



**How-to Guide
SAP EPM**

How To... Create Partitions in SSAS of BPC

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**Applicable Releases:
SAP BPC 5.x**

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1 (Business) Scenario

In order to improve Performance, please use this how-to guide to create partitioning.

2 Introduction

Partitioning the main cube has had a dramatic impact on performance at many customers. The default partition model is to partition by time, as below.

3 SSAS Partitioning

PARTITIONING IS PERHAPS THE SINGLE MOST SIGNIFICANT THING YOU CAN DO TO IMPROVE PERFORMANCE.

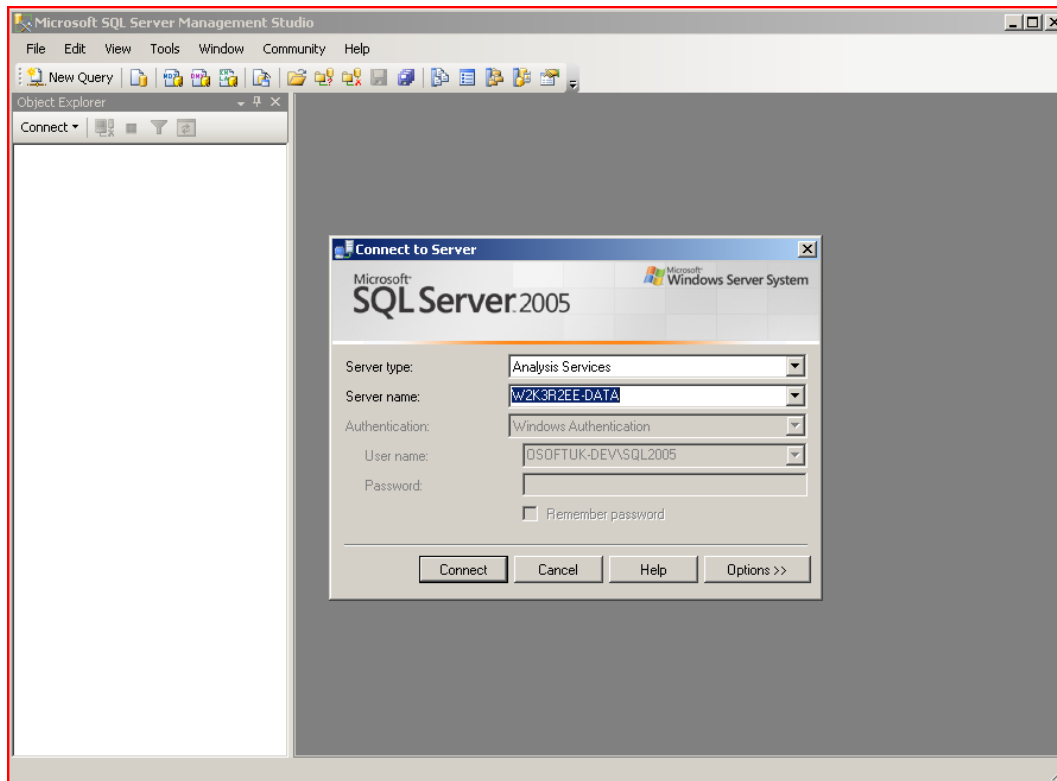
So try it.

3.1 Sample Partition for Finance Cube

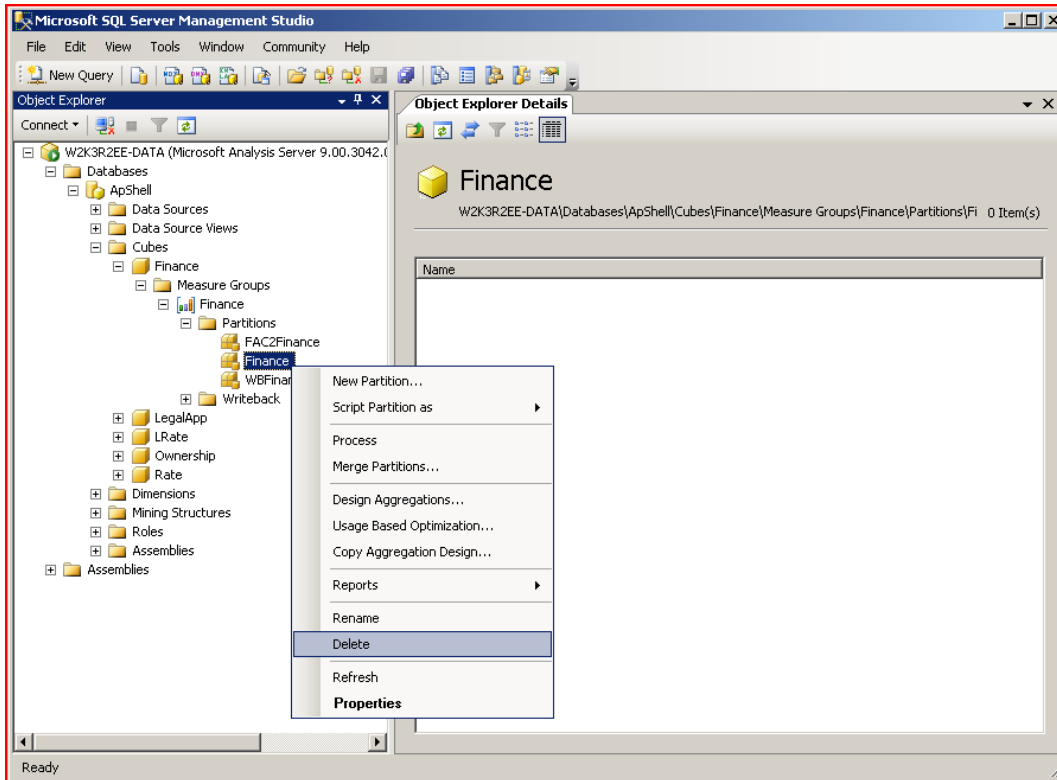
Partition Name	Fact Table	Slice	WHERE Clause	Storage Mode
FACTFINANCE2002	dbo.tblFactFINANCE	2002.TOTAL	(dbo.tblFactFINANCE.TIMEID >= '20020100') AND (dbo.tblFactFINANCE.TIMEID <= '20021200')	MOLAP
FACTFINANCE2003	dbo.tblFactFINANCE	2003.TOTAL	(dbo.tblFactFINANCE.TIMEID >= '20030100') AND (dbo.tblFactFINANCE.TIMEID <= '20031200')	MOLAP
FACTFINANCE2004	dbo.tblFactFINANCE	2004.TOTAL	(dbo.tblFactFINANCE.TIMEID >= '20040100') AND (dbo.tblFactFINANCE.TIMEID <= '20041200')	MOLAP
FACTFINANCE2005JAN	dbo.tblFactFINANCE	2005.TOTAL. 2005.Q1. 2005.JAN	dbo.tblFactFINANCE.TIMEID = '20050100'	MOLAP
FACTFINANCE2005FEB	dbo.tblFactFINANCE	2005.TOTAL. 2005.Q1. 2005.FEB	dbo.tblFactFINANCE.TIMEID = '20050200'	MOLAP
FACTFINANCE2005MAR	dbo.tblFactFINANCE	2005.TOTAL. 2005.Q1. 2005.MAR	dbo.tblFactFINANCE.TIMEID = '20050300'	MOLAP
FACTFINANCE2005Q2	dbo.tblFactFINANCE	2005.TOTAL. 2005.Q2	(dbo.tblFactFINANCE.TIMEID >= '20050400') AND (dbo.tblFactFINANCE.TIMEID <= '20050600')	MOLAP
FACTFINANCE2005Q3	dbo.tblFactFINANCE	2005.TOTAL. 2005.Q3	(dbo.tblFactFINANCE.TIMEID >= '20050700') AND (dbo.tblFactFINANCE.TIMEID <= '20050900')	MOLAP
FACTFINANCE2005Q4	dbo.tblFactFINANCE	2005.TOTAL. 2005.Q4	(dbo.tblFactFINANCE.TIMEID >= '20051000') AND (dbo.tblFactFINANCE.TIMEID <= '20051200')	MOLAP
FAC2FINANCE	dbo.tblFAC2FINANCE	All	[no filter]	MOLAP
FACTWBFINANCE	dbo.tblFACTWBFINANCE	All	[no filter]	ROLAP

4 Creating Partitions in SSAS

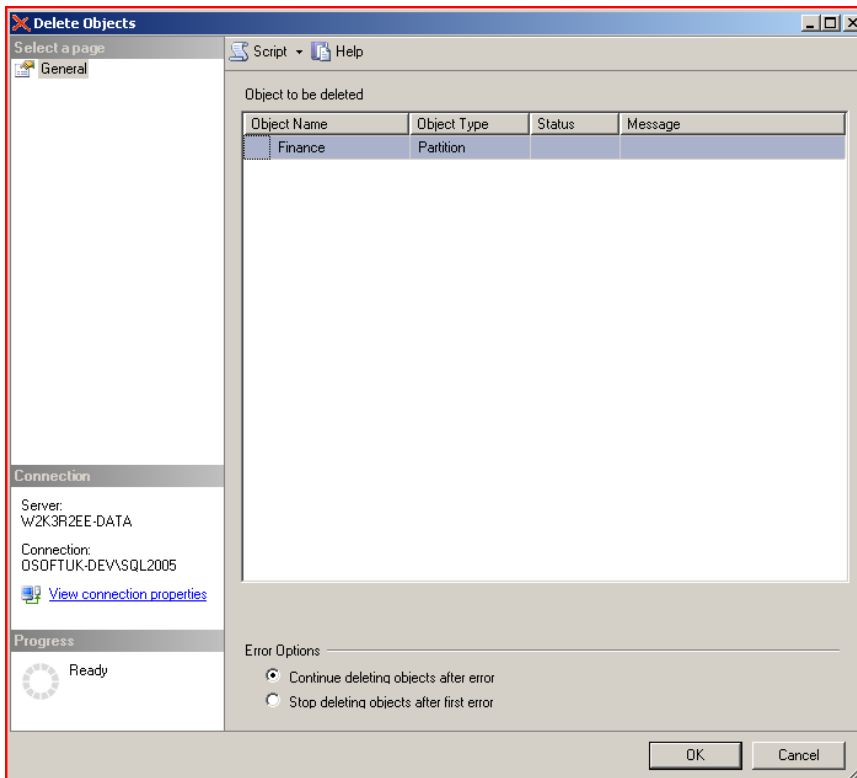
Using [Microsoft SQL Server Management Studio](#), connect to Analysis Service instance.



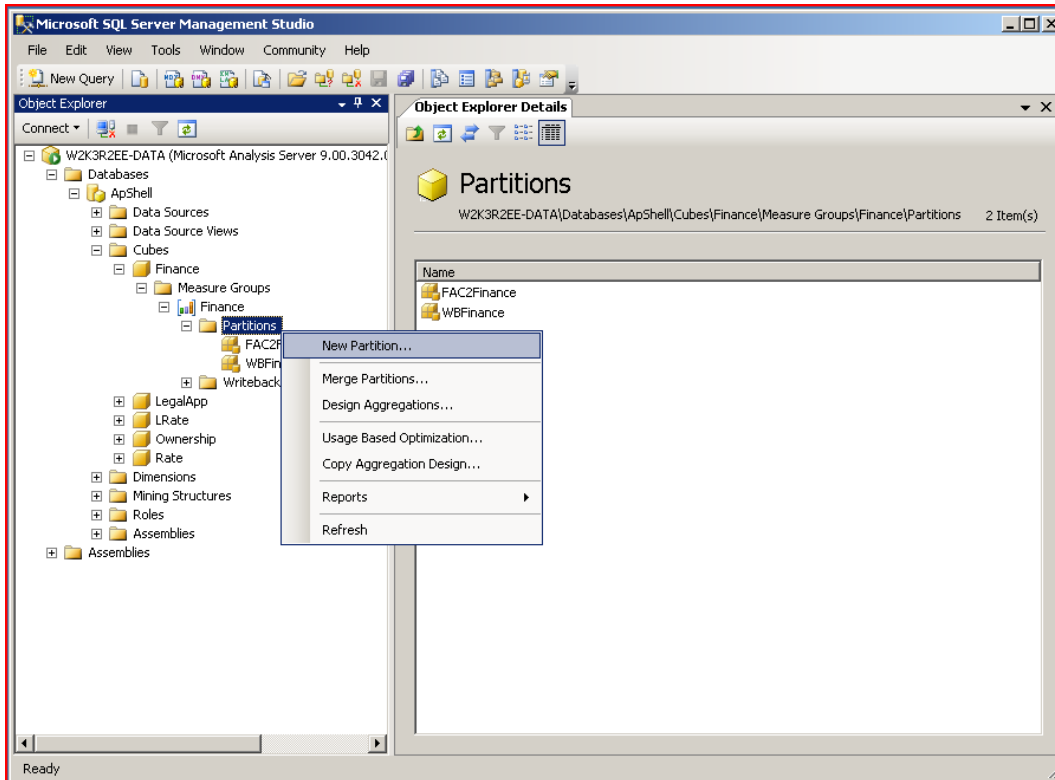
Within the [Cubes](#) folder, open navigate to the Fact partition of the required cube, for example *Cubes -> Finance -> Measures Groups -> Finance -> Partitions -> Finance*. Delete the [Finance](#) partition by right clicking on the partition and select [Delete](#).



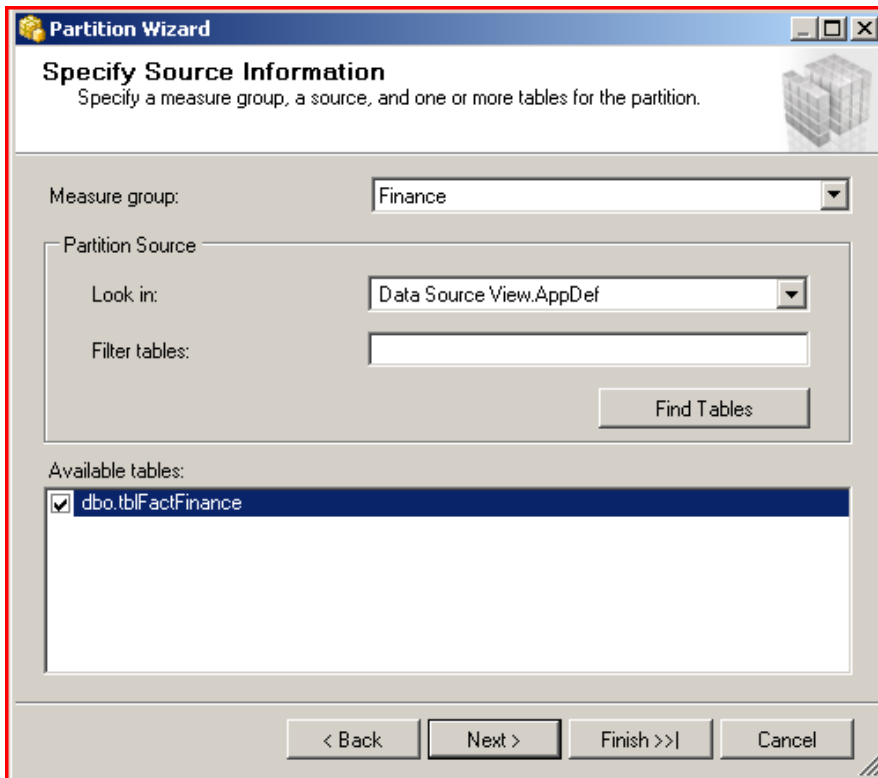
At the **Delete Object** window, click **OK** button in-order to delete the chosen Fact partiton.



Create a new partition by right clicking on **Partitions** and selecting **New Partition**.



Move through the beginning screens by clicking **Next** until you get to the **Specify Source Information** window. You will need to choose the correct Fact table for your partition, for example `dbo.tblFactFinance`. Click **Next** button to continue to the next window.



At the **Restrict Rows** window, you need to specify a query to restrict rows to your chosen time periods and click **Next** button.

The screenshot shows the 'Restrict Rows' step of the Partition Wizard. It includes a title bar, a description, a checked checkbox for specifying a query, a text area with a SQL query, a 'Check' button, a warning message, and navigation buttons at the bottom.

Restrict Rows
Choose whether to use a query to restrict the rows that are included in the partition.

Specify a query to restrict rows

Query:

```
SELECT
[dbo].[tblFactFinance].[ACCOUNT],[dbo].[tblFactFinance].[CATEGORY],[dbo].[tblFactFinance].[DATASRC],[dbo].[tblFactFinance].[ENTITY],[dbo].[tblFactFinance].[INTCO],[dbo].[tblFactFinance].[RPTCURRENCY],[dbo].[tblFactFinance].[SIGNEDDATA],[dbo].[tblFactFinance].[SOURCE],[dbo].[tblFactFinance].[TIMEID]
FROM [dbo].[tblFactFinance]
WHERE (dbo.tblFactFINANCE.TIMEID >= '20020100')
AND (dbo.tblFactFINANCE.TIMEID <= '20021200')
```

Check

Warning: This query must exclude any rows from this table that are already included in other partitions. If these rows are not excluded, duplicate aggregation will occur in measure groups with more than one partition.

< Back Next > Finish >>| Cancel

At the Processing and Storage Locations windows, ensure the correct **Processing location** and **Storage location** are chosen. Typically, this would be your Analysis Services server and the location of the Analysis Service Data folder on the Analysis Services server. Click **Next** button.

The screenshot shows the 'Processing and Storage Locations' step of the Partition Wizard. It includes a title bar, a description, radio buttons for processing and storage locations, and navigation buttons at the bottom.

Processing and Storage Locations
You can specify different locations for processing and storing the partition.

Processing location

Current server instance

Remote Analysis Services data source:

Storage location

Default server location:

C:\Program Files\Microsoft SQL Server\MSSQL.2\OLAP\Data

Specified folder:

< Back Next > Finish >>| Cancel

Provide a name for your partition. This must be in the form *FACT<ApplicationName><Identifier>*, for example, *FACTFINANCE2002*. Ensure that the **Aggregations options** are set to **Design aggregations later and Process Now** and click **Finish** button.

Partition Wizard

Completing the Wizard
Provide a name for the partition, set aggregation options, and then click Finish to save the partition.

Name:

Aggregation options:

- Design aggregations for the partition now
- Design aggregations later
- Copy the aggregation design from an existing partition

Copy from:

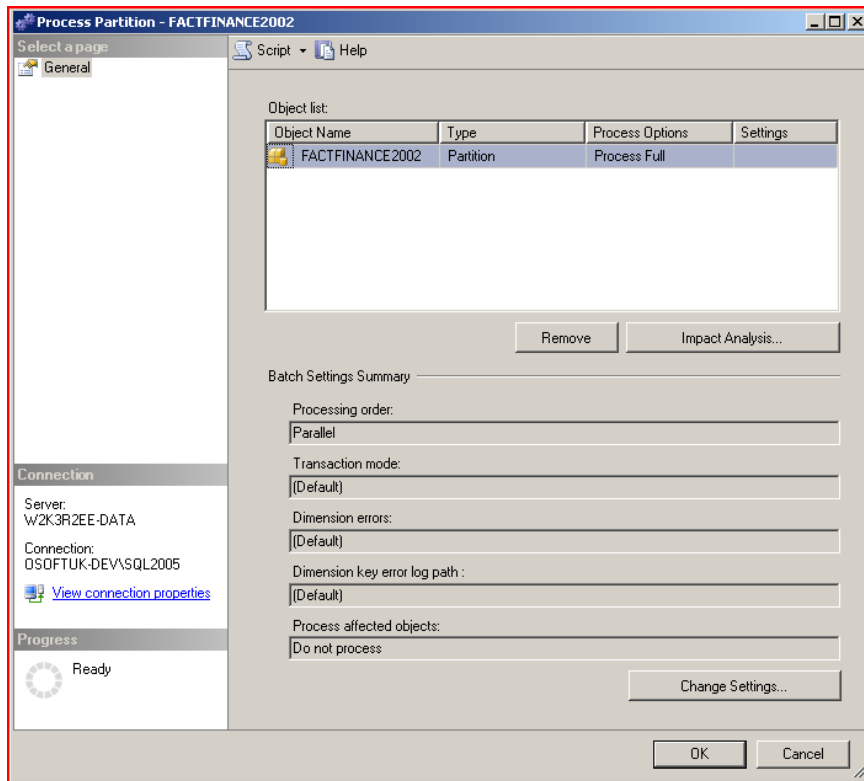
Process Now

< Back Next > Finish Cancel

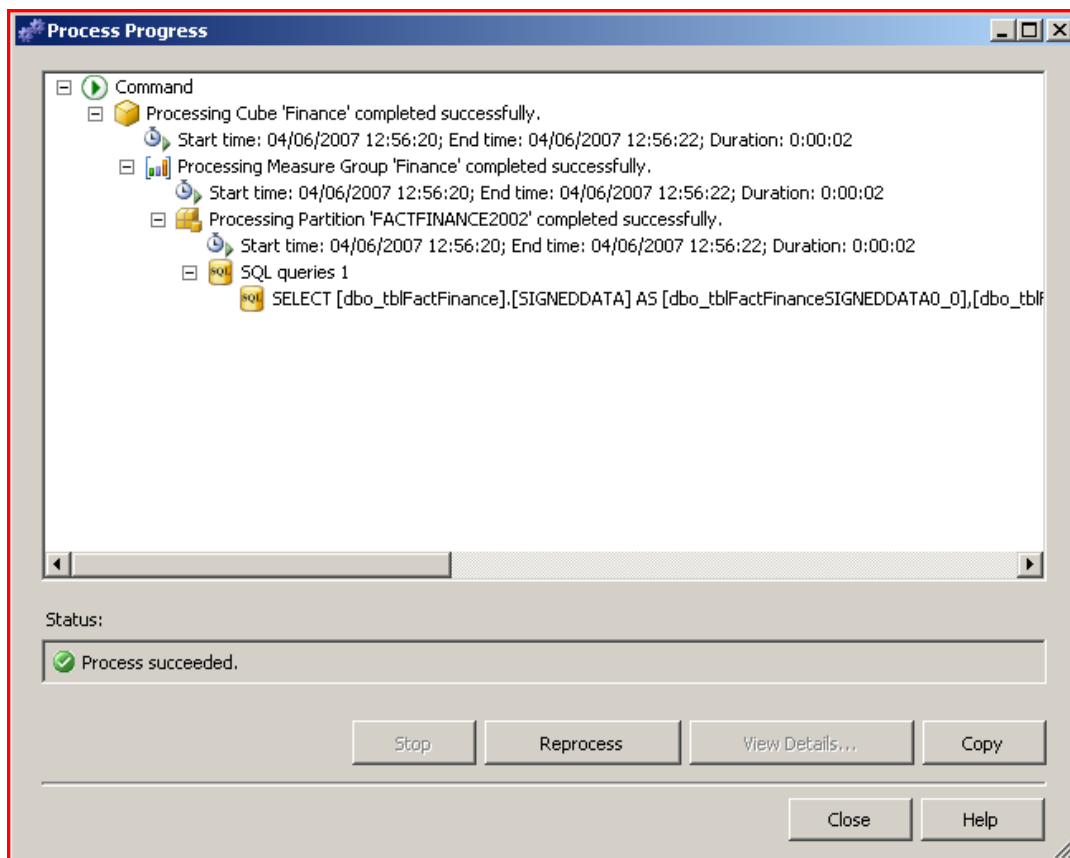
Note1: If you want to define several partitions, DO NOT CHECK 'Process Now' option.
You need to do it once when you define last partition.

Note2: BPC is doesn't support aggregation in V5.1 and 7M.

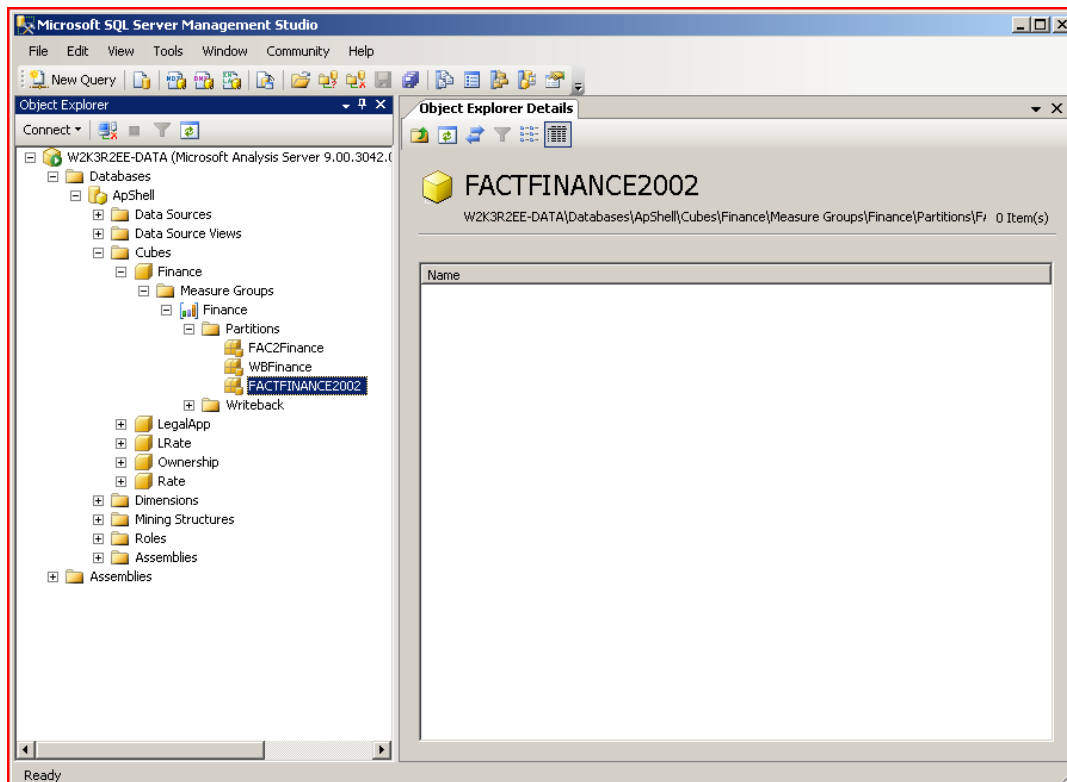
Based on the test result, SQL2005 never improved query performance with aggregation.
Even though user defines it, it will not maintain when user runs admin functions like modify application from BPC admin console.



Once the **Process Progress** window has successfully completed processing the cube, click the **Close** button.



The newly created partition will be present in the Microsoft SQL Server Management Studio, under *Cubes -> Finance -> Measures Groups -> Finance -> Partitions*.



Repeat the creation of new partitions until all time slices in the chosen Fact table have been accounted for.

Final Note: If any time periods are not represented in a partition then the data for that time period will not be available, so maintenance is required when adding additional time periods.

www.sdn.sap.com/irj/bpx/epm