

**The monitoring infrastructure of the SAP NetWeaver™ platform lets administrators monitor SAP® landscapes using a central monitoring system. Performance data collected, stored, and aggregated by the monitoring infrastructure can now be transferred to the SAP Business Intelligence component of SAP NetWeaver. SAP Business Intelligence provides a sophisticated, cost-effective solution for reporting and analysis of all kinds of data, including performance data.**

## **PERFORMANCE-DATA REPORTING IN SAP® BUSINESS INTELLIGENCE**

IT departments and hosting service providers must prove that they're complying with predetermined service levels. To accomplish this, they use reporting tools to collect history data for long-term service-level reporting. In addition to their constant efforts to reduce the cost of obtaining data, IT groups and hosting providers are always trying to improve their methods of managing and analyzing large quantities of information. Better management and analysis of data means greater efficiency, productivity, reporting, and communications throughout an entire enterprise, which enables managers to improve their decision making.

The SAP® Business Intelligence component (SAP BI) of the SAP NetWeaver™ platform provides a sophisticated, cost-effective solution for performance and availability reporting. After SAP BI is configured and reports are designed, performance reporting with SAP BI reduces your total cost of operations and increases efficiency.

### **High-Level Reporting with Integrated Functionalities**

Performance reporting using SAP BI provides the following integrated functionalities:

- High-level reporting on performance-history data that proves predetermined service levels have been achieved (for example, for response times and availability)
- Trend analyses that tell you when problems from changes in performance values (such as the growth of a database) are about to occur so you can take preventive measures
- Correlation methods that determine the cause of a problem, such as poor dialog response time or high CPU utilization, so you can correct it

As illustrated in Figure 1, the preconfigured business content of SAP BI includes a number of queries and Web reports that demonstrate how to use SAP BI for high-level performance and availability reporting. A drill-down function lets you review detailed data; for example, you can drill down from a monthly overview to a daily overview. You can also use Business Explorer, a set of front-end tools for SAP BI, to create your own performance queries and Web reports that are customized for your reporting needs.

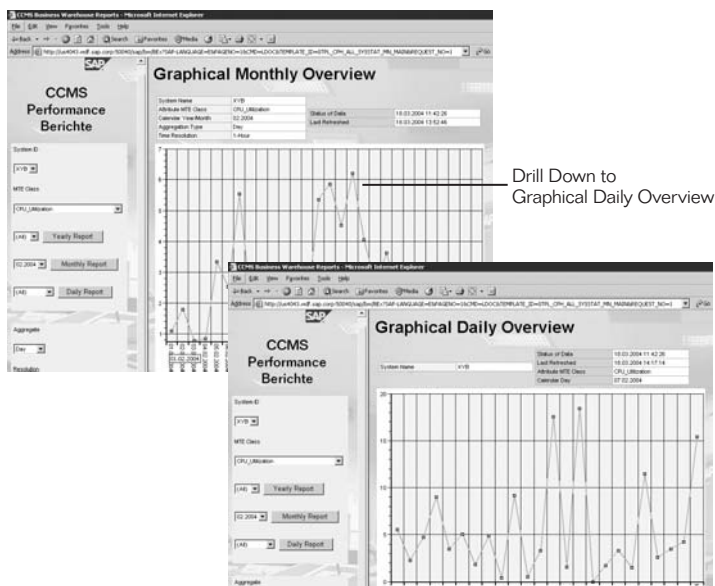


Figure 1: Using Drill-Down Functions to Review Detailed Data

### Central Monitoring of SAP Landscapes

The monitoring infrastructure of SAP NetWeaver lets administrators monitor SAP landscapes using a central monitoring system. This open ABAP™-based infrastructure, the “computing center management system” widely known as CCMS, lets you monitor almost any object. Performance data, availability data, and other vital information are stored in the shared-memory segments of monitored components for a maximum of 24 hours. In the central monitoring system, monitors provide central views on local data.

Performance data typically includes information on the following metrics:

- Availability of systems or application servers
- Dialog response times
- Efficiency of buffers
- Utilization of CPUs

### Central Collection of Performance Data

The infrastructure includes the central performance history, a functionality that lets you store and manage selected performance data from monitored components in the database of the central monitoring system. Stored performance data can be transferred to SAP BI for high-level reporting. The central performance history allows you to store data for long time periods, which you can define according to your reporting needs (limited only by disk capacity). For example, you may want to aggregate minute data to average minute values per quarter-hour after five days.

The central performance history provides the following:

- A central site for collecting and permanently storing selected performance data
- Data resolutions covering time periods from one minute to one day
- Data consolidation and reorganization
- Accessibility from any of your alert monitors

Figure 2 illustrates the extraction of data from the source (the central performance history of the central monitoring system) to the target, SAP BI, where performance reporting is performed.

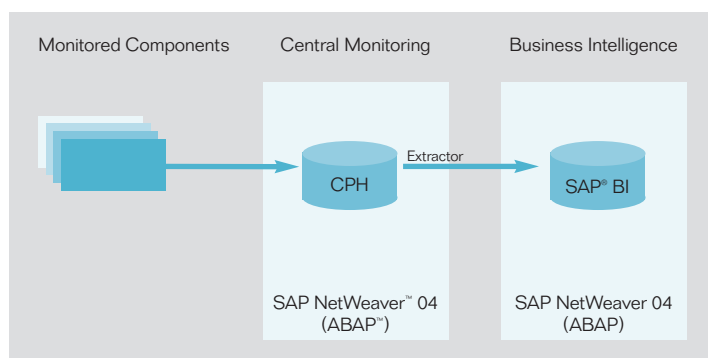


Figure 2: Extraction of Data from Source System to Target System

### Prerequisites

The source system and target system must meet the following additional prerequisites:

- Basis Plug-In 2004.1 in the source system
- SAP BI content 3.52 add-on in the target system
- Administrator expertise in:
  - Monitoring infrastructure, including the central performance history
  - SAP BI

### Configuration Steps

For the source system and the target system, which are both based on SAP NetWeaver, the following configuration steps are required.

#### Source System

To use data from the central performance history in SAP BI, the central performance history must be configured and active in the central monitoring system (source system) with the following requirements:

- The systems for which the central performance history collects performance data must be registered in the central monitoring system as monitored systems.
- The configuration of the central performance history must be complete; the desired nodes must be assigned a valid collection-and-reorganization schema.
- The data sources used to extract central performance history data must be activated to generate source structures.

#### Target System

To use the target system, you must perform the following configuration steps in SAP BI:

- Activate the available business content for performance reporting
- Register the source system
- Define data selections (“InfoPackages”) for extracting data from the source system

#### Data Transfer to SAP BI

After the configuration steps are finished, data must be transferred from the source system to SAP BI. Initially, all of the data from the central performance history is copied to SAP BI. Since the retention period and resolutions of selected performance values are also copied from the central performance history to SAP BI, you can establish settings for the data, resolution, and time period for which the data will be stored in the central monitoring system. New data is transferred from the source system to SAP BI once a day.

#### Data Management in SAP BI

The data transferred from the source system is stored in SAP BI in data containers called InfoCubes. Queries can be performed and performance reports generated based on the data in the InfoCubes. SAP BI is used only for reporting and data output. Performance data is regularly reorganized in both the source system and target system.

### Data Storage in InfoCubes

Central performance history data is also stored in SAP BI in InfoCubes. Various InfoCubes are combined in virtual InfoCubes, and queries are defined for one or more InfoCubes.

The following InfoCubes are available as content specific to the CCMS:

- InfoCubes containing the central performance history data according to resolutions of performance values. This distribution of data to different InfoCubes leads to better performance when data is requested in SAP BI. For most queries, data in only one resolution is requested, which means there is less data to be read. The following InfoCubes are available:
  - One-minute performance values
  - 15-minute performance values
  - One-hour performance values
  - One-day performance values
- An InfoCube for online data in all resolutions that allows you to obtain current performance data not yet stored in the central performance history directly from the monitored components

### Reporting

Query definitions are made using the query designer, an independent desktop application that is part of the Business Explorer tool set. With the query designer you can perform ad hoc queries based on your query definition or use the Web application designer – another tool in the Business Explorer tool set – to create sophisticated Web-reporting templates.

### Data Reorganization

The data in the central performance history and the corresponding data in SAP BI are automatically reorganized at regular intervals so the quantity of data doesn't exceed predetermined limits.

### Lower Costs, Higher Efficiency

For reporting on collected performance data, the functionalities of SAP BI deliver the following business benefits:

- Lower total operating cost for performance reporting
- Greater productivity due to efficient management of large quantities of data
- Better decision making due to:
  - Improved data analysis from correlation of different, even independent, data sources (for example, the CCMS, mySAP™ Customer Relationship Management, and mySAP ERP Financials solutions)
  - Accurate, useful forecasting data
  - High-level analysis and reporting
- Improved communication due to flexible, customized reports and personalized Web reporting in the SAP Enterprise Portal component of SAP NetWeaver
- Greater efficiency due to the linking of reports for drill-down analyses

### Find Out More

For more information, please see the following quick links in the SAP Service Marketplace extranet:

- Monitoring (<http://service.sap.com/monitoring>)
- SAP BI (<http://service.sap.com/BI>)