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The Power of Choice

With comprehensive solutions and a worldwide reach, the Fujitsu group is bringing flexibility to the world of high-performance platforms—and helping companies build the infrastructures they need for mission-critical Oracle technologies

In a competitive industry that has seen more than its share of upheaval, Southwest Airlines has enjoyed unusually consistent success—and 29 straight years of profitability. That success has been based on many things, but two key factors stand out: the company's award-winning Rapid Rewards frequent-flyer program and its travel Web site, southwest.com.

Those programs are critical to Southwest's business—and they involve the processing of huge volumes of inquiries and transactions that come from phone centers,

business partners, and the Internet. That means that the technology that supports those areas has to be powerful, and running virtually all the time. "We needed the most reliable systems possible to run our Rapid Rewards customer database," says Kerry Schwab, senior manager of Interactive Marketing at Southwest Airlines. "24/7 is more than a goal to us—it's a necessity."

To ensure that it has the performance and high availability it needs, Southwest moved its Rapid Rewards database and Web site to Fujitsu™ PRIMEPOWER™ servers



“[Benchmark testing] shows that Oracle is the obvious database choice for e-businesses, and the Solaris/SPARC-based PRIMEPOWER 2000, the superior platform choice.”

Chuck Rozwat
executive vice president
of Server Technologies,
Oracle

running the Solaris™ Operating Environment and Oracle9i™ Real Application Clusters with PRIMECLUSTER™, which enables a database to run on clusters of servers acting as a single server. Like many companies, Southwest has found that Fujitsu servers provide a solid foundation for Oracle® technologies. “Since we moved to PRIMEPOWER servers, we’ve seen a substantial performance boost, faster response time, and our backups are quicker,” says Schwab.

Today, as business moves online and data volumes grow, more and more companies share Southwest’s need for the high availability and top performance provided by Fujitsu systems. “As one of the world’s largest providers of information technology and services, we are in a unique position to help companies meet the challenges of e-business,” says Shu Hiraki, group executive vice president of the Platform Business Development and Management group at Fujitsu Limited. “In particular, we can help them build the extremely scalable, secure, and always-on IT infrastructures needed to take advantage of the infinite possibilities presented by broadband and the Internet.”

THE ORACLE FOCUS

Fujitsu’s technologies cover a wide range of personal and enterprise computing needs, with everything from handhelds, notebooks, and PCs to workstations, servers, mainframes, and storage solutions. For the data center, this

extensive lineup includes the SPARC™64 GP-based PRIMEPOWER family of enterprise servers for the Solaris Operating Environment, and the Intel-based PRIMERGY™ family of servers. It also includes a wide choice of operating systems: Fujitsu is unique in its support for both Solaris and Windows, and it supports Linux and its own proven mainframe systems as well.

With this broad suite of products, the Fujitsu group can provide a robust, powerful infrastructure for mission-critical Oracle databases. “For example,” says Dr. Joseph Reger, chief technology officer of Fujitsu Siemens Computers, “we are the only company that supports three of Oracle’s development platforms—Linux, Windows, and Solaris.” Today, companies around the world use the combination of Oracle and Fujitsu group technology for enterprise computing, including the DaimlerChrysler Bank Group in Germany, Lotte Shopping in Korea, and Nord Data A/S in Denmark.

To help companies get the most out of their combined technologies, Oracle and the Fujitsu group have worked for more than 12 years in a strategic alliance that encompasses product development, marketing, and sales. As a result of this relationship:

- Oracle technology is a key component in the Fujitsu PRIMEPOWER and PRIMERGY family of solutions.
- Fujitsu PRIMEPOWER servers and Fujitsu ETERNUS™ GR storage are used as a development and test platform for

Global Solutions, Glo

The Fujitsu group does business around the world through a global network of manufacturing, R&D, sales, and support operations. The group encompasses more than 170,000 people and includes Fujitsu Limited; Fujitsu Technology Solutions, Inc.; Fujitsu Siemens Computers; Fujitsu Consulting, Inc.; and Fujitsu Services Ltd. The Fujitsu group offers everything for enterprise computing, ranging from best-in-class platforms for Intel and UNIX environments to mainframes and enterprise storage solutions. It is also one of the leading providers of mobile computing products, PCs, and workstations to business customers. As a result, it can provide world-class technology and platform products, and deliver locally optimized solutions for customers in all corners of the world.

The Fujitsu group provides offerings in four broad areas:

- **Services and Software.** Fujitsu has the world’s third-largest IT services organization, which covers everything from large-scale systems construction to IT and Web integration, strategic planning, system design, operation, and maintenance.
- **Information Processing.** Fujitsu manufactures a wide range of computing platforms—from large-scale mission-critical enterprise servers to mobile PCs—that are distinguished by world-class engineering, quality, and reliability. Fujitsu also provides enterprise storage solutions.
- **Telecommunications.** Fujitsu’s optical network solutions enable telecommunications operators to deploy next-generation networks

the 64-bit version of Oracle9i Database.

- The two companies have jointly staffed competency centers that carry out support activities such as sizing, benchmarking, troubleshooting, tuning, certification, and integration.

PERFORMANCE FOR TODAY AND TOMORROW

With Fujitsu technologies, Oracle users can have an infrastructure that delivers the key qualities needed in today's data centers. Fujitsu technology provides:

High Performance. PRIMEPOWER servers provide the highest business processing capacity in the commercial UNIX marketplace. Fujitsu holds the top-performing position in the SAP Sales & Distribution (SAP SD) two-tier Standard Application benchmark (as of August 2002). In that test, a PRIMEPOWER 2000 128-processor server (based on the Solaris Operating Environment and SPARC architecture) combined with ETERNUS GR storage and Oracle9i Database achieved a score of 7,800 SAP SD benchmark users—almost twice the score of the second-place competitor. In another test, an 8-way PRIMEPOWER server scored the best-per-CPU performance for the Oracle Application Benchmark in the “midrange servers greater than 4-CPU” category. And in an SAP SD 3-Tier benchmark test, Fujitsu was the first to exceed the 20,000-user milestone. That mark was set using an innovative

mixed-platform architecture that combined EMC storage, Linux-based PRIMERGY systems, and high-end PRIMEPOWER servers running Solaris and an Oracle database.

“Oracle’s customers expect leading technology, low total cost of ownership, and the best performance available,” said Chuck Rozwat, executive vice president of Server Technologies at Oracle, in response to a world-record SAP ATO benchmark using Oracle software and PRIMEPOWER servers. “This result shows that Oracle is the obvious database choice for e-businesses, and the Solaris/SPARC-based PRIMEPOWER 2000, the superior platform choice.”

Scalability. To keep up with changing workloads, companies can either *scale out*—that is, increase capacity by adding multiple independent servers—or *scale up* to add capacity by increasing the processor, memory, and input/output capacity of a single large-scale system. For scaling out, PRIMERGY and PRIMEPOWER servers include compact rack-mountable nodes designed for high-density server farms. With its new PRIMERGY blade servers, the company can now offer blade server configurations with 300 servers in a single rack, with potentially up to 600 processors. For scaling up, the PRIMERGY systems support up to eight processors, while PRIMEPOWER servers scale to 128 processors in a single system.

Fujitsu also offers a capacity-on-demand environment that allows companies to

“By combining powerful technology and deep expertise, we are providing our customers with one-stop access to leading-edge solutions.”

Larry Fillmer
president and CEO,
Fujitsu Technology Solutions, Inc.



CAMPBELL LAMPO

Global Reach

that can deliver not only voice but also data, video, and a wide range of broadband services.

- **Electronic Devices.** Fujitsu is one of the world's largest manufacturers of semiconductors, as well as a recognized leader in plasma and liquid crystal displays. The company is focusing on solutions for the broadband Internet era, including mobile terminals, digital appliances, and WAN/high-end LAN networks.

The Fujitsu group serves customers in various regions worldwide: Fujitsu Limited covers Japan; Fujitsu Siemens Computers focuses on markets in Europe, the Middle East, and Africa; Fujitsu Technology Solutions, Inc., operates mainly in North America. For information about other regions, please visit www.fujitsu.com.

- **Fujitsu Limited** www.fujitsu.com
- **Fujitsu Siemens Computers** www.fujitsu-siemens.com
- **Fujitsu Technology Solutions, Inc.** www.ftsi.fujitsu.com
- **Fujitsu Consulting, Inc.** <http://consulting.fujitsu.com>
- **Fujitsu Services Ltd.** <http://services.fujitsu.com>



“As the [Rapid Rewards] program evolves with more functionality for one-to-one marketing, the system has got to be up all the time. With PRIMEPOWER and Fujitsu technologies, we are confident that we are building a solid foundation for future capabilities.”

Anne Murray
senior director of
Interactive Marketing,
Southwest Airlines

have additional resources pre-installed in a server, and then purchase and activate those resources permanently to match ever-growing workloads—or temporarily to meet unexpected peaks.

Availability. PRIMERGY servers support Intel-based clustering architectures. Redundancy in server, storage, and fibre channel technologies eliminates single points of failure.

Fujitsu also offers PRIMECLUSTER, an advanced clustering technology for the Solaris Operating Environment that safeguards applications and data across multiple nodes, maximizes availability, and helps reduce total cost of ownership with powerful management and operational capabilities. In addition, the company offers a Resilient Technology Platform—a PRIMEPOWER solution based on the Solaris Operating Environment for customers who need carrier-grade application availability with committed 99.999 percent uptime.

The flexibility and power of Fujitsu's servers also put companies in position to meet tomorrow's new demands. At Southwest Airlines, for example, the company's Rapid Rewards program and sales Web site are often enhanced to give users more features. “As the program evolves with more functionality for one-to-one marketing, the system has got to be up all the time,” says Anne Murray, Southwest Airlines' senior director of Interactive Marketing. “With PRIMEPOWER and Fujitsu technologies, we are confident that we are building a solid foundation for future capabilities.”

TAILORING THE INFRASTRUCTURE

Because the data center plays a central role in business, Fujitsu's enterprise technologies are designed to provide a modular approach to building IT infrastructures—which is key to meeting the differing needs of various organizations. “Each company has its own unique requirements,” says Fujitsu Limited's Shu Hiraki. “So our approach is based on a flexible, multitier, multiplatform architecture that encompasses client devices, front-end server farms, mid-tier and back-end servers, and complete storage solutions. That means that a company can have real choice, and design the optimum architecture for its business.”

To help ensure that a company's infra-

structure fits precisely with its business, Fujitsu provides a comprehensive portfolio of professional services, including systems integration, implementation, maintenance, and support. That ability to deliver focused expertise was recently strengthened with the creation of two new Fujitsu companies: Fujitsu Services Ltd. and Fujitsu Consulting, Inc. Fujitsu Services, which is based in London, delivers IT infrastructure management and outsourcing services, and a full range of related services, including infrastructure consulting, deployment, and education and training. Fujitsu Consulting, Inc., which is based in Edison, New Jersey, provides a full breadth of consulting, applications integration, and managed services that help clients design, integrate, and maintain strategic business solutions.

The Fujitsu group continues to explore ways to bring high levels of performance and availability to enterprise computing—along with the reliability and manageability that help drive a solid return on investment. “Changing markets are creating tremendous challenges—and tremendous opportunities—for businesses,” says Larry Fillmer, president and CEO of Fujitsu Technology Solutions, Inc. “By combining powerful technology and deep expertise, we are providing our customers with one-stop access to leading-edge solutions. And we are working to keep delivering solutions that provide tangible benefits and help customers succeed in this dynamic, fast-moving world.” •

RESOURCES

Fujitsu PRIMEPOWER Servers

- <http://primepower.fujitsu.com/en/>
- www.fujitsu-siemens.com/primepower
- www.ftsi.fujitsu.com/services/products/primepower/index.html

Fujitsu PRIMERGY Servers

- <http://primergy.fujitsu.com/en/>
- www.fujitsu-siemens.com/primergy
- www.ftsi.fujitsu.com/services/products/primergy/index.html

Fujitsu PRIMECLUSTER

- <http://primepower.fujitsu.com/en/primecluster.html>
- www.fujitsu-siemens.com/rl/products/software/primecluster.html

Oracle and Fujitsu

- www.oracle.com/partnerships/hw/fujitsusiemens/index.html?content.html