

SAP DB Reached 5.500 SD-Users in Benchmark on Linux

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SD Benchmark Description

The Sales and Distribution (SD) Benchmark consists of the following transactions:

- Create an order with five line items (transaction VA01)
- Create a delivery for this order (VL01)
- Display the customer order (VA03)
- Change the delivery (VL02) and post goods issue
- List 40 orders for one sold-to party (VA05)
- Create an invoice (VF01)

Dialog Steps of the SD Benchmark

| | |
|--|---------------------------------|
| 0 Logon | 11 Call /m02 (Change delivery) |
| 1 Main screen | 12 [F9] (Posts goods issue) |
| 2 Call /mva01 (Create customer order) | 13 Call /mva05 (List orders) |
| 3 1st screen | 14 [Enter] |
| 4 2nd screen (with 5 items) | 15 Call /mfv01 (Create invoice) |
| 5 [F11 - Save] | 16 [F11 - Save] |
| 6 Call /m01 (Create a delivery) | 17 Call /mend |
| 7 1st screen | 18 Confirm logoff |
| 8 [F11 - Save] | |
| 9 Call /mva03 (Display customer order) | |
| 10 [Enter] | |

Dialog steps 2 to 16 are repeated n times (15 dialog steps -> min. 150 sec duration).

Business aspect:

One run (dialog steps 2 to 16) corresponds to the selling of 5 items.

Defining SAPS

The SAP Application Performance Standard (SAPS) is a hardware independent unit that describes the performance of a system configuration in the SAP environment. It is derived from the SD Standard Application benchmark, where 100 SAPS are defined as 2,000 fully business processed order line items per hour.

In technical terms, this throughput is achieved by processing 6,000 dialog steps (screen changes), 2,000 postings per hour in the SD benchmark, or 2,400 SAP transactions.

Fully business processed in the SD Standard Application Benchmark means the full business process of an order line item: creating the order, creating a delivery note for this order, displaying the order, changing the delivery, posting a goods issue, listing orders, and creating an invoice.

Using SAPS for Sizing

If, for example, a sizing table for a portal suggests a configuration of 1,000 SAPS, you can check the SD benchmark

table for a sample configuration. If you set the sort order in the SAPS column, you will see a number of benchmark tests that can give you an idea about which configurations are likely to fulfill your requirements.

Result

The SAP SD standard 4.6 C application benchmark performed on March 6, 2003
by Fujitsu Siemens Computers in Walldorf, Germany is certified with the following data:

| | |
|---|--|
| Number of benchmark users & comp.: | 5,500 SD (Sales & Distribution) |
| Average dialog response time: | 1.89 seconds |
| Throughput: | |
| Fully Processed Order Line items / hour: | 555,330 |
| Dialog steps / hour: | 1,666,000 |
| SAPS: | 27,770 |
| Average DB request time (dia/upd): | 0.192 sec / 0.402 sec |
| CPU utilization of database server: | 97% |
| CPU utilization of application servers: | 64% (dia: 73%, upd: 30%, msg/enq: 40%) |
| Operating System database server: | SuSE Linux Enterprise Server 8 |
| Operating System application servers: | SuSE Linux Enterprise Server 7 |
| RDBMS: | SAP DB 7.3 |
| R/3 Release: | 4.6 C |
| Total disk space: | 2,500 GB |

Certification Number: 2003014

Configuration:

| | |
|---------------------------|---|
| 1 Database server: | Fujitsu Siemens Computers PRIMERGY T850 GE RH, 8-way SMP, Intel Xeon MP, 2.0 GHz, 2 MB L3 cache, 8 GB main memory |
| 61 Application servers: | |
| 40 Dialog servers: | Fujitsu Siemens Computers PRIMERGY BX300, 2-way SMP, Pentium III LV, 800 MHz, 512 KB L2 cache, 2 GB main memory |
| 8 Dialog servers: | Fujitsu Siemens Computers PRIMERGY BX300, 2-way SMP, Pentium III LV, 933 MHz, 512 KB L2 cache, 2 GB main memory |
| 12 Update servers: | Fujitsu Siemens Computers PRIMERGY BX300, 2-way SMP, Pentium III LV, 933 MHz, 512 KB L2 cache, 2 GB main memory |
| 1 Message/Enqueue server: | Fujitsu Siemens Computers PRIMERGY BX300, 1-way SMP, Pentium III LV, 800 MHz, 512 KB L2 cache, 512 MB main memory |

