

Strategic Briefing
Optimal Business Continuity in BS2000/OSD Mainframe Environments

Unique worldwide:
LiveMigration of mainframe operating systems and applications

Leadership worldwide:
HighAvailability – mainframe high availability that is simple, secure and configured with speed

shaping tomorrow with you

FUJITSU

Planned and unplanned outages
have an impact on 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. Both events once again demonstrated how vulnerable even the most highly developed infrastructures can be.

Fortunately these kinds of unexpected events are uncommon. However, IT managers must cope with quite a number of other planned and unplanned outages in their IT infrastructures. In mainframe environments these downtimes have a direct impact on mission-critical processes, and thus even infrequent outages represent a serious problem.

Mainframe hardware failures are quite rare thanks to robust system architectures and the redundancy of key components. In most cases, operating 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?

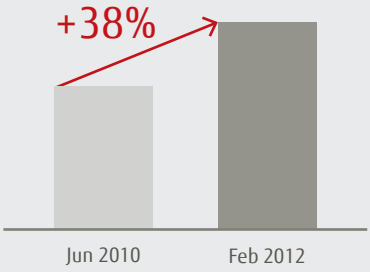
BS2000/OSD mainframes are the answer. For decades these Fujitsu systems have offered the best high-availability concept on the market. This concept has been developed further and enhanced with unique functions for the SQ series business servers from Fujitsu:

LiveMigration (LM): SQ series business servers 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.

HighAvailability (HA): The innovative high-availability solution behind the SQ series is distinguished by its easy configuration and operation, in addition to automated failover. This minimizes application downtime and ensures that lengthy decision-making processes or operating error are not the cause of further delays in getting systems back online.

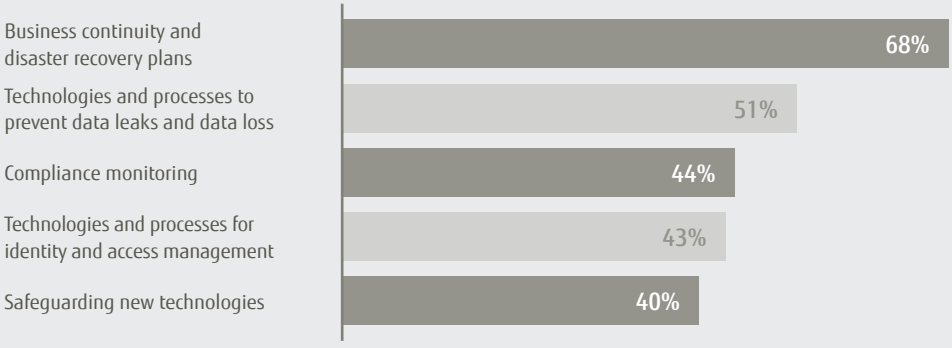
To provide the best possible protection for keeping business processes up and running, the SQ series business servers feature a consistent HA/LM concept that completely precludes planned downtime and minimizes unplanned downtime as well. It is easy, efficient and reliable.

Costly downtime ...



The costs per hour of service outage have increased by 38 percent within just 19 months. (Source: Aberdeen Group, Datacenter Downtime, March 2012)

... and how enterprises protect themselves



Areas where enterprises plan investments in business security. (Source: Ernst & Young's November Global Information Security Survey, November 2011)

Maximum application availability
Minimum cost and effort

Consistent concept with LiveMigration (LM) and HighAvailability (HA)

To support the optimization of business continuity, Fujitsu BS2000/OSD SQ series business servers represent a consistent HA/LM high-availability solution that is state of the art. 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.

Solution administration is quite simple using the system's web-based SQ manager – this is true for monitoring HA scenarios and failover, as well as for system migrations during productive operations (LM). Administration is also supported by secure, automated processes.

Thanks to these innovative functions, the solution considerably increases system availability when it comes to planned downtimes and unexpected outages, thus making sure that operations continue without interruption.



BS2000/OSD
Business Server SQ210

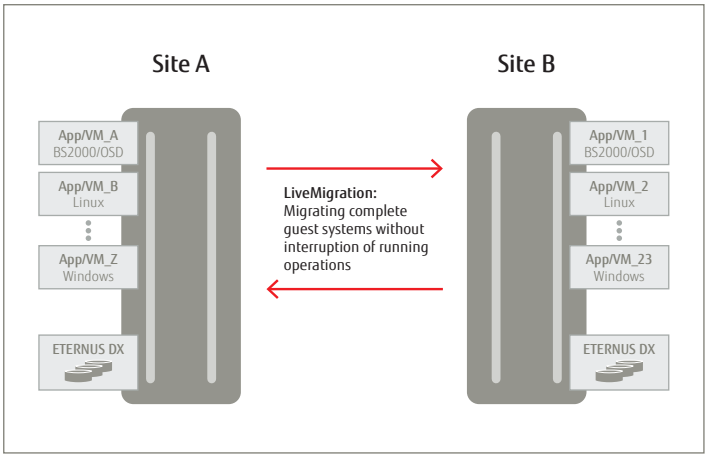
The first and only mainframe worldwide with LiveMigration

Fujitsu BS2000/OSD SQ series business servers are the first mainframes worldwide to have LiveMigration for operating systems and applications. This feature enables enterprises to avoid planned service interruptions that affect mission-critical systems such as Enterprise Resource Planning (ERP), Customer Relationship Management (CRM) or Supply Chain Management (SCM).

Customers can use LiveMigration to move the guest systems (BS2000, Linux, Windows) and related applications running on an SQ series business server to a second SQ series business server – the migration causes no interruptions and goes virtually unnoticed by users. Once the migration has been initiated, it runs subtly in the background. The applications are available to users during the entire migration process. 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.



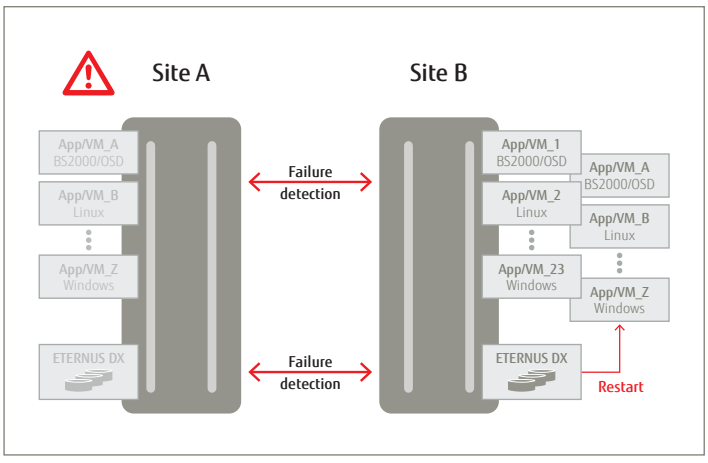
“Always on”
with BS2000/OSD mainframe technology

Best-in-class business continuity through automated HighAvailability

The high-availability function of the Fujitsu SQ series business servers is a low-cost and user-friendly solution for increasing the availability of mission-critical application environments. HighAvailability is realized using automated failover between two SQ series business servers. These servers monitor each other when in operation. If one server fails, those guest systems selected for failover mode, including the applications running on them, are automatically restarted on the second server system. At the same time, the system administrator in charge can be informed about any problems per e-mail or SMS alarm message. The high-availability function of the SQ server provides support during outages involving the system unit, disk storage system or even complete sites.

The high-availability function of the SQ series business servers is easy to configure and use thanks to the SQ Manager. What’s more, the availability of mainframe guest systems and applications can be automated and prioritized according to customer specifications.

The high-availability function of the SQ series is fast and secure because process automation prevents operating error and eliminates the need for decision-making that can be very time-consuming. In addition, enterprises can productively utilize all the resources in the cluster. This innovative solution is thus ideal for efficiently minimizing the impact of unplanned outages resulting, for example, from power failures, technical defects or operating error.



Business processes in mainframe environments: more security and more efficiency

Thanks to the further development of the proven high-availability concept behind the BS2000/OSD business servers, 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 mission-critical applications.
- Reduce unplanned downtime to an absolute minimum with high-availability that is easy to configure.
- 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.

Experience innovation for maximum business continuity live:
http://www.fujitsu.com/fts/business-continuity-bs2000

BS2000/OSD business servers
ensure success through innovation

Information technology (IT) is growing in importance in all fields of business – and it must always achieve more with less. To resolve this dilemma, every aspect related to the provisioning of IT services must be constantly scrutinized and continually improved.

BS2000/OSD mainframe technology from Fujitsu offers you high levels of innovation combined with excellent capabilities for integration in modern data centers. This makes Fujitsu business servers cost-effective building blocks for dynamic IT infrastructures, and with ongoing improvements in this IT efficiency, your enterprise will definitely be extremely flexible, reliable and competitive in dynamic markets.

The high-availability concept behind Fujitsu BS2000/OSD business servers is unrivaled when it comes to providing maximum reliability in mission-critical environments:

1. Avoid planned IT interruptions
Thanks to the extreme stability of the hardware and software, BS2000/OSD business servers have demonstrated unmatched resiliency for decades, so that service tasks are seldom required. When 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.

Your benefits:
- Extreme high-availability for IT operations
- Few or no planned service interruptions
- Optimized deployment of IT personnel – less specialist know-how is required

2. Prevent potential outages
BS2000/OSD business servers prevent outages that could be caused by operating error or workload problems at various levels. Simplified system management reduces the risks of operating 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 BS2000/OSD business servers to 99.999 percent. This unrivaled performance is achieved through the intelligent clustering of several servers delivering optimized operability, capacity utilization and availability. What's more, the high-availability concept behind the SQ series is also a very efficient and low-cost solution for reducing downtime to an absolute minimum.

Your benefits:
- Highest availability for your mission-critical applications
- Almost unlimited scalability
- Higher efficiency through optimal resource utilization
- Easy administration

http://www.fujitsu.com/fts/bs2000

Published by
Fujitsu Technology Solutions GmbH
Mies-van-der-Rohe-Strasse 8, 80807 Munich, Germany
Copyright: © Fujitsu Technology Solutions 2013
Printed in Germany
Order No.: 10897-8-0513-EN

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