

InfoProvider Redesign Functions- Part 1: Repartitioning



Applies to:

SAP NetWeaver BW. For more information, visit the [EDW homepage](#)

Summary

This document provides a detailed insight into Redesigning InfoProviders by the Process of Repartitioning. The technique has been explained in detail and then implemented with utmost attention to explanation of every minute detail.

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Overview of Repartitioning

After Several years of operation in SAP BW installations, the requirement may arise to redesign the data model.

There are 2 different methods of redesigning components:

- Repartitioning
- Remodeling

We will cover Repartitioning in this document.

Use

You use partitioning to split the total dataset for an InfoProvider into several, smaller, physically independent and redundancy-free units. This separation improves system performance when you analyze data delete data from the InfoProvider.

Prerequisites

You can only partition a dataset using one of the two partitioning criteria 'calendar month' (0CALMONTH) or 'fiscal year/period' (0FISCPER). At least one of the two InfoObjects must be contained in the InfoProvider.

Features

When you activate the InfoProvider, the system creates the table on the database with one of the number of partitions corresponding to the value range. You can set the value range yourself.

Choose the partitioning criterion 0CALMONTH and determine the value range

From 01.1998 To 12.2003

6 years x 12 months + 2 = 74 partitions are created (2 partitions for values that lay outside of the range, meaning < 01.1998 or >12.2003).

You can also determine the maximum number of partitions created on the database for this table.

Choose the partitioning criterion 0CALMONTH and determine the value range

From 01.1998 To 12.2003

Choose 30 as the maximum number of partitions.

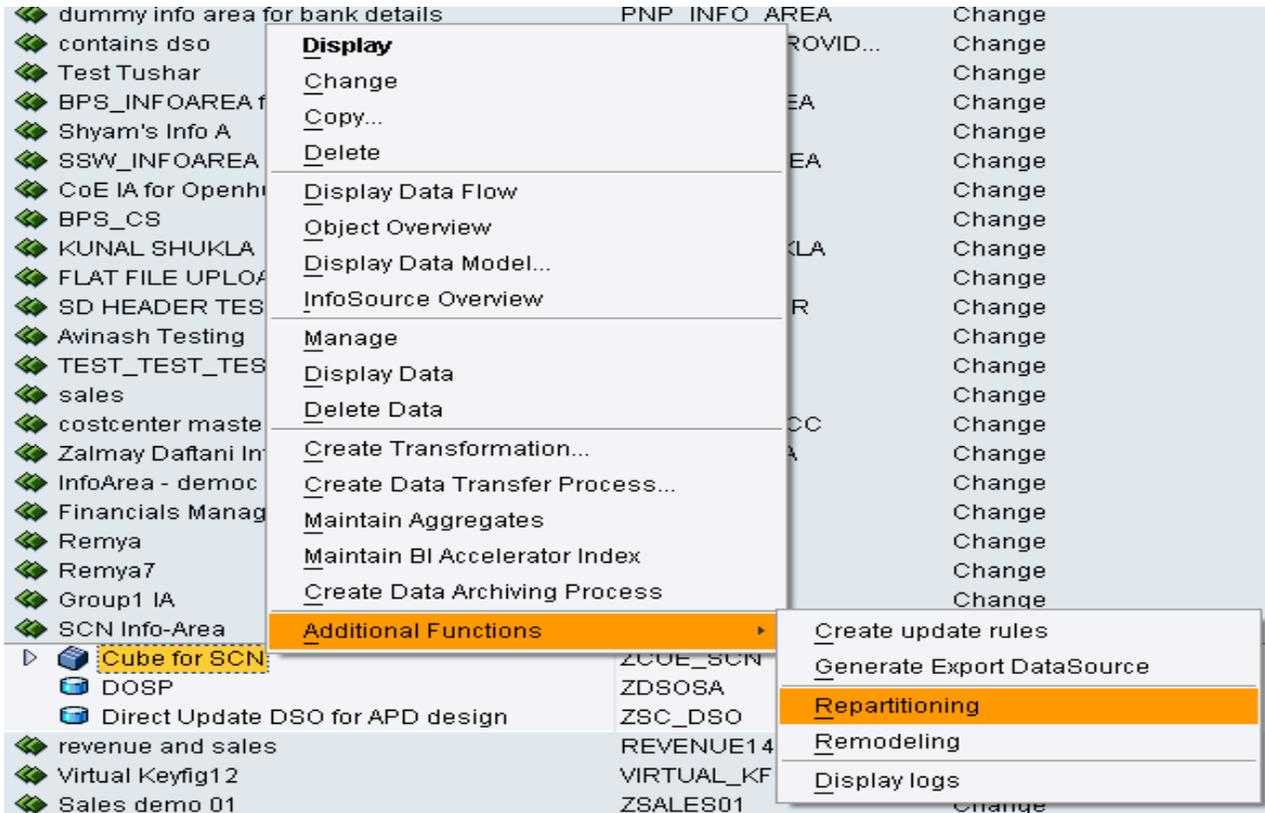
Resulting from the value range: 6 years x 12 calendar months + 2 marginal partitions (up to 01.1998, from 12.2003) = 74 single values.

The system groups three months together at a time in a partition (meaning that a partition corresponds to exactly one quarter); in this way, 6 years x 4 partitions/year + 2 marginal partitions = 26 partitions created on the database.

The performance gain is only achieved for the partitioned InfoProvider if the time characteristics of the InfoProvider are consistent. This means that with a partition using 0CALMONTH, all values of the 0CAL x characteristics of a data record have to match.

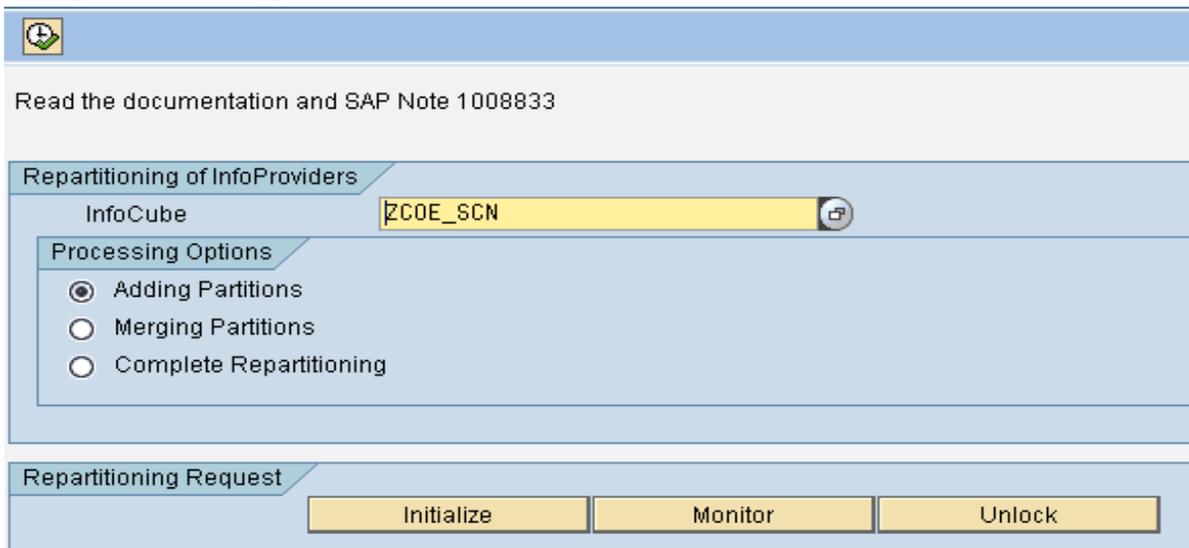
Illustrated Implementation Repartitioning Procedure

To carry out the Repartitioning procedure, Right click on your InfoCube and in the context menu, navigate through Additional Functions → Repartitioning.



You will get the following window after clicking on Repartitioning

Repartitioning of InfoProviders



Because the InfoCube we have selected has not been partitioned yet, use the Complete partitioning option as circled in red below and then click on Initialize.

Repartitioning of InfoProviders

InfoCube

Processing Options

Adding Partitions

Merging Partitions

Complete Repartitioning

Repartitioning Request

Note: Fundamental conversations take place in the database during the repartitioning process. The standard/recommended practice is to back up the data before we start the repartitioning process. This reduces the risk of critical data loss in case of an error

As we will follow the standard practice of data-backup, confirm the warning in the Confirmation of Database backup popup.

Read the documentation and SAP Note 1008833

Repartitioning of InfoProviders

InfoCube

Processing Options

Adding Partitions

Merging Partitions

Complete Repartitioning

Confirmation of Database Backup

Did you backup the database before you executed repartitioning?

Repartitioning Request

Now we will select the partitioning condition as 0CALMONTH here as circled in red below.

| Time characteristic | Long description | Select |
|---------------------|---------------------|----------------------------------|
| 0CALMONTH | Calendar Year/Month | <input checked="" type="radio"/> |
| 0CALMONTH2 | Calendar month | <input type="radio"/> |
| 0CALWEEK | Calendar Year/Week | <input type="radio"/> |
| 0CALYEAR | Calendar Year | <input type="radio"/> |

Press  to confirm the selection.

Now, the Value Range (Partitioning Condition) popup opens.

Here we have to specify the value range for which you want to create partitions based on 0CALMONTH.

Optionally, specify the Maximum number of Partitions. Here we will specify both as shown below.

Calendar year/month

From To

Options

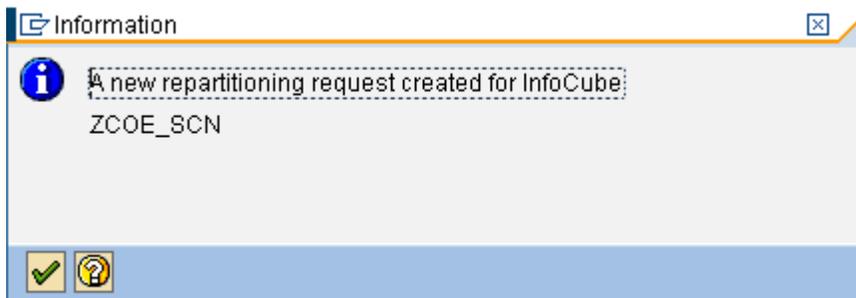
Max. no. partitions

Press Yes to rebuild the Aggregates after repartitioning.

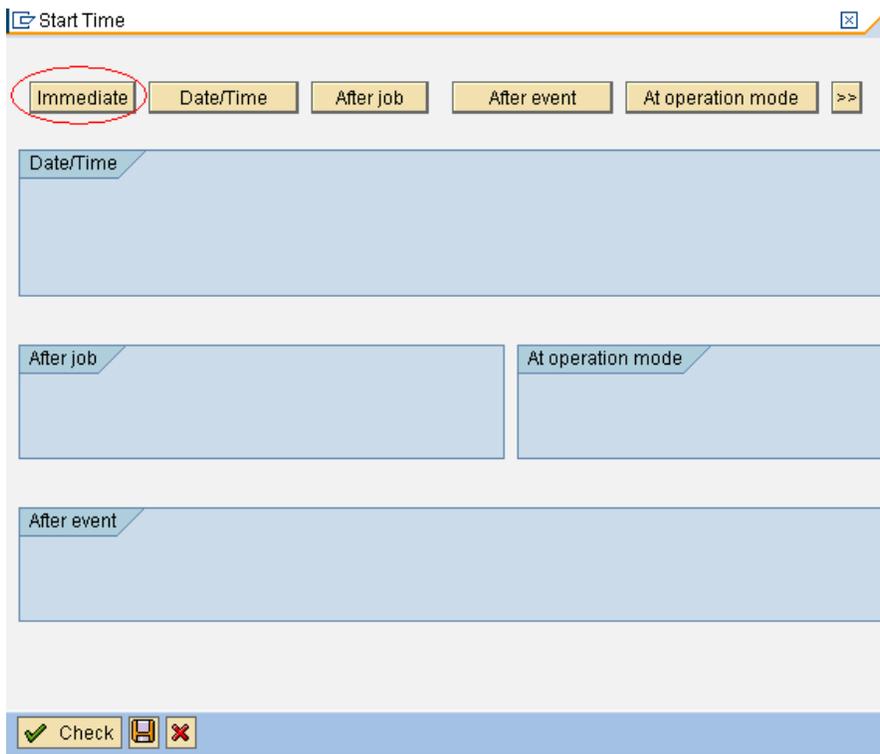


The information popup confirms that the repartitioning request has been created for the selected Infocube.

Confirm this popup as well.

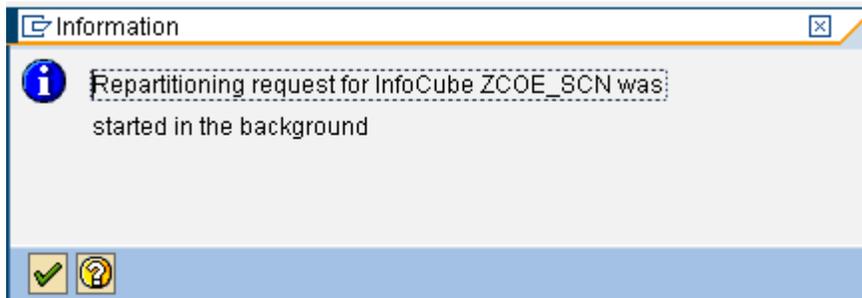


The request created here must be scheduled. We will choose Immediate scheduling in our scenario.



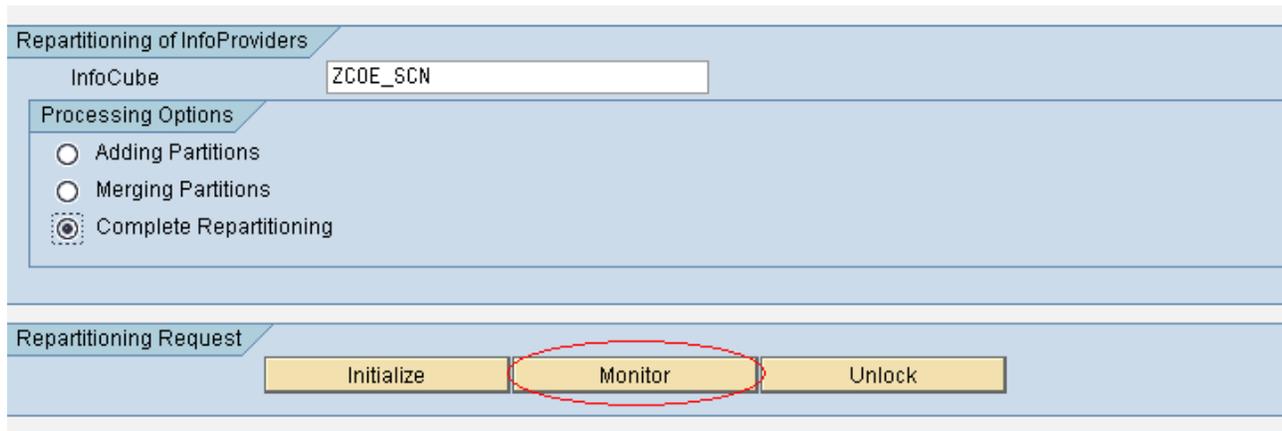
Now click on the Save Button(Circled in Red below) to confirm the changes.

The Information Pop-up confirms the start of Repartitioning Request processing.



Monitoring the Repartitioning Process

Launch the monitor in the selection screen for repartitioning by clicking the Monitor button (circled in Red below)



The monitor logs the steps carried out during the repartitioning along with their respective results as shown below. The green Overall status indicates that the remodeling has been successful.

Monitor Requests

The screenshot displays the 'Monitor Requests' window. On the left, there is a tree view of object names and their descriptions. The 'MONITOR' object is expanded, showing a list of tasks under 'Complete Repartitioning'. On the right, there is a 'Header' section with various technical details.

| Object Name | Description |
|-------------------------|----------------------------|
| MONITOR | Details of conversion |
| Complete Repartitioning | 200707 << >> 200709 |
| CREA_SHD_EFACT | Create shadow table /BI |
| CREA_SHD_FFACT | Create shadow table /BI |
| SPACE_CHECK | Check free space on DB |
| COPY_TO_SHD_EFACT | Copy all data records fro |
| COPY_TO_SHD_FFACT | Copy all data records fro |
| CREA_IDX | Create indexes on both : |
| SET_READ_LOCK | Set read lock for InfoCub |
| INA_AGGR | Deactivate all active agg |
| DELETE_FACTVIEW | Delete view of fact tables |
| CHECK_EFACT | Check data consistency |
| CHECK_FFACT | Check data consistency |
| SWITCH_EFACT | Swap E fact table /BIC/4I |
| SWITCH_FFACT | Swap F fact table /BIC/4I |
| CREA_FACTVIEW | Recreate view of fact tab |
| POST_ACT | Adapt BW metadata for I |
| REPA_IDX | Repair indexes for both 1 |
| ANALYZE | Calculate DB statistics f |
| RELEASE_READ_LOCK | Reset read lock for InfoC |
| ACT_AGGR | Reactivate all aggregate |
| CLEANUP | Various cleanup jobs |

| Header | |
|--------------------------|---------------------------------|
| 200707 << >> 200709 | |
| Technical Id for Request | E06B4A1A8812BDF1AEF2002219907D7 |
| Log Object | RSCNV |
| Log SubObject | RSCNV |
| Created By | BITDEV02 |
| Last Changed By | BITDEV02 |
| Date of Execution | 20.04.2011 |
| Time of Execution | 18:01:25 |
| Last Run Date | 20.04.2011 |
| Last Run Time | 18:01:25 |
| Status of Operation | Request completed successfully |

Related Content

http://help.sap.com/saphelp_nw70/helpdata/en/33/dc2038aa3bcd23e10000009b38f8cf/content.htm

http://help.sap.com/saphelp_nw70/helpdata/en/58/85e5414f070640e10000000a1550b0/content.htm

<https://forums.sme.sap.com/message.jspa?messageID=8149043>

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