

# DATA SHEET

## COSMOS (BS2000/OSD)

### Version 18.0

#### Monitor and Analysis Programs

Issue November 2011

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**COSMOS is an event-driven monitor collecting detailed measuring data for the systematic performance diagnosis of BS2000/OSD systems.**

**COSMOS is executable only under a userid with the privilege SWMONADM.**

### Functional Description

COSMOS records the entire temporal sequence of system events. Approximately 90 different kinds of events can be registered, e.g. start and end of an input/output operation, system calls (SVCs), creation and termination of tasks. Each event is identified by a 4 character long name. For the collection of the events COSMOS interfaces, so called "hooks", are implemented at selected points in the system. Dependent on the selected parameters the hook is "opened", i.e. the data collecting code is activated at each occurrence of the appropriate event and a data record is written. When terminating COSMOS all at this time opened hooks are closed.

The data can be collected for all tasks or for tasks selected according to certain criteria (user identification, category, job name or TSN).

The collected measuring data are written into monitoring files (on tape or disk). For the evaluation of the COSMOS monitoring files special analysis programs are available.

COSMOS is to be seen as add-on to the software monitor openSM2. It should be used only if the degree of detail of the openSM2 measuring data is not sufficient for the diagnosis of the performance bottlenecks.

Because of the very detailed measured values, connected with a huge amount of monitored data, COSMOS is only suitable for short-term monitoring. A long-term measurement for trend analyses is not possible.

The interpretation of the measured values requires intimate knowledge of the internal operational sequences in the system.

The analysis programs can supply the following detailed results:

- For each task:
  - SVC and file access statistics, dwell times in each system queue (Q0 to Q13), input/output distribution (number and duration per accessed device),

number of dialogs with consumption values (in-/outputs, CPU time), page access statistics

- For each application resp. transaction code:
  - number of dialogs, average response time, composition of the response time incl. DB part, consumption values (CPU time, in-/outputs separated by DC and DB part), UTM events (e.g. number of PEND, MGET, MPUT,...), time dependent course of dialogs
- EVENT trace function:
  - Each action in the system can be traced temporally.
- Connection of analysis programs to PC:
  - All analysis programs can transfer their result data to a PC, where the data can be displayed graphically by means of prefabricated EXCEL macros.

### Program Description

The monitor COSMOS is started as monitoring program under control of SM2. COSMOS is realized as privileged running subsystem. The user program SM2 processes the specified parameters and triggers the loading of the COSMOS subsystem over DSSM. COSMOS opens the hooks in the system (TPR and SIH) selected by the user. By means of the macro NPCHK user data can be handed over to COSMOS from TU, as far as the supply of these data and the call of the macro are implemented in the user program to be measured.

The collected measuring data can be output into up to 16 files (tapes or disks). The program COSMIX mixes these parallel outputs into the temporally ascending order of the measured values necessary for the evaluation.

From this file the analysis programs produce the result lists in the degree of detail selected by the user.

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## TECHNICAL DETAILS

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### COSMOS V18.0

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#### Technical data

##### Hardware

BS2000/OSD Business Server

##### Software

BS2000/OSD-BC V9.0 or OSD/XC V9.0  
openSM2 V9.0

##### Operating mode

Interactive and batch mode

##### Implementation language

Assembler, SPL

##### User interface

Commands English  
Message texts English/German (optional)

##### Installation

Corresponding to installation description in the readme file

#### Documentation

Provided readme file

#### Training

See course offer at:  
<http://ts.fujitsu.com/training>

#### Demands on the user

The user should possess in-depth system knowledge so as to be able to analyze and interpret the performance data.

#### Conditions

This software product can be purchased by the customer against a single payment or leased in accordance with the conditions for the use of software products.

#### Ordering and delivery

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

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