



Virtual Brochure

Monitoring the SAP Web AS Java System of SAP NetWeaver 04

Introduction

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Documentation in the SAP Service Marketplace

You can find this documentation at the following Internet address:
service.sap.com/instguides

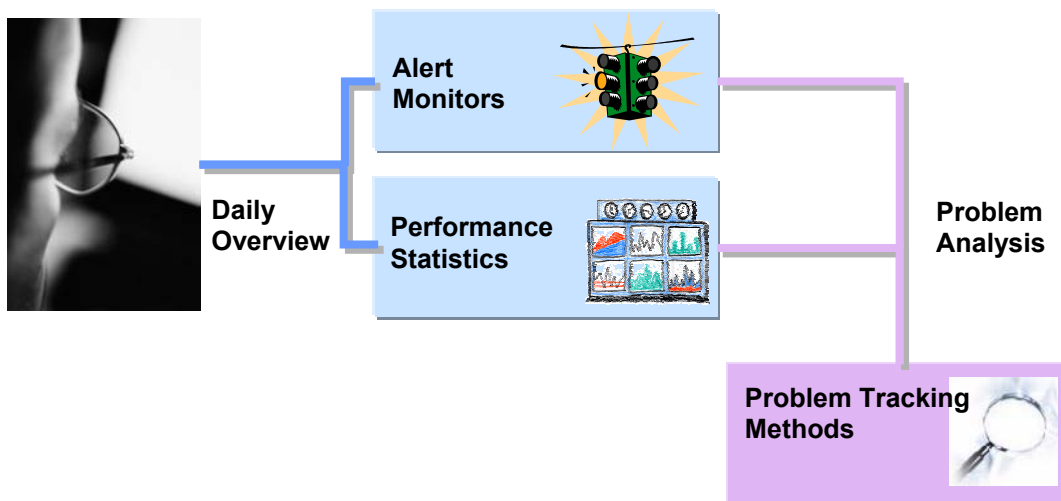
Monitoring the SAP Web AS Java

The Java system of SAP NetWeaver can be fully integrated in the SAP Web Application Server. Monitoring of SAP Web AS Java Systems can be done centrally with the for customers well known Computing Center Management System (CCMS) with which an administrator can monitor the whole SAP system landscape, both ABAP and Java systems. The CCMS is part of an ABAP system. To monitor the SAP Web AS Java 6.40 it is recommended to use an ABAP system 6.40 to have the full functionality.

[Quick Link to latest news:
New Features in Release 6.40
\(VC session 20 min.\)](#)

<http://www.service.sap.com/~sapidb/011000358700003282102004D>

The monitoring tasks of an administrator can be divided into two categories where the first is the daily overview, i. e. watching the running system, and the second is the problem analysis in case that an error has occurred.



For the first category SAP offers an alert monitor in the CCMS where all system- and application status values are reported to (transaction RZ20). The data you find inhere includes monitors for

- The status of all managers and services of the J2EE engine dispatcher and servers
- The J2EE applications
- The operating system
- Availability of the engine and the J2EE applications
- All log files, monitored for the appearance of error and fatal log messages

[Quicklink to deeper knowledge:
Interpreting the Monitor values
\(Slides with notes\)](#)

<http://www.service.sap.com/~sapidb/011000358700003284962004E>

All the data gets collected by the SAPCCMSR agent that has to run on the J2EE Engine host and be connected to the Central Monitoring System.

Monitors for which thresholds are defined create an alert if the threshold is met.

This alert can be coupled with a notification method sending an alarm e.g. as an e-mail, sms, or pager notification.

Central System – RZ20

The screenshot displays the SAP Central Monitoring Console interface. On the left, a tree view shows monitoring categories: CCMS monitor sets, SAP Business Workflow, SAP CCMS Monitor Templates, SAP CCMS Monitors for Optional Components, SAP CCMS Technical Expert Monitors, SAP CRM Monitor Templates, SAP Central Monitoring Console (highlighted), and SAP J2EE Monitor Templates. Below this, other categories like Adobe Document Services, ATI Systems, Application, BI UDC Systems, CCMS Selfmonitoring, Engines, Heartbeat, Logfiles, and Operating System are listed. On the right, several monitoring panels are visible: 'Applications' showing details for C11 instances, 'Engines' showing details for C11 Disp instances, and 'Heartbeat' showing details for BE6 GRMG instances. A status bar at the bottom indicates 'Scenario Executed Successfully' with a 0% completion rate and a reason for HTTP POST failure: 'HTTP communication failure'.

[Quicklink to introductive information: Central Monitoring for SAP NetWeaver \(VC session 25 min.\)](#)

<http://www.service.sap.com/~sapidb/011000358700003282122004E>

Besides the alert monitor another important monitoring tool is the **Global System Workload Analysis Tool**. There the administrator can control the performance of the J2EE Engine. The data is called “Distributed Statistics Records”. These records are aggregated and show average performance values like how long did it take to receive a response from a certain application today and is there an application with a significantly low performance.

Global System Workload Monitor

Workload Overview

Action Profile

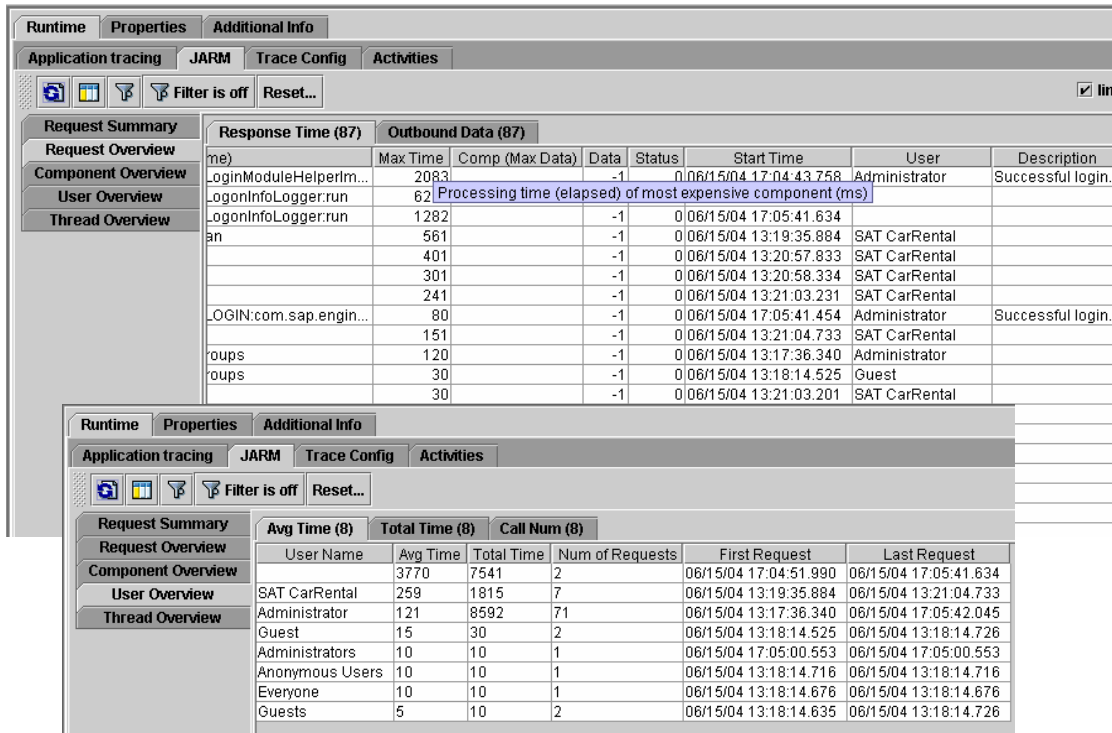
The screenshot shows the Global System Workload Analysis tool interface. It displays a 'Workload Overview: Average Time per Step in ms' table and an 'Action Profile: Average Values per Step in ms' table. The workload overview table shows data for WMO Request, ESB Request, and System. The action profile table shows data for various actions like Appl.: sap.com/EncyclopaediaPages, varies.jsp, and DDIF_FIELDINFO_GET.

Service Type	# Steps	@Resp.Tim	@Wait.Tim	@ CallTim	Memory
WMO Request	33.026	5,4	0,0	0,0	1,3
ESB Request	75.282	893,5	0,0	2,4	30,2
System	26	48,7	0,0	19,0	1,8

Executed Action	ActionType	# Steps	@ Resp.Time (ms)
Appl.: sap.com/EncyclopaediaPages	http	21.711	3.055,5
Appl.: sap.com/RFC Client EA	appinit	1	446,0
varies.jsp	http	9	409,3
Appl.: sap.com/EncyclopaediaPages	appinit	2	239,0
Appl.: sap.com/EncyclopaediaPages	appDestroy	2	141,5
DDIF_FIELDINFO_GET	RFC	2	86,5
RFC_GET_FUNCTION_INTERFACE	RFC	1	67,0

The DSRs collect performance values from the J2EE Engine and the total response time of deployed applications.

For the SAP Java applications the performance measurement is adapted to the special needs of the applications. The **Java Applications Responsetime Measurement (JARM)** collects performance data from the SAP applications and their single components and displays it in an aggregated view in the JARMViewer. There the 100 slowest requests are listed.



The screenshot displays the JARMViewer interface with two main panels. The top panel shows a 'Response Time (87)' table with columns for Max Time, Comp (Max Data), Data, Status, Start Time, User, and Description. The bottom panel shows a 'Total Time (8)' table with columns for User Name, Avg Time, Total Time, Num of Requests, First Request, and Last Request.

Response Time (87)		Outbound Data (87)					
me)	Max Time	Comp (Max Data)	Data	Status	Start Time	User	Description
ogonInfoLogger:run	62	Processing time (elapsed) of most expensive component (ms)					
an	1282						
	561						
	401						
	301						
	241						
_OGIN:com.sap.engin...	80						Successful login.
	151						
roups	120						
roups	30						
	30						

Total Time (8)		Call Num (8)			
User Name	Avg Time	Total Time	Num of Requests	First Request	Last Request
SAT CarRental	259	1815	7	06/15/04 13:19:35.884	06/15/04 13:21:04.733
Administrator	121	8592	71	06/15/04 13:17:36.340	06/15/04 17:05:42.045
Guest	15	30	2	06/15/04 13:18:14.525	06/15/04 13:18:14.726
Administrators	10	10	1	06/15/04 17:05:00.553	06/15/04 17:05:00.553
Anonymous Users	10	10	1	06/15/04 13:18:14.716	06/15/04 13:18:14.716
Everyone	10	10	1	06/15/04 13:18:14.676	06/15/04 13:18:14.676
Guests	5	10	2	06/15/04 13:18:14.635	06/15/04 13:18:14.726

If a problem occurred the Session Trace can be switched on which combines several tracing methods. The Session Trace gets activated by certain URL parameters and includes an application process flow trace, a database trace as well as a J2EE Engine performance trace.

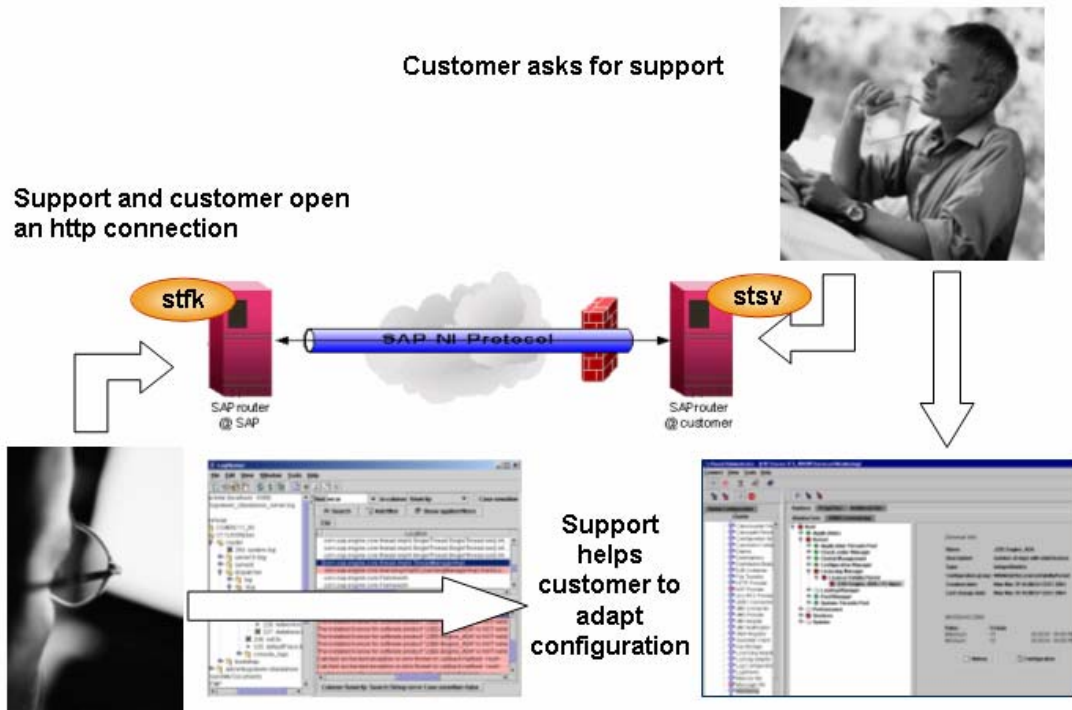
[Quicklink to deeper knowledge: Administration and Monitoring technical overview \(Slide show\)](#)

<http://www.service.sap.com/~sapidb/011000358700003286302004E>

As customers who implement SAP solutions have high expectations in terms of reliability and maintainability SAP pays high attention to make all applications supportable. An operable application provides appropriate mechanisms for customers to run and manage the specific application, such as

- centralized, standardized logging and tracing
- centrally available configuration information
- centrally available software version information
- heartbeats
- performance analyses

These mechanisms are delivered by all SAP Java applications. If the customer maintains the CCMS Central Monitoring Infrastructure with an ABAP System 6.40 optimal conditions for optimal support is guaranteed.



Want to know more?

- Detailed information on Central Monitoring can be found on the SAP Service Marketplace, quicklink <http://www.service.sap.com/monitoring> and quicklink <http://www.service.sap.com/javamonitoring>.
- Several virtual classroom sessions are provided, e.g. for the setup of the Central Monitoring Infrastructure (SAP CCMSR agent with j2ee option), for Central Performance History, and Availability Monitoring. To watch these sessions refer to the SAP Service Marketplace, quicklink <http://www.service.sap.com/elearn>.
- SAP offers a new customer classroom training:
ADM200 Administration of the SAP Web Application Server Java
- Latest information, discussions, newsgroups in the Software Developer Network <http://www.sdn.sap.com>.
- If you have questions, contact javamonitoring@sap.com