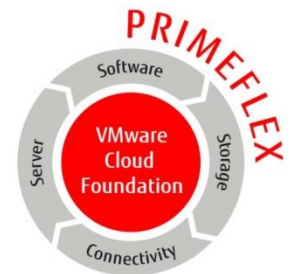


Data sheet

FUJITSU Integrated System PRIMEFLEX for VMware Cloud Foundation

Fast track to your VMware Software Defined Data Center



PRIMEFLEX for VMware Cloud Foundation is a turnkey integrated system that includes all the hardware and software to simplify deployment of a large-scale hyper-converged software-defined data center infrastructure. It combines high performance, energy efficient Fujitsu PRIMERGY standard x86 servers, network switches from Extreme Networks® and VMware Cloud Foundation™, VMware's integrated platform that delivers enterprise-ready services for compute, storage, networking and security in combination with unique lifecycle management capabilities. PRIMEFLEX for VMware Cloud Foundation is ideal for businesses and service providers who demand fast time to production, reduced management complexity and lower TCO.

High virtualization performance and energy-efficiency

The underlying computing platform comprises Fujitsu PRIMERGY rack servers, providing massive scale-out x86 server power, while still delivering ideal economic efficiency in terms of server density, energy consumption, heat optimization and lower operating costs. Fujitsu x86 servers have a long track record of continuous outstanding benchmark results, enjoying the longest leadership positions in most of the VMware VMmark benchmark categories. Thanks to the Fujitsu Cool-safe® advanced thermal design, additional cooling costs can be saved on top of comparatively low energy consumption.

VMware Cloud Foundation™ software stack

VMware Cloud Foundation brings together VMware vSphere®, vSAN™, NSX® and optionally, vRealize® Suite components, into a natively integrated stack. For the logical infrastructure, the familiar VMware virtualization and management components are augmented by the VMware SDDC Manager, the centralized management software in VMware Cloud Foundation used to automate the entire lifecycle of the SDDC, from bring-up, to configuration, to infrastructure provisioning to upgrades/patches, making it simple for admin staff to build and maintain the SDDC.

Rapid bring-up and configuration

PRIMEFLEX for VMware Cloud Foundation can be put into productive use within a few days instead of months, providing IT organizations with the fastest way to deploy a complete infrastructure for a software-defined data center.

On-demand provisioning of infrastructure pools

SDDC manager provides a fully automated process for creating, extending, and deleting workload domains, which can be administered and patched independently. Workload domains provide a unit of consumption at the SDDC level by presenting an integrated selection of compute, storage and network resources for business workloads to run in.



Non-disruptive, automated lifecycle management

SDDC manager provides fully automated patching and upgrading for all key components in the VMware Cloud Foundation software stack (VMware vSphere, vSAN, NSX, vCenter Server and SDDC Manager), significantly reducing maintenance efforts and achieving meaningful OPEX savings for data center operations.

Features and benefits

MAIN FEATURES	BENEFITS
Compute and storage hardware <ul style="list-style-type: none">■ Fujitsu vSAN ReadyNodes™ based on Fujitsu Server PRIMERGY RX2530 or RX2540 systems providing compute and storage capacity with internal disks	<ul style="list-style-type: none">■ High-performance, energy-efficient and space saving x86 servers satisfying different performance and capacity requirements
Networking hardware <ul style="list-style-type: none">■ Extreme Networks® ExtremeSwitching™ VDX 6740 top-of-rack switches for intra-rack connectivity and traffic to data center network■ Extreme Networks® ExtremeSwitching™ VDX 6940-36Q spine switches for inter-rack connectivity■ Extreme Networks® ExtremeSwitching™ VDX 6740T-1G management switch (optional)	<ul style="list-style-type: none">■ Offers a flexible switching platform in a compact form factor for a spine-leaf design required in highly scalable cloud architectures
VMware Cloud Foundation™ <ul style="list-style-type: none">■ Compute, storage, network virtualization and management (vSphere®, vSAN™, NSX®, vRealize®, SDDC Manager)	<ul style="list-style-type: none">■ Delivers enterprise-ready software-defined data center infrastructure on all levels (compute, storage, network) with unique automation and management capabilities for simplified operation
SDDC Manager <ul style="list-style-type: none">■ Rapid bring-up and configuration■ On-demand provisioning of infrastructure pools■ One-click patching and upgrading of VMware software stack	<ul style="list-style-type: none">■ Faster time to production for new IT capacity■ Enables elastic capacity expansion or reduction■ Reduces risk and time needed for maintenance windows
Other software components <ul style="list-style-type: none">■ VMware vRealize® Suite (all editions higher than Basic)■ VMware Horizon®	<ul style="list-style-type: none">■ Provides the management platforms to address VDI or IaaS use cases (mix of both use cases in one configuration supported)
Deployment model <ul style="list-style-type: none">■ Factory-integrated delivery of all hardware and mandatory software components - complemented with deployment services	<ul style="list-style-type: none">■ Reduces implementation risks; speeds up deployment time at the customer site to typically a few days only
Support <ul style="list-style-type: none">■ Single point of contact for support for all components of the entire solution and its lifecycle	<ul style="list-style-type: none">■ Easier support interaction with speedier resolution times

Architecture

PRIMEFLEX for VMware Cloud Foundation provides an integrated stack of hardware and software (virtualization, operations and management) with guaranteed interoperability, freeing organizations from dealing with complex interoperability matrixes.

Server and storage infrastructure

The foundation of PRIMEFLEX for VMware Cloud Foundation is based on a hyper-converged infrastructure (vSAN ReadyNodes™), which means that compute and storage for VMs are delivered from the same x86 server platform running the hypervisor. To meet varying customer requirements, Fujitsu offers a range of certified [vSAN ReadyNodes](#) (hybrid and all-flash) ensuring quick, repeatable deployments while eliminating risk of misconfiguration. All vSAN ReadyNodes are based on FUJITSU Server PRIMERGY dual-socket rack servers providing high performance with the latest Intel® Xeon® processor family.

Network design

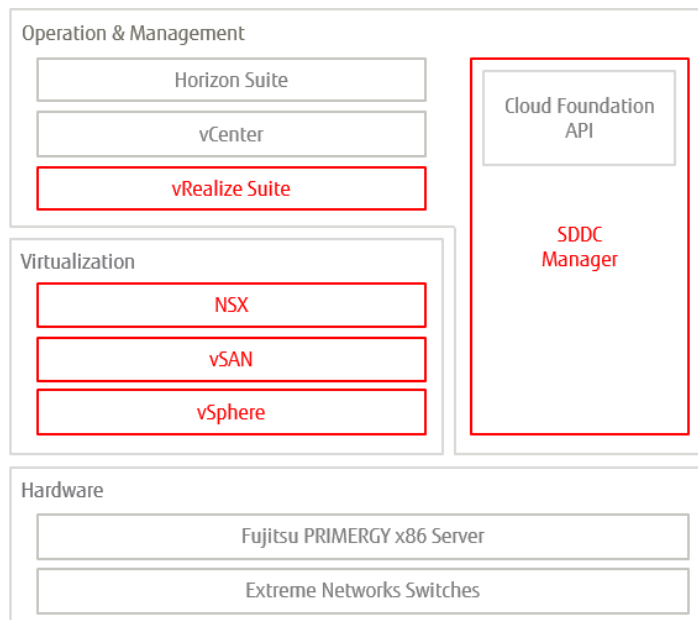
PRIMEFLEX for VMware Cloud Foundation includes a prescriptive network design within and across racks. The design requires a leaf-spine topology involving Top of Rack (ToR) and inter-rack switches. Each rack contains two Extreme Networks® ExtremeSwitching™ VDX 6740 ToR switches, which control intra-rack network connectivity and traffic to the existing data center network. With scale out across multiple racks, east-west traffic is fully self-contained. Connectivity between racks is provided by means of two Extreme Networks® ExtremeSwitching™ VDX 6940-36Q inter-rack switches. If a management network is required, an optional Extreme Networks® ExtremeSwitching™ VDX 6740T-1G may be integrated in each rack.

Software stack

PRIMEFLEX for VMware Cloud Foundation includes the VMware Cloud Foundation software stack. The basic edition includes compute (vSphere Enterprise+), storage (vSAN Advanced), networking (NSX Advanced), and lifecycle automation (SDDC Manager). Higher end Cloud Foundation editions (Standard, Advanced and Enterprise) also include cloud management (vRealize Suite and vRealize Network Insight) in increasing levels of functionality. For further information, please see the detailed [feature list](#).

Customers must provide a separate vCenter Server license for a Cloud Foundation environment. Only one vCenter Server license is needed per Cloud Foundation instance, regardless of the number of workload domains in the environment.

For VDI use cases VMware Horizon® may be integrated on top of the VMware Cloud Foundation software stack. Although part of the platform deployed by Cloud Foundation, Horizon is sold and licensed separately.



The SDDC Manager is the operator’s primary interface for day-to-day tasks. On Day 0, the SDDC Manager automates bring-up of the VMware software stack. After Day 0, the SDDC Manager dramatically simplifies operations and management with capabilities such as non-disruptive, automated lifecycle management and integrated performance management, capacity optimization and real-time log analytics. In addition, the SDDC Manager provides REST-based APIs for integration with the existing data center management and monitoring tools.

Use cases

- **Cloud Infrastructure**
Leverage the high performance, availability, and scalability of the VMware SDDC to run any mission-critical apps (i.e., database, web apps, VDI)
- **IT Automation**
Automate infrastructure and application delivery with selfservice capabilities to enable Infrastructure as a service on premises
- **Hybrid Cloud**
Build a true hybrid cloud with common infrastructure and consistent operations, connecting your private and public clouds, that are compatible, stretched, and distributed
- **Virtual Desktop Infrastructure (VDI)**
Simplify the planning and design of a VDI environment based on VMware Horizon®, making VDI deployments faster and more secure

Technical details

Hardware

Rack Infrastructure		1-8x FUJITSU PRIMECENTER M2 Rack 42U 1200x800
Compute Nodes		Fujitsu offers a range of server configurations (vSAN ReadyNodes™) for use with VMware Cloud Foundation. For a list of all Fujitsu vSAN ReadyNodes, please see the VMware Compatibility Guide .
Networking	Management Switch	1x Extreme Networks® ExtremeSwitching™ VDX6740T-1G, 48x 1GE, 1U For further info please see the related data sheet .
	Top of Rack Switches	2x Extreme Networks® ExtremeSwitching™ VDX6740 48 x 10GE, 4x 40GE 1U For further info please see the related data sheet .
	Inter-rack Switches	2x Extreme Networks® ExtremeSwitching™ VDX 6940-36Q, 36 x 40GE, 1U For further info please see the related data sheet . Multi-rack configurations require one pair of inter-rack switches in one of the racks for inter-rack traffic.

Software

VMware Cloud Foundation		PRIMEFLEX for VMware Cloud Foundation uses VMware Cloud Foundation V3.5 For details please see the release note .
Other software products		VMware Horizon Suite may be integrated to address VDI use cases. PRIMEFLEX for VMware Cloud Foundation supports mixed operation of VDI and IaaS environments in a single configuration.

Licensing

		The VMware Cloud Foundation software is licensed on a per processor perpetual license model and valid for the entire configuration. Customers who have previously purchased individual components of the software stack are able to purchase complementary licenses to upgrade to VMware Cloud Foundation without penalty. The appropriate VMware End User License Agreement (EULA) terms for VMware Cloud Foundation apply and have to be agreed before first usage. You will find the EULA terms at: http://www.vmware.com/download/eula/
License terms		Fujitsu provides one Product Activation Code (PAC) for the complete PRIMEFLEX for VMware Cloud Foundation software bundle. To generate a valid license key this activation code has to be activated at http://www.vmware.com/code/fsc

Warranty

Support Service

Support and Service regulations		The maintenance offer for PRIMEFLEX for VMware Cloud Foundation is based on Fujitsu SupportPacks with standardized product-related services and predefined SLAs for the software and hardware components. Support Services for the hardware components extend the standard warranty and provide various options for duration, response or recover times to meet individual customer needs. For the VMware Cloud Foundation software the Support Services comprise the diagnosis of software incidents and the provision of workarounds, corrections and software versions with new functions (new major releases). All according to the VMware Cloud Foundation license policy. The Support Packs for VMware Cloud Foundation have an initial term of 3, 4 or 5 years, 24x7 service time and customers can choose next business day or 4 hours responsible time.
Recommended Service		24x7, onsite response time: 4h
Service Lifecycle		5 years
Service Weblink		http://ts.fujitsu.com/Supportservice

Professional Services

Deployment Service (mandatory)		PRIMEFLEX for VMware Cloud Foundation includes a mandatory deployment service which cares for on-site bring-up of the solution.
Ordering		PRIMEFLEX for VMware Cloud Foundation may be obtained from local Fujitsu sales representative, or regional offices.

Delivery	The recommended initial minimum configuration is 8 compute nodes. Within a rack single compute nodes may be added in any number until the maximum capacity of the rack is reached.
Documentation	User manuals can be downloaded from http://manuals.ts.fujitsu.com
Disclaimer	Any change in the configuration or settings of PRIMEFLEX for VMware Cloud Foundation, unless explicitly permitted in the respective user documentation, is regarded as a customer disassembly of PRIMEFLEX for VMware Cloud Foundation. Customer disassembly, regardless whether it is related to settings or configuration changes in hardware or software components, automatically and immediately terminates any warranties, service and support obligations of Fujitsu regarding PRIMEFLEX for VMware Cloud Foundation.

Fujitsu platform solutions

In addition to FUJITSU Integrated System PRIMEFLEX for VMware Cloud Foundation, Fujitsu provides a range of platform solutions. They combine reliable Fujitsu products with the best in services, know-how and worldwide partnerships.

Dynamic Infrastructures

With the Fujitsu Business-Centric Data Center approach, Fujitsu offers a full portfolio of IT products, solutions and services, ranging from clients to data center solutions, Managed Infrastructure and Infrastructure-as-a-Service. How much you benefit from Fujitsu technologies and services depends on the level of cooperation you choose. This takes IT flexibility and efficiency to the next level.

Computing products

www.fujitsu.com/global/services/computing/

- PRIMERGY: Industrial standard server
- SPARC Enterprise: UNIX server
- PRIMEQUEST: Mission-critical x86 server
- ETERNUS: Storage system

Software

www.fujitsu.com/software/

More information

To learn more about FUJITSU Integrated System PRIMEFLEX for VMware Cloud Foundation, please contact your Fujitsu business partner, Fujitsu sales representative, or visit our [website](#).

Fujitsu green policy innovation

Fujitsu Green Policy Innovation is our worldwide project for reducing burdens on the environment. Using our global know-how, we aim to resolve issues of environmental energy efficiency through IT. Please find further information at: www.fujitsu.com/global/about/environment/



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