

Costs and complexity down – Performance and availability up x10sure™



We make sure



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Put together for you by Microsoft and Fujitsu Siemens Computers: your IT future, all wrapped up

More than ever before, small and medium-sized enterprises are confronted with dynamic changes in their markets. They are tackling these challenges with their typical strengths, which include close customer relationships and the ability to adapt swiftly – and by increasingly leveraging IT as the foundation for boosting growth and as a strategic instrument for strengthening their competitiveness.

The right technology and infrastructure is essential to achieving these objectives, since inadequate performance and high availability often hamper growth and market success. A company that wants to improve processes, support new business models and keep the competition in check with intelligent differentiation strategies needs more: it needs highly available IT that is secure and can be administered and operated as easily and economically as possible.

It's now simpler than ever before to evolve IT infrastructures in this direction and lay the IT foundation for the future. Here you'll discover what Microsoft and Fujitsu Siemens Computers have created for you in this connection. Find out more about the contents of a package of products and services that these two technology leaders have put together for you and can implement together with their partners. You'll discover new perspectives for your IT future that will amply reward your reading time.



Greater performance and high availability

We're combining forces in the service of highly available IT in the SME sector – and you'll be able to benefit very soon! Microsoft and Fujitsu Siemens Computers are collaborating with select partners to put together a package of services and products that unites innovative technology and know-how from different worlds.

The foundation of this package is PRIMERGY servers with Microsoft® Windows Server™ 2003 R2 preinstalled. This base is complemented by innovative and cost-effective storage technology based on FibreCAT® systems. Fault-tolerant operation of the environment is ensured by x10sure™, a tool that costs less, yet outperforms conventional high-availability solutions. And all these systems and solutions are tuned to each other and mesh seamlessly with one another, ensuring troublefree operation and delivering the reliability small and medium-sized enterprises need.

The components at a glance:

- **Microsoft Windows Server 2003 R2:** the latest Microsoft IT platform for optimized infrastructures – even simpler, more secure and less expensive than predecessor platforms.
- **PRIMERGY servers:** industry-standard servers with the Microsoft Windows Server 2003 R2 operating system preinstalled – for absolute dependability, high performance and agility.
- **FibreCAT storage:** powerful storage media that complement PRIMERGY servers perfectly – innovative, with a proven track record in the SME sector, and extremely economical.
- **x10sure:** a low-cost high availability solution for Microsoft Windows Server 2003-based environments – automated, easy to operate and simple to integrate.
- **Certified partners:** the assistance you need to plan, implement and operate highly available Windows environments – customer-oriented, expert, and experienced in the SME arena.

Cooperating for the benefit of our customers – for more than 20 years

Microsoft server solutions plus server, storage and high availability technology from Fujitsu Siemens Computers: it's a winning combination. When they pool know-how, knowledge and experience from complementary worlds, the results are proof that these two leaders in IT innovation know how to cooperate to **generate customer benefit**.

And this objective has guided their partnership for more than 20 years. Microsoft technology can now be found in just about all Fujitsu Siemens Computers products. In addition, numerous in-house developments by Fujitsu Siemens Computers are based on Microsoft technology.

One typical example of this is easyXchange, a solution for mail server and storage consolidation based on Microsoft Exchange Server.

More: → www.fujitsu-siemens.com
→ www.microsoft.com



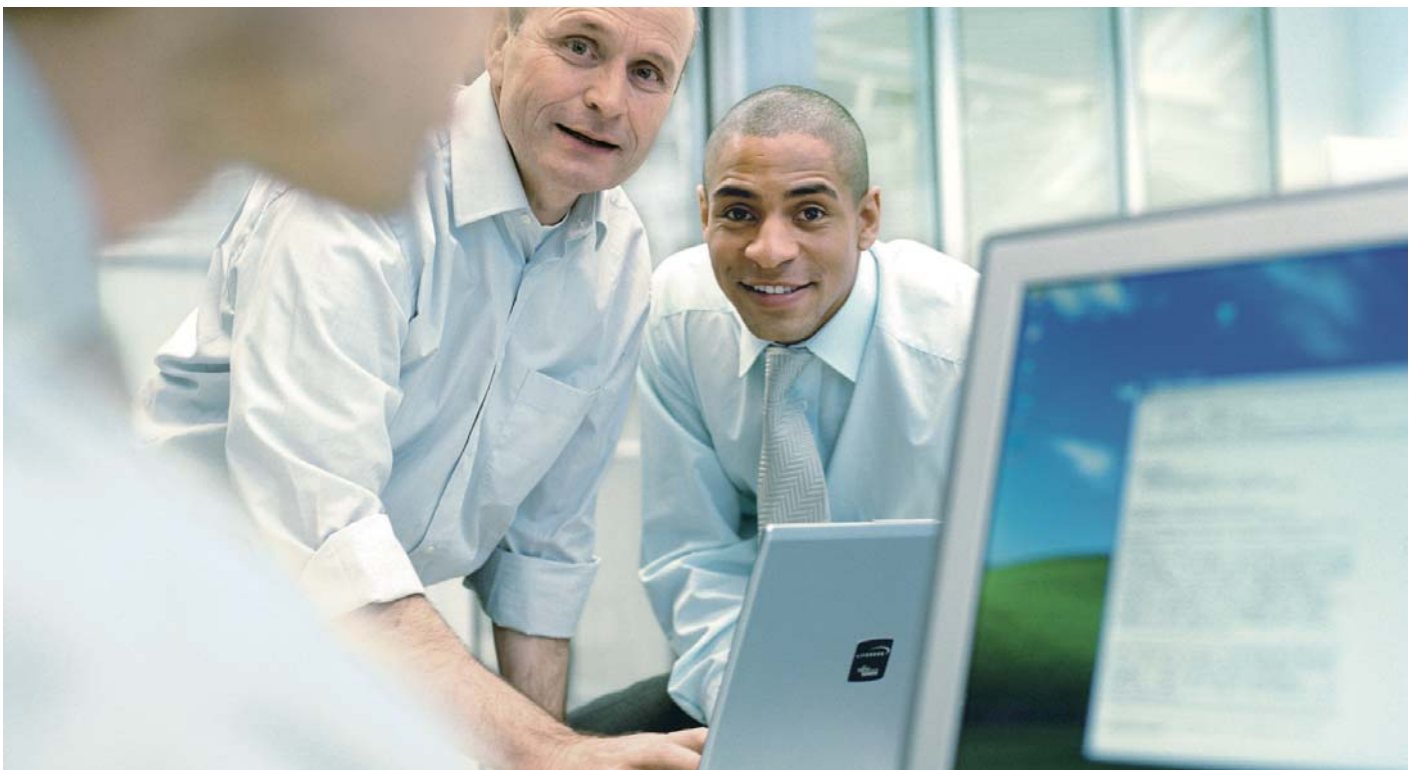
A new yardstick for reliability and cost-effectiveness: Microsoft Windows Server 2003 R2

Microsoft Windows Server 2003 R2 is the new yardstick for reliability, productivity, networking and cost-effectiveness in server operating systems. As a further development of the tried-and-tested platform Windows 2000 Server, Windows Server 2003 already included numerous improvements in detail and offered new perspectives for implementing IT environments that make a major contribution to companies' business success. Now Microsoft has gone one step further with the current R2 version of this server operating system.

Whether used at a small, medium-sized or large enterprise, at departments, branch offices and data centers, for running infrastructures and applications or for consolidating servers and applications: Windows Server 2003 R2 impresses customers with its high security, productivity, power and rapid return on investment.

Taking a closer look: simpler administration, monitoring and automation

You benefit from many refined improvements by using Windows Server 2003 R2. You cut the costs of administration and operation and also make life easier for your system administrators. For example, they'll be delighted at the automatic software distribution and the convenient central control of the desktop and server environment, as well as the much simpler administration of directories and user identities in the network. That's a lot, but there's even more: automated functions that allow rapid configuration changes, permanent status monitoring, and enhanced Windows/UNIX® interoperability to enable cross-platform management are just three of the many advantages Microsoft Windows Server 2003 R2 offers. And end users will need less assistance from their administrators in the future: for instance, they'll be able to restore inadvertently deleted files themselves without the aid of the help desk.



Reduced costs and complexity in your IT infrastructure

Investments in Windows Server 2003 R2 are soon recouped, mainly as a result of the refined functions for efficient administration. Windows Server 2003 R2 also makes it easier for you to roll out advanced new solutions that allow you to leverage competitive advantages more quickly. Thanks to its great compatibility with products from Microsoft and other vendors, Windows Server 2003 R2 integrates easily in existing environments and works seamlessly with the systems there. Moreover, Windows Server 2003 R2 is ideal for consolidating older server systems and applications in order to reduce the complexity of IT structures and thus cut costs.

Active protection of data and applications

In the age of the intranet and Internet and the related threats posed by Trojans, viruses and other electronic invaders, and in view of growing collaboration between business partners, IT security in everyday working life is taking on a new and enhanced significance. Windows Server 2003 R2's security functions, such as a PKI (public key infrastructure), smart card integration, 802.1X support, software restriction policies and cross-forest Active Directory trusts, allow you to create integrated IT infrastructures that ensure your company's information is secure – and stays that way. Improved identity and access management also contributes to greater security, making it easier to ensure compliance with statutory requirements.

More: → www.microsoft.com/windowsserver2003

GOOD REASONS FOR MICROSOFT WINDOWS SERVER 2003 R2

- Simpler server administration
- Higher system availability
- Flexible central and local scalability
- Automated software distribution
- Better support for collaboration
- Secure access to network resources
- Automation of configuration changes
- Fewer maintenance-related requests from end users
- Integration of Windows and UNIX systems
- Can be used for 32-bit and 64-bit applications

Microsoft Windows Server 2003 R2 is preinstalled on the PRIMERGY servers from Fujitsu Siemens Computers – the hardware platform for future-proof, highly available IT ...

CUTTING COSTS AND COMPLEXITY ON AN INDUSTRY-STANDARD PLATFORM: PRIMERGY SERVERS

Microsoft Windows Server 2003 R2 and PRIMERGY servers form a harmonious whole. The servers have been optimized for the new operating system from Microsoft – just another benefit of the close partnership between the two companies. It's a benefit that pays off for you in many respects: through high stability, reduced complexity and simpler administration. And the result is kind to your budget and your resources.

Laying the foundation for greater IT efficiency and agility

Any company that is able to adapt its IT rapidly and flexibly to changes in market requirements or provide swift IT support for new business models has its nose ahead of the competition. And the reverse is also true: rigid and inflexible IT impairs opportunities for growth, delays rollout of new products and results in lost revenue.

Enterprises are therefore well advised to adapt their IT to the demands of a dynamic market environment. In today's business climate, no company can afford disruptions to business operations, inefficiencies, or sluggishness. Maximum availability and agility are critical – but they have to be affordable as well!

PRIMERGY servers from Fujitsu Siemens Computers with Microsoft Windows Server 2003 R2 preinstalled are a decisive component in achieving greater IT efficiency and productivity.

Whether you need a Web or e-mail server, or a database or application server – the PRIMERGY portfolio has the right system for a wide range of different requirements. Whatever their intended use: thanks to their high degree of standardization, PRIMERGY servers offer excellent value for money. The servers are distinguished by highly developed redundancy of important components and modules. That minimizes the risk of technical failures and ensures uninterrupted, reliable operation of your business-critical applications. And this stability is also enhanced through the fact that faulty components can be replaced online.

A diverse spectrum

PRIMERGY servers address a wide range of needs with various model families. For example, the servers from the PRIMERGY TX200 and TX300 model series are tower servers with a mature quality of service for continuous platform operation. The same flair for performance is offered by the rack versions of the PRIMERGY RX200 and RX300. Capacity and performance in a compact format over just one or two height units are the hallmark of this server line, enabling reliable administration and control of sophisticated business applications. Hot-plug redundant components permit ideally tuned configurations in line with the service levels required. Onboard remote management components such as the iRMC (Integrated Remote Management Controller) and the optional iRMC Advanced Pack for graphical console redirection offer ideal possibilities for administration.



PRIMERGY RX rack servers

are perfect for an IT strategy aimed at cutting costs, increasing transparency and maximizing IT investments at the data center.

Another focal area is the BX blade servers. They concentrate high-performance computing power in the smallest of spaces and boast a compact board that accommodates a complete server with processors, main memory, controllers and hard disks. The blades configured in this way are inserted next to each other in a compact chassis that provides all the servers with their power supply, cooling and network connectivity infrastructure.

This design not only saves space, complex cabling and power, but also results in outstanding flexibility. If more computing power is required for new tasks, you can simply insert an additional blade in the chassis – and your capacity problems are solved! What's more: you can connect the individual blades to create a server pool and assign its combined resources to your application landscape on demand. The conventional assignment of a separate server, a separate database and separate storage systems to each application is then a thing of the past – as are the days where only 20 or 30 percent of server capacity is utilized. There's no need

to reserve capacity for peak times. If extra computing power is needed – for example at the end of the month – automated management ensures that blades that are not fully used are added. In this way, you achieve ideal server utilization.

Thanks to their high flexibility, PRIMERGY blade servers are excellently suited for creating server pools from which applications can be supplied with computing power on demand. Such virtualization of computing power is the answer to the traditional and not very efficient principle of linking the server and the application 1:1. PRIMERGY blade servers are the ideal platform for running the low-cost high availability solution x10sure.

More: → www.fujitsu-siemens.com/primergy



PRIMERGY blade servers

This new product category offers excellent connectivity thanks to CPU blades, redundant and hot-plug LAN switches and integrated blade management.

You've now been introduced to a fundamental component for boosting your IT's efficiency using PRIMERGY servers and Microsoft Windows Server 2003 R2 working in tandem. What's still missing is the storage component ...

Storage excellence for coping with growing volumes of data: FibreCAT® systems

Over 90 percent of all information at companies is now created in digital form. One, two or even more terabytes of data are no longer a rarity at small and medium-sized enterprises. That means that both the storage and provision of information are growing in importance.

Need for renewal in the storage arena

No enterprise can afford chaos when it comes to storing data – or the risks of losing data that chaos entails. The consequences for the entire company are too serious – the more so when you consider the statutory regulations and archiving obligations that are increasingly governing data storage. Switching to Windows Microsoft Server 2003 R2 and PRIMERGY servers is a fine opportunity to replace obsolete storage technology and implement cutting-edge storage management – in the shape of the FibreCAT product family. It is tailored completely to the needs of small and medium-sized enterprises and gives users what they want: storage excellence.

Small and medium-sized enterprises have clear and specific expectations of storage systems: low cost, simplicity and above all reliability – qualities that FibreCAT storage systems already bring to data storage at a large number of companies.

State-of-the-art, high-speed storage technology

FibreCAT systems are the ideal complement to PRIMERGY server platforms with Microsoft Windows Server 2003 R2. The FibreCAT SX80 model has been certified for use in the high availability solution x10sure.

□ The FibreCAT SX80 boasts a storage capacity of up to 42 terabytes.

That means lots of flexibility to cope with a wide range of needs. The system family uses the latest Fibre Channel technology. The result: high-speed data transport – up to 4 gigabits a second! The system also offers the option of operating SAS and SATA disks in one chassis.

Speed and maximum reliability

One major benefit of the FibreCAT models is their high transfer rate. They also have another key merit: they are extremely reliable. All the important components, such as RAID controllers, fans, power supply and disks, have a redundant design and can be replaced online. Moreover, FibreCap technology protects the data in the RAID controller cache against being lost in the event of a power outage. This is an intelligent function that stores the cache contents on a built-in, removable compact flash card if the power fails. The power for this backup process is supplied by a capacitor that, unlike conventionally used batteries, is recharged right away. That ensures that work can be continued at full performance directly after the power is restored after an outage.

Easy to install and operate

What is especially important for small and medium-sized enterprises: FibreCAT systems can be installed quickly and easily. Cooperation linkups with leading vendors like Emulex and Brocade also mean that a packaged storage product can be offered: hardware, software, host bus adapters, Fibre Channel switches and related services from a single source. And FibreCAT storage systems don't require any specialized knowledge in practical operation. The necessary know-how has already gone into the preinstalled administration software, which can be used with an intuitive Web interface.

Numerous features make using storage convenient in practice. They also include integration with Microsoft Virtual Disk Services (VDS), with which different storage devices can be administered simply using consistent interfaces if required. Series standards, such as the snapshot technology on which the Microsoft Windows Server 2003 Volume Copy Shadow Services (VSSs) are based, ensure outstanding data protection. Application-consistent snapshots constantly save changes to original files. That puts an end to the nightmare of losing data – if the system crashes, the version existing before the fault occurred can be restored rapidly.

More: → www.fujitsu-siemens.com/fibrecat

Starter bundle My very first SAN



To offer companies a simple and affordable means of introducing a storage area network (SAN), Fujitsu Siemens Computers has compiled the soft bundle »My very first SAN« from pretested components that have been launched successfully on the market. It not only includes the FibreCAT SX80 storage system, but also the necessary add-on components such as host bus adapters (HBAs) from Emulex and Brocade switches. That creates an all-round solution that makes storage consolidation easier than ever: with best-in-class technology and solutions from a single source at a very attractive price – and with the future security of upgrading to cope with additional requirements at any time. The »My very first SAN« bundle is the ideal, low-cost means of introducing a SAN: it is perfectly integrated in the high availability solution x10sure and can be combined perfectly with it.

More: → www.fujitsu-siemens.com/campaigns/myfirstsan

CASE STUDY

Deutsche Saatveredlung AG centralized its data storage as part of a project aimed at increasing operational reliability and fault tolerance. As part of this, it implemented a concept that is based on a cluster solution with PRIMERGY servers and FibreCAT SX storage systems with a mirrored SAN storage.

»The solution implemented with servers and storage systems from Fujitsu Siemens Computers convinced us with its excellent price/performance ratio and also offers greater availability, agility and performance without any additional administration overhead.«

Jan-Bernd Struthoff, Head of IT, Deutsche Saatveredlung AG

Read the full case study at: http://212.52.239.202/files/pdf/6608_FSC_CSSaatver_EN_A.pdf

PRIMERGY servers with Microsoft Windows Server 2003 R2 in conjunction with FibreCAT storage solutions: a combination that offers a wide range of opportunities for maximum IT efficiency and security. The use of x10sure opens up further perspectives for ensuring high availability ...

Automated administration in real time instead of manual monitoring: x10sure™ high availability solution

x10sure™ is a simple, low-cost high availability solution for small and medium-sized enterprises. This solution is excellently suited for users who run their business applications on the basis of Microsoft Windows Server 2003 R2 and on PRIMERGY servers.

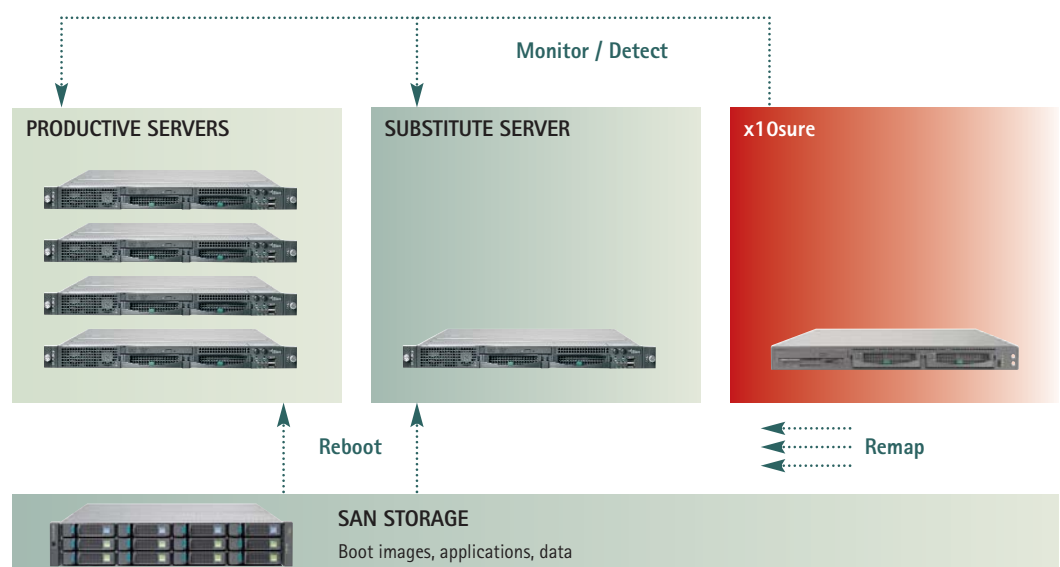
x10sure allows you to transform your existing infrastructure into a state-of-the-art, easy-to-operate and very cost-effective availability solution for all your Windows applications. x10sure offers automatic server monitoring and error recovery and can be used for both standard Microsoft applications and applications that customers have developed themselves – without any need to modify them.

x10sure ...

- ... **cuts your capital expenses** for high availability solutions since, unlike traditional concepts, just one substitute server for backing up a large number of operational servers is required with the »x10sure N:1 approach«.
- ... **minimizes downtime**, since if a server fails, applications are up and running again seamlessly in a matter of minutes on a reserve server
- ... **reduces administration overhead** thanks to simple installation, configuration and operation. The x10sure Windows Server Pool is administered quickly and efficiently from a central user interface.

READY FOR ACTION AGAIN IN JUST A FEW MINUTES ...

- x10sure monitors the server landscape.
- A server fails.
- x10sure detects the problem.
- x10sure switches off the faulty server.
- x10sure assigns the Windows application to the substitute server.
- x10sure initiates booting of the substitute server.
- The substitute server starts the software with the identity of the failed productive server.



Fault tolerance – at low cost with x10sure

Thanks to x10sure, the days when high fault tolerance meant high costs are over. Before, companies that wanted high availability could only attain it for their most important server services. Plus they had to adopt the traditional cluster approach: every operational server was flanked by a substitute one. The result: double the hardware, double the capital expense and double the licensing and maintenance costs. That kept many small and medium-sized enterprises from introducing the security that today's dynamic business operations demand.

Now there is x10sure, a low-cost, lean alternative, even an expansion option for further servers. The solution monitors server operation around the clock. When it identifies a server failure, it initiates automatic switchover to a substitute server, which then assumes the operation of the affected application within the briefest of times.

That goes down well in the market, since x10sure not only pays off immediately in the form of far less investment and minimized running costs, but also offers a lot of other advantages. Because x10sure replaces

manual monitoring of the quality of service with automated, rule-based real-time management without any user intervention, administration overhead is immediately reduced. A further advantage is in the »storage core« of x10sure. Since the solution boots the substitute server from a SAN system, implementation of x10sure also entails a centralized storage solution. Many small and medium-sized enterprises are inclined to take this step anyway in order to ensure faster and more secure backups and effective file management.

The advantages of x10sure at a glance

- ☐ Automated backup of business processes
- ☐ High availability for low budgets
- ☐ Can be used for any application, even custom applications
- ☐ Support for PRIMERGY blade, rack and tower servers
- ☐ Simple implementation, easy administration and low maintenance costs

More: → www.fujitsu-siemens.com/x10sure

CASE STUDY

»Risks eliminated« – Thanks to the advanced blade ecosystem PRIMERGY BX600 in conjunction with the high availability solution x10sure and FibreCAT storage technology, the German Alpine Association (750,000 members) has not only significantly improved the availability of data, processes and applications, but boosted the efficiency and cost-effectiveness of IT operation at its national head office:

»Consolidation of our IT landscape with servers, storage systems and the high availability solution x10sure from Fujitsu Siemens Computers has not only had an advantageous impact on running costs and operational readiness, but above all eliminated existing risks in IT operation. That gives you a deep-down feeling of security.«

Klaus Vogler, Head of IT, German Alpine Association

Your IT has a stable, future-proof foundation with PRIMERGY servers along with the preinstalled Microsoft Windows Server 2003 R2 operating system, FibreCAT storage and x10sure high availability. A turnkey solution is created professionally for you by qualified partners. You have the choice ...

Bundled by renowned companies – implemented by expert partners: certified quality

The components for your company's stable and secure IT future are available: Microsoft Windows Server 2003-based PRIMERGY servers, FibreCAT storage systems and the x10sure high availability solution are an extremely good choice. The only thing left for you to do is select a partner to integrate the components into a harmonious whole and adapt them to the specific needs of your company. They all have one thing in common: certified quality. Please contact us to find the right partner for your needs.

Certified quality means you can rely on excellently trained sales and technical staff in planning, implementing and supervising an x10sure project. This expertise is founded on in-depth know-how of PRIMERGY servers. Additional special x10sure knowledge is imparted in both Web-based and classic training courses – and examined as well, since only partner companies who successfully prove their x10sure team's qualification are awarded the status of a certified partner.

There are also partner companies who, in addition to their status as certified partners, go one step further and invest in their own x10sure live demos and test environments. This more extensive commitment wins them certification as an »x10sure Competence Center«.

PUT YOUR IT FUTURE ON A STRONG FOUNDATION

- With the latest Microsoft server operating system technology
- With superior server technology from Fujitsu Siemens Computers
- With state-of-the-art storage from the market leader for SMEs
- With a high availability solution specifically tailored to Windows environments
- With partners who create a reliable and cost-effective synthesis from these components





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