

Data sheet

FUJITSU Software openSM2 (Open Systems) Package Version 10.0

The package for SE servers for OSD/BC V10.0 and V11.0

System Performance Monitor

Product line openSM2

Round-the-clock performance monitoring forms the basis for effective and economic operation of IT systems. Fujitsu Technology Solutions offers the openSM2 product line, a consistent solution for corporate performance.

openSM2 provides comprehensive online monitoring with configurable alarm management, detailed bottleneck analyses as well as forecasts of future performance requirements and so gives the customer the capability to optimize the performance of his systems.

The openSM2 product line consists of the products openSM2 (BS2000) and openSM2 (Open Systems) package.

openSM2 (Open Systems)

openSM2 (Open Systems) supports the server systems Linux, Microsoft Windows, VMware vSphere, Xen and X2000, the storage systems ETERNUS DX and Symmetrix as well as SNMP-capable systems.

The openSM2 (Open Systems) package for the SE server offers, in conjunction with openSM2 (BS2000), a powerful solution to monitor all server units and application units in the SE server and the systems running on the server as well as the storage systems and SNMP capable devices (e.g. FC switches) in and connected to the SE server.

openSM2 on the SE server has a web-based user interface, the openSM2 Manager.



Features and Benefits

Main features	Benefits
<ul style="list-style-type: none">■ Simple installation and configuration■ Comfortable graphical user interfaces■ Central performance monitoring of heterogeneous IT infrastructures■ Uniform tool for various system types■ Simultaneous monitoring of several systems with a different system type■ Graphical and tabular presentation of the measurement data■ Rule-based verification of the measurement data■ Configurable alarms■ Automatically triggered actions■ Save the measurement data in a database■ Central analysis of systems with a different system type■ Accurate analysis with a flexible selection of the analysis period and measurement variables■ Automatic generation of a list of processes with the highest CPU consumption■ Automatic generation of hit lists of the monitored objects with the highest utilization values	<ul style="list-style-type: none">■ Ready to run■ Intuitive to use■ Efficient and transparent performance management■ Unified and graphically supported processing of all measurement data■ Swift estimation of the overall situation■ Precise assessment of system behavior■ Automated monitoring■ Early problem recognition■ Rapid reaction to problems■ Database to implement detailed analyses■ Standardized layout of diagrams■ Implementation of trend and bottleneck analyses■ Fast identification of the mains causes of peak loads■ Simple identification of overloaded resources

Topics

openSM2 Manager

The openSM2 Manager is the web-based user interface to monitor the performance of SE servers. The openSM2 Manager is available as add-on software in the SE Manager. It runs on the management unit and enables central monitoring of the systems in the SE server as well as additional systems outside the SE server insofar as this has been licensed and configured accordingly.

The components and systems in the SE server are automatically determined by the openSM2 Manager with the corresponding configuration of the SE server and are included in monitoring. If necessary, the openSM2 administrator must enter authentication data for the systems so that the agent can set up a connection to the systems. Furthermore, the openSM2 administrator can enter more systems that are to be monitored.

Agents collect at settable time intervals (measurement intervals) the measurement data for the current status of the monitored systems and save this data in a database. The agents run on the management unit and enter the data of the monitored systems remotely so that openSM2 does not have to be installed on these systems. An agent has to be installed locally on the monitored system only on BS2000 systems. It transfers the measurement data via a TCP/IP connection to the master agent on the management unit. Furthermore, if monitoring is also required for Windows systems, a Windows agent must be installed on a Windows system.

The measurement data is saved in two databases. A database contains the measurement data for the last 24 hours for the online monitoring. The second (optional) database contains archived measurement data for offline evaluations. The archive scope (i.e. the systems and values where measurement data is to be archived) can be configured. Furthermore, the archived measurement data can be compressed by putting several monitoring intervals together.

Several systems - and with various system types - can be combined in one system group. For example, a system group with all guest systems (VM) can be formed on a virtualized server. Dynamic system groups allow systems to be selected and grouped according to specific criteria. The members of these system groups are not permanently defined, but are determined dynamically via filter functions so that any newly added systems can also be automatically allocated to a system group. The monitored systems are displayed in a tree structure which visualizes the allocation of systems to system platforms and system groups. The colour of a system entry shows the system status.

In order to present measurement data, snapshot reports are available with the measurement values of the current measurement interval and time sequence reports with the time involved for the measurement values. The report can present the measurement data for an individual system or for a system group. The reports can be aligned, saved and opened in freely configurable report views. The charts in the

reports can be customized by selecting various diagram types (line, bar, logarithmic line, etc.), colors and other options.

A user administration with role concept assigns the various permissions to users. In addition to the presentation of measurement data for the monitored systems all users can set user-specific settings. Administrators can also set or modify global settings.

Each user can change the display name of the systems and define system groups. He can change the pre-defined report groups, reports and values as well as define new report groups, reports and values.

An administrator can define the systems to be monitored and set the settings for the agents. Furthermore, he can define the role and thus the permissions for other users. He can also export, archive or delete measurement data.

The performance data can be monitored by means of user-defined rules. Conditions and actions are defined in a rule. When all the rule conditions have been met, the defined actions are executed. The alarm status is displayed via the system entry colour defined in the rule in the system list.

The action initiated can be:

- open a report with the affected measurement size,
- initiate an acoustic alert,
- start a procedure on any monitored server system on which an agent runs,
- send an e-mail or SMS,
- send a SNMP trap.

Conditions for various systems can usually be linked as well. Different limits and actions can be defined for various times of the day in order to consider the various types of system usage, e.g. dialog mode during the day and batch mode during the night.

The main causes of load peaks are quickly identified by the automatic generation of a list of processes with the highest CPU consumption. Likewise, overloaded resources are easily found by automatic production of hit lists of the monitored objects with the highest utilization values.

Measurement data

openSM2 enters a large number of server and operating system measurement data for server systems.

- Utilization of processors in user and privileged mode
- Utilization of physical and virtual storage
- Paging and swapping activities
- Utilization of the paging file and the swap area
- Use of cache areas
- Number of inputs/outputs
- Utilization of the physical disks and logical partitions
- Transfer rates and access times for devices
- File accesses
- Utilization of filesystems
- Transfer rates for TCP/IP network connections
- Number of system calls
- Length and utilization of wait queues
- Number of processes, threads, etc.
- Resources consumption for processes and process groups

openSM2 collects measurement data from the entire server and the individual virtual machines for the virtualized server systems VMware vSphere, Xen and X2000.

- Number of virtual machines
- Number of the real and virtual processors
- Utilization of the processors as a whole and via the virtual machines
- Memory assignment via virtual machines
- Data transfer rates of the virtual block devices
- Data transfer rates of the network

Measurement data for storage systems are recorded on a system-global basis as well as for each volume based on read/write accesses.

- Access rates
- Data transfer rates
- Response times
- Cache hit rates

openSM2 collects measurement data from the groups for SNMP-capable systems

- IP
 - TCP
 - UDP
- of the SNMP-MIB-2.

The energy consumption is also recorded for the server units and application units in the SE server.

Technical details

Technical prerequisites: Hardware

SE server with server units x86, application units and storage systems ETERNUS DX

Technical prerequisites: Software

Monitored systems	Linux	SuSE Linux, Red Hat Enterprise Linux as released for AU and SU within the SE server
	Windows	Microsoft Windows Server as released for AU and SU within the SE server
	VMware	VMware vSphere and VMware ESX as released for AU and SU within the SE server
	Xen	Xen (SuSE or Red Hat Linux) and Citrix XenServer as released for AU and SU within the SE server
	X2000	X2000 (on server units x86) as of V6
	SNMP	SNMP V2

openSM2 Manager

SE Manager
Internet browser

Microsoft Internet Explorer : as supported by SE Manager

Mozilla Firefox: as supported by SE Manager

openSM2 (BS2000)

OSD/BC V10.0, V11.0 and OSD/XC V10.0, V11.0

User interface

German and English, others upon request

Installation

By the customer (see Release Notice)

Documentation

openSM2 User Guide
Help functions of the user interfaces

Demands on the user

In order to analyze and interpret the performance data, users should have an in-depth knowledge of the system.

Training

See course offer

Conditions

This software product is supplied to the customer under the conditions for the use of software products against a single payment or instalments.

Ordering and delivery

The software product may be obtained from your local Fujitsu Technology Solutions GmbH regional office.

More information

Fujitsu OPTIMIZATION Services

In addition to FUJITSU software BS2000 offers a large number of platform solutions. These combine the high-performance products from Fujitsu with optimum service concepts, many years of experience and worldwide partnerships

Dynamic Infrastructures

With its Dynamic Infrastructures strategy, Fujitsu offers a comprehensive portfolio of IT products, solutions and services, for example, solutions for the data center and managed infrastructures up to infrastructure-as-a-service. How much you benefit from Fujitsu technologies and services depends on the level of cooperation you choose. Your IT can thus reach new levels of flexibility and efficiency.

Computing products

de.fujitsu.com/products

- PRIMERGY: Industry standard servers
- SPARC Enterprise: UNIX servers
- PRIMEQUEST: Mission-critical IA servers
- ETERNUS: Storage system
- BS2000 Mainframe

Software

de.fujitsu.com/products/software/

- Operating systems
- Database products
- Resource orchestration
- Storage software
- System management

services

de.fujitsu.com/services

- Managed Services
- Infrastructure as a Service
- Consulting & Integration Services
- Maintenance & Support Services

More information

For more information about Fujitsu openSM2 (Open Systems), please contact your representative or visit our web site: <http://de.fujitsu.com/bs2000>

Fujitsu Green Policy Innovation

Fujitsu Green Policy Innovation is our worldwide project for reducing burdens on the environment. Using our global know-how, we aim to resolve issues of environmental energy efficiency through IT. For more information see:

www.fujitsu.com/global/about/environment/



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Contact

Fujitsu Technology Solutions GmbH
Address: Mies-van-der-Rohe-Straße 8, 80807 Munich
Email: bs2marketing@ts.fujitsu.com
Website: <http://ts.fujitsu.com/bs2000>
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