BW Performance Monitoring

Applies to:

SAP BW 7.0. For more information, visit the EDW homepage.

Summary

This article helps to achieve BW statistics of the system which will help a user to calculate the performance for a particular period and based on the statistics he will be able to do the system analysis.

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Introduction

If you are analyzing the performance of a system, you should normally start with the workload overview. You can also display the total values for all instances, and compare the performance of particular instances over a period of time. A wide range of analysis views and data helps you to find the source of performance problems quickly and easily.

You can use the workload monitor to display the following, among other things:

❖ Number of instances configured for your system

❖ Number of users working on the different instances

❖ Response time distribution

❖ Distribution of workload by transaction steps, transactions, packages,applications

❖ Transactions with the largest response times and database time

❖ Memory usage for each transaction or each user per dialog step

❖ Workload caused by RFC, broken down by transactions, function modules, and destinations

❖ Number and volume of spool requests

❖ Statistics about response time distribution, with or without the GUI time

❖ Optional: table accesses

❖ Workload and transactions used by users, broken down by users, accounting numbers, and clients

❖ Workload generated by requests from external systems

In addition to this you can also display data for any instance. Depending on the user mode you can choose the period for which you want to display data between day, week, month or Last minute's load.

Use TCode ST03 to navigate to Workload monitor screen.

Operating Workload Monitor

The Workload Monitor is a one-screen transaction that has as few additional menus as possible. This makes operation significantly easier.

The workload monitor has an interface that is divided into two parts. Use the tree structures on the left to make the following settings:

❖ Select the user mode
❖ Select the period for which you want to display the workload
❖ Select different functions and analysis views

The system then displays the result on the right in a standardized ALV Grid Control. You can use this to:

❖ Adjust the layout of the data output
❖ Find any information using sort and filter functions
❖ Save user-specific views
❖ Display statistics graphically
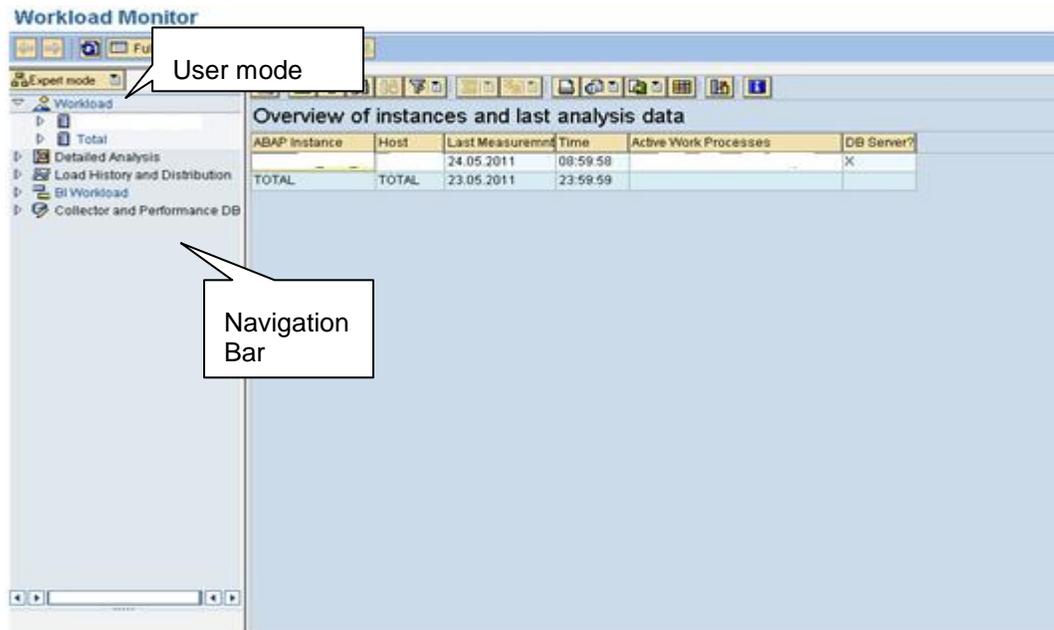
User Mode

It answers a question that which functions and which periods should be displayable?

The user mode determines the view of the statistics data of the workload monitor (transaction ST03). The design was conceived with different users in mind, so that the system displays different functions and time periods of monitoring, depending on the user mode you choose.

There are two different user modes. Each shows different information.

❖ *Service Engineer* mode

This mode provides you with the workload statistics for the current day and for the previous week, as well as an overview of the workload history and distribution, and a detailed analysis of the workload. This user mode is set up especially for SAP Service.

By default, the system displays all statistics for all application servers.

❖ *Expert* mode

This mode provides users with all of the functions available in the workload monitor. You can display all available workload data (daily, weekly, and monthly data).

Navigation Bar

You can choose any function by double clicking it.

❖ Workload
Depending on the user mode, you can define the instance and the period that you want to analyze here.
❖ Detailed Analysis
These functions read the workload directly from the statistics files of the individual instances.
❖ Load History and distribution
With these functions, you cannot display the workload for a particular instance and a particular period, but rather compare the workload of different instances or periods.
Display the most important data together therefore allows a direct comparison of the instances.
❖ Collector and Performance DB
You can use this function to define which values the statistics collector collects, how often, and how long they are to be retained in the database.

Analysis Views of the Workload Monitor

An analysis view is a particular aspect of the workload. Depending on which aspects of the workload you are interested in, you can display various workload parameters, sorted by different sort criteria such as by users, transaction steps, RFC destinations, and so on.

Following screen shot shows the analysis views tab and different options available:-

We will see the details for each type:-

❖ Workload Overview

The workload overview displays data about the workload that is written by the SAP kernel and displayed with the workload monitor. The workload overview provides system administrators with various detailed information about the most important workload data, such as the CPU time, the number of database changes, the response times, and so on.

❖ Transaction Profile

In the workload monitor, you can display the workload in different analysis views which highlight the workload from a particular perspective. One of these aspects is the question of which transactions cause which workload.

If you want to display the transaction details for specific transactions, you need to activate the *Transaction Detail Profiles* for these transactions first.

❖ Time Profile

The time profile displays the distribution of transaction steps over a day, meaning that you can easily identify periods of higher and lower workload. The time profile therefore displays the workload grouped by the hours of the day.

❖ Memory Use statistics

It gives the average or maximum values for the memory usage for a particular transaction or a particular user per dialog step. The memory usage is sorted by the user logged on during the analysis period. Double-click a line to display the memory usage of the selected user, sorted by transactions.

❖ RFC profiles

The RFC client and RFC server records contain data such as execution time and called function for individual RFCs. The RFC destination records contain the total of all RFC calls per destination and therefore no additional information about the called function modules.

❖ User and Settlement Statistics

It tells you how the system load is distributed among the different users and what the workload profile of an individual user looks like.

The output area contains five tab pages that display the most important workload data for individual users and the corresponding workload in this system on the tab pages *Clients*, *Account Numbers*.

❖ Frontend Statistics

It gives you the volume of data sent and received and the frontend processing times of the individual presentation servers.

❖ Spool Statistics

These are the Statistics about the number and volume of spool requests.

❖ Response Time Distribution

It gives you the statistics about the distribution of the response times, showing what percentage of the system requests were dealt with in what time, with or without GUI time.

❖ Load from External Systems

It gives you details about Workload for a system caused by requests from other systems, broken down by systems, actions, or users.

❖ Web Statistics

These are the details about Workload caused by Internet calls, on the client- and server-side, broken down by hosts, transactions, users, or the URL.

❖ DB Connection Statistics

These are the statistics for workload due to accesses to the database, broken down by different database connections. To display the workload broken down by different transactions or reports that used a specific database connection, select that database connection.

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