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SAP® BW Performance Optimization

- ▶ Using BW Statistics Effectively
- ▶ Monitoring Performance Using the Workload Monitor
- ▶ Leveraging Tools and Utilities for the ETL and Reporting Processes
- ▶ Using Indexes to Understand the Performance of the ETL Process

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2 BW statistics

BW statistics is the component of SAP BW that is integrated with the solution precisely to help system administrators monitor the system and tune performance. In the SAP data warehousing world, it is as widely used as the SAP BW product itself to make the job of the BW administrators easy.

One of the main purposes of SAP BW is to help a business analyst analyze business related data from different perspectives. BW statistics plays an important role in this process, providing abundant information in the form of queries, workbooks, dashboards, and cockpits for the administrator on the different aspects of system usage. It is therefore important for a BW Administrator to understand this tool and utilize it to its fullest extent.

BW statistics



BW statistics needs to be separately activated in the BW system. It is a part of the technical content' and can be activated using an automated process, or the same process as is followed for activating the business content.

The technical content contains the BW statistics. BW statistics collects data for the following areas of analysis:

- ▶ Actions like slicing, dicing, filtering, etc. by users on the front end and processing of that action in the OLAP engine is captured as query runtimes.
- ▶ Runtimes of subprocesses for analytic indexes.
- ▶ Runtimes and status of data transfer and data processing in the Data Warehouse.
- ▶ The system records statistics on the runtimes and status of data transfer and data processing in the Data Warehouse. Statistics for the data transfer process are not activated as a default case and need to be activated in table RSDDSTATOBJLEVEL (Refer to SAP Note 966964).
- ▶ Runtimes for performing planning functions.

Depending on the area, the system writes the statistics recordings to tables RSDDSTAT* or UPC_STATISTIC*. For statistical analyses in Data Warehouse processes, tables RSMDATASTATE, RSMDATASTATE_EXT, RSDDSTATDTP, RSBKREQUEST, RSBSOURCEPROP, RSPCLOGCHAIN and RSPCPROCESSLOG are used too.

In SAP BW 3.5, the technical content also includes BW data slice:

- ▶ The BW data slice contains InfoCubes which in turn contain information about the data in other InfoCubes. A data slice is comprised of two following InfoCubes.
- ▶ BW data slice [0BWTC_C06]: This InfoCube contains information about combinations of characteristics per request loaded in an InfoCube. Selection conditions of InfoPackage fill the data in this InfoCube.
- ▶ Requests in InfoCube [0BWTC_C07]: InfoCube delivers the number of data records for the current InfoCube and for each individual request (without referring to the combination of characteristics).

Of the two, BW statistics is very useful in a monitoring system.

The following objects are contained in the BW statistics for analysis:

- ▶ Queries/Workbooks
- ▶ MultiProvider InfoCubes
- ▶ InfoSources
- ▶ DSO
- ▶ Transformations
- ▶ DataSources
- ▶ InfoObjects
- ▶ Process chains
- ▶ Dashboards/cockpit
- ▶ Roles

We will cover the following aspects in this chapter:

- ▶ Activating and updating BW statistics.
- ▶ Utilizing BW statistics queries for monitoring performance.
- ▶ Administration of BW statistics.

We will begin by learning how to activate BW statistics, explore the functions available within it, and finally look at how to utilize it most effectively.

Procedure 2.1: Activate BW statistics

BW statistics are contained within technical content.

The activation of BW statistics content is automated and this process installs all the technical content including the data flows, process chains, and also schedules the process chains.

Use transaction code SPRO • [SAP Reference IMG](#) and follow the path as shown in Figure 2.1.

SAP CUSTOMIZING IMPLEMENTATION GUIDE • SAP NETWEAVER • BUSINESS WAREHOUSE • SETTINGS FOR BI CONTENT • BUSINESS INTELLIGENCE • BI ADMINISTRATION COCKPIT • SET UP TECHNICAL CONTENT

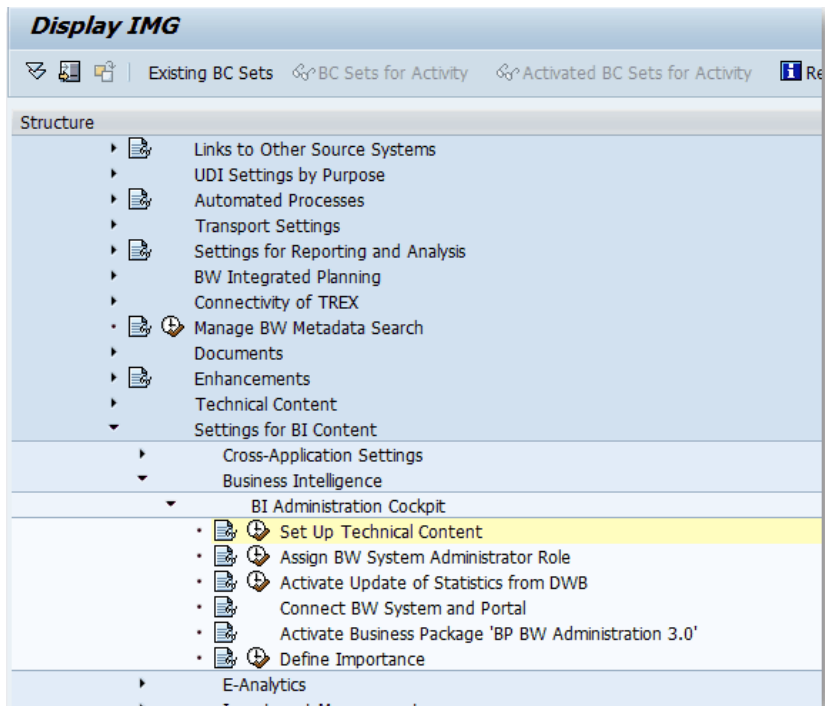


Figure 2.1: Program path to activate BW statistics BI content

You can also use transaction code RSTCT_INST_BIAC to access this program.

Program RSTCT_ACTIVATEADMINCOCKPIT_NEW as shown in Figure 2.2 below can be executed in foreground or background mode. Based on the option selected, transport request for the activated objects will be created.

Select the correct source system from which the statistics will be loaded.

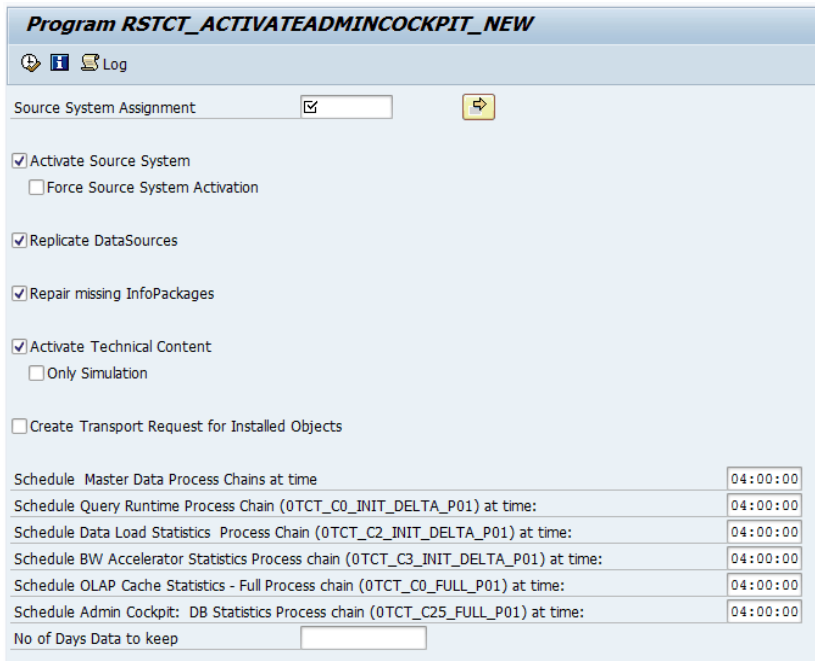


Figure 2.2: Program path to activate BW statistics BI content

As shown in Figure 2.2, scheduling all of the process chains can be done through the program. Set the appropriate time for each process chain.

In the case of systems upgraded from SAP BW 7.0 to SAP BW 7.3 and had BW statistics installed, delete following process chains:

- ▶ 0TCT_C2_DELTA_P01
- ▶ 0TCT_C2_INIT_P01
- ▶ 0TCT_C0_DELTA_P01
- ▶ 0TCT_C0_INIT_P01

After installing BW statistics successfully, check to ensure that all objects like data flows, queries, and BI cockpit are active. Assign a source system for all the virtual providers (0TCT_VC*) installed. The BW system can be monitored more effectively via Xcelsius Dashboards that are delivered as part of the technical content. Xcelsius Dashboards can be launched via transaction code RSTC_XCLS. The BI Admin Cockpit monitors can be viewed in portal or Xcelsius dashboards.

The automated process activates all of the BW statistics content. It does not provide any option to selectively activate specific areas of BW statistics. For selectively activating the BW statistics content, you can follow manual process of activation as described below.

Use the transaction code RSORBCT or menu path: SAP MENU • MODELING • ADMINISTRATOR WORKBENCH • BUSINESS CONTENT.

Select the INFOPROVIDERS BY INFOAREAS from the pane on the left hand side of the screen, as shown in Figure 2.3. All BW statistics InfoCubes and MultiProviders are under the technical content InfoArea.

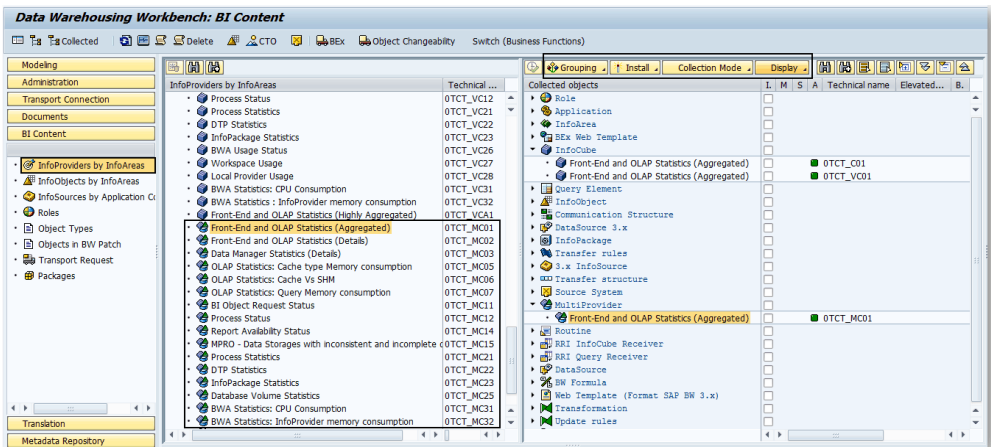


Figure 2.3: Activate Technical Content for BW statistics

On the right hand side of the screen under **Display**, select LIST instead of HIERARCHY [optional step]. Under the heading **Grouping**, select DATAFLOW BEFORE AND AFTERWARDS.

Now from the middle pane, drag and drop the desired MultiProvider(s) from the technical content to the right most pane. The system will start collecting the BW objects related to the BW statistics as shown in Figure

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