Data Tools Operations ready

Ln 1 Col 1 Ch 1 INS

Activate Windows Go to Settings to activate Windows. Publish

MultidimensionalProject14 - Microsoft Visual Studio (Administrator)

File Edit View Project Build Debug Team Database Cube Tools Architecture Test Analyze Window Help

Develop Default Start

SQL Server Object Explor... Sales.cube [Design]\* Sales.dsv [Design]

Cube Struct... Dimension Usage Calculations KPIs Actions Partitions Aggregations Perspectives Translations Browser

KPI Organizer

Name: MySales

Associated measure group: <All>

Value Expression: [Measures].[Qty]

Goal Expression: 1000

Status indicator: Traffic light

Status expression:

```
case
    when kpivalue("Mysales")>1000 then 1
    when kpivalue("Mysales")<1000 then -1
    else 0
end
```

Calculation Tools

Measure Group: <All>

Metadata Functions Templates

Sales

- Measures
  - Fact Sales
    - Qty
  - Product Dim
  - Time Dim

Trend

Standard arrows

Solution Explorer

Search Solution Explorer (Ctrl+.)

Solution 'MultidimensionalProject14' (1 project)

- MultidimensionalProject14
  - Data Sources
    - Sales.ds
  - Data Source Views
    - Sales.dsv
    - Sales 1.dsv
  - Cubes
    - Sales(cube)
    - Sales 1(cube)
  - Dimensions
    - Product Dim.dim
    - Time Dim.dim
    - Product Dim 1.dim
    - Channel Dim.dim
    - Salesman Dim.dim
    - Customer Dim.dim
    - Time Dim 1.dim
  - Mining Structures
  - Roles
  - Assemblies
  - Miscellaneous

Activate Windows

Solution Explorer Team Explorer Class View Tabular Model... Go to Settings to activate Windows.

MultidimensionalProject14 - Microsoft Visual Studio (Administrator)

File Edit View Project Build Debug Team Database Cube Tools Architecture Test Analyze Window Help

Quick Launch (Ctrl+Q) Sign in

SQL Server Object Explor... Sales.cube [Design] Sales.dsv [Design]

Cube Struct... Dimension Usage Calculations KPIs Actions Partitions Aggregations Perspectives Translations Browser

KPI Organizer

Name: MySales

Associated measure group: <All>

Value Expression: [Measures].[Qty]

Goal Expression: 1000

Status

Status indicator: Traffic light

Status expression:

```
case
    when kpivalue("Mysales")>1000 then 1
    when kpivalue("Mysales")<1000 then -1
    else 0
end
```

Calculation Tools

Measure Group: <All>

Sales

- Measures
  - Fact Sales
    - Qty
- Product Dim
- Time Dim

Solution Explorer

Solution 'MultidimensionalProject14' (1 project)

- MultidimensionalProject14
  - Data Sources
    - Sales.ds
  - Data Source Views
    - Sales.dsv
    - Sales 1.dsv
  - Cubes
    - Sales.cube
    - Sales 1.cube
  - Dimensions
    - Product Dim.dim
    - Time Dim.dim
    - Product Dim 1.dim
    - Channel Dim.dim
    - Salesman Dim.dim
    - Customer Dim.dim
    - Time Dim 1.dim
  - Mining Structures
  - Roles
  - Assemblies
  - Miscellaneous

Activate Windows  
Go to Settings to activate Windows.

Serve... Toolb... SSIS T... SQL... Output Data Tools Operations

Item(s) Saved

Ln 5 Col 4 Ch 4 INS

Publish

Sales.cube [Design] Sales.dsv [Design]

Cube Struct... Dimension Usage Calculations KPIs Actions Partitions Aggregations Perspectives Translations Browser

KPI Organizer

Name: MySales

Associated measure group: <All>

Value Expression: [Measures].[Qty]

Goal Expression: 1000

Status:

- Status indicator: Traffic light
- Status expression:

```
case
    when kpivalue("Mysales")>1000 then 1
    when kpivalue("Mysales")<1000 then -1
    else 0
end
```

Trend:

Standard arrow

SQL Server Object Explor... Solution Explorer

Search Solution Explorer (Ctrl+.)

Solution 'MultidimensionalProject14' (1 project)

- MultidimensionalProject14
  - Data Sources
    - Sales.ds
  - Data Source Views
    - Sales.dsv
    - Sales 1.dsv
  - Cubes
    - Sales(cube)

Open

- Process... (highlighted)
- Browse
- View Code F7
- View Designer Shift+F7
- Add Business Intelligence...
- Scope to This
- New Solution Explorer View
- Exclude From Project
- Cut Ctrl+X
- Copy Ctrl+C
- Delete Del
- Rename
- Properties Alt+Enter

Activate Windows  
Go to Settings to activate Windows.

Serve... Toolb... SSIS T... SQL... Output Data Tools Operations

Sales.cube [Design] X Sales.dsv [Design]

Cube Structure Dimension Usage Calculations KPIs Actions Partitions Aggregations Perspectives Translations Browser

KPI Organizer

Name: MySales

Associated measure group: <All>

Value Expression: [Measures].[Qty]

Goal Expression: 1000

Status

Status indicator: Traffic light

Status expression:

```
case
    when kpivalue("Mysales")>1000 then 1
    when kpivalue("Mysales")<1000 then -1
    else 0
end
```

Trend

Standard arrows

SQL Server Object Explor... X X Sales.cube [Design] X Sales.dsv [Design]

SQL Server

(localdb)\MSSQLLocalDB (localdb)\ProjectsV13 Projects - Multidimensional

Solution Explorer

Search Solution Explorer (Ctrl + F)

Solution 'MultidimensionalProject14' (1 project)

- MultidimensionalProject14
  - Data Sources
    - Sales.ds
  - Data Source Views
    - Sales.dsv
    - Sales 1.dsv
  - Cubes
    - Sales.cube
    - Sales 1(cube)
  - Dimensions
    - Product Dim.dim
    - Time Dim.dim
    - Product Dim 1.dim
    - Channel Dim.dim
    - Salesman Dim.dim
    - Customer Dim.dim
    - Time Dim 1.dim
  - Mining Structures
  - Roles
  - Assemblies
  - Miscellaneous

Activate Windows  
Solution Explorer Team Explorer Class View Tabular Model...  
Go to Settings to activate Windows.

Serve... Toolb... SSIS T... SQL...  
Output Data Tools Operations

Target Key.

A KPI (Key Performance Indicator), is used , defined by a Base Measure, Against a Target value.

---

Deployment Progress - MultidimensionalProject14

Server : localhost  
Database : MultidimensionalProject14

Command

Object list:

Object Name	Type	Process Options	Settings

Process Progress

- Command
  - Processing Cube 'Sales' completed.  
Start time: 27/10/2020 13:46:39; End time: 27/10/2020 13:46:40; Duration: 0:00:01
  - Processing Measure Group 'Fact Sales' completed.

Status:

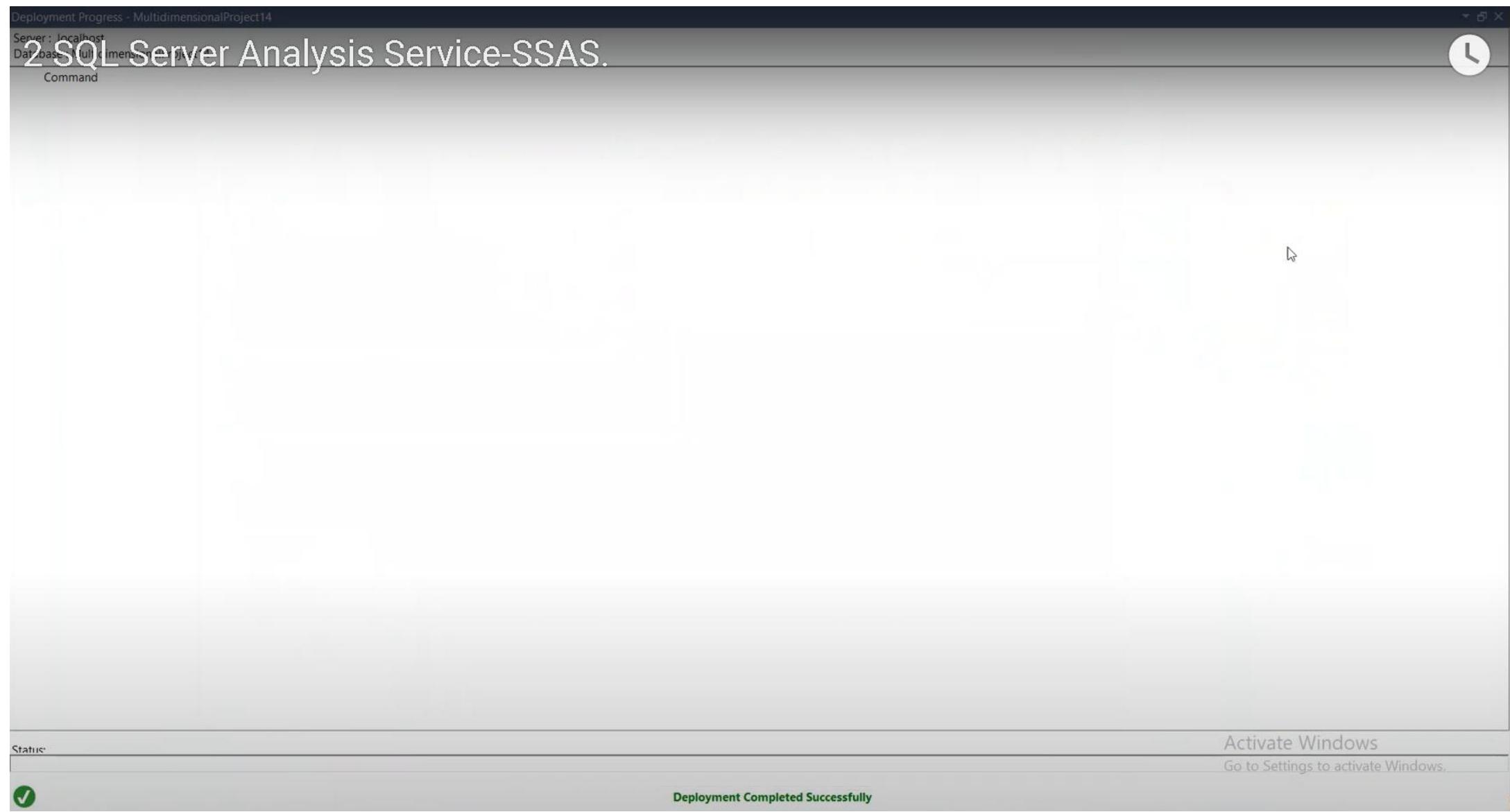
Process succeeded.

Stop Reprocess View Details... Copy Close Help Change Settings... Run... Close

Deployment Completed Successfully

Activate Windows  
Go to Settings to activate Windows.

Static: ✓



MultidimensionalProject14 - Microsoft Visual Studio (Administrator)

File Edit View Project Build Debug Team Database Cube Tools Architecture Test Analyze Window Help

Develop Default Start

SQL Server Object Explor... Sales.cube [Design] Sales.dsv [Design]

Cube Struct... Dimension Usage Calculations KPIs Actions Partitions Aggregations Perspectives Translations Browser

KPI Organizer

Name: MySales

Associated measure group: <All>

Value Expression: [Measures].[Qty]

Goal Expression: 1000

Status

Status indicator: Traffic light

Status expression:

```
case
    when kpivalue("Mysales")>1000 then 1
    when kpivalue("Mysales")<1000 then -1
    else 0
end
```

Trend

Trend indicators: Standard arrows

Solution Explorer

Solution 'MultidimensionalProject14' (1 project)

- MultidimensionalProject14
  - Data Sources
    - Sales.ds
  - Data Source Views
    - Sales.dsv
    - Sales 1.dsv
  - Cubes
    - Sales(cube)
      - Sales 1(cube)
  - Dimensions
    - Product Dim.dim
    - Time Dim.dim
    - Product Dim 1.dim
    - Channel Dim.dim
    - Salesman Dim.dim
    - Customer Dim.dim
    - Time Dim 1.dim
  - Mining Structures
  - Roles
  - Assemblies
  - Miscellaneous

Solution Explo... Team Explorer Class View Tabular Model... Go to Settings to activate Windows.

Serve... Toolb... SSIS T... SQL... Output Data Tools Operations

Sales.cube [Design] Sales.dsv [Design]

Cube Struct... Dimension Usage Calculations KPIs Actions Partitions Aggregations Perspectives Translations Browser

Language: Default

Edit as Text Import... Tools

Dimension Hierarchy Operator Filter Expression Parameter

<Select dimension>

الكمية ... الموارد ... الـ

Click to execute the query.

Calculated Members

SQL Server Object Explorer

Sales.cube [Design] Sales.dsv [Design]

Dimension Usage Calculations KPIs Actions Partitions Aggregations Perspectives Translations Browser

Language: Default

Edit as Text Import... Tools

Dimension Hierarchy Operator Filter Expression Parameter

<Select dimension>

الكمية ... الموارد ... الـ

Click to execute the query.

Calculated Members

Solution Explorer

Solution 'MultidimensionalProject14' (1 project)

MultidimensionalProject14

- Data Sources
- Sales.ds

- Data Source Views
- Sales.dsv
- Sales 1.dsv

- Cubes
- Sales.cube
- Sales 1.cube

- Dimensions
- Product Dim.dim
- Time Dim.dim
- Product Dim 1.dim
- Channel Dim.dim
- Salesman Dim.dim
- Customer Dim.dim
- Time Dim 1.dim

- Mining Structures
- Roles
- Assemblies
- Miscellaneous

Serve... Toolb... SSIS T... SQL... Output Data Tools Operations

Activate Windows  
Solution Explor... Team Explorer Class View Tabular Model... Go to Settings to activate Windows.

MultidimensionalProject14 - Microsoft Visual Studio (Administrator)

File Edit View Project Build Debug Team Database Cube Tools Architecture Test Analyze Window Help

Develop Default Start

SQL Server Object Explorer

Sales.cube [Design] Sales.dsv [Design]

Cube Struct... Dimension Usage Calculations KPIs Actions Partitions Aggregations Perspectives Translations Browser

Language: Default

Edit as Text Import... Tools

Sales

Dimension Hierarchy Operator Filter Expression

<Select dimension>

الكمية ... الموارد

Measure Group: <All>

Sales

Measures

KPIs

MySales

Value

Goal

Status

Product Dim

Time Dim

Calculated Members

Click to execute the query.

Solution Explorer

Search Solution Explorer (Ctrl+Shift+F)

Solution 'MultidimensionalProject14' (1 project)

MultidimensionalProject14

- Data Sources
- Sales.ds
- Data Source Views

  - Sales.dsv
  - Sales 1.dsv

- Cubes

  - Sales.cube
  - Sales 1.cube

- Dimensions

  - Product Dim.dim
  - Time Dim.dim
  - Product Dim 1.dim
  - Channel Dim.dim
  - Salesman Dim.dim
  - Customer Dim.dim
  - Time Dim 1.dim

- Mining Structures
- Roles
- Assemblies
- Miscellaneous

Serve... Toolb... SSIS T... SQL... Output Data Tools Operations

Activate Windows  
Solution Explorer Team Explorer Class View Tabular Model... Go to Settings to activate Windows.

The screenshot shows the Microsoft Visual Studio interface for a multidimensional project named 'MultidimensionalProject14'. The main window displays the 'Sales.cube [Design]' view, which includes a navigation bar with tabs like 'Cube Struct...', 'Dimension Usage', 'Calculations', etc., and a toolbar with icons for various operations. On the left, the 'SQL Server Object Explorer' shows the database structure with nodes for 'SQL Server', '(localdb)\MSSQLLocalDB', and 'Projects - Multidimensional'. The central pane shows the cube's dimensions and measures. The right pane is the 'Solution Explorer' showing the project structure, including 'MultidimensionalProject14' with its components like 'Sales.ds', 'Sales.cube', and various dimension and mining structures. The bottom status bar provides standard VS navigation links like 'Serve...', 'Toolb...', 'SSIS T...', 'SQL...', 'Output', 'Data Tools Operations', and activation status information.

MultidimensionalProject14 - Microsoft Visual Studio (Administrator)

File Edit View Project Build Debug Team Database Cube Tools Architecture Test Analyze Window Help

SQL Server Object Explor... Sales.cube [Design] Sales.dsv [Design]

Cube Struct... Dimension Usage Calculations KPIs Actions Partitions Aggregations Perspectives Translations Browser

Language: Default

Dimension Hierarchy Operator Filter Expression

<Select dimension>

Measure Group: <All>

Sales

Metadata

Measure Group: <All>

Sales

Measures

KPIs

MySales

Value

Goal

Status

Product Dim

Time Dim

Calculated Members

890

Solution Explorer

Search Solution Explorer (Ctrl+I)

Solution 'MultidimensionalProject14' (1 project)

MultidimensionalProject14

- Data Sources
- Sales.ds

- Data Source Views
- Sales.dsv
- Sales 1.dsv

- Cubes
- Sales.cube
- Sales 1.cube

- Dimensions
- Product Dim.dim
- Time Dim.dim
- Product Dim 1.dim
- Channel Dim.dim
- Salesman Dim.dim
- Customer Dim.dim
- Time Dim 1.dim

- Mining Structures
- Roles
- Assemblies
- Miscellaneous

Activate Windows

Solution Explorer Team Explorer Class View Tabular Model...

Output Data Tools Operations

Go to Settings to activate Windows.

The screenshot shows the Microsoft Visual Studio interface for a multidimensional project. The main window displays the 'Sales.cube [Design]' tab, which is currently active. In the center, there's a tree view of the cube structure under the 'Sales' measure group. One node, 'Value', is selected and has a value of '890' displayed in a text input field. Below this, there's a section for 'Calculated Members'. The left sidebar shows the 'SQL Server Object Explorer' with a tree of database objects like 'Sales', 'Metadata', and 'Measure Group: <All>'. The right sidebar is the 'Solution Explorer' showing the project structure with items like 'Data Sources', 'Cubes' (including 'Sales.cube'), and 'Dimensions'. The bottom status bar includes links for 'Solution Explorer', 'Team Explorer', 'Class View', 'Tabular Model...', and activation information for Windows.

MultidimensionalProject14 - Microsoft Visual Studio (Administrator)

File Edit View Project Build Debug Team Database Cube Tools Analyze Window Help

Develop Default Start

SQL Server Object Explor... Sales.cube [Design] Sales.dsv [Design]

Cube Struct... Dimension Usage Calculations KPIs Actions Partitions Aggregations Perspectives Translations

KPI Organizer

Name: MySales

Associated measure group: <All>

Value Expression: [[Measures].[Qty]]

Goal Expression: 1000

Status

Status indicator: Traffic light

Status expression:

```
case
    when kpivalue("Mysales")>1000 then 1
    when kpivalue("Mysales")<1000 then -1
    else 0
end
```

Trend

Solution Explorer

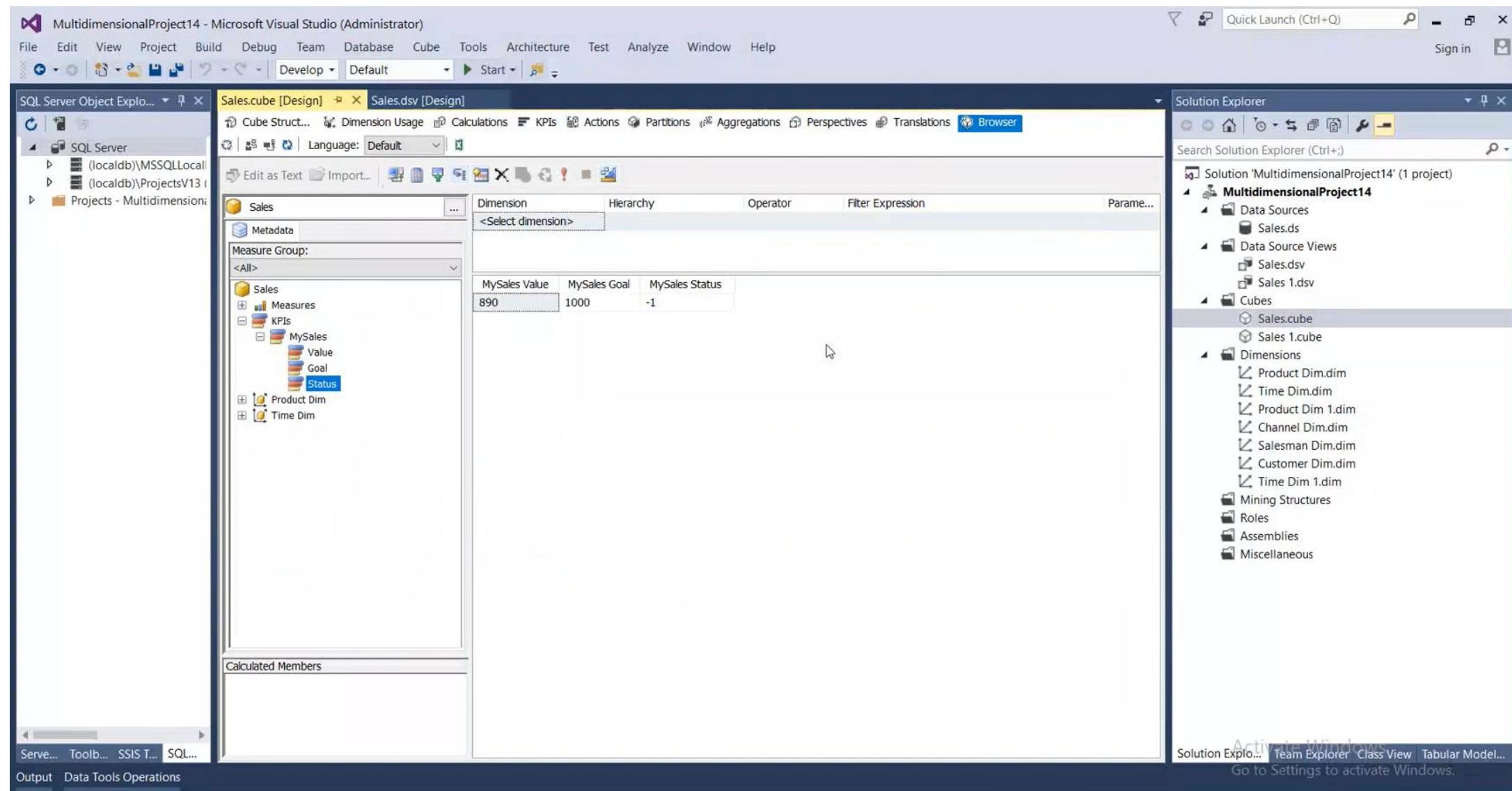
Search Solution Explorer (Ctrl+Shift+F)

Solution 'MultidimensionalProject14' (1 project)

- MultidimensionalProject14
  - Data Sources
    - Sales.ds
  - Data Source Views
    - Sales.dsv
    - Sales 1.dsv
  - Cubes
    - Sales.cube
    - Sales 1.cube
  - Dimensions
    - Product Dim.dim
    - Time Dim.dim
    - Product Dim 1.dim
    - Channel Dim.dim
    - Salesman Dim.dim
    - Customer Dim.dim
    - Time Dim 1.dim
  - Mining Structures
  - Roles
  - Assemblies
  - Miscellaneous

Activate Windows  
Go to Settings to activate Windows.

Serve... Toolb... SSIS T... SQL...  
Output Data Tools Operations



MultidimensionalProject14 - Microsoft Visual Studio (Administrator)

File Edit View Project Build Debug Team Database Cube Tools Architecture Test Analyze Window Help

Develop Default Start

SQL Server Object Explor... Sales(cube [Design]) Sales.dsv [Design]

Cube Struct... Dimension Usage Calculations KPIs Actions Partitions Aggregations Perspectives Translations Browser

Language: Default

Edit as Text Import... Dimension Hierarchy Operator Filter Expression Parameters

<Select dimension>

Dimension Hierarchy Operator Filter Expression Parameters

Measure Group: <All>

Sales

Metadata

Measure Group: <All>

Sales

Measures

KPIs

MySales

Value

Goal

Status

Product Dim

Time Dim

Calculated Members

MySales Value MySales Goal MySales Status

890	1000	-1
-----	------	----

Serve... Toolbar... SSIS T... SQL...

Output Data Tools Operations

Quick Launch (Ctrl+Q) Sign in

Solution Explorer

Solution 'MultidimensionalProject14' (1 project)

- MultidimensionalProject14
  - Data Sources
    - Sales.ds
  - Data Source Views
    - Sales.dsv
    - Sales 1.dsv
  - Cubes
    - Sales(cube)
    - Sales 1.cube
  - Dimensions
    - Product Dim.dim
    - Time Dim.dim
    - Product Dim 1.dim
    - Channel Dim.dim
    - Salesman Dim.dim
    - Customer Dim.dim
    - Time Dim 1.dim
  - Mining Structures
  - Roles
  - Assemblies
  - Miscellaneous

Activate Windows  
Solution Explorer Team Explorer Class View Tabular Model...  
Go to Settings to activate Windows.

MultidimensionalProject14 - Microsoft Visual Studio (Administrator)

File Edit View Project Build Debug Team Database Cube Tools Architecture Test Analyze Window Help

Quick Launch (Ctrl+Q) Sign in

Sales.cube [Design] Sales.dsv [Design]

Cube Struct... Dimension Usage Calculations KPIs Actions Partitions Aggregations Perspectives Translations Browser

Language: Default

Edit as Text Import... Dimension Hierarchy Operator Filter Expression

<Select dimension>

Measure Group: <All>

Sales

Metadata

Measure Group: <All>

Sales

Measures

KPIs

MySales

Value

Goal

Status

Product Dim

Time Dim

Calculated Members

MySales Value MySales Goal MySales Status

890 1000 -1

Solution Explorer

Search Solution Explorer (Ctrl+.)

Solution 'MultidimensionalProject14' (1 project)

MultidimensionalProject14

Data Sources

Sales.ds

Data Source Views

Sales.dsv

Sales 1.ds

Cubes

Sales.cube

Sales 1(cube)

Dimensions

Product Dim.dim

Time Dim.dim

Product Dim 1.dim

Channel Dim.dim

Salesman Dim.dim

Customer Dim.dim

Time Dim 1.dim

Mining Structures

Roles

Assemblies

Miscellaneous

Serve... Toolb... SSIS T... SQL...

Output Data Tools Operations

Activate Windows

Solution Explorer Team Explorer Class View Tabular Model...

Go to Settings to activate Windows.

The screenshot shows a Microsoft Visual Studio interface for a multidimensional project named 'MultidimensionalProject14'. The main workspace is divided into several panes:

- Left Pane:** Shows the 'SQL Server Object Explorer' with a tree view of the database structure, including 'SQL Server', '(localdb)\MSSQLLocalDB', and '(localdb)\ProjectsV13'. A 'Projects - Multidimensional' folder is expanded.
- Center Top:** The 'Sales.cube [Design]' tab is active. It features a toolbar with icons for 'Edit as Text', 'Import...', and various design tools. Below the toolbar is a navigation bar with tabs: 'Cube Struct...', 'Dimension Usage', 'Calculations', 'KPIs', 'Actions', 'Partitions', 'Aggregations', 'Perspectives', 'Translations', and 'Browser'. The 'Language' dropdown is set to 'Default'.
- Center Bottom:** A table with three columns: 'MySales Value', 'MySales Goal', and 'MySales Status'. The values are 890, 1000, and -1 respectively.
- Right Side:** The 'Solution Explorer' pane lists the project structure:
  - MultidimensionalProject14**
    - Data Sources: Sales.ds
    - Data Source Views: Sales.dsv, Sales 1.ds
    - Cubes: Sales.cube, Sales 1(cube)
    - Dimensions: Product Dim.dim, Time Dim.dim, Product Dim 1.dim, Channel Dim.dim, Salesman Dim.dim, Customer Dim.dim, Time Dim 1.dim
    - Mining Structures
    - Roles
    - Assemblies
    - Miscellaneous
- Bottom:** A toolbar with buttons for 'Serve...', 'Toolb...', 'SSIS T...', 'SQL...', 'Output', 'Data Tools', and 'Operations'. A status bar at the bottom right says 'Activate Windows' and 'Go to Settings to activate Windows.'

MultidimensionalProject14 - Microsoft Visual Studio (Administrator)

File Edit View Project Build Debug Team Database Cube Tools Architecture Test Analyze Window Help

Develop Default Start

SQL Server Object Explor... Sales.cube [Design] Sales.dsv [Design]

Cube Structure Dimension Usage Calculations KPIs Actions Partitions Aggregations Perspectives Translations Browser

KPI Organizer

Name: MySales

Associated measure group: <All>

Value Expression: [Measures].[Qty]

Goal Expression: 1000

Status

Status indicator: Traffic light

Status expression:

```
case
    when kpivalue("Mysales")>1000 then 1
    when kpivalue("Mysales")<1000 then -1
    else 0
end
```

Trend

Solution Explorer

Search Solution Explorer (Ctrl+Shift+F)

Solution 'MultidimensionalProject14' (1 project)

- MultidimensionalProject14
  - Data Sources
    - Sales.ds
  - Data Source Views
    - Sales.dsv
    - Sales 1.dsv
  - Cubes
    - Sales(cube)
    - Sales 1(cube)
  - Dimensions
    - Product Dim.dim
    - Time Dim.dim
    - Product Dim 1.dim
    - Channel Dim.dim
    - Salesman Dim.dim
    - Customer Dim.dim
    - Time Dim 1.dim
  - Mining Structures
  - Roles
  - Assemblies
  - Miscellaneous

Activate Windows  
Go to Settings to activate Windows.

Serve... Toolb... SSIS T... SQL... Output Data Tools Operations

In 1 Col 1 Ch 1 INS

Ready

MultidimensionalProject14 - Microsoft Visual Studio (Administrator)

File Edit View Project Build Debug Team Database Cube Tools Architecture Test Analyze Window Help

Quick Launch (Ctrl+Q) Sign in

SQL Server Object Explor... Sales.cube [Design] Sales.dsv [Design]

Cube Struct... Dimension Usage Calculations KPIs Actions Partitions Aggregations Perspectives Translations Browser

Dimension Hierarchy Operator Filter Expression

<Select dimension>

Display Structure Value Goal Status Trend Weight

MySales 890 1000

Solution Explorer

Search Solution Explorer (Ctrl+.)

Solution 'MultidimensionalProject14' (1 project)

MultidimensionalProject14

- Data Sources
- Sales.ds

- Data Source Views
- Sales.dsv
- Sales 1.dsv

- Cubes
- Sales(cube)
- Sales 1(cube)

- Dimensions
- Product Dim.dim
- Time Dim.dim
- Product Dim 1.dim
- Channel Dim.dim
- Salesman Dim.dim
- Customer Dim.dim
- Time Dim 1.dim

- Mining Structures
- Roles
- Assemblies
- Miscellaneous

Activate Windows Go to Settings to activate Windows.

Serve... Toolb... SSIS T... SQL... Output Data Tools Operations

Ready Ln 1 Col 1 Ch 1 INS Publish

The screenshot shows the Microsoft Visual Studio interface for a multidimensional project named 'MultidimensionalProject14'. The main window displays the 'Sales.cube [Design]' view, which includes a table with columns: Display Structure, Value, Goal, Status, Trend, and Weight. A single row is present: 'MySales' with Value 890 and Goal 1000. The status is red. The Solution Explorer on the right shows the project structure, including Data Sources (Sales.ds), Data Source Views (Sales.dsv, Sales 1.dsv), Cubes (Sales(cube), Sales 1(cube)), Dimensions (Product Dim.dim, Time Dim.dim, Product Dim 1.dim, Channel Dim.dim, Salesman Dim.dim, Customer Dim.dim, Time Dim 1.dim), Mining Structures, Roles, Assemblies, and Miscellaneous. The 'Sales(cube)' cube is currently selected in the Solution Explorer. The bottom status bar indicates 'Ready'.

MultidimensionalProject14 - Microsoft Visual Studio (Administrator)

File Edit View Project Build Debug Team Database Cube Tools Architecture Test Analyze Window Help

Quick Launch (Ctrl+Q) Sign in

SQL Server Object Explor... Default Start

Sales.cube [Design] Sales.dsv [Design]

Cube Struct... Dimension Usage Calculations Actions Partitions Aggregations Perspectives Translations Browser

Dimension Hierarchy Operator Filter Expression

<Select dimension>

Display Structure Value Goal Status Trend Weight

MySales 890 1000

Solution Explorer

Search Solution Explorer (Ctrl+Shift+F)

Solution 'MultidimensionalProject14' (1 project)

MultidimensionalProject14

- Data Sources
- Sales.ds

Data Source Views

- Sales.dsv
- Sales 1.dsv

Cubes

- Sales.cube
- Sales 1(cube)

Dimensions

- Product Dim.dim
- Time Dim.dim
- Product Dim 1.dim
- Channel Dim.dim
- Salesman Dim.dim
- Customer Dim.dim
- Time Dim 1.dim

Mining Structures

Roles

Assemblies

Miscellaneous

Serve... Toolb... SSIS T... SQL... Output Data Tools Operations

Activate Windows Go to Settings to activate Windows.

Ln 1 Col 1 Ch 1 INS ↑ Publish

Detailed description: This screenshot shows the Microsoft Visual Studio interface for a multidimensional project. The title bar indicates 'MultidimensionalProject14 - Microsoft Visual Studio (Administrator)'. The menu bar includes File, Edit, View, Project, Build, Debug, Team, Database, Cube, Tools, Architecture, Test, Analyze, Window, and Help. The toolbar has icons for Save, Undo, Redo, Cut, Copy, Paste, Find, Replace, and others. The 'Develop' tab is selected in the ribbon. The 'Solution Explorer' pane on the right lists the project structure, including 'MultidimensionalProject14' (solution), 'Data Sources' (Sales.ds), 'Data Source Views' (Sales.dsv, Sales 1.dsv), 'Cubes' (Sales.cube, Sales 1(cube)), 'Dimensions' (Product Dim.dim, Time Dim.dim, Product Dim 1.dim, Channel Dim.dim, Salesman Dim.dim, Customer Dim.dim, Time Dim 1.dim), 'Mining Structures', 'Roles', 'Assemblies', and 'Miscellaneous'. The main workspace shows 'Sales.cube [Design]' and 'Sales.dsv [Design]' tabs. The 'KPIs' tab is selected. A table displays a single row: 'Display Structure' (MySales), 'Value' (890), 'Goal' (1000), 'Status' (red light), 'Trend' (black light), and 'Weight' (1). The status bar at the bottom shows 'Ln 1 Col 1 Ch 1 INS ↑ Publish'.

MultidimensionalProject14 - Microsoft Visual Studio (Administrator)

File Edit View Project Build Debug Team Database Cube Tools Architecture Test Analyze Window Help

Develop Default Start

Sales.cube [Design] Sales.dsv [Design]

Cube Struct... Dimension Usage Calculations KPIs Actions Partitions Aggregations Perspectives Translations Browser

Dimension Hierarchy Operator Filter Expression

<Select dimension>

Display Structure Value Goal Status Trend Weight

MySales 890 1000

Solution Explorer

Search Solution Explorer (Ctrl+;)

Solution 'MultidimensionalProject14' (1 project)

MultidimensionalProject14

- Data Sources
- Sales.ds

- Data Source Views
- Sales.dsv
- Sales 1.dsv

- Cubes
- Sales.cube
- Sales 1.cube

- Dimensions
- Product Dim.dim
- Time Dim.dim
- Product Dim 1.dim
- Channel Dim.dim
- Salesman Dim.dim
- Customer Dim.dim
- Time Dim 1.dim

- Mining Structures
- Roles
- Assemblies
- Miscellaneous

Serve... Toolb... SSIS T... SQL... Solution Explor... Team Explorer Class View Tabular Model... Go to Settings to activate Windows.

Output Data Tools Operations

Ready

Line 1 Col 1 Ch 1 INS

Publish

MultidimensionalProject14 - Microsoft Visual Studio (Administrator)

File Edit View Project Build Debug Team Database Cube Tools Architecture Test Analyze Window Help

Quick Launch (Ctrl+Q) Sign in

Sales.cube [Design] Sales.dsv [Design]

Cube Struct... Dimension Usage Calculations KPIs Actions Partitions Aggregations Perspectives Translations Browser

Language: Default

Edit as Text Import... Dimension Hierarchy Operator Filter Expression Parameters

Dimension <Select dimension>

Measure Group: <All>

Sales

Metadata

Measure Group: <All>

Sales

Measures

KPIs

MySales

Value

Goal

Status

Product Dim

Time Dim

Calculated Members

MySales Value MySales Goal MySales Status

890	1000	-1
-----	------	----

Serve... Toolb... SSIS T... SQL... Output Data Tools Operations

Solution Explorer

Search Solution Explorer (Ctrl+Shift+F)

Solution 'MultidimensionalProject14' (1 project)

MultidimensionalProject14

- Data Sources
- Sales.ds
- Data Source Views

  - Sales.dsv
  - Sales 1.dsv

- Cubes

  - Sales.cube
  - Sales 1.cube

- Dimensions

  - Product Dim.dim
  - Time Dim.dim
  - Product Dim 1.dim
  - Channel Dim.dim
  - Salesman Dim.dim
  - Customer Dim.dim
  - Time Dim 1.dim

- Mining Structures
- Roles
- Assemblies
- Miscellaneous

Activate Windows  
Solution Explo... Team Explorer Class View Tabular Model... Go to Settings to activate Windows.

The screenshot shows the Microsoft Visual Studio interface for a multidimensional project named 'MultidimensionalProject14'. The main window displays the 'Sales.cube [Design]' view, which includes a table with three columns: 'MySales Value', 'MySales Goal', and 'MySales Status'. The table contains a single row with values 890, 1000, and -1. The left sidebar shows the cube's dimensions and measures, including 'Sales', 'Measures', 'KPIs', 'MySales' (with sub-items 'Value', 'Goal', 'Status'), 'Product Dim', and 'Time Dim'. The Solution Explorer on the right lists the project structure, including 'MultidimensionalProject14' (solution), 'Data Sources' (Sales.ds), 'Data Source Views' (Sales.dsv, Sales 1.dsv), 'Cubes' (Sales.cube, Sales 1.cube), 'Dimensions' (Product Dim.dim, Time Dim.dim, Product Dim 1.dim, Channel Dim.dim, Salesman Dim.dim, Customer Dim.dim, Time Dim 1.dim), 'Mining Structures', 'Roles', 'Assemblies', and 'Miscellaneous'. The status bar at the bottom indicates 'Activate Windows'.

MultidimensionalProject14 - Microsoft Visual Studio (Administrator)

File Edit View Project Build Debug Team Database Cube Tools Architecture Test Analyze Window Help

Develop Default Start

SQL Server Object Explor... Sales.cube [Design] Sales.dsv [Design]

Cube Struct... Dimension Usage Calculations KPIs Actions Partitions Aggregations Perspectives Translations Browser

Language: Default Use this view to define how dimensions are used in the cube.

Edit as Text Import... ...

Sales Metadata Functions

Measure Group: <All>

Sales

- Measures
- KPIs
  - MySales
    - Value
    - Goal
    - Status
- Product Dim
- Time Dim

SELECT NON EMPTY { KPISValue("MySales"), KPISGoal("MySales"), KPISStatus("MySales") } ON COLUMNS FROM [Sales] CELL PROPERTIES VALUE, BACK\_COLOR, FORE\_COLOR, FORMATTED\_VALUE, FORMAT\_STRING, FONT\_NAME, FONT\_SIZE, FONT\_FLAGS

MySales Value MySales Goal MySales Status

Click to execute the query.

Solution Explorer

Solution 'MultidimensionalProject14' (1 project)

- MultidimensionalProject14
  - Data Sources
    - Sales.ds
  - Data Source Views
    - Sales.dsv
    - Sales 1.dsv
  - Cubes
    - Sales(cube)
    - Sales 1(cube)
  - Dimensions
    - Product Dim.dim
    - Time Dim.dim
    - Product Dim 1.dim
    - Channel Dim.dim
    - Salesman Dim.dim
    - Customer Dim.dim
    - Time Dim 1.dim
  - Mining Structures
  - Roles
  - Assemblies
  - Miscellaneous

Serve... Toolb... SSIS T... SQL...

Output Data Tools Operations

Activate Windows  
Solution Explo... Team Explorer Class View Tabular Model...  
Go to Settings to activate Windows.

MultidimensionalProject14 - Microsoft Visual Studio (Administrator)

File Edit View Project Build Debug Team Database Cube Tools Architecture Test Analyze Window Help

Develop Default Start

SQL Server Object Explor... Sales.cube [Design] Sales.dsv [Design]

Cube Struct... Dimension Usage Calculations KPIs Actions Partitions Aggregations Perspectives Translations Browser

Language: Default

Edit as Text Import...

Sales

Metadata Functions

Measure Group: <All>

Sales

Measures

KPIs

MySales

Value

Goal

Status

Product Dim

Time Dim

SELECT NON EMPTY { KPISValue("MySales"), KPISGoal("MySales"), KPISStatus("MySales") } ON COLUMNS FROM [Sales] CELL PROPERTIES VALUE, BACK\_COLOR, FORE\_COLOR, FORMATTED\_VALUE, FORMAT\_STRING, FONT\_NAME, FONT\_SIZE, FONT\_FLAGS

MySales Value | MySales Goal | MySales Status

Click to execute the query.

Solution Explorer

Search Solution Explorer (Ctrl+.)

Solution 'MultidimensionalProject14' (1 project)

MultidimensionalProject14

Data Sources

Sales.ds

Data Source Views

Sales.dsv

Sales 1.dsv

Cubes

Sales(cube)

Sales 1(cube)

Dimensions

Product Dim.dim

Time Dim.dim

Product Dim 1.dim

Channel Dim.dim

Salesman Dim.dim

Customer Dim.dim

Time Dim 1.dim

Mining Structures

Roles

Assemblies

Miscellaneous

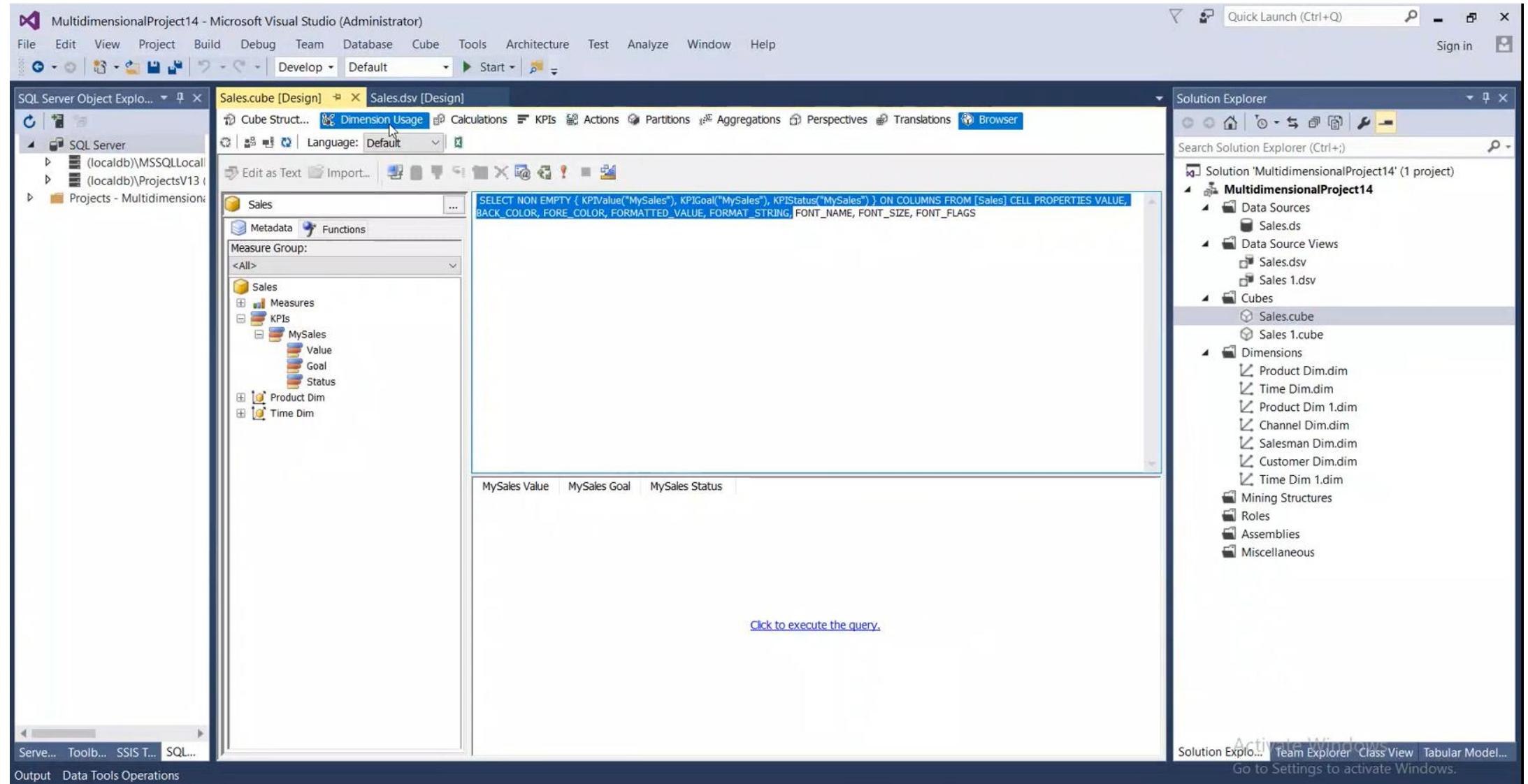
Serve... Toolbars... SSIS T... SQL...

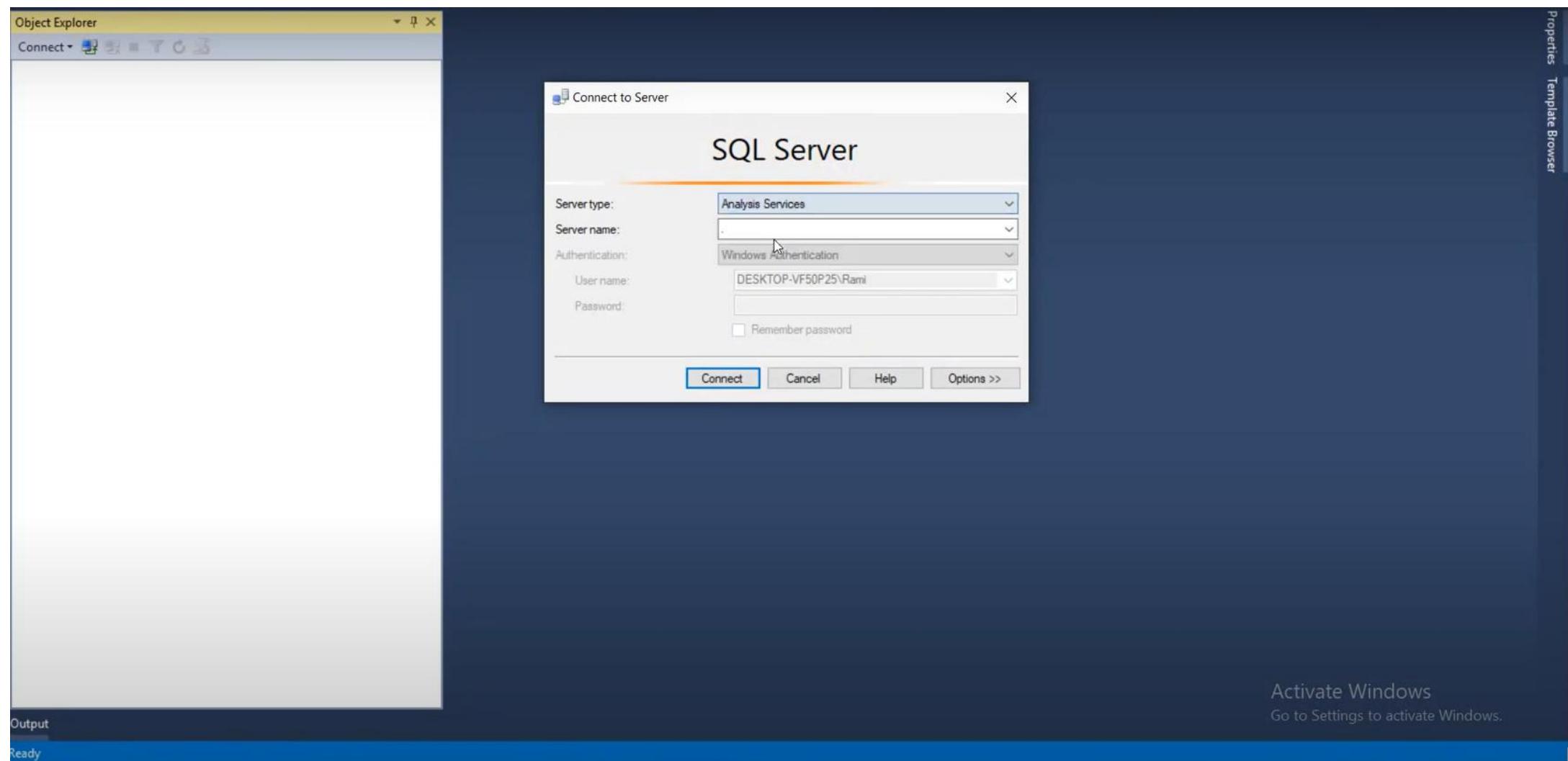
Output Data Tools Operations

Activate Windows

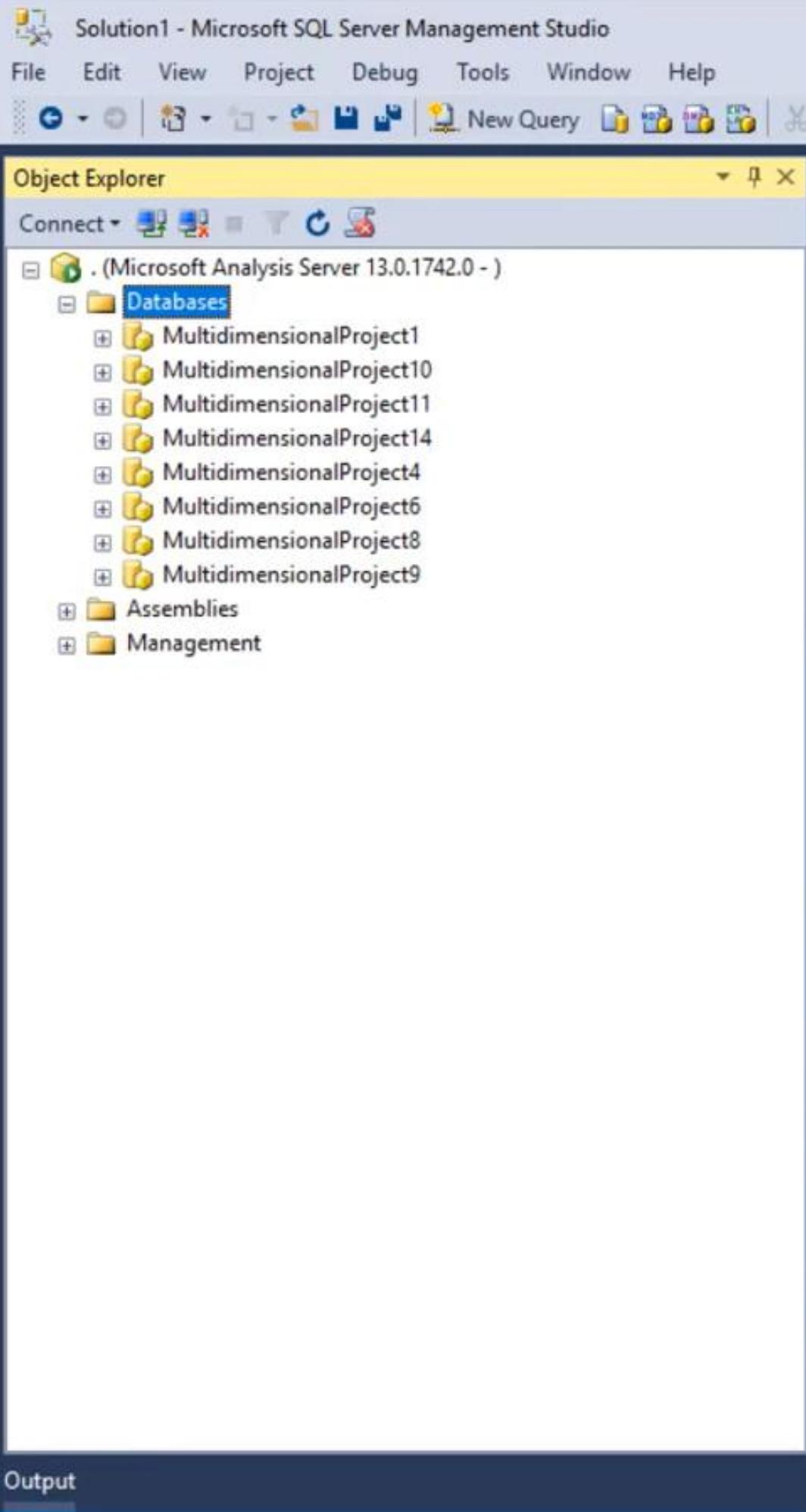
Solution Explorer Team Explorer Class View Tabular Model...

Go to Settings to activate Windows.





Activate Windows  
Go to Settings to activate Windows.



Output

MultidimensionalProject14 - Microsoft Visual Studio (Administrator)

File Edit View Project Build Debug Team Database Cube Tools Analyze Window Help

Develop Default Start

SQL Server Object Explor... Sales.cube [Design] Sales.dsv [Design]

Cube Struct... Dimension Usage Calculations KPIs Actions Partitions Aggregations Perspectives Translations Browser

Edit as Text Import... Dimension Hierarchy Operator Filter Expression

Measure Group: <All>

Sales

Product Name Qty

Accessories	305
Books	155
Clothing	185
Components	115
Sportswear	130

Calculated Members

Solution Explorer

Solution 'MultidimensionalProject14' (1 project)

- MultidimensionalProject14
  - Data Sources
    - Sales.ds
  - Data Source Views
    - Sales.dsv
    - Sales 1.dsv
  - Cubes
    - Sales.cube
    - Sales 1.cube
  - Dimensions
    - Product Dim.dim
    - Time Dim.dim
    - Product Dim 1.dim
    - Channel Dim.dim
    - Salesman Dim.dim
    - Customer Dim.dim
    - Time Dim 1.dim
  - Mining Structures
  - Roles
  - Assemblies
  - Miscellaneous

Activate Windows

Solution Explo... Team Explorer Class View Tabular Model... Go to Settings to activate Windows.

Output Data Tools Operations

The screenshot shows the Microsoft Visual Studio interface for a multidimensional project named 'MultidimensionalProject14'. The main window displays the 'Sales.cube [Design]' view, which includes a tree view of cube components and a table of sales data. The data table shows products like Accessories, Books, Clothing, Components, and Sportswear with their respective quantities. The Solution Explorer on the right lists the project's components, including cubes like 'Sales.cube' and 'Sales 1.cube', and dimensions like 'Product Dim.dim' and 'Time Dim.dim'. The status bar at the bottom indicates 'Data Tools Operations'.

MultidimensionalProject14 - Microsoft Visual Studio (Administrator)

File Edit View Project Build Debug Team Database Cube Tools Architecture Test Analyze Window Help

Quick Launch (Ctrl+Q) Sign in

SQL Server Object Explor... Default Start

Sales.cube [Design] Sales.ds [Design]

Cube Struct... Dimension Usage Calculations KPIs Actions Partitions Aggregations Perspectives Translations Browser

Language: Default

Edit as Text Import... Dimension Hierarchy Operator Filter Expression Parameter

Dimension <Select dimension>

Measure Group: <All>

Sales

Metadata

Measure Group: <All>

Sales

Measures

Fact Sales

Qty

KPIs

MySales

Value

Goal

Status

Product Dim

Product ID

Product Name

Product Price

Time Dim

Calculated Members

Product Name Qty

Accessories	305
Books	155
Clothing	185
Components	115
Sportswear	130

Solution Explorer

Solution 'MultidimensionalProject14' (1 project)

MultidimensionalProject14

- Data Sources
- Sales.ds
- Data Source Views
  - Sales.ds
  - Sales 1.ds
- Cubes
  - Sales.cube
  - Sales 1.cube
- Dimensions
  - Product Dim.dim
  - Time Dim.dim
  - Product Dim 1.dim
  - Channel Dim.dim
  - Salesman Dim.dim
  - Customer Dim.dim
  - Time Dim 1.dim
- Mining Structures
- Roles
- Assemblies
- Miscellaneous

Serve... Toolb... SSIS T... SQL...

Output Data Tools Operations

Activate Windows Solution Explorer Team Explorer Class View Tabular Model... Go to Settings to activate Windows.

Solution1 - Microsoft SQL Server Management Studio

File Edit View Project Debug Tools Window Help

New Query

Object Explorer

Connect

. (Microsoft Analysis Server 13.0.1742.0 - )

- Databases
  - ⊕ MultidimensionalProject1
  - ⊕ MultidimensionalProject10
  - ⊕ MultidimensionalProject11
  - ⊖ MultidimensionalProject14
    - ⊕ Data Sources
    - ⊕ Data Source Views
    - ⊖ Cubes
      - ⊕ Sales
      - ⊕ Sales 1
    - ⊕ Dimensions
    - ⊕ Mining Structures
    - ⊕ Roles
    - ⊕ Assemblies
  - ⊕ MultidimensionalProject4
  - ⊕ MultidimensionalProject6
  - ⊕ MultidimensionalProject8
  - ⊕ MultidimensionalProject9
- ⊕ Assemblies
- ⊕ Management

Output

Solution1 - Microsoft SQL Server Management Studio

File Edit View Project Debug Tools Window Help

New Query

Object Explorer Analysis Serv

Connect . (Microsoft Analysis Server 13.0.1742.0 - )

- Databases
  - + MultidimensionalProject1
  - + MultidimensionalProject10
  - + MultidimensionalProject11
  - MultidimensionalProject14
    - + Data Sources
    - + Data Source Views
    - Cubes
      - + Sales
      - + Sales 1
    - + Dimensions
    - + Mining Structures
    - + Roles
    - + Assemblies
  - + MultidimensionalProject4
  - + MultidimensionalProject6
  - + MultidimensionalProject8
  - + MultidimensionalProject9
  - + Assemblies
  - + Management

Output

Solution1 - Microsoft SQL Server Management Studio

File Edit View Project Debug Tools Window Help

New Query

Object Explorer

Connect

- Microsoft Analysis Server 13.0.1742.0 -
  - Databases
    - MultidimensionalProject1
    - MultidimensionalProject10
    - MultidimensionalProject11
    - MultidimensionalProject14
      - Data Sources
      - Data Source Views
      - Cubes
        - Sales
        - Sales 1
      - Dimensions
      - Mining Structures
      - Roles
      - Assemblies
    - MultidimensionalProject4
    - MultidimensionalProject6
    - MultidimensionalProject8
    - MultidimensionalProject9
  - Assemblies
  - Management

Output

MDXQuery6.mdx - (local).MultidimensionalProject1 (DESKTOP-VF50P25\Ram) - Microsoft SQL Server Management Studio

File Edit View Query Project Debug Tools Window Help

New Query Generic Debugger

Object Explorer

Connect Databases MultidimensionalProject1 MultidimensionalProject10 MultidimensionalProject11 MultidimensionalProject14 Data Sources Data Source Views Cubes Sales Sales 1 Dimensions Mining Structures Roles Assemblies MultidimensionalProject4 MultidimensionalProject6 MultidimensionalProject8 MultidimensionalProject9 Assemblies Management

MDXQuery6.mdx -...TOP-VF50P25\Ram

Cube: Perspective

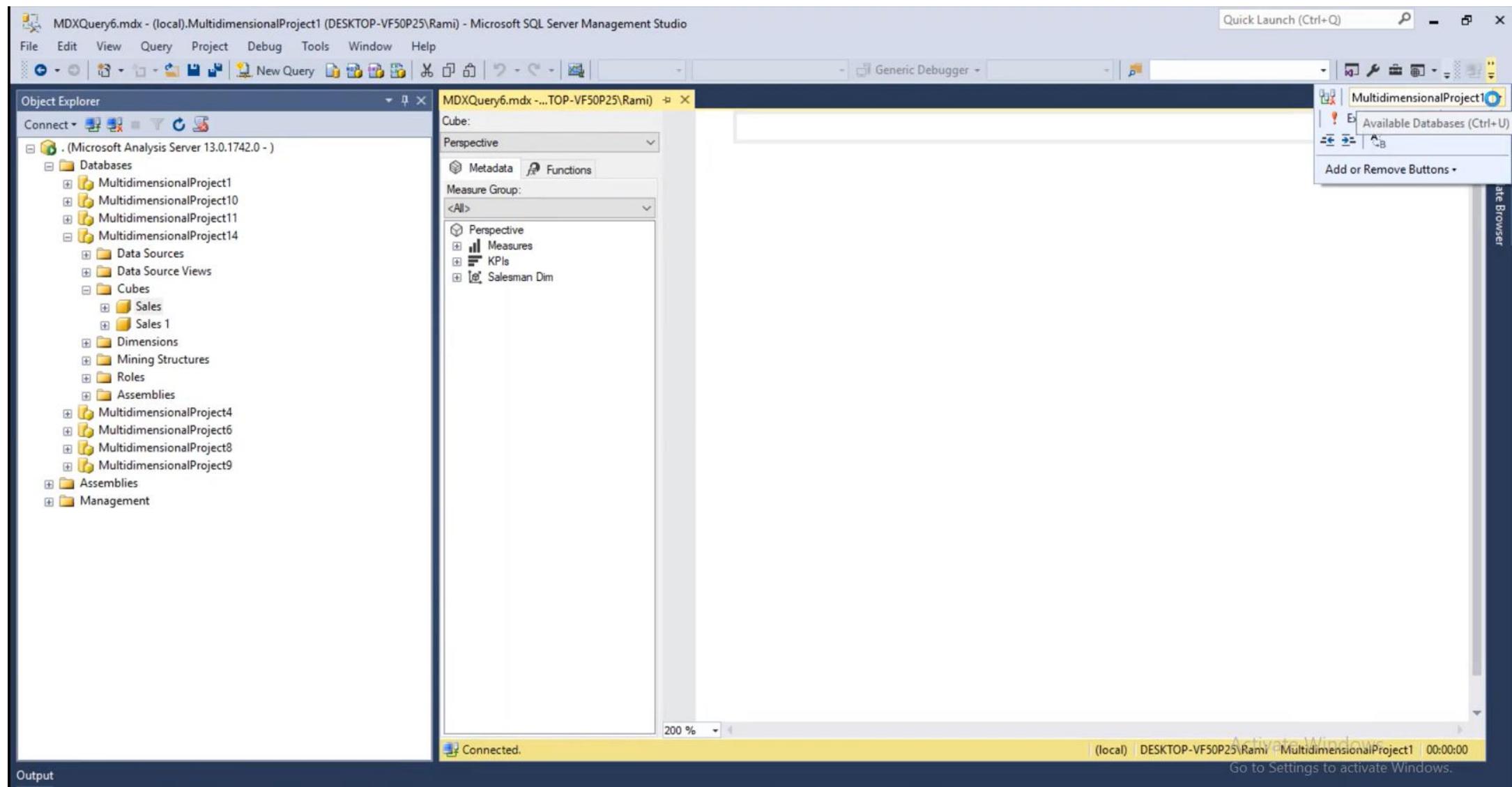
Perspective Metadata Functions

Measure Group: <All>

Perspective Measures KPIs Salesman Dim

Connected.

(local) DESKTOP-VF50P25\Ram MultidimensionalProject1 00:00:00 Go to Settings to activate Windows.



MDXQuery6.mdx - (local).MultidimensionalProject1 (DESKTOP-VF50P25\Rami) - Microsoft SQL Server Management Studio

File Edit View Query Project Debug Tools Window Help

New Query Generic Debugger

Object Explorer

Connect . (Microsoft Analysis Server 13.0.1742.0 - )

Databases

- MultidimensionalProject1
- MultidimensionalProject10
- MultidimensionalProject11
- MultidimensionalProject14
- Data Sources
- Data Source Views
- Cubes

  - Sales
  - Sales 1

- Dimensions
- Mining Structures
- Roles
- Assemblies

- MultidimensionalProject4
- MultidimensionalProject6
- MultidimensionalProject8
- MultidimensionalProject9

- Assemblies
- Management

MDXQuery6.mdx -...TOP-VF50P25\Rami

Cube: Perspective

Perspective

Measure Group: <All>

Metadata Functions

Measures KPIs Salesman Dim

Add MultidimensionalProject1 MultidimensionalProject10 MultidimensionalProject11 MultidimensionalProject14 MultidimensionalProject4 MultidimensionalProject6 MultidimensionalProject8 MultidimensionalProject9

Connected. 200 %

(local) DESKTOP-VF50P25\Rami MultidimensionalProject1 00:00:00 Go to Settings to activate Windows.

Output

The screenshot shows the Microsoft SQL Server Management Studio interface. The left pane displays the Object Explorer with a tree view of database objects. The right pane shows the MDXQuery6.mdx editor. A context menu is open over the cube list in the editor, listing various multidimensional projects. The 'Add' option is highlighted, and a dropdown menu shows the available projects: MultidimensionalProject1, MultidimensionalProject10, MultidimensionalProject11, MultidimensionalProject14, MultidimensionalProject4, MultidimensionalProject6, MultidimensionalProject8, and MultidimensionalProject9. The status bar at the bottom indicates a connection to '(local)' on 'DESKTOP-VF50P25\Rami' with a query time of '00:00:00'. An activation watermark for Windows is visible in the bottom right corner.

MDXQuery6.mdx - (local).MultidimensionalProject14 (DESKTOP-VF50P25\Rami) - Microsoft SQL Server Management Studio

File Edit View Query Project Debug Tools Window Help

Generic Debugger

Quick Launch (Ctrl+Q)

Object Explorer

Connect (Microsoft Analysis Server 13.0.1742.0 - )

Databases

- MultidimensionalProject1
- MultidimensionalProject10
- MultidimensionalProject11
- MultidimensionalProject14**
- Data Sources
- Data Source Views
- Cubes
  - Sales
  - Sales 1
- Dimensions
- Mining Structures
- Roles
- Assemblies

MultidimensionalProject4

MultidimensionalProject6

MultidimensionalProject8

MultidimensionalProject9

Assemblies

Management

MDXQuery6.mdx - TOP-VF50P25\Rami

Cube: EmpPerformance

Measure Group: <All>

Metadata Functions

- EmpPerformance
- Measures
- KPIs
- Salesman Dim
- Time Dim 1

Add or Remove Buttons

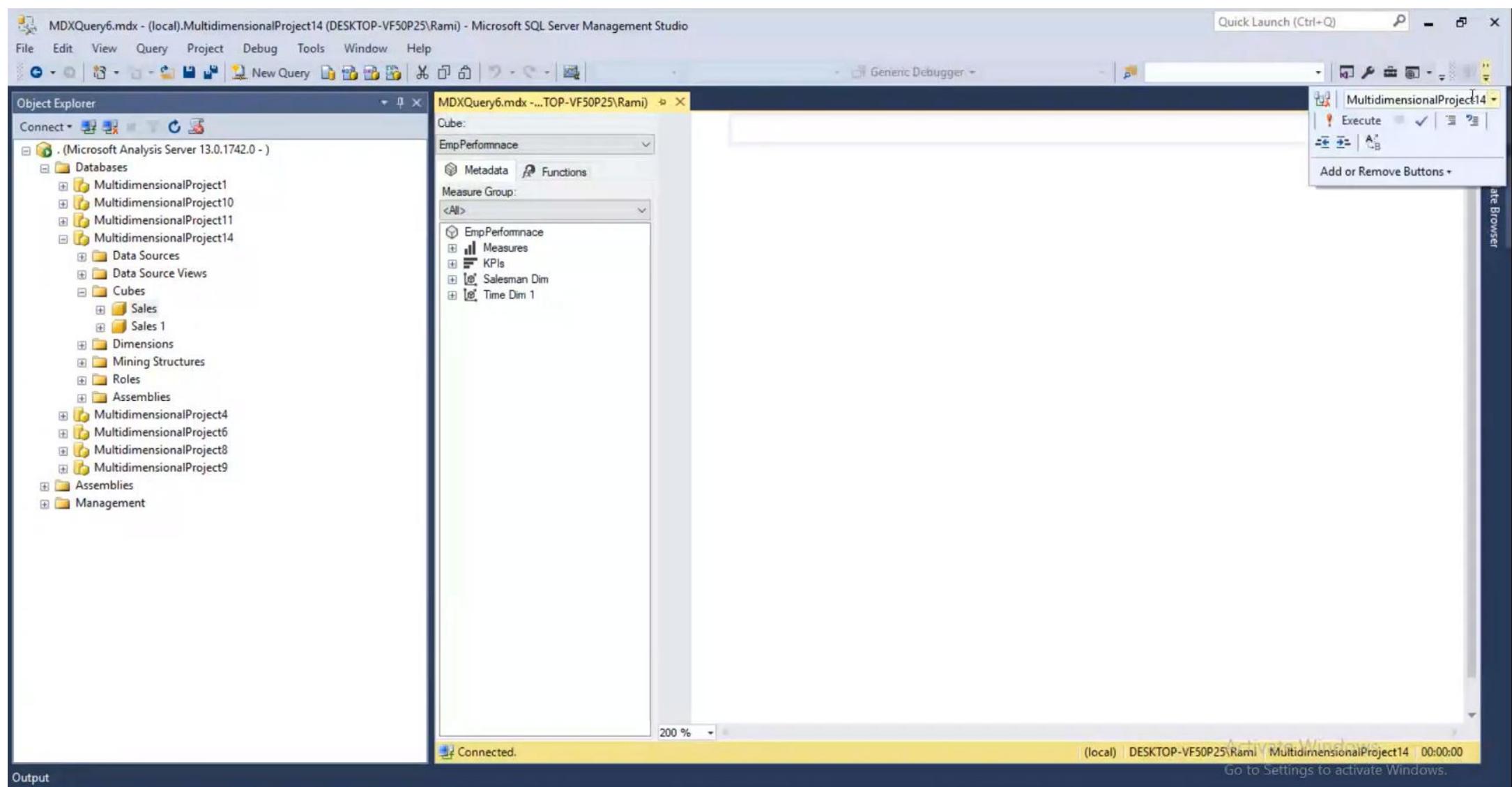
Connected.

(local) | DESKTOP-VF50P25\Rami | MultidimensionalProject14 | 00:00:00

Activate Windows  
Go to Settings to activate Windows.

Output

The screenshot displays the Microsoft SQL Server Management Studio interface. The left pane shows the Object Explorer with a tree view of databases, including MultidimensionalProject1 through 14, Data Sources, Dimensions, and other objects. The MultidimensionalProject14 database is currently selected. The main pane contains an MDX query editor titled 'MDXQuery6.mdx - TOP-VF50P25\Rami'. It shows a dropdown for the cube 'EmpPerformance' and a 'Measure Group' dropdown set to '<All>'. Below these are tabs for 'Metadata' and 'Functions'. A list of measure groups is visible, including EmpPerformance, Measures, KPIs, Salesman Dim, and Time Dim 1. The top right features a toolbar with various icons, and the status bar at the bottom provides system and connection details.



MDXQuery6.mdx - (local).MultidimensionalProject14 (DESKTOP-VF50P25\Rami) - Microsoft SQL Server Management Studio

File Edit View Query Project Debug Tools Window Help

New Query Generic Debugger

Object Explorer

Connect . (Microsoft Analysis Server 13.0.1742.0 - )

Databases

- MultidimensionalProject1
- MultidimensionalProject10
- MultidimensionalProject11
- MultidimensionalProject14**
- Data Sources
- Data Source Views
- Cubes
  - Sales
  - Sales 1
- Dimensions
- Mining Structures
- Roles
- Assemblies

MultidimensionalProject4

MultidimensionalProject6

MultidimensionalProject8

MultidimensionalProject9

Assemblies

Management

MDXQuery6.mdx - ...TOP-VF50P25\Rami

Cube:

EmpPerformance

EmpPerformance

CityPerProduct

Sales

Sales 1

<All>

EmpPerformance

Measures

KPIs

Salesman Dim

Time Dim 1

Connected.

(local) DESKTOP-VF50P25\Rami MultidimensionalProject14 00:00:00

Activate Windows  
Go to Settings to activate Windows.

MDXQuery6.mdx - (local).MultidimensionalProject14 (DESKTOP-VF50P25\Rami) - Microsoft SQL Server Management Studio

File Edit View Query Project Debug Tools Window Help

Quick Launch (Ctrl+Q)

Object Explorer

Connect ▾

. (Microsoft Analysis Server 13.0.1742.0 - )

- Databases
  - MultidimensionalProject1
  - MultidimensionalProject10
  - MultidimensionalProject11
  - MultidimensionalProject14
  - Data Sources
  - Data Source Views
  - Cubes
    - Sales
    - Sales 1
  - Dimensions
  - Mining Structures
  - Roles
  - Assemblies
  - MultidimensionalProject4
  - MultidimensionalProject6
  - MultidimensionalProject8
  - MultidimensionalProject9
- Assemblies
- Management

MDXQuery6.mdx - (local).MultidimensionalProject14 (DESKTOP-VF50P25\Rami)

Cube: Sales

Measure Group: <All>

Metadata Functions

- Sales
- Measures
- KPIs
- Product Dim
- Time Dim

Connected.

200 %

(local) | DESKTOP-VF50P25\Rami | MultidimensionalProject14 | 00:00:00

Go to Settings to activate Windows.

Output

Ready

MDXQuery6.mdx - (local).MultidimensionalProject14 (DESKTOP-VF50P25\Rami)\* - Microsoft SQL Server Management Studio

File Edit View Query Project Debug Tools Window Help

New Query Generic Debugger

Object Explorer

Connect . (Microsoft Analysis Server 13.0.1742.0 - )

Databases

- MultidimensionalProject1
- MultidimensionalProject10
- MultidimensionalProject11
- MultidimensionalProject14
  - Data Sources
  - Data Source Views
  - Cubes
    - Sales
    - Sales 1
  - Dimensions
  - Mining Structures
  - Roles
  - Assemblies
- MultidimensionalProject4
- MultidimensionalProject6
- MultidimensionalProject8
- MultidimensionalProject9
- Assemblies
- Management

MDXQuery6.mdx - ...TOP-VF50P25\Rami)\*

Cube: Sales

Measure Group: <All>

Sales

Measures

- Fact Sales
  - Qty
- KPIs
- Product Dim
- Time Dim

select [Measures].[Qty]  
from Sales

Messages

Executing the query ...  
Error (Data mining): Either the user, 'DESKTOP-VF50P25\Rami'  
Error (Data mining): Either the user, 'DESKTOP-VF50P25\Rami'  
Run complete

Query completed with errors.

(local) | DESKTOP-VF50P25\Rami | MultidimensionalProject14 | 00:00:00  
Go to Settings to activate Windows.

Output

MDXQuery6.mdx - (local).MultidimensionalProject14 (DESKTOP-VF50P25\Rami)\* - Microsoft SQL Server Management Studio

File Edit View Query Project Debug Tools Window Help

New Query Generic Debugger

Quick Launch (Ctrl+Q)

Object Explorer

Connect Databases MultidimensionalProject1 MultidimensionalProject10 MultidimensionalProject11 MultidimensionalProject14 Data Sources Data Source Views Cubes Sales Sales 1 Dimensions Mining Structures Roles Assemblies MultidimensionalProject4 MultidimensionalProject6 MultidimensionalProject8 MultidimensionalProject9 Assemblies Management

MDXQuery6.mdx - ...TOP-VF50P25\Rami)\*

Cube: Sales

Measure Group: <All>

Metadata Functions

Sales

- ↳ Measures
  - ↳ Fact Sales
    - ↳ Qty
  - ↳ KPIs
  - ↳ Product Dim
  - ↳ Time Dim

select [Measures].[Qty] on columns  
from Sales

Messages Results

Qty  
890

Query executed successfully.

(local) DESKTOP-VF50P25\Rami MultidimensionalProject14 00:00:01 Go to Settings to activate Windows.

Output

Ready

Ln 1 Col 1 Ch 1 INS

MDXQuery6.mdx - (local).MultidimensionalProject14 (DESKTOP-VF50P25\Rami)\* - Microsoft SQL Server Management Studio

File Edit View Query Project Debug Tools Window Help

New Query

MDXQuery6.mdx - TOP-VF50P25\Rami\*

Cube: Sales

Metadata Functions

Measure Group: <All>

- Sales
  - Measures
    - Fact Sales
    - Gty
  - KPIs
  - Product Dim
  - Time Dim

select [Measures].[Qty] on columns  
from Sales

Messages Results

Qty  
890

Query executed successfully.

(local) DESKTOP-VF50P25\Rami MultidimensionalProject14 00:00:01 Go to Settings to activate Windows.

Output

MultidimensionalProject14 - Microsoft Visual Studio (Administrator)

File Edit View Project Build Debug Team Database Cube Tools Architecture Test Analyze Window Help

Develop Default Start

Quick Launch (Ctrl+Q) Sign in

SQL Server Object Explor... Sales.cube [Design] Sales.dsv [Design]

Cube Struct... Dimension Usage Calculations KPIs Actions Partitions Aggregations Perspectives Translations Browser

Language: Default

Edit as Text Import...

Sales

Dimension Hierarchy Operator Filter Expression Parameter

<Select dimension>

Measure Group: <All>

Sales

Metadata

Qty

890

Measure Group: <All>

Sales

Measures

Fact Sales

Qty

KPIs

MySales

Value

Goal

Status

Product Dim

Product ID

Product Name

Product Price

Time Dim

Calculated Members

Solution Explorer

Search Solution Explorer (Ctrl+;)

Solution 'MultidimensionalProject14' (1 project)

MultidimensionalProject14

Data Sources

Sales.ds

Data Source Views

Sales.dsv

Sales 1.dsv

Cubes

Sales.cube

Sales 1.cube

Dimensions

Product Dim.dim

Time Dim.dim

Product Dim 1.dim

Channel Dim.dim

Salesman Dim.dim

Customer Dim.dim

Time Dim 1.dim

Mining Structures

Roles

Assemblies

Miscellaneous

Serve... Toolb... SSIS T... SQL...

Output Data Tools Operations

Activate Windows  
Solution Explor... Team Explorer Class View Tabular Model...  
Go to Settings to activate Windows.

MDXQuery6.mdx - (local).MultidimensionalProject14 (DESKTOP-VF50P25\Rami)\* - Microsoft SQL Server Management Studio

File Edit View Query Project Debug Tools Window Help

New Query Generic Debugger Properties Template Browser

Object Explorer

Connect Databases Cubes Dimensions Mining Structures Roles Assemblies MultidimensionalProject1 MultidimensionalProject10 MultidimensionalProject11 MultidimensionalProject14 Data Sources Data Source Views Sales Sales 1 Cube: Sales Metadata Functions Measure Group: <All> Sales Measures Fact Sales Qty KPIs Product Dim Time Dim

select [Measures].[Qty] on columns  
from Sales

Messages Results

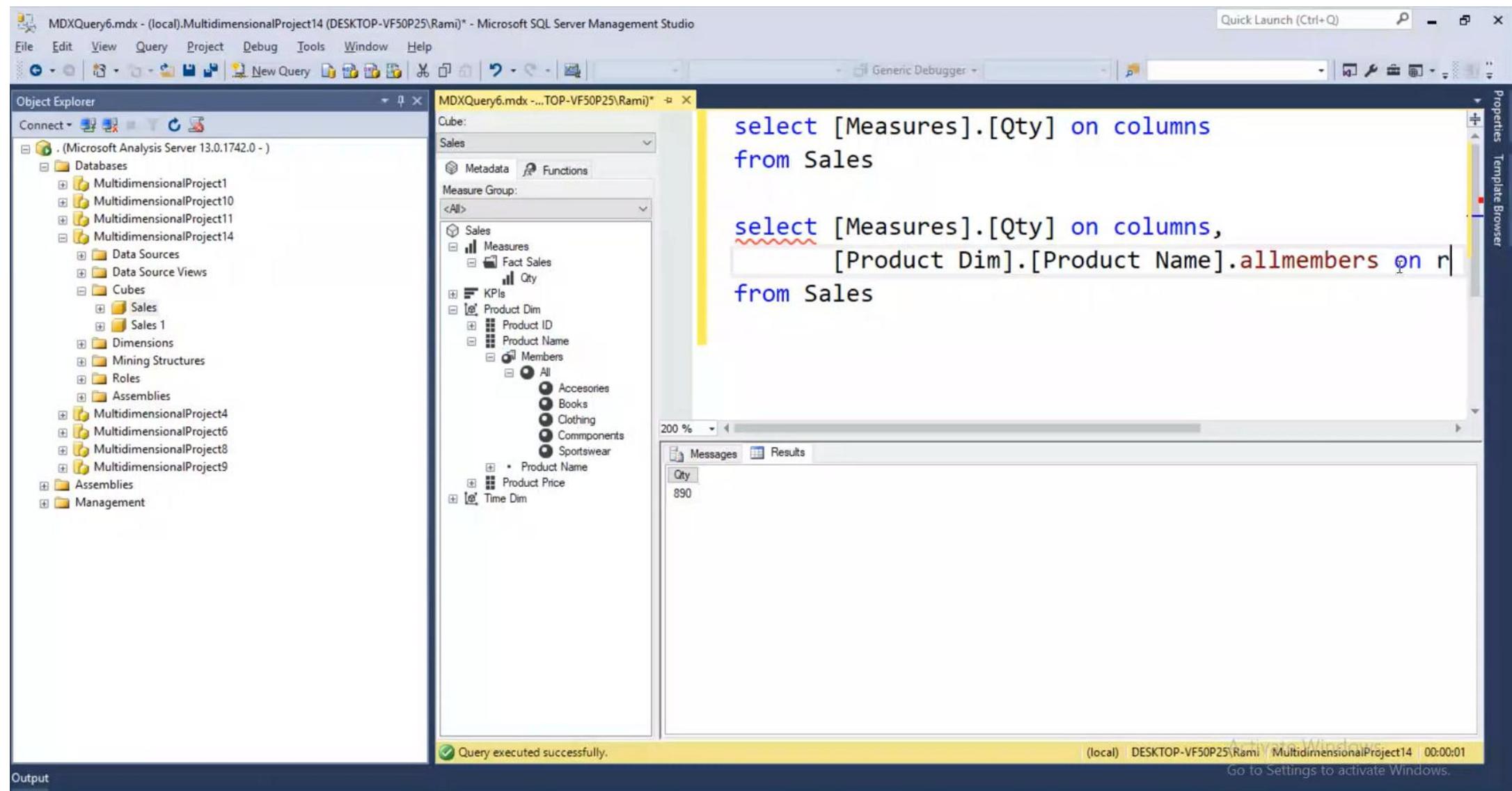
Qty 890

200 %

Query executed successfully.

(local) DESKTOP-VF50P25\Rami MultidimensionalProject14 00:00:01 Go to Settings to activate Windows.

Output



Object Explorer

Connect

(Microsoft Analysis Server 13.0.1742.0 -)

- Databases
  - MultidimensionalProject1
  - MultidimensionalProject10
  - MultidimensionalProject11
  - MultidimensionalProject14
    - Data Sources
    - Data Source Views
  - Cubes
    - Sales
    - Sales 1
  - Dimensions
  - Mining Structures
  - Roles
  - Assemblies
  - MultidimensionalProject4
  - MultidimensionalProject6
  - MultidimensionalProject8
  - MultidimensionalProject9
- Assemblies
- Management

MDXQuery6.mdx -TOP-VF50P25\Rami)\*

Cube: Sales

Metadata Functions

Measure Group: <All>

- Sales
  - Measures
    - Fact Sales
      - Qty
  - KPIs
  - Product Dim
    - Product ID
    - Product Name
      - Members
        - All
          - Accessories
          - Books
          - Clothing
          - Components
          - Sportswear
        - Product Name
        - Product Price
    - Time Dim

select [Measures].[Qty] on columns  
from Sales

select [Measures].[Qty] on columns,  
[Product Dim].[Product Name].allmembers on rows  
from Sales

Messages Results

Qty 890

Query executed successfully.

(local) DESKTOP-VF50P25\Rami MultidimensionalProject14 00:00:01

Go to Settings to activate Windows.

Properties Template Browser

## 2 SQL Server Analysis Service-SSAS.

MDXQuery6.mdx - (local).MultidimensionalProject14 (DESKTOP-VF50P25\Ram) - Microsoft SQL Server Management Studio

Object Explorer

Connect - Databases - MultidimensionalProject1 - MultidimensionalProject10 - MultidimensionalProject11 - MultidimensionalProject14 - Data Sources - Data Source Views - Cubes - Sales - Sales 1 - Dimensions - Mining Structures - Roles - Assemblies - MultidimensionalProject4 - MultidimensionalProject6 - MultidimensionalProject8 - MultidimensionalProject9 - Assemblies - Management

MDXQuery6.mdx - ...TOP-VF50P25\Ram)\* - Generic Debugger

Cube: Sales

Measure Group: <All>

Metadata Functions

Sales

Measures

Fact Sales

Qty

KPIs

Product Dim

Product ID

Product Name

All

Accessories

Books

Clothing

Components

Sportswear

Product Name

Product Price

Time Dim

res].[Qty] on columns

res].[Qty] on columns,  
[ct Dim].[Product Name].allmembers on rows

Messages Results

Qty  
890

Query executed successfully.

(local) DESKTOP-VF50P25\Ram MultidimensionalProject14 00:00:01

Output Go to Settings to activate Windows.

## 2 SQL Server Analysis Service-SSAS.

MDXQuery6.mdx - (local).MultidimensionalProject14 (DESKTOP-VF50P25\Rami)\* - Microsoft SQL Server Management Studio

Object Explorer

Connect Databases Cubes Dimensions Mining Structures Roles Assemblies MultidimensionalProject1 MultidimensionalProject10 MultidimensionalProject11 MultidimensionalProject14 Data Sources Data Source Views Sales Cube: Sales Metadata Functions Measure Group: <All> Sales Measures Fact Sales Qty KPIs Product Dim Product ID Product Name Members All Accesories Books Clothing Components Sportswear Product Name Product Price Time Dim

```
select [Measures].[Qty] on columns  
from Sales
```

```
select [Measures].[Qty] on columns,  
[Product Dim].[Product Name].allmembers on rows  
from Sales
```

Messages Results

City	Qty
All	890
Accesories	305
Books	155
Clothing	185
Components	115
Sportswear	130

Query executed successfully.

(local) DESKTOP-VF50P25\Rami MultidimensionalProject14 00:00:01 Go to Settings to activate Windows.

Output

MDXQuery6.mdx - (local).MultidimensionalProject14 (DESKTOP-VF50P25\Rami)\* - Microsoft SQL Server Management Studio

File Edit View Query Project Debug Tools Window Help

New Query Generic Debugger

Quick Launch (Ctrl+Q)

Object Explorer

Connect . (Microsoft Analysis Server 13.0.1742.0)

Databases

- MultidimensionalProject1
- MultidimensionalProject10
- MultidimensionalProject11
- MultidimensionalProject14
  - Data Sources
  - Data Source Views
  - Cubes
    - Sales
    - Sales 1
  - Dimensions
  - Mining Structures
  - Roles
  - Assemblies
- MultidimensionalProject4
- MultidimensionalProject6
- MultidimensionalProject8
- MultidimensionalProject9
- Assemblies
- Management

Cube: Sales

Measure Group: <All>

Metadata Functions

Sales

Measures

- Fact Sales
  - Qty

KPIs

Product Dim

- Product ID
- Product Name
  - Members
    - All
      - Accessories
      - Books
      - Clothing
      - Components
      - Sportswear
    - Product Name
    - Product Price
  - Time Dim
    - Calendar Quarter
    - Calendar Year
    - Time ID

from Sales

```
select [Measures].[Qty] on columns,
       [Product Dim].[Product Name].allmembers on rows
  from Sales
 where [Time Dim].[Calendar Year].[2007]
```

Messages Results

	Qty
All	890
Accessories	305
Books	155
Clothing	185
Components	115
Sportswear	130

200 %

Query executed successfully.

(local) DESKTOP-VF50P25\Rami MultidimensionalProject14 00:00:01

Go to Settings to activate Windows.

Output

MDXQuery6.mdx - (local).MultidimensionalProject14 (DESKTOP-VF50P25\Rami)\* - Microsoft SQL Server Management Studio

File Edit View Query Project Debug Tools Window Help

New Query Generic Debugger

Quick Launch (Ctrl+Q)

Object Explorer

Connect . (Microsoft Analysis Server 13.0.1742.0)

Databases

- MultidimensionalProject1
- MultidimensionalProject10
- MultidimensionalProject11
- MultidimensionalProject14
  - Data Sources
  - Data Source Views
  - Cubes
    - Sales
    - Sales 1
  - Dimensions
  - Mining Structures
  - Roles
  - Assemblies
- MultidimensionalProject4
- MultidimensionalProject6
- MultidimensionalProject8
- MultidimensionalProject9
- Assemblies
- Management

Cube: Sales

Measure Group: <All>

Metadata Functions

Measures

- Fact Sales
  - Qty

KPIs

Product Dim

- Product ID
- Product Name
  - Members
    - All
      - Accessories
      - Books
      - Clothing
      - Components
      - Sportswear
    - Product Name

Dimensions

- Time Dim
  - Calendar Quarter
  - Calendar Year
  - Time ID

Results

	Qty
All	380
Accessories	110
Books	80
Clothing	110
Components	30
Sportswear	50

200 %

Messages Results

Query executed successfully.

(local) DESKTOP-VF50P25\Rami MultidimensionalProject14 00:00:01 Go to Settings to activate Windows.

Output

Object Explorer

Connect

Databases MultidimensionalProject1 MultidimensionalProject10 MultidimensionalProject11 MultidimensionalProject14 Data Sources Sales 1 Data Source Views Cubes Sales Sales 1 Dimensions Mining Structures Roles Assemblies MultidimensionalProject4 MultidimensionalProject6 MultidimensionalProject8 MultidimensionalProject9 Assemblies Management

MDXQuery6.mdx -...TOP-VF50P25\Ram...\* Cube: Sales

Metadata Functions

Measure Group: <All>

Sales Measures Fact Sales Qty KPIs Product Dim Product ID Product Name Members All Accessories Books Clothing Components Sportswear Product Name Product Price Time Dim Calendar Quarter Calendar Year Time ID

```
from Sales
select [Measures].[Qty] on columns,
[Product Dim].[Product Name].allmembers on rows
from Sales
where [Time Dim].[Calendar Year].[2007]
```

200 %

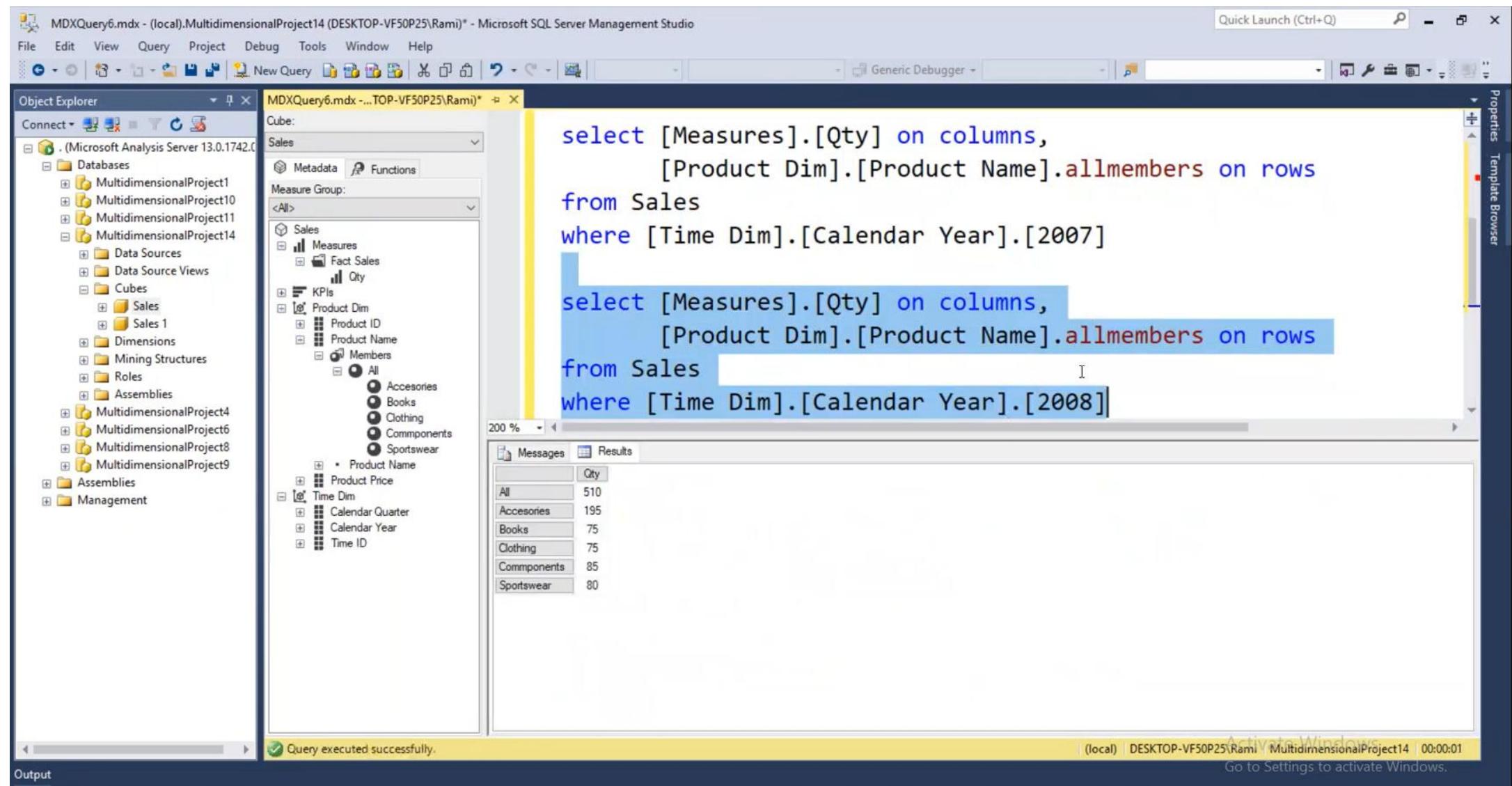
Messages Results

	Qty
All	380
Accessories	110
Books	80
Clothing	110
Components	30
Sportswear	50

Query executed successfully.

(local) DESKTOP-VF50P25\Ram MultidimensionalProject14 00:00:01 Go to Settings to activate Windows.

Output



Object Explorer

Connect: . (Microsoft Analysis Server 13.0.1742.0)

MDXQuery6.mdx -...TOP-VF50P25(Rami)\*

Cube: Sales

Measure Group: <All>

Sales

- Metadata
- Functions

Measures

- Fact Sales
- Qty

KPIs

Product Dim

- Product ID
- Product Name
- Members
  - All
    - Accessories
    - Books
    - Clothing
    - Components
    - Sportswear
  - Product Name
  - Product Price
- Time Dim
  - Calendar Quarter
  - Calendar Year
  - Time ID

```
from Sales  
where [Time Dim].[Calendar Year].[2008]
```

```
select [Time Dim].[Calendar Year].allmembers on columns,  
[Product Dim].[Product Name].allmembers on rows  
from sales
```

	All	2007	2008
All	890	380	510
Accessories	305	110	195
Books	155	80	75
Clothing	185	110	75
Components	115	30	85
Sportswear	130	50	80

Query executed successfully.

(local) DESKTOP-VF50P25(Rami) MultidimensionalProject14 | 00:00:01  
Go to Settings to activate Windows.

Output

The screenshot shows the Microsoft Analysis Services Management Studio interface. The left pane is the Object Explorer, displaying a tree view of databases, cubes, dimensions, and other objects. The central pane shows an MDX query being executed against a cube named 'Sales'. The query is:

```
from Sales  
where [Time Dim].[Calendar Year].[2008]  
  
select [Time Dim].[Calendar Year].allmembers on columns,  
[Product Dim].[Product Name].allmembers on rows  
from sales
```

The results pane displays a table with the following data:

	All	2007	2008
All	890	380	510
Accessories	305	110	195
Books	155	80	75
Clothing	185	110	75
Components	115	30	85
Sportswear	130	50	80

At the bottom, a message bar indicates "Query executed successfully." and the status bar shows "(local) DESKTOP-VF50P25\Ram" and "00:00:01".

Object Explorer

Connect (Microsoft Analysis Server 13.0.1742.0)

Databases: MultidimensionalProject1, MultidimensionalProject10, MultidimensionalProject11, MultidimensionalProject14, MultidimensionalProject4, MultidimensionalProject6, MultidimensionalProject8, MultidimensionalProject9

Cubes: Sales 1

Measure Group: <All>

Sales 1

- Metadata
- Functions

Dimensions:

- Sales 1
  - Measures
  - KPIs
  - Channel Dim
    - Channel ID
      - City
      - Country
      - CityPerCounter
    - Customer Dim
      - Customer Address
      - Customer ID
      - Customer Name
      - Customer Phone
    - Product Dim 1
      - Product ID
      - Product Name
      - Product Price
    - Salesman Dim
    - Time Dim 1
      - Calendar Quarter
      - Calendar Year
      - Time ID
      - QtrPerYear

select [Time Dim].[Calendar Year].allmembers on columns,  
[Product Dim].[Product Name].allmembers on rows  
from sales

select [Product Dim 1].[Product Name].allmembers on columns,  
([Time Dim 1].[Calendar Year].allmembers)\*([Channel Dim].[C

Messages Results

	All	2007	2008
All	890	380	510
Accessories	305	110	195
Books	155	80	75
Clothing	185	110	75
Components	115	30	85
Sportswear	130	50	80

Query executed successfully.

(local) | DESKTOP-VF50P25\Ram | MultidimensionalProject14 | 00:00:01

Go to Settings to activate Windows.

Output

Ready

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Object Explorer

MDXQuery6.mdx ->...TOP-VF50P25\Ram\*

Cube: Sales 1

Measure Group: <All>

Sales 1

Measures

KPIs

Channel Dim

Channel ID

City

Country

CityPerCounter

Customer Dim

Customer Address

Customer ID

Customer Name

Customer Phone

Product Dim 1

Product ID

Product Name

Product Price

Salesman Dim

Time Dim 1

Calendar Quarter

Calendar Year

Time ID

QtrPerYear

columns,  
'OWS  
; on columns,  
'([Channel Dim].[Country].allmembers) on rows

200 %

Messages Results

	All	2007	2008
All	890	380	510
Accessories	305	110	195
Books	155	80	75
Clothing	185	110	75
Components	115	30	85
Sportswear	130	50	80

Query executed successfully.

(local) DESKTOP-VF50P25\Ram MultidimensionalProject14 00:00:01

Object Explorer

MDXQuery6.mdx - ...TOP-VF50P25(Rami)\*

Cube: Sales 1

Measure Group: <All>

Databases

- MultidimensionalProject1
- MultidimensionalProject10
- MultidimensionalProject11
- MultidimensionalProject14
  - Data Sources
  - Data Source Views
  - Cubes
    - Sales
    - Sales 1
  - Dimensions
  - Mining Structures
  - Roles
  - Assemblies
- MultidimensionalProject4
- MultidimensionalProject6
- MultidimensionalProject8
- MultidimensionalProject9
- Assemblies
- Management

Metadata Functions

Sales 1

- Measures
- KPIs
- Channel Dim
  - Channel ID
  - City
  - Country
  - CityPerCounter
- Customer Dim
  - Customer Address
  - Customer ID
  - Customer Name
  - Customer Phone
- Product Dim 1
  - Product ID
  - Product Name
  - Product Price
- Salesman Dim
- Time Dim 1
  - Calendar Quarter
  - Calendar Year
  - Time ID
  - QtrPerYear

select [Time Dim].[Calendar Year].allmembers on columns,  
[Product Dim].[Product Name].allmembers on rows  
from sales

select [Product Dim 1].[Product Name].allmembers on columns,  
([Time Dim 1].[Calendar Year].allmembers)\*([Channel Dim].[C  
from [Sales 1]

Messages Results

	All	2007	2008
All	890	380	510
Accessories	305	110	195
Books	155	80	75
Clothing	185	110	75
Components	115	30	85
Sportswear	130	50	80

Query executed successfully.

(local) DESKTOP-VF50P25(Rami) MultidimensionalProject14 00:00:01 Go to Settings to activate Windows.

Object Explorer

Connect

Databases (.Microsoft Analysis Server 13.0.1742.0)

- MultidimensionalProject1
- MultidimensionalProject10
- MultidimensionalProject11
- MultidimensionalProject14
  - Data Sources
  - Data Source Views
- Cubes
  - Sales
  - Sales 1
- Dimensions
- Mining Structures
- Roles
- Assemblies
- MultidimensionalProject4
- MultidimensionalProject6
- MultidimensionalProject8
- MultidimensionalProject9
- Assemblies
- Management

MDXQuery6.mdx - ...TOP-VF50P25\Ram\*

Cube: Sales 1

Metadata Functions

Measure Group: <All>

Sales 1

- Measures
- KPIs
- Channel Dim
  - Channel ID
  - City
  - Country
  - CityPerCounter
- Customer Dim
  - Customer Address
  - Customer ID
  - Customer Name
  - Customer Phone
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[Product Dim].[Product Name].allmembers on rows  
from sales

select [Product Dim 1].[Product Name].allmembers on columns,  
([Time Dim 1].[Calendar Year].allmembers)\*([Channel Dim].[C  
from [Sales 1]

Messages Results

	All	Accessories	Books	Clothing	Components	Sportswear
All	All	890	305	155	185	115
All	Algeria	210	5	60	65	70
All	Egypt	515	225	60	120	20
All	France	60	5	(null)	(null)	25
All	Moraco	105	70	35	(null)	(null)
2007	All	380	110	80	110	30
2007	Algeria	120	(null)	60	40	10
2007	Egypt	210	80	(null)	70	20
2007	France	(null)	(null)	(null)	(null)	(null)
2007	Moraco	50	30	20	(null)	(null)
2008	All	510	195	75	75	85
2008	Algeria	90	5	(null)	25	60
2008	Egypt	305	145	60	50	(null)

Query executed successfully.

(local) | DESKTOP-VF50P25\Ram | MultidimensionalProject14 | 00:00:01

Go to Settings to activate Windows.

Output

Ready

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Object Explorer

Connect ➔

Databases

- MultidimensionalProject1
- MultidimensionalProject10
- MultidimensionalProject11
- MultidimensionalProject14
- Data Sources
- Data Source Views
- Cubes
  - Sales
  - Sales 1
- Dimensions
- Mining Structures
- Roles
- Assemblies
- MultidimensionalProject4
- MultidimensionalProject6
- MultidimensionalProject8
- MultidimensionalProject9
- Assemblies
- Management

MDXQuery6.mdx ...TOP-VF50P25(Rami)\*

Cube: Sales 1

Measure Group: <All>

Metadata Functions

Sales 1

- Measures
- KPIs
- Channel Dim
  - Channel ID
  - City
  - Country
  - CityPerCounter
- Customer Dim
  - Customer Address
  - Customer ID
  - Customer Name
  - Customer Phone
- Product Dim 1
  - Product ID
  - Product Name
  - Product Price
- Salesman Dim
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  - Calendar Year
  - Time ID
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from sales

select [Product Dim 1].[Product Name].allmembers on columns,  
([Time Dim 1].[Calendar Year].allmembers)\*( [Channel Dim].[C...  
from [Sales 1]

Messages Results

	All	Accessories	Books	Clothing	Components	Sportswear
All	All	890	305	155	185	115
All	Algeria	210	5	60	65	70
All	Egypt	515	225	60	120	20
All	France	60	5	(null)	(null)	25
All	Moraco	105	70	35	(null)	(null)
2007	All	380	110	80	110	30
2007	Algeria	120	(null)	60	40	10
2007	Egypt	210	80	(null)	70	20
2007	France	(null)	(null)	(null)	(null)	(null)
2007	Moraco	50	30	20	(null)	(null)
2008	All	510	195	75	75	85
2008	Algeria	90	5	(null)	25	60

Query executed successfully.

(local) | DESKTOP-VF50P25\Ram | MultidimensionalProject14 | 00:00:01

Go to Settings to activate Windows.

MDXQuery6.mdx - (local).MultidimensionalProject14 (DESKTOP-VF50P25\Rami)\* - Microsoft SQL Server Management Studio

File Edit View Query Project Debug Tools Window Help

New Query Generic Debugger Properties Template Browser

Object Explorer

Cube: Sales 1

Measure Group: <All>

Databases

- MultidimensionalProject1
- MultidimensionalProject10
- MultidimensionalProject11
- MultidimensionalProject14
  - Data Sources
  - Data Source Views
  - Cubes
    - Sales
    - Sales 1
  - Dimensions
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  - Assemblies
- MultidimensionalProject4
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- MultidimensionalProject8
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- Assemblies
- Management

Metadata Functions

Sales 1

Channel Dim

- Channel ID
- City
- Country
- CityPerCounter

Customer Dim

- Customer Address
- Customer ID
- Customer Name
- Customer Phone

Product Dim 1

- Product ID
- Product Name
- Product Price

Salesman Dim

Time Dim 1

- Calendar Quarter
- Calendar Year
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[Product Dim].[Product Name].allmembers on rows  
from sales

select [Product Dim 1].[Product Name].allmembers on columns,  
([Time Dim 1].[Calendar Year].allmembers)\*(Channel Dim).[(  
from [Sales 1]

Messages Results

	All	Accessories	Books	Clothing	Components	Sportswear
All	All	890	305	155	185	115
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All	Egypt	515	225	60	120	20
All	France	60	5	(null)	(null)	25
All	Moraco	105	70	35	(null)	(null)
2007	All	380	110	80	110	30
2007	Algeria	120	(null)	60	40	10
2007	Egypt	210	80	(null)	70	20
2007	France	(null)	(null)	(null)	(null)	(null)
2007	Moraco	50	30	20	(null)	(null)
2008	All	510	195	75	75	85
2008	Algeria	90	5	(null)	25	60

Query executed successfully.

(local) DESKTOP-VF50P25\Rami MultidimensionalProject14 00:00:01 Go to Settings to activate Windows.

The Basic MDX Query (MDX).

MDX Query.

Rows and Columns and Aggregates.

MDX Query - The Basic Query.

SQL Server Analysis Services Queries.

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MDX Basics | MDX functions in SSAS | SSAS MDX

Examples | mdx tutorials for beginners.

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