

How-to Guide
SAP EPM



How To... Create Partitions in SSAS of SAP BusinessObjects Planning and Consolidation

Version 2.00 - July 2009

Applicable Releases:
SAP BPC 5.x

©Copyright 2007 SAP AG. All rights reserved.

No part of this publication may be reproduced or transmitted in any form or for any purpose without the express permission of SAP AG. The information contained herein may be changed without prior notice.

Some software products marketed by SAP AG and its distributors contain proprietary software components of other software vendors.

Microsoft, Windows, Outlook, and PowerPoint are registered trademarks of Microsoft Corporation.

IBM, DB2, DB2 Universal Database, OS/2, Parallel Sysplex, MVS/ESA, AIX, S/390, AS/400, OS/390, OS/400, iSeries, pSeries, xSeries, zSeries, z/OS, AFP, Intelligent Miner, WebSphere, Netfinity, Tivoli, and Informix are trademarks or registered trademarks of IBM Corporation in the United States and/or other countries.

Oracle is a registered trademark of Oracle Corporation.

UNIX, X/Open, OSF/1, and Motif are registered trademarks of the Open Group.

Citrix, ICA, Program Neighborhood, MetaFrame, WinFrame, VideoFrame, and MultiWin are trademarks or registered trademarks of Citrix Systems, Inc.

HTML, XML, XHTML and W3C are trademarks or registered trademarks of W3C®, World Wide Web Consortium, Massachusetts Institute of Technology.

Java is a registered trademark of Sun Microsystems, Inc.

JavaScript is a registered trademark of Sun Microsystems, Inc., used under license for technology invented and implemented by Netscape.

MaxDB is a trademark of MySQL AB, Sweden.

SAP, R/3, mySAP, mySAP.com, xApps, xApp, and other SAP products and services mentioned herein as well as their respective logos are trademarks or registered trademarks of SAP AG in Germany and in several other countries all over the world. All other product and service names mentioned are the trademarks of their respective companies. Data

contained in this document serves informational purposes only. National product specifications may vary.

These materials are subject to change without notice. These materials are provided by SAP AG and its affiliated companies ("SAP Group") for informational purposes only, without representation or warranty of any kind, and SAP Group shall not be liable for errors or omissions with respect to the materials. The only warranties for SAP Group products and services are those that are set forth in the express warranty statements accompanying such products and services, if any. Nothing herein should be construed as constituting an additional warranty.

These materials are provided "as is" without a warranty of any kind, either express or implied, including but not limited to, the implied warranties of merchantability, fitness for a particular purpose, or non-infringement. SAP shall not be liable for damages of any kind including without limitation direct, special, indirect, or consequential damages that may result from the use of these materials.

SAP does not warrant the accuracy or completeness of the information, text, graphics, links or other items contained within these materials. SAP has no control over the information that you may access through the use of hot links contained in these materials and does not endorse your use of third party web pages nor provide any warranty whatsoever relating to third party web pages.

SAP CPM "How-to" Guides are intended to simplify the product implementation. While specific product features and procedures typically are explained in a practical business context, it is not implied that those features and procedures are the only approach in solving a specific business problem using SAP. Should you wish to receive additional information, clarification or support, please refer to SAP Consulting.

Any software coding and/or code lines / strings ("Code") included in this documentation are only examples and are not intended to be used in a productive system environment. The Code is only intended better explain and visualize the syntax and phrasing rules of certain coding. SAP does not warrant the correctness and completeness of the Code given herein, and SAP shall not be liable for errors or damages caused by the usage of the Code, except if such damages were caused by SAP intentionally or grossly negligent.

Table of Contents

1	(Business) Scenario	1
2	Introduction.....	1
3	SSAS Partitioning	2
3.1	Sample Partition for Finance Cube	2
4	Creating Partitions in SSAS.....	3

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.

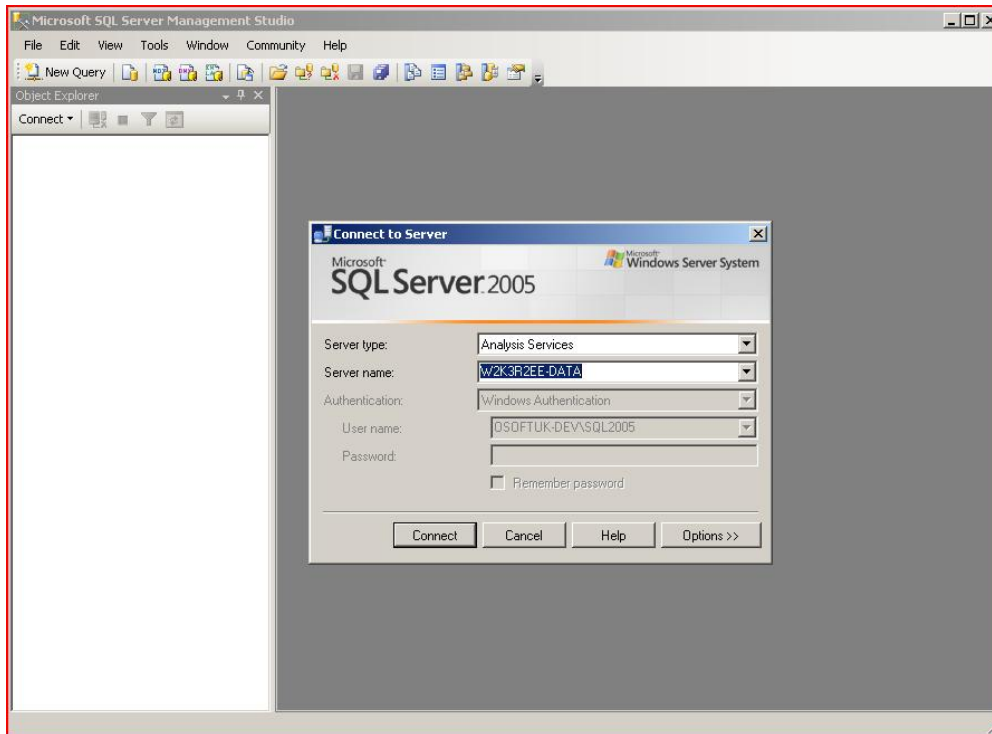
So try it.

3.1 Sample Partition for Finance Cube

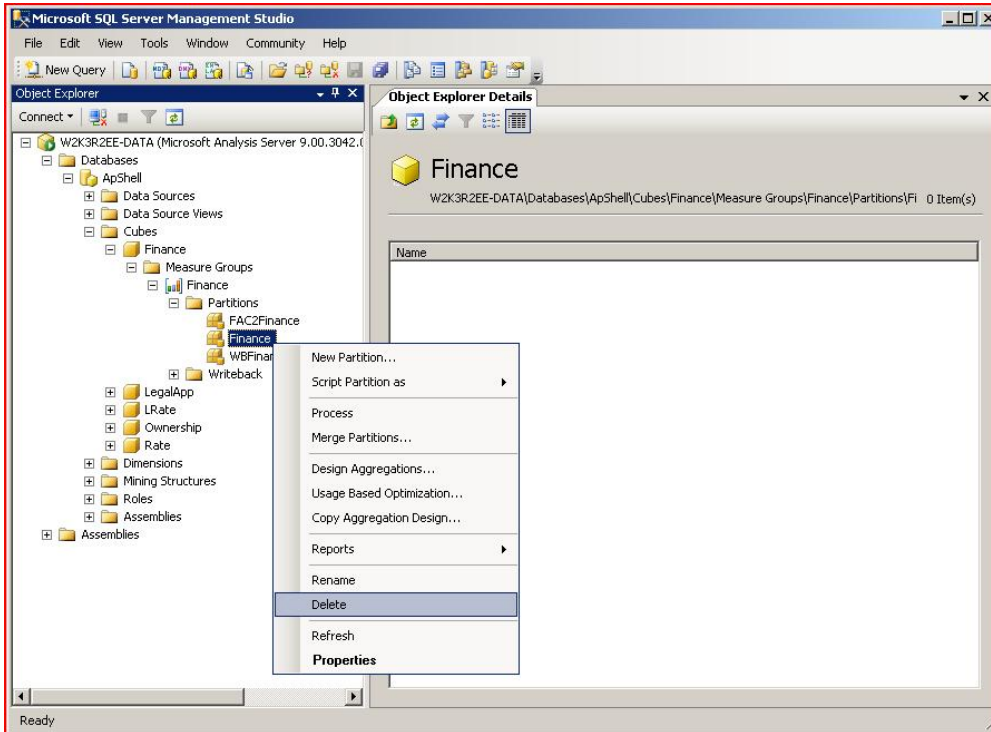
Partition Name	Fact Table	Slice	WHERE Clause	Storage Mode
FACTFINANCE2002	dbo.tblFactFINANCE	2002.TOTAL	(dbo.tblFactFINANCE.TIMEID >= '20020100') AND (dbo.tblFactFINANCE.TIMEID <= '20021200')	MOLAP
FACTFINANCE2003	dbo.tblFactFINANCE	2003.TOTAL	(dbo.tblFactFINANCE.TIMEID >= '20030100') AND (dbo.tblFactFINANCE.TIMEID <= '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

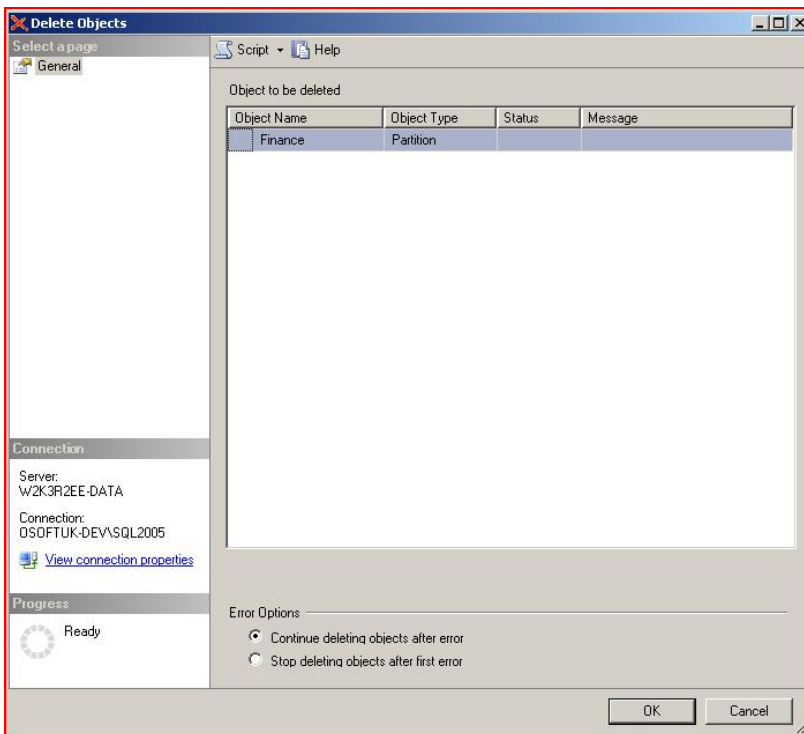
Using [Microsoft SQL Server Management Studio](#), connect to Analysis Service instance.



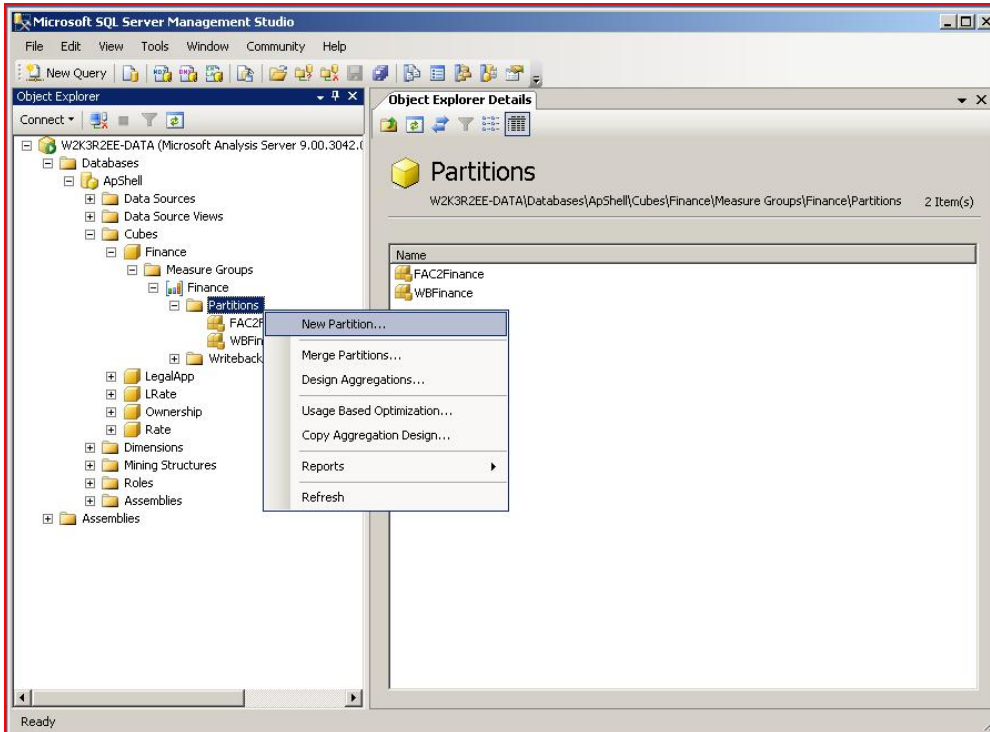
Within the [Cubes](#) folder, open navigate to the Fact partition of the required cube, for example *Cubes -> Finance -> Measures Groups -> Finance -> Partitions -> Finance*. Delete the [Finance](#) partition by right clicking on the partition and select [Delete](#).



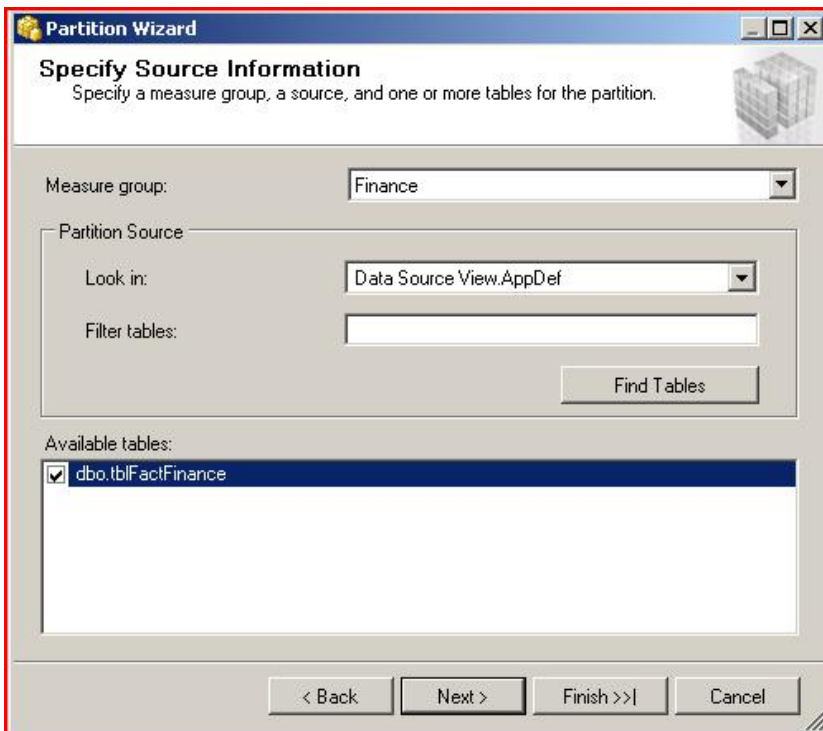
At the **Delete Object** window, click **OK** button in-order to delete the chosen Fact partition.



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.

Partition Wizard

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.

Partition Wizard

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

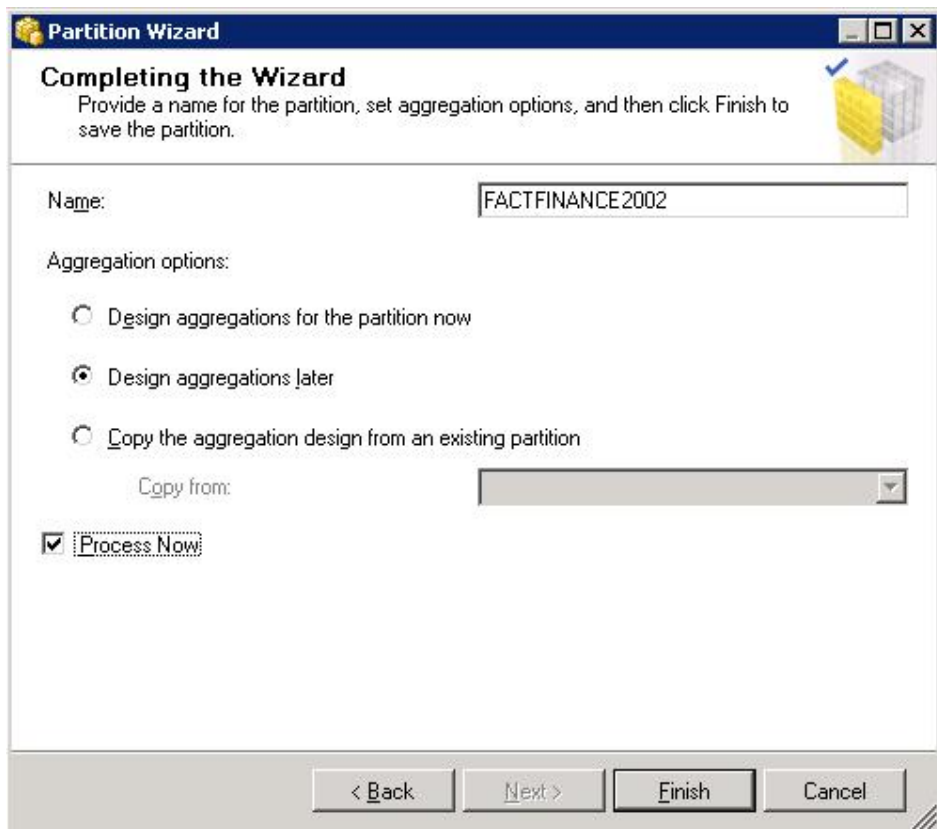
Default server location:

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.



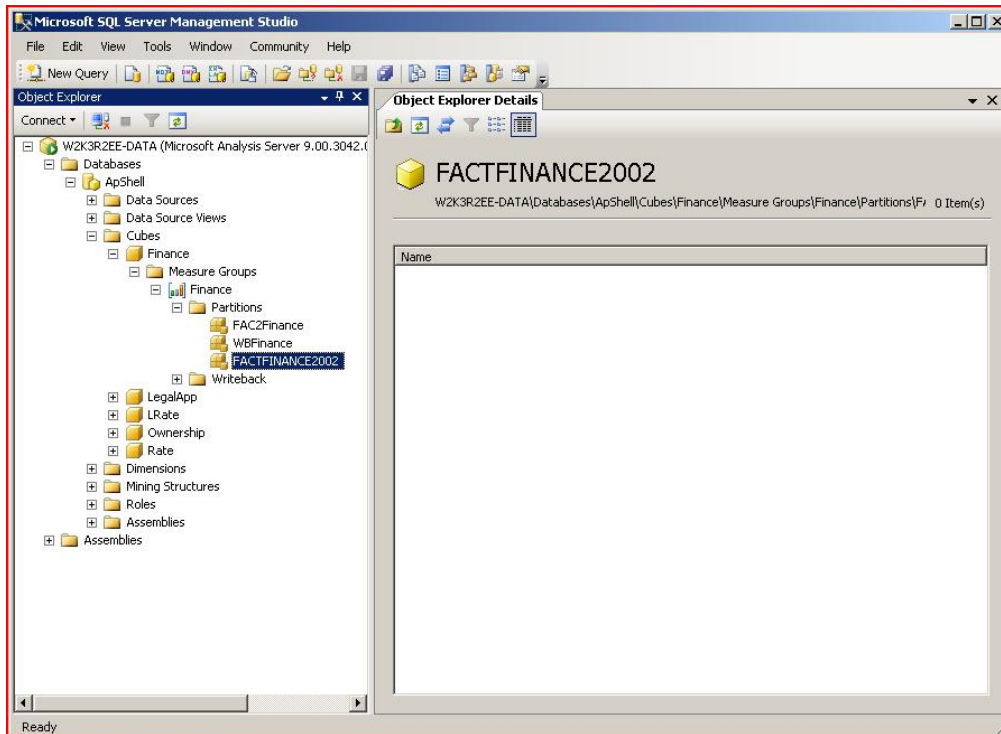
The screenshot shows the 'Partition Wizard' dialog box, specifically the 'Completing the Wizard' step. The title bar reads 'Partition Wizard'. Below the title bar, the main heading is 'Completing the Wizard' with a sub-instruction: 'Provide a name for the partition, set aggregation options, and then click Finish to save the partition.' The 'Name' field contains 'FACTFINANCE2002'. Under 'Aggregation options', three radio buttons are present: 'Design aggregations for the partition now' (unselected), 'Design aggregations later' (selected), and 'Copy the aggregation design from an existing partition' (unselected). Below these is a 'Copy from:' dropdown menu. At the bottom left, the 'Process Now' checkbox is checked. At the bottom right, there are four buttons: '< Back', 'Next >', 'Finish', and '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.

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