Data Sheet

Fujitsu Storage Reference Architecture for Commvault HyperScale™ X Software

Data Protection for Scale-Out Infrastructure

Fujitsu Data Protection Appliances

Data protection appliances and solutions from Fujitsu ensure data protection and 'always-on' availability across your hybrid cloud estate. Fujitsu specializes in mapping the right technology for individual needs depending on your business size spanning small, mid-size and enterprise-scale businesses. The solutions provide 24/7 business continuity, prevent cybercrime, and ensure compliance from on-premises to the cloud. Combining Fujitsu storage systems with leading partner technologies, we safeguard data and ensure always-on data integrity.

Reference Architecture for Commvault HyperScale™ X Software

The Fujitsu Storage Reference Architecture for Commvault HyperScale™ X Software combines the benefits of the cloud like service, agility, resiliency, scalability with the advantages of on-premises backup storage especially if considering cost effects. Customers gain a fully tested, easy-to-set-up data protection solution for Commvault based on FUJITSU Server PRIMERGY to protect data in physical, virtual or cloud-based data centers.

The joint solution enables organizations to build a unified, modern data protection and management platform on a scale-out infrastructure. It delivers greater resiliency, availability, and scale with predictable performance and economics.

Fujitsu collaborates with Commvault and offers Commvault Validated Reference Design to accelerate an organization's digital transformation journey as they move to hybrid cloud, container, and virtualized environments.

www.fujitsu.com/global/products/computing/storage/data-protection/reference-architecture-cv-hs/

Features & Benefits

Main Features	Benefits
Pre-tested and validated architecture ■ Data protection solution based on performance-leading Fujitsu hardware High flexibility and modular scalability ■ Non-disruptive capacity and performance expansion Unified, modern data protection ■ Delivers cloud-like services on-premises Enhanced resiliency with built-in ransomware protection ■ Via intelligent monitoring and load balancing	■ Fast deployment and easy upgrade maximize resources and improve operational efficiency ■ Increase IT agility, resiliency and availability, and guarantee high investment protection ■ Eliminates point solutions and data silos, lowers infrastructure cost and reduces complexity ■ Maintains data availability and mitigates ransomware impacts via intelligent monitoring

Key characteristics

Powerful Scale-Out Data Protection

- The Fujitsu Storage Reference Architecture is the certified reference design for the Commvault HyperScale™ X Software based on industry-standard Fujitsu Server PRIMERGY.
- The tested and optimized solution simplifies ordering, installation, administration, and support. In addition, this helps enterprises match hardware configurations and capacity to their data protection needs, while accelerating ROI, reducing complexity and increasing customer value through a scale-out infrastructure.
- The validated hardware and the Commvault HyperScale™ X Software allow organizations to replace limited and legacy backup tools with a modern hybrid cloud-enabled data management solution that eliminates expensive forklift upgrades. You can build a unified, modern data protection and management platform for all workloads, including containers, virtual and databases delivering greater resiliency, agility, and investment protection.

Fujitsu Server PRIMERGY

- The Fujitsu Storage Reference Architecture is based on the Fujitsu Server PRIMERGY RX2540 representing a suited platform for Commvault HyperScale™ X Software to expand and transform capabilities for customers in today's evolving software-defined world.
- Fujitsu Server PRIMERGY systems powered by latest Intel® Xeon® technology offer all the key components to accelerate innovation and provide a competitive advantage through business-proven quality, optimal efficiency and more agility for your daily operations. PRIMERGY servers deliver more than 25 years of development and production expertise resulting in extremely low failure rates below market average, and lead to continuous operations and outstanding hardware availability.
- The Fujitsu Server PRIMERGY RX systems are versatile rack-optimized servers providing best in-class performance and energy efficiency.
- The PRIMERGY RX2540 sets higher standards for usability, scalability and cost efficiency. The 2U dual-socket rack server is ideal for running enterprise applications, collaboration and messaging workloads as well as traditional databases. Moreover, it substantially simplifies carrying out infrastructure-related tasks like server virtualization and consolidation.
- For more information please refer to www.fujitsu.com/primergy.

Commvault HyperScale™ X Software

- Commvault HyperScale™ X Software is a powerful, cloud-ready solution bringing scale-out infrastructure to the Commvault Intelligent Data Services platform. The unified, modern data protection and management platform delivers cloud-like services on-premises.
- The software consolidates all the roles performed by discrete servers in the traditional data protection architecture into a single software defined stack running on a scale-out infrastructure. It spans multiple storage nodes running on Fujitsu Server PRIMERGY RX, creating a massively addressable storage pool with built-in enterprise-class data management capabilities.
- All data management and storage optimization operations are distributed across the nodes, with each node capable of taking on multiple roles on demand, including moving data to cloud. Software defined resiliency and availability allows enterprises to fix failed components or nodes and replace or upgrade nodes seamlessly without disrupting operations or data availability.
- This simplified approach provides unmatched scalability, security, and resiliency to accelerate an organization's digital transformation journey as they move to hybrid cloud, container, and virtualized environments.

Components of the Fujitsu Storage Reference Architecture

- The initial configuration of the Fujitsu Storage Reference Architecture consists of three nodes, known as a block, each of the nodes being a PRIMERGY server (model N12) or a PRIMERGY server with a Direct Attached Storage Subsystem JX40 (model N24). Subsequent expansion of the Storage Pool can be done with individual or multiple nodes providing high scalability into petabytes of data.
- The server core components like chassis, CPU, memory, controller represent features of the Fujitsu Storage Reference Architecture that do not change.
- Boot storage houses the operating system and core Commvault HyperScale X binaries. The metadata storage provides caching areas for such operations as deduplication, indexing, and extents. Boot and metadata can be configured either combined as a single storage unit or housed separately.
- Data storage houses the data footprint for the customer environment. There are several disk capacities to configure the required data storage, but use identical hard disk drive (HDD) capacities for each node.
- Networking needs a minimum of one port for data and one for storage communication between the nodes. The recommendation is to use four ports for failover and redundancy. Optional network cards with SAS or Fibre Channel interface for tape integration or Commvault IntelliSnap® operations are validated and customizable.

Technical details

General Specification

Model	N12	N24
Capacity	50 - 339 TB	151 - 678 TB
Capacity (net usable)	1-node: 50, 75, 88, 100, 113 TB 3-node: 151, 226, 264, 300, 339 TB	1-node: 151, 176, 201, 226 TB 3-node: 453, 528, 604, 678 TB
Supported backup and archiving software for open systems	Commvault HyperScale™ X Software Commvault Intelligent Data Services Platform Software	
Supported Environments	Physical, virtual and NAS / NDMP systems	
Note	Use of accompanying and/or additional Software is subject to proactive acceptance of the respective License Agreements /EULAs/ Subscription and support terms of the Software manufacturer as applicable for the relevant Software whether preinstalled or optional. The software may only be available bundled with a software support subscription which – depending on the Software - may be subject to separate remuneration.	

Components

Base unit	PRIMERGY RX2540 M6 12x 3.5' w/ Expander	
Product Type	Dual Socket Rack Server	
Chipset	Intel® C621A	
Processor	®Intel Xeon® Silver 4316 20C 2.30 GHz	
Memory	512 GB (16 modules with 32GB) DDR4, registered, ECC, 2,933 MT/s, 3200 MHz, DIMM, 2Rx4	
SAS Controller	Broadcom® PSAS CP 2100-8i LP	Broadcom® PSAS CP 2100-8i LP Broadcom® PSAS CP 600e Broadcom® PSAS CP 500e
Hard Disk Drives	HDD SAS, 12 Gb/s, 8 TB, 7,200 rpm, 512e, hot-plug, 3.5-inch, business critical HDD SAS, 12 Gb/s, 12 TB, 7,200 rpm, 512e, hot-plug, 3.5-inch, business critical HDD SAS, 12 Gb/s, 14 TB, 7,200 rpm, 512e, hot-plug, 3.5-inch, business critical HDD SAS, 12 Gb/s, 16TB, 7,200 rpm, 512e, hot-plug, 3.5-inch, business critical HDD SAS, 12 Gb/s, 18TB, 7,200 rpm, 512e, hot-plug, 3.5-inch, business critical	HDD SAS, 12 Gb/s, 12 TB, 7,200 rpm, 512e, hot-plug, 3.5-inch, business critical HDD SAS, 12 Gb/s, 14 TB, 7,200 rpm, 512e, hot-plug, 3.5-inch, business critical HDD SAS, 12 Gb/s, 16TB, 7,200 rpm, 512e, hot-plug, 3.5-inch, business critical HDD SAS, 12 Gb/s, 18TB, 7,200 rpm, 512e, hot-plug, 3.5-inch, business critical
Boot and Metadata Storage	6.4 TB (2x SSD SAS, 12 Gb/s, 3.2 TB, Mixed-use, hot-plug, 2.5-inch, enterprise, 3 DWPD) 960 GB (2 x SSD M.2 SATA, 6 Gb/s, 480 GB, non-hot-plug, enterprise, 1.5 DWPD)	6.4 TB (1x SSD SAS, 12 Gb/s, 6.4 TB, Mixed-use, hot-plug, 2.5-inch, enterprise, 3 DWPD) 3.2 TB (1x SSD SAS, 12 Gb/s, 3.2 TB, Mixed-use, hot-plug, 2.5-inch, enterprise, 3 DWPD) 960 GB (2 x SSD M.2 SATA, 6 Gb/s, 480 GB, non-hot-plug, enterprise, 1.5 DWPD)
Networking	"PLAN EP MCX4-LX 25Gb 2p SFP28 LP or PLAN EP X710-T2L 2x10GBASE-T PCIE LP or PLAN EP X710-T4L 4x10GBASE-T PCIE LP"	
Optional Add-in cards	PFC EP LPE35002 2X 32GB LP or PFC EP QLE2772 2x 32Gb Qlogic LP	

Components

Note	Initial configuration requires 3-nodes; upgrades with one or multiple nodes; node always fully populated with identical HDD capacities; capacity depending on used HDDs; capacity values calculated using Base2 (i.e., 1 TB = 1,099,511,627,776 bytes)
	If and to the extent a list of components or certain compatibilities are specified in the product data sheet, these component lists and compatibility specifications are exhaustive. Using deviating or other system components and applications together with the product may but does not necessarily have to lead to compatibility problems. A final statement and/or commitment on the compatibility of such deviating or other system components and applications can only be provided after a corresponding verification through a dedicated compatibility testing.
	The properties of the product provide a baseline for product security and therefore end-customer IT security. However, these properties are not sufficient on their own to protect the product from all existing threats, such as intrusion attempts, data exfiltration and other forms of cyberattacks. To customize security settings, please use the configuration options as available for the respective product. During operation, the IT security of this product is within the responsibility of the respective administrator/end-user of the product. Please note, that Fujitsu as a manufacturer does not make any policy prescriptions or advocacy statements regarding IT security best practices and/or general product operation.

Installation specification

Dimension notes	482.4 mm (Bezel) / 445 mm (Body) x 770 x 259.8 mm	483 x 770 x 528 mm
19" rackmount	Yes	
Note	Actual weight may vary depending on configuration	
Height Unit standard	6 U	12 U
Weight	up to 75 kg	up to 110 kg
Power supply	1600W hot-plug, 96% (Titanium efficiency), 200-240V, 50 / 60Hz	

Environment

Operating ambient temperature	10 - 40 °C (50 - 104 °F)
Sound pressure (LpAm)	Typical noise : 43 dB(A) (idle) / 43 dB(A) (operating)
Sound power (LWAd; 1B = 10dB)	Typical noise : 6.1 B (idle) / 6.0 B (operating)
Noise notes	Noise emissions depends on operation modes, system configuration and ambient temperature.Typical hardware configuration which is the base for measurement according to ISO 7779: 2x PSU 450W. 2x CPU Xeon E5-2630 v4 2.20 GHz, 4x RAM 8GB, HDD 2x 500GB SATA
Operating environment	FTS 04230 – Guideline for Data Center (installation specification)
Operating environment link	http://docs.ts.fujitsu.com/dl.aspx?id=589915e9-1bf8-40f7-8ba4-7cac9371f2f0

Warranty

Warranty period	3 years
Warranty type	Onsite warranty
Warranty Terms & Conditions	www.fujitsu.com/warranty

Product Support - the perfect extension

Support Pack Options	Available in major metropolitan areas: 24x7, 4h Onsite Response Time (depending on country) 9x5, 4h Onsite Response Time (depending on country) 9x5, Next Business Day Onsite Response Time
Recommended Service	24x7, Onsite Response Time: 4h - For locations outside of EMEA please contact your local Fujitsu partner.
Service Lifecycle	at least 5 years after shipment, for details see https://support.ts.fujitsu.com/
Service Weblink	www.fujitsu.com/emeia/products/product-support-services

Compliance

Compliance notes	There is general compliance with the safety/EMC requirements of all European countries and North America. National approvals required in order to satisfy statutory regulations or for other reasons can be applied for on request.
Compliance link	https://sp.ts.fujitsu.com/sites/certificates

Fujitsu products, solutions & services

In addition to Fujitsu Reference Architecture for Commvault HyperScale™ X Software, Fujitsu provides a range of platform solutions. They combine reliable Fujitsu products with the best in services, know-how and worldwide partnerships.

Fujitsu Portfolio
Built on industry standards, Fujitsu offers a full portfolio of IT hardware and software products, services, solutions and cloud offering, ranging from clients to datacenter solutions and includes the broad stack of Business Solutions, as well as the full stack of Cloud offerings. This allows customers to select from alternative sourcing and delivery models to increase their business agility and to improve their IT operation's reliability.

Computing Products
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More information

Learn more about Fujitsu Reference Architecture for Commvault HyperScale™ X Software, please contact your Fujitsu sales representative or Fujitsu Business partner, or visit our website.
www.fujitsu.com/global/products/computing/storage/data-protection/reference-architecture-cv-hs/

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 contribute to the creation of a sustainable environment for future generations through IT.
Please find further information at http://www.fujitsu.com/global/about/environment

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Disclaimer

Please note that the data sheet reflects the technical specification with the maximum selection of components for the named system and not the detailed scope of delivery. The scope of delivery is defined by the selection of components at the time of ordering. The product was developed for normal business use.
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