



Strategic Briefing Optimal Business Continuity in BS2000 Mainframe Environments

shaping tomorrow with you

FUJITSU

Planned and unplanned downtimes impact business processes.

October 2012: New York. November 2012: Munich. Within just weeks of each other, two major metropolitan regions suffered widespread power failures. In one case the outage was due to natural causes, whereas the other was the result of a technical failure. These and similar events demonstrate how vulnerable even the most highly developed infrastructures can be. And that is not all: Risks are on the rise as well. Organizations and enterprises are focusing more attention on the risks facing them, especially when it comes to cyber incidents. And this is causing a shift in investments toward more risk prevention and mitigation.

What's more, IT managers must cope with quite a number of other planned and unplanned outages in their IT infrastructures. Downtime in mainframe environments – whether planned or unplanned – directly affect business-critical processes and represent a very serious problem.

Mainframe hardware failures are quite rare thanks to robust system architectures and the redundancy of key components. In most cases, human error, application snags or workload problems are among the reasons why a system is unexpectedly not available. In addition, planned hardware and software maintenance tasks lead to frequent interruptions of IT operations. How can business enterprises and organizations be better prepared to respond to such situations?

Fujitsu offers a comprehensive package for the FUJITSU Server BS2000 SE Series that enables you to cope with planned and unplanned outages effectively. And it ensures that an experienced Fujitsu service team is at your side.

LiveMigration (LM)

FUJITSU Server BS2000 SE Series systems are the first and currently only mainframes worldwide that support the migration of operating systems and applications during running operations, without downtime or outages, thus delivering constant service availability. These systems make planned outages a thing of the past.

HighAvailability (HA)

Preventive steps need to be taken in order to cushion the effects of unplanned outages, even if they rarely occur. These measures include redundant configurations, redundant data storage, defined procedures for restart and recovery, an emergency manual, training for system operators, outage tests at regular intervals, etc. All processes should be automated to the highest degree possible because speed is essential in critical situations. The degree of automation depends on specific customer requirements, as well as the hardware and software deployed. Fujitsu supports its customers in setting up the best response to outage scenarios with its customized service offering.

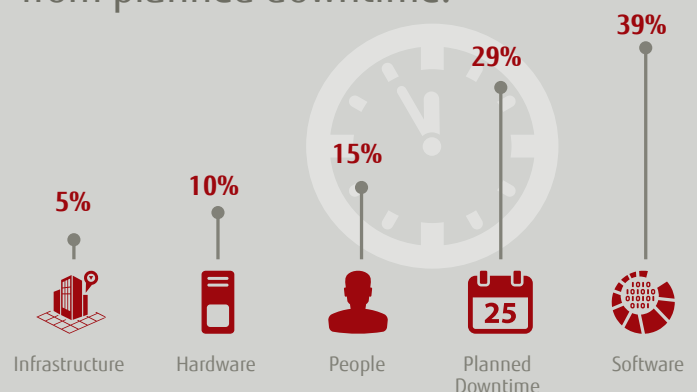
The consistent Fujitsu SE infrastructure concept ensures the best business continuity possible by completely avoiding planned downtime, while also minimizing the occurrence of unplanned outages. It's easy, efficient and reliable.

The cost per hour of downtime increased by 60 percent between 2014 and 2016 – the average was \$260,000 per hour.



Source: Aberdeen Group, April 2016

Almost one-third of all outages results from planned downtime.



Data source: Informatik Aktuell, October 6, 2015
© Institute of Electrical and Electronics Engineers (IEEE)



FUJITSU Server BS2000 SE Series: The first and only mainframe worldwide with LiveMigration

Fujitsu SE infrastructures are the first mainframes worldwide to have LiveMigration for operating systems and applications. This innovation enables enterprises to avoid planned service interruptions that affect business-critical systems such as Enterprise Resource Planning (ERP), Customer Relationship Management (CRM) or Supply Chain Management (SCM).

Fujitsu SE infrastructures represent a consistent LM high-availability solution that is state of the art and ideal for optimizing business continuity during planned outages, e.g., for maintenance or configuration modifications.

The solution is based on a cluster of two business servers that is easy to use. In terms of performance and software stack, these two servers do not need to have identical configurations. This keeps investment requirements and administration tasks at low levels.

Easy administration of online migrations is possible thanks to the system's web-based SE Manager. Administration is also supported by secure, automated processes.

The benefit: Planned downtime is unnecessary – operations continue without interruption.

Maximum application availability. Minimum cost and effort.

Customers can use LiveMigration to move the guest systems (BS2000, Linux, Windows) and related applications running on an SE infrastructure to a second SE Series system.

Such elegant system migrations can be performed between two server units based on the /390 architecture, or between two server units based on the x86 architecture. Once the migration has been initiated, it runs transparently in the background; the applications are still available during the entire migration process. Linux and Windows guest systems on x86 application units can also be migrated to other application units by means of VMware technologies.

LiveMigration thus enables enterprises to benefit from “always on” availability for their mainframe applications – and this is an industry first.

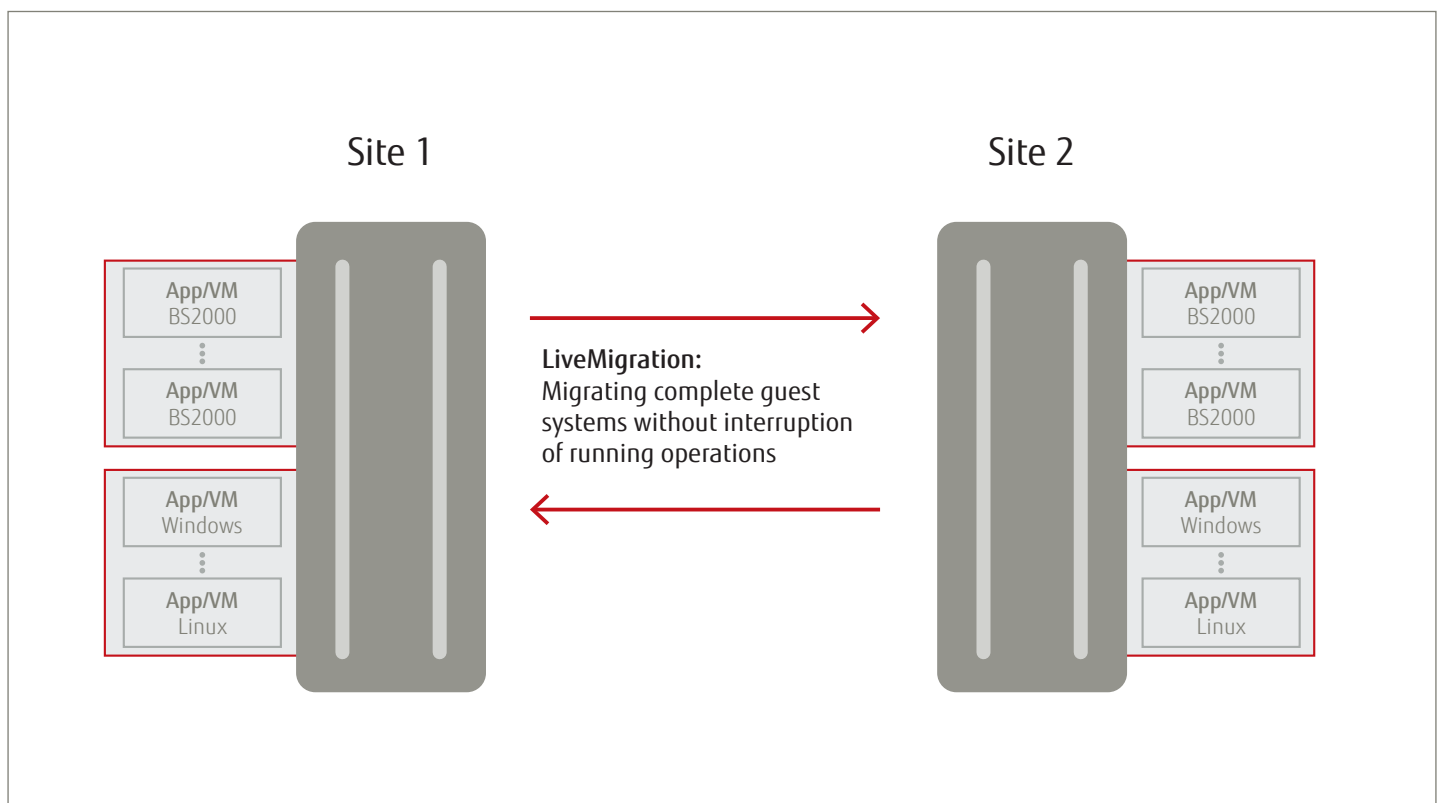
LiveMigration is the best tool for avoiding all kinds of planned downtime – for example, when:

- Maintenance work is required,
- Workloads need to be optimized.

“Always-on” with BS2000 mainframe technology

Thanks to the further development of the proven high-availability concept behind the SE infrastructures, you can support your business with maximum continuity and even higher efficiency:

- Avoid planned service interruptions with LiveMigration so that you can offer users the highest levels of availability for business-critical applications.
- Reduce unplanned outages through defined response procedures.
- Simplify your business processes through intuitive, web-based operability and secure, automated processes.
- Optimize your business continuity strategy without implementation risks thanks to pretested configurations.
- Drive down your investments and operating costs for ensuring the high availability of your mission-critical applications.



BS2000/OSD business servers ensure success through innovation

Information technology (IT) is growing in importance in all fields of business when it comes to paving the way toward the digital age – and IT systems are expected to achieve more with even fewer resources. To resolve this dilemma, every aspect related to the provisioning of IT services must be constantly scrutinized and continually optimized.

BS2000/OSD mainframe technology from Fujitsu offers you high levels of innovation combined with excellent capabilities for integration. This makes SE infrastructures cost-effective building blocks for dynamic data center environments, and with constant improvements in efficiency, your enterprise will definitely be extremely flexible, reliable and competitive in today's dynamic markets.

The high-availability concept behind SE infrastructures is unrivaled when it comes to providing maximum reliability in business-critical environments:

1. Avoid planned IT interruptions

Thanks to the extreme stability of the hardware and software, SE infrastructures have demonstrated unmatched availability – service tasks are seldom required. And whenever maintenance is necessary, for example, when deploying software updates or upgrading hardware, most – if not all – of this work can be done when systems are in productive operation thanks to LiveMigration and other innovative functions. This also supports LiveMigration workload management to prevent resource bottlenecks.

Your benefits:

- Extreme high-availability for IT operations
- Few or no planned service interruptions
- Less specialized expertise required
- Optimized workforce deployment

2. Prevent potential outages

SE infrastructures prevent outages that could be caused by human error or workload problems at various levels. Simplified system management reduces the risks of human error. The high level of automation also contributes to stable operations because a large number of rule-based tasks are carried out by the system itself, along with continuous system status and evaluation reporting.

Your benefits:

- High productivity and quality of mainframe operations
- Proactive assurance of extreme high availability for productive operations
- Lighter workloads for IT personnel

3. Minimize the impact of unplanned outages

You can increase the availability of SE infrastructures to 99.999 percent. This unrivaled performance is achieved through the intelligent clustering of several servers to deliver optimized operability, capacity utilization and availability tailored to customer needs. What's more, Fujitsu services reduce potential outages to a minimum thanks to proven and automated outage response concepts.

Your benefits:

- Highest availability for your business-critical applications
- Virtually unlimited scalability
- Higher efficiency through optimal resource utilization
- Easy administration

www.fujitsu.com/fts/bs2000

Herausgeber

Fujitsu Technology Solutions GmbH

Mies-van-der-Rohe-Rohe-Strasse 8, 80807 Munich, Germany

Copyright: © Fujitsu Technology Solutions 2017

Contact:

E-mail: bs2marketing@ts.fujitsu.com

All rights reserved, including intellectual property rights. Technical data subject to modifications and delivery subject to availability. Any liability that the data and illustrations are complete, actual or correct is excluded. Designations may be trademarks and/or copyrights of the respective manufacturer, the use of which by third parties for their own purposes may infringe the rights of such owner.

