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Commvault® Validated Reference Design Specification

Commvault HyperScale™ X Software on FUJITSU PRIMERGY RX2540 M5 and DAS JX40 S2

Introduction to Commvault HyperScale™ X Software

Commvault Hyperscale™ X Software is an intuitive and easy to deploy integrated solution with a distributed scale-out file system that provides unmatched scalability, security, and resiliency. Its flexible architecture allows you to get up and running quickly and grow as your needs demand. Commvault Validated Reference Designs accelerate hybrid cloud adoption and deliver:

- Simple, flexible data protection for all workloads including containers, virtual, and databases
- High performance backup and recovery with enhanced recovery capabilities
- Optimized scalability to easily grow capacity in single-node increments as needed, on-prem and in the cloud
- Enhanced resiliency with intelligent load balancing of data across disks and nodes and the ability to support concurrent hardware failures
- Built-in ransomware protection via intelligent monitoring to detect data anomalies and alert users

By shifting the secondary storage and data management infrastructure to a scale-out architecture, enterprises can help transform their data centers to be as operationally efficient, resilient and scalable as public cloud infrastructure. Commvault HyperScale X allows organizations to replace limited and legacy backup tools with a modern hybrid cloud-enabled data management solution that eliminates expensive forklift upgrades. The purpose of this technical specification is to provide the complete FUJITSU PRIMERGY RX2540 M5 and DAS JX40 S2 Commvault Validated Reference Design for Commvault Hyperscale™ X Software.

General availability designation

This configuration is classified as general availability design, meaning it has been tested and validated as per the Commvault Validated Reference Design Program. This configuration is subject to change due to updated part numbers or replacement hardware as a result of hardware life cycles. Validated Reference Designs are developed to provide optimized costs, resiliency, and performance. Commvault collaborates with Fujitsu to create fully supported design specifications. Substitutions or modifications to validated design specifications could result in unsupported configurations. Any substitutions or modifications to validated configurations must be approved by both Commvault and Fujitsu. This configuration is currently orderable for customer deployment and supported through Commvault support channels.

How to use this document

This document details the necessary design components of the Commvault HyperScale X Technology architecture, providing the key components required when purchasing and configuring the infrastructure for a Commvault HyperScale X Software solution. Commvault Reference Designs deliver validated configurations with leading hardware vendor technology complemented by best practices that will accelerate ROI, reduce complexity, and add customer value.

The document is broken into a high-level component section detailing the configuration and specific component options that can be selected to satisfy storage capacity and density requirements. Each subsection provides guidance for ordering configurations.

This document does not cover overall architecture and design of the Commvault HyperScale X solution and should be considered as a supplement specific to Fujitsu. This document also does not take into account every possible customer environmental design or configuration factors, which may require adjustments or changes to these recommendations. This document is not a guarantee that the reference design will work properly in every environment, and customers remain responsible for all configuration, design and scheduling settings.

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FUJITSU PRIMERGY RX2540 M5 specification summary

Server overview

Technical specifications	
Form factor	2U Dual Socket Rack Server plus 2U DAS Expansion
Motherboard chipset	Intel® C624 Series
Processors	Intel® Xeon® Silver 4216
Memory	512 GB RAM

Boot and metadata storage options

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. The design specifies dedicated storage for Commvault metadata.

Data storage options

Data storage houses the protected data. Data storage selection dictates the amount of data that each node can accommodate.

Initial deployments of Commvault HyperScale X require a 3-node configuration, each with identical hard disk drive (HDD) capacities. Subsequent expansion of the Storage Pool can be done with individual or multiple nodes.

Overall sizing and retention vary per customer and therefore is beyond the scope of this document. Please refer to Commvault HyperScale Technology sizing documentation to determine the drive size (and node quantity) required for the specific deployment.

Networking options

A minimum of two (2x) 10 GB ports are required per node for Commvault HyperScale X installs; one for protected data and one for storage communication between the nodes. It is recommended to have a total of four (4x) ports, preferably on two separate cards: two (2x) for data and two (2x) for storage failover and redundancy. These builds have been designed with this recommendation.

Optional I/O add-on cards

The design includes all core components to work with Commvault HyperScale X Technology. There are specific times where additional parts may be required depending on the environment and use case (e.g., optional I/O cards for SAS and Fiber Channel connectivity). The I/O cards below are validated and included as part of the design, the quantity and type of these I/O cards are customizable, and there are multiple valid configurations possible.

SAS Connectivity is typically used for direct tape integration, while Fiber Channel cards are used for Commvault IntelliSnap® operations or tape libraries.

Bill of materials

The Bill of Materials list all components required to configure Commvault HyperScale X nodes. Each component has been tested and validated. Substitutions cannot be supported. Country-specific components such as power cables are not listed and can be changed as required. Please select the server model of interest from the link and the list of parts for each supported configuration.

Requirements and limitations

You must select matching Data Storage options for both the PRIMERGY RX2540 M5 and JX40 S2 extension (e.g. 12 x 16 TB drives plus 12 x 16 TB drives). Mixing of drive quantities and/or capacities in PRIMERGY RX2540 M5 and JX40 S2 is not supported.

JX40 S2 cannot be added to a PRIMERGY RX2540 M5 previously configured and deployed as a HyperScale X N12 node. There is insufficient metadata storage in the N12 configuration to support the additional data storage with the JX40 S2 extension.

Additional resources

Additional information regarding the FUJITSU PRIMERGY RX2540 M5 and DAS JX40 S2 can be found on the Fujitsu website. A couple of useful links have been included:

Fujitsu RX2540 server details and general configurations

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