FUJITSU BS2000 Hardware, Software and Services Portfolio

Greater flexibility with high-end multi-server platforms

Architecture concept: SE series
Server BS2000: SE series portfolio
Integration: SE infrastructures
Software: BS2000 portfolio
Service: BS2000 portfolio
Enterprise systems in today’s data centers operate on the assumption that maximum data and application availability plus outstanding economic efficiency are indispensable attributes. A system must be designed and monitored in such a way that individual faults do not result in a system standstill and that all components interact optimally and effectively in a reliably coordinated manner.

SE infrastructures meet such requirements perfectly. A multi-server platform with a standardized management concept enables considerable TCO improvements and offers the greatest possible flexibility when recentralizing applications as well as when consolidating IT operations and the resources used. A standardized service concept optimally supports wide-ranging configurations and growth options and ensures future security and investment protection in state-of-the-art data centers.

FUJITSU BS2000
Hardware, Software and Services Portfolio

Architecture concept: SE series
Server BS2000: SE series portfolio
Integration: SE infrastructures
Software: BS2000 portfolio
Service: BS2000 portfolio
Future security coupled with flexibility
High-end performance

BS2000 is a highly available, scalable, high-performance operating system basis for business-critical applications and is completely compatible across numerous versions. The open interfaces of the BS2000 mainframe operating system offer exceptionally flexible and future-proof integration in modern application architectures, reliably fulfilling the IT requirements of dynamic data centers.

Excellent mainframe technology features
■ Best TCO values with a high number of end users
■ High availability during normal IT operations and in case of a disaster
■ Maximum stability, scalability and high performance for databases and applications
■ Large amounts of data and scalability over an enormous performance bandwidth without any technological leaps

The architecture concept of the FUJITSU Server BS2000 SE series offers customers the best platform for every usage scenario. Compared to the operation of individual systems, the standardized SE series management concept clearly reduces administration and maintenance expenditure.
Future security coupled with flexibility
High-end performance

FUJITSU Server BS2000 SE series

- Mainframe technology for BS2000, Linux and Windows applications based on the latest Intel® Xeon® Gold technology
- State-of-the-art innovative high-end mainframe (/390) technology (SE710)
- Powerful BS2000 mainframe for entry-level and medium-range performance (SE310)

- Integration of different server and peripheral systems
- Central, comfortable operation and administration of all applications on the SE
- Optional use of various application units for x86 applications (supports Linux, Windows, VMware vSphere)

- Outstanding energy efficiency and low space requirements with maximum user numbers and changing workloads
- Capacity on demand for temporary processor activation
- Reduced TCO thanks to highly-developed automation technology
- Investment protection thanks to the object-compatible functionality of all BS2000 applications

Advantages brought by mainframes in the modern data center

- Availability & failover cluster
- I/O-intensive processing
- Individual applications
- OLTP processing
- Database operations
- Internet services
- Java applications
- Standard applications

More information about BS2000 Server can be found at: www.fujitsu.com/emeia/bs2000/server
<table>
<thead>
<tr>
<th><strong>Operating system</strong></th>
<th>BS2000 OSD/XC V11.0 Linux, Windows with Application Units</th>
<th>BS2000 OSD/XC V11.0 Linux, Windows with Application Units</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Server units</strong></td>
<td>1 SU310 Server unit (basis x86)</td>
<td>1 SU710 Server unit (basis /390)</td>
</tr>
<tr>
<td><strong>Application units</strong></td>
<td>High-End x86 Server with Intel® Xeon® processors (bronze/silver/gold/platinum) for Linux and Windows applications</td>
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</tr>
<tr>
<td><strong>Processor type</strong></td>
<td>SU310: Intel® Xeon® Gold 6242</td>
<td>SU710: CMOS in /390 architecture</td>
</tr>
<tr>
<td><strong>Number of BS2000 processors</strong></td>
<td>SU310: 1–2</td>
<td>SU710: 1–15 and 1 hot-spare CPU</td>
</tr>
<tr>
<td><strong>Performance</strong></td>
<td>80–430 RPF* with 3 models</td>
<td>360–6000 RPF* with 18 models</td>
</tr>
<tr>
<td><strong>Main memory</strong></td>
<td>128 to 512 GB in the server unit</td>
<td>SU710: up to 256 GB</td>
</tr>
<tr>
<td><strong>I/O interfaces</strong></td>
<td>SU310: up to 8 PCI slots for Fibre Channel with 16/32 Gbit/s or LAN controller</td>
<td>SU710: up to 126 Fibre Channels with 16 Gbit/s</td>
</tr>
<tr>
<td><strong>Net unit</strong></td>
<td>1/10 Gbit/s SE Server integrated and external LAN connectors for server unit and application units</td>
<td>1/10 Gbit/s SE Server integrated and external LAN connectors for server unit and application units, 1–4 High-speed Net Connect (HNC)</td>
</tr>
<tr>
<td><strong>Management unit</strong></td>
<td>Administration of all SE Server components incl. peripherals</td>
<td>Administration of all SE Server components incl. peripherals</td>
</tr>
<tr>
<td><strong>System rack</strong></td>
<td>1 System rack (0–3 additional racks possible)</td>
<td>1 System rack (0–3 additional racks possible)</td>
</tr>
</tbody>
</table>

* RPF = Relative Performance Factor (1 RPF = 1.5 MIPS)
Mainframe integration in state-of-the-art data centers

Mainframe technologies are the main pillars for critical business applications in today’s Enterprise IT infrastructures. In order to use applications which fully maximize the use of internet options and mobile technologies, BS2000 mainframe platforms offer suitable integration options, e.g. web user interfaces, simple integration in portals and heterogeneous application scenarios, state-of-the-art application developments or modelling of service-oriented architectures.

Integration

■ with other server platforms
■ of applications
■ of data in multivendor networks
■ with storage systems and Net-Storage
■ in higher-level IT operations management
**Enterprise IT infrastructures**

**Integrated – Flexible – Secure**

**SE infrastructure**

The units can be combined in the SE infrastructure so that they provide the optimal platform for the customer’s respective requirements. In addition to classic mainframe operations, such a hybrid system enables many different usage scenarios, such as the consolidation of all the application components belonging to one IT service into a shared platform.

The SE infrastructure also offers a protective framework when modernizing critical business applications. And last but not least it can operate as an Enterprise platform for critical business standard applications. Even critical business basic services, such as portals, mail, directory services etc., can be suitable consolidated.
Enterprise IT infrastructures
Integrated – Flexible – Secure

**Servers**
The FUJITSU Server BS2000 SE series has a unique selling point in the server market. As flexibly configurable hybrid systems they open up completely new design options in multi-server operations thanks to their openness, integration options and manageability. The SE series with its processors offers:
- Best system performance
- Flexible configuration options
- Maximum stability and availability
- Minimum power consumption
- Low space requirements

**Software**
BS2000 mainframe software with its comprehensive services and functions provides optimal support for existing and new IT infrastructures. The BS2000 operating system with its open interfaces offers future-proof integration into modern application architectures. These include:
- Open standard interfaces
- Standardized system technology
- Open integration software that can be adapted
- Anpassbare offene Integrationsssoftware

**Management**
The SE Manager ensures a standardized, central management concept for the entire system which enables a very high degree of integration and the optimal use of resources:
- Cross-system administration using a modern, browser-based interface as a single-point-of-administration
- Common system monitoring of all parts and components
- Common service concepts
- Comprehensive consolidation options thanks to state-of-the-art virtualization

**Peripherals**
We offer a carefully chosen selection of peripherals, delivering the best value for every BS2000 performance range. The SE infrastructure enables the shared use and management of integrated and external peripherals.

**Network**
The SE infrastructure is supplied with a „ready-to-run“ network. The SE series net unit provides maximum performance between the SE units and the customer network and also features maximum security. This is implemented by:
- Network virtualization
- Network isolation
- Integrated components for physical security
- Access control for logical security
Fujitsu covers all the relevant topics of modern data centers with a wide range of mainframe software products.

Operating system
Meets all important requirements of dynamic data centers as a fully compatible basis for business-critical applications

<table>
<thead>
<tr>
<th>Benefit</th>
<th>High efficiency platform</th>
</tr>
</thead>
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<table>
<thead>
<tr>
<th>Products</th>
</tr>
</thead>
<tbody>
<tr>
<td>■ OSD/XC package</td>
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</table>

Database systems
Achieve secured, consistent, integrated and highly scalable information management

<table>
<thead>
<tr>
<th>Benefit</th>
<th>Consistent data provision</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>Products</th>
</tr>
</thead>
<tbody>
<tr>
<td>■ LEASY</td>
</tr>
<tr>
<td>■ ORACLE</td>
</tr>
<tr>
<td>■ SESAM</td>
</tr>
<tr>
<td>■ UDS/SQL</td>
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</table>

openSEAS
integrates BS2000 applications (incl. corporate applications) into the internet, also via mobile devices

<table>
<thead>
<tr>
<th>Benefit</th>
<th>Internet access 24 hours a day</th>
</tr>
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<table>
<thead>
<tr>
<th>Products</th>
</tr>
</thead>
<tbody>
<tr>
<td>■ BeanConnect</td>
</tr>
<tr>
<td>■ openFT (File Transfer)</td>
</tr>
<tr>
<td>■ openUTM (Transaction Monitor)</td>
</tr>
<tr>
<td>■ WebTA (Webenabling &amp; Portals)</td>
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</tbody>
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Job management
Automates routine work and cross-platform functions

<table>
<thead>
<tr>
<th>Benefit</th>
<th>Administration optimization</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>Products</th>
</tr>
</thead>
<tbody>
<tr>
<td>■ AVAS</td>
</tr>
<tr>
<td>■ JV</td>
</tr>
<tr>
<td>■ SDF-A</td>
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<tr>
<td>■ SDF-P</td>
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</tbody>
</table>

Communication and Internet
Offers open network architecture, selected interoperability features and optimized e-mail standards in accordance with communication systems

<table>
<thead>
<tr>
<th>Benefit</th>
<th>Access to open networks</th>
</tr>
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<table>
<thead>
<tr>
<th>Products</th>
</tr>
</thead>
<tbody>
<tr>
<td>■ Apache</td>
</tr>
<tr>
<td>■ interNet Services, NFS</td>
</tr>
<tr>
<td>■ openNet Server</td>
</tr>
<tr>
<td>■ TIAM, MT9750</td>
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</table>

Performance management
Analyzes and controls system performance in order to optimize load distribution

<table>
<thead>
<tr>
<th>Benefit</th>
<th>Optimal performance and load distribution</th>
</tr>
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<table>
<thead>
<tr>
<th>Products</th>
</tr>
</thead>
<tbody>
<tr>
<td>■ DAB</td>
</tr>
<tr>
<td>■ openSM2, SM2-PA</td>
</tr>
<tr>
<td>■ PCS</td>
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<td>■ SCA</td>
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</tbody>
</table>

Print management
Provides all the services required to implement corporate print concepts

<table>
<thead>
<tr>
<th>Benefit</th>
<th>Printing in networks on a cross-platform basis</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>Products</th>
</tr>
</thead>
<tbody>
<tr>
<td>■ DPRINT</td>
</tr>
<tr>
<td>■ RISO</td>
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</tbody>
</table>

Fujitsu covers all the relevant topics of modern data centers with a wide range of mainframe software products.
## FUJITSU Software BS2000 Portfolio

### Programming systems

Create the foundation for professional development of individual applications on BS2000 systems

- **Benefit** Easy of use
- **Products**
  - BS2IDE
  - ASSEMBH, C/C++, COBOL, CRTE
  - FOR1, Pascal-XT, PL/I
  - JENV (JAVA)
  - AID, COLUMBUS85

### Security

Offers exacting security concepts for a dynamic data center

- **Benefit** Maximum security
- **Products**
  - SECOS

### Storage management

Permits the best possible benefit to be drawn from the handling and use of connected storage media

- **Benefit** Integration of storage systems and backup
- **Products**
  - HSMS, FDDRL
  - MAREN, ROBAR
  - SHC-OSD, DRV
  - SPACEOPT

### System management

Covers products for the support and automation of system operation

- **Benefit** Central management
- **Products**
  - HIPLEX-MSCF
  - OMNIS, OMNIS-Menu
  - PROP-XT
  - SNMP-AGENTS

### Utilities

Adapts IT solutions with special utilities to customized requirements in a very flexible way

- **Benefit** Support of individual customer solutions
- **Products**
  - EDT, FMS, LMS
  - RFA, PERCON, SORT
  - TASKDATE
  - FHS, IFG

- **Benefit** Efficient resource utilization
- **Products**
  - VM2000

### Virtualization

Enables several virtual systems to be processed simultaneously on one server

FUJITSU Service BS2000 Portfolio
Suitable for all customer requirements

Design operational procedures in an economic manner
The fundamental success factors in modern data centers are the operationally secure integration of BS2000 systems, uncompromising availability and the highest possible economic viability and cost transparency. Future security and investment protection demand complete service eco-systems in order to maintain IT operations with their complex infrastructures in an efficient and future-proof manner. Fujitsu, as a reliable trustworthy partner, supports its customers with the emphasis on reducing IT total costs, ensuring the high-availability of IT operations and simultaneously creating intelligent solutions.

More information:
www.fujitsu.com/emeia/bs2000
Contact: bs2000services@ts.fujitsu.com
### BS2000 Services & Support in dynamischen Infrastrukturen

| Managed Infrastructure | Managed Data Center BS2000  
Remote and local services (system administration, consulting services)  
Financial Services (AIP, CoD) |
|------------------------|-------------------------------------------------|
| Infrastructure as a Service | BS2000 as a Service  
Providing BS2000 IT infrastructure and staff by Fujitsu  
(productive, information and archive systems and disaster recovery) |
| Infrastructure Solutions | BS2000 Solutions  
(DB offload, SOA Integration, Consult, Design, Build, Services, Training, etc.) |
| Infrastructure Products & Services | BS2000 Hardware-/Software-/Middleware-Portfolio  
(BS2000 SE series, BS2000 OSD/XC, openSEAS)  
Maintenance and Support Services  
(Remote/fokal, SLAs, etc.) |

Information about BS2000 Services can be found at:
- www.fujitsu.com/emeia/bs2000/services
- Contact: bs2000services@ts.fujitsu.com

### BS2000 Training Course Offerings

**Standard and Customized Training Courses**

Fujitsu offers a comprehensive portfolio of technical training courses for BS2000 products. On request, training course contents can be specifically adapted to customer requirements and, if required, training courses can also be held as in-house courses.

**Topics:**
- BS2000 Fundamentals
- BS2000 System applications
- BS2000 System operation
- BS2000 System support
- BS2000 Integration into data center infrastructure
- Application development products

Information about BS2000 training courses can be found at:
- www.fujitsu.com/emeia/bs2000
- Contact: eps.academy@ts.fujitsu.com

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