FUJITSU

The fast track to VMware-based virtual infrastructures

Fujitsu Integrated System
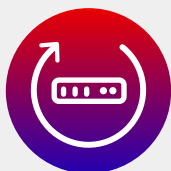PRIMEFLEX for VMware vSphere

intel.
XEON

Intel® Xeon®
processor

Building and modernizing a data center infrastructure is becoming increasingly complex because new areas of application have to be supported while digital transformation is underway. At the beginning of this millennium, Fujitsu already recognized the need to simplify and accelerate infrastructure deployment, while minimizing costs and risks. Under the PRIMEFLEX brand, a comprehensive range of powerful integrated systems was developed – all systems are pre-validated, pre-integrated and pre-tested. For many years PRIMEFLEX has been a proven solution for rapid, low-risk data center innovation, with a focus on critical success factors for business enterprises.

PRIMEFLEX for VMware vSphere is designed to make it easier for customers to meet the challenges of virtualization. And it opens up a seamless path to the private and hybrid cloud at the same time. IT organizations can benefit from extraordinary agility, absolute reliability and exceptional efficiency by adopting this converged architecture. This is true for all aspects of the project lifecycle – the design, installation, solution deployment, daily operations, support, plus adaptation and extension of the infrastructure.

Pre-integrated system consisting of servers, storage, network and virtualization software

Designed and supported as a complete system

Architecture integrates know-how gained from thousands of customer projects

VMware virtualization at its best with a seamless path to the private and hybrid cloud

Award-winning x86 servers in VMmark benchmarks and storage in SPC-1 benchmarks

Ready for next-generation application environments

Leadership in integration

PRIMEFLEX gets you to your destination faster, safer and more cost-efficient. Its holistic and integrative concept is the key. Complex and risky DIY approaches are things of the past as PRIMEFLEX is a complete system designed, integrated and supported by Fujitsu. In addition, best-in-class, perfectly harmonized technology components in combination with standardized implementation services and holistic infrastructure support ensure significant boosts in productivity for both business and IT operations. All this, in comparison to classical infrastructures, with considerably lower total cost of ownership.

PRIMEFLEX for VMware vSphere – compelling at every stage

VMware is by far the first choice for virtualization in data centers. With VMware vSphere, IT organizations can deliver IT services flexibly and reliably, while transforming their data centers into powerful, flexible, and secure hubs for outstanding business agility.

Building on comprehensive best practices from a long-standing strategic partnership with VMware and thousands of successful virtualization projects, Fujitsu has integrated the strengths of the virtualization platform in PRIMEFLEX for VMware vSphere. The result is a complete infrastructure solution that seamlessly links servers, storage, network and software. This pays off for customers: They can realize their virtualization plans quickly, with high quality and efficiency.

This completely virtualized infrastructure can be easily customized and is ready to run in the shortest time possible. As a converged infrastructure, PRIMEFLEX for VMware vSphere provides extraordinary agility to optimally meet various virtualization requirements. The latest technologies, comprehensive automation, uniform administration and extensive options for installation, operation and expansion ensure exceptional efficiency throughout the entire life cycle. The absolute reliability of all infrastructure components, and numerous options for meeting even the highest demands for availability, also guarantee peace of mind.

Here are some of the outstanding PRIMEFLEX for VMware vSphere features that make data center modernization much easier:

	Design	Install/Deploy	Operate	Adapt/Extend
Extraordinary agility	• Factory designed converged architecture • Quickly and easily adapted to specific needs	• Quick and fail-safe setup • 50%+ faster deployment compared to competitors	• Productivity gains through best performance, reliability and resource utilization • Add VMs on demand	• Fast response to changing needs • Scaling and expansion on demand
Exeptional efficiency	• Easy to configure • Latest technologies (DDR5, PMem, GPGPU, all-flash storage, ...)	• Quick implementation • Standardized implementation service with single price tag and order number	• Simplified IT operations with ISM* • Savings in energy and space costs	• Certified expansion packs • Integration guidelines • Professional services • Integration of backup and restore for the virtualized environment
Absolute reliability	• Tested and validated design • Perfectly balanced and pre-integrated components	• Installation and integration services, proven in thousands of customer projects globally	• At least 99.997% availability • Single point of contact (SPoC) support for the entire infrastructure solution	• Pre-tested and optimized upgrade options

* Fujitsu Software Infrastructure Manager (ISM) provides an integrated view and centralized control and lifecycle management of the infrastructure

Gain extraordinary agility

PRIMEFLEX for VMware vSphere exponentially improves IT organization's responsiveness to business demands. The solution helps translate an initial idea into tangible results within days, compared to weeks or months with a DIY approach.

Based on the fully pre-tested and validated design, along with detailed sizing and configuration recommendations, the architecture can be tailored to meet specific requirements quickly and easily. Proven installation and integration methods delivered through Fujitsu implementation services ensure high-quality setups. For example, the new PRIMEFLEX Implementation Desk along with the easy-to-use web-based PRIMEFLEX Deployment Portal makes infrastructure deployment faster, more reliable and secure.

Once in operation, PRIMEFLEX for VMware vSphere provides considerable productivity gains ensured by world-class performance of PRIMERGY servers and ETERNUS hybrid and all-flash storage systems. This leaves a lot of headroom,

Deliver value faster.

e.g. during load peaks, to add VMs on demand or to meet new business requirements. On the other hand, seamless integration and sophisticated management tools enable you to manage everything faster and more confidently. The Fujitsu Software Infrastructure Manager (ISM) provides monitoring and lifecycle management of Infrastructure through a simple vCenter integrated interface.

And if the solution needs to be adapted to new requirements, you can scale granularly on component level, and integrate additional functions for backup and disaster recovery.

Improve efficiency

Optimal resource utilization, future-proof technologies, simplified IT operations: PRIMEFLEX for VMware vSphere offers all this and much more in a validated architecture that guarantees lower TCO. Design, installation and deployment are much easier and save a lot of time and money.

The pre-tested architecture can be easily adapted to your own requirements. PRIMERGY servers can be equipped with the very latest technologies such as GPGPU for new application areas (e.g. VDI, Deep Learning and AI) or DDR5 and PMem modules. And ETERNUS hybrid and all-flash storage ensures maximum efficiency with features such as massive data throughput or the ability to compress and/or deduplicate data at the application level.

For lowering installation and deployment costs, Fujitsu provides a special PRIMEFLEX Implementation Service. During operation, the high energy efficiency of the systems and the compact design of the solution pay off. In addition, extensive automation and integrated centralized

Significantly lower TCO.

management simplify IT operations, thus reducing operating costs even more. The efficiency gains that can be achieved during operation are enormous – two examples:

- 50% reduction in power consumption with group power capping
- 90% Cost & time reduction with uniform firmware management

And should plans call for an expansion of the solution, this can be done easily and economically with expansion packs. This also applies if, for example, a backup is to be integrated in the virtualized environment– the Fujitsu data protection portfolio provides a number of options for every use case.

Intel® Xeon®
processor

Build the future on absolute reliability

You want to avoid risks and protect your investments – and with future-proof PRIMEFLEX for VMware vSphere, you will find peace of mind.

When you start your project, you can build on an architecture concept that thousands of customers trust – and easily adapt it to your needs. An infrastructure is at your disposal that offers 99.997% availability even with the entry-level systems. You can easily integrate backup and disaster recovery, or build a resilient solution based on VMware vMotion.

Peace of mind guaranteed.

In addition, you will be able to meet SLAs quickly and reliably, and resolve technical crises in a jiffy with exclusive PRIMEFLEX Infrastructure Support and a single point of contact. Reliability is also the top priority if you want to expand your solution. The further development of the solution is quality-assured, and all upgrade packages are approved by experts.
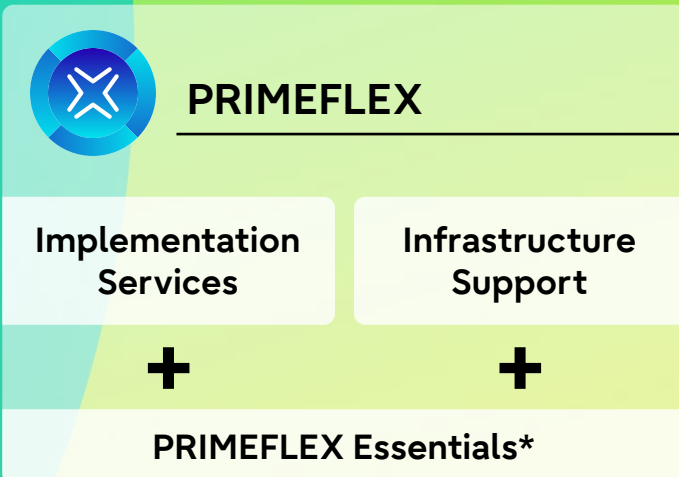
Choice of delivery options

To ensure a smooth deployment and easy maintenance, the default delivery option for PRIMEFLEX systems includes an on-site implementation service and an infrastructure support service that provides technical solution support with a single point of contact for support.

Companies who have sufficient resources in their IT department to deploy and maintain the IT infrastructure on their own, can choose the PRIMEFLEX Essentials option without an implementation service and solution support.

Deliver value faster.

PRIMEFLEX

Implementation Services	Infrastructure Support
+	+

PRIMEFLEX Essentials*

* Certified hardware and software including component support

The choice is yours – simply select the delivery option you need.

Overview of technical details

Thanks to its extremely flexible configuration options, PRIMEFLEX for VMware vSphere is the ideal solution for small medium-sized and very large IT organizations. The minimum server configuration is 2 nodes and currently ranges up to 64 nodes – with extensive possibilities for specific server configurations. When it comes to storage, you can choose between a broad range of all-flash or hybrid Fujitsu storage systems. For LAN connectivity, Fujitsu recommends network switches from Juniper or Extreme. Existing switches at a customer site may also be integrated into the solution. If Fibre Channel connectivity is required, Fujitsu recommends Brocade switches from Broadcom. Here is a short overview of the modules:

Infrastructre Management:
FUJITSU Software Infrastructure Manager (ISM)

- Centralized and converged management of servers, storage, network, power and cooling, cloud management
- 23 times faster troubleshooting
- 50% reduction in power consumption
- 90% cost and time savings with uniform firmware management

Storage Options:
ETERNUS DX/AF/AB/HB

- Choice of all-flash and hybrid storage systems
- Balanced speed, capacity, and costs
- Best-in-class IOPS
- Extremely scalable

Server Options:
PRIMERGY RX2530/2540

- Dual-socket x86 servers powered by the 4th generation of Intel® Xeon® Scalable Processors (up to 60 cores/CPU)
- Up to 8 TB memory (DDR5 or in combination with new Intel PMem 300 generation)

Hypervisor:
VMware vSphere

- Industry-leading virtualization and cloud platform
- Universal application platform
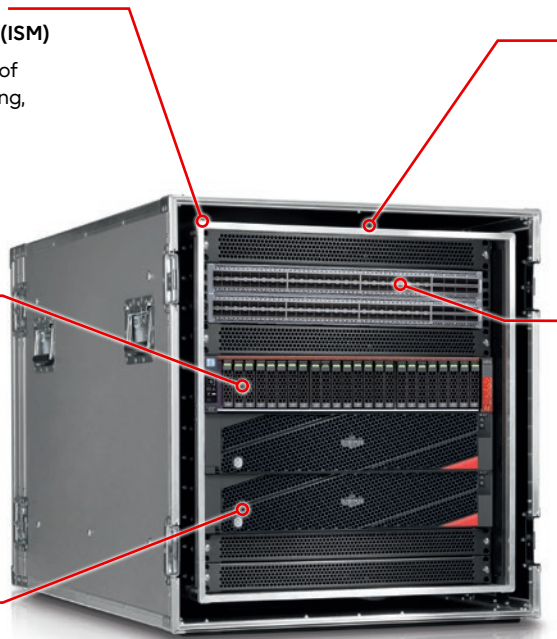- 54% decrease in downtime of tier-one applications

Local Area Network Connectivity: Juniper, Extreme Networks, bring your own switch

- Support for 1/10/40 GbE ports for optimal flexibility and scalability
- Maximum throughput for all ports and package sizes
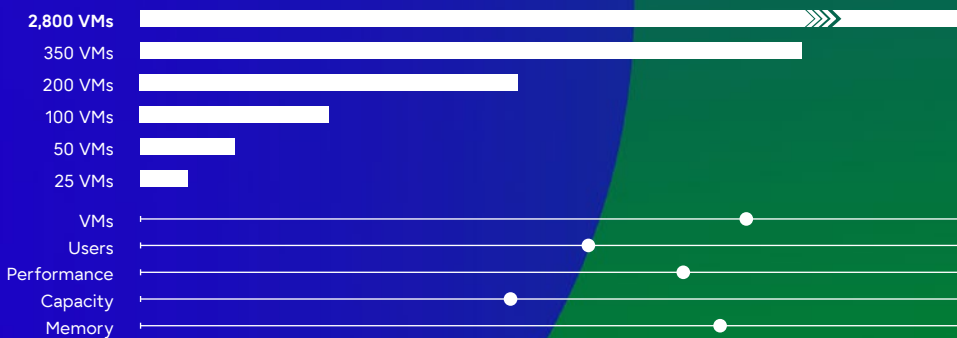- Maximized network availability through efficiency and resilience

Fibre Channel Connectivity:
Brocade

- Brocade Fibre Channel technology-based switches from Broadcom deliver high-performance connectivity across the data center and scalability network on demand

PRIMEFLEX for VMware vSphere offers you ultimate flexibility

2,800 VMs
350 VMs
200 VMs
100 VMs
50 VMs
25 VMs

VMs
Users
Performance
Capacity
Memory

- Choose from pre-configured packages for 25, 50, 100, 200, 350 and 2,800 virtual machines

- Start small and scale granularly on component level as your business demands grow

- Migrate to private/public/hybrid cloud whenever you want