RANSOMWARE PROTECTION WITH SUPERMICRO, SCALITY, AND VEEAM

Modernize your data center with storage, virtualization, and cloud technologies with Supermicro SuperStorage, Scality RING, and Veeam Backup & Replication

Supermicro Simply Double
Storage System

Supermicro Top-Loading
60 Bay Storage System

TABLE OF CONTENTS

SUPERMICRO

Supermicro (Nasdaq: SMCI), the leading innovator in high-performance, high-efficiency server and storage technology is a premier provider of advanced server Building Block Solutions® for Enterprise Data Center, Cloud Computing, Artificial Intelligence, and Edge Computing Systems worldwide. Supermicro is committed to protecting the environment through its "We Keep IT Green®" initiative and provides customers with the most energy-efficient, environmentally friendly solutions available on the market. www.supermicro.com

Executive Summary

Supermicro, Scality, and Veeam® modernize data centers through virtualization, storage, and cloud technologies to meet business objectives while lowering costs. The combination of Supermicro better, faster, greener storage-server solutions with Scality RING system architecture and Veeam Backup & Replication™ offer the latest technologies to keep pace with today's massive data growth while meeting end-user requirements. Increasing IT investment is no longer suitable for assembling data and application availability.

With data growth increasing from 30% to 50% per year, increasing IT investment isn't keeping pace with end-user data and application availability demands. This opens several gaps, one of "Availability" between "Always-On Enterprise" requirements and IT's ability to deliver on those requirements. With the power of Supermicro, better, faster, greener storage solutions, coupled with Scality RING and Veeam Platform, provide an Availability Solution for Enterprises that delivers recovery time and point objectives (RTPOTM) of less than 15 minutes for ALL applications and data.

Supermicro SuperStorage, Scality RING, and Veeam Backup & Replication offer the latest technologies to keep pace with today's massive data growth. At the same time, with Supermicro Super storage, the solution combines Veeam's backup and recovery application software with Scality's RING software that delivers 14x9's durability, 100% availability, and lower TCO.

Supermicro SuperStorage Servers, Scality RING with Ransomware Protection, and Veeam Backup & Replication

Supermicro SuperStorage Simply Double, with Scality RING and Veeam Backup & Replication, offers maximum storage capacity, using double the hot-swap drive bays and IOPS in the same space as an industry-standard 2U storage server. Additional bays are located on the top of the Simply Double SuperStorage server in a patented Riser Bay for easy access and servicing. Simply Double supports leading-edge, high-performing INTEL® XEON®-scalable processors in a dual-socket 2nd Gen Intel® Scalable processors configuration, thus delivering optimal performance. To maximize availability, high-speed recovery, and data-loss avoidance, Supermicro offers two supported solutions: First is a 2U chassis supporting the Simply Double half-populated formatting with 24x3.5" drives for a total storage capacity of 560TB and 192GB of memory; the second is a fully populated server offering that provides a maximum storage configuration of 1120TB and 384GB memory, with a maximum capacity of 3TB for both half and complete configurations.

Supermicro SuperStorage top-loading 60-bay is an easy deployment solution in a 4U rack dual socket 2nd Gen Intel® scalable processors category, supporting high performing Intel® Xeon® scalable processors with 205W TDP, providing a higher base frequency with more cores and delivering optimal performance for throughput and IOP. The solution is available as a six-node cluster configuration in a fully populated, best-in-class offering, built with 12GB/s SAS technology for optimal performance and holding a total capacity of 2880TB to meet the highest storage demands of increased data capacity. Included in the configuration are six NVMe bays and 384TB of memory for a maximum of 3TB per node.

Supermicro SuperStorage plus Scality RING and Veeam Backup & Replication offer High Availability while reducing the total cost of ownership (TCO) by up to 90%. Veeam Backup & Replication leverages Scality RING as a single backup repository for any data and application. You can increase your Supermicro SuperStorage backup by adding standard additional storage to the Scality RING.

By leveraging the combined features of Supermicro SuperStorage, Scality RING, and Veeam Backup & Replication, your solution is engineered to provide high-speed and verified recovery — allowing an organization to achieve RTOs of less than 15 minutes with Veeam SureBackup® and automatically verifying every backup recovery. Additionally, Scality's RING self-healing and fast hard drive recovery ensure that it will always meet your infrastructure's service-level agreements (SLAs).

Supermicro SuperStorage, Scality, and Veeam ensure data loss avoidance. In addition, Veeam Backup & Replication provides multiple options to meet your data management demands and ensure the fastest, most efficient backups. Combining solutions, you can replicate either on-site for High Availability or offsite for disaster recovery, with the addition of erasure coding by Scality as an option to protect your data (single-site or multi-site), thus increasing ROI.

Supermicro, Scality, and Veeam allow you to close the "Availability Gap" to meet your Always-On Enterprise requirements. Veeam's tight integration with Scality RING ensures the highest application availability level while lowering costs and simplifying IT operational management.

Solution Overview

The following table describes two complete solutions for Supermicro Systems, Scality RING, and Veeam:

Solution Specifics

Reference Solution Name	Simply Double for Scality RING		Top Loading 60-Bay for Scality RING		
Base Server SKU	SSG-620P-E1CR24H		SSG-640SP-E1CR60		
Approx. Usable Capacity with 6-node Cluster	Fully Populated Systems: **1834TB**	Half-Populated Systems: **917TB**	Fully Populated System: **4585TB**	Half-Populated Systems: **2292TB**	Half-Populated System: **1440TB**
Form Factor	2U x 24x 3.5" Drive Bays		4U x 60x 3.5" Drive Bays + 4 NVMe Bays		
System Dimensions WxHxD	17.2" (437mm) x 3.5" (89mm) x 34" (863mm)		17.6" (447mm) x 7" (178mm) x 34.1" (866mm)		
TPM 2.0	(optional)		(optional)		
CPU	3rd Gen Intel® Xeon Scalable processors				
Memory	192GB (Supports up to 4TB per node)		348GB (Supports up to 4TB per node)		
Storage Controller	Broadcom 3908-based Hardware RAID controller		Broadcom SAS 3916- Based Hardware Raid controller		
NIC	2x 25GbE SFP28 Broadcom BCM57414, AIOM Form Factor				
Storage Devices	3.5" 18TB SAS-3 7200 RPM drives				
Populated	Fully Populated Systems: **24x**	Half-Populated Systems: **12x**	Fully Populated System: **60x**	Half-Populated Systems: **30x**	Half-Populated System: **30x**
NVMe Cache Device[2]	6-node cluster or larger: IntelD7-P5520 1.92TB NVMe per node		6-node cluster or larger: 2x 7400 PRO 3.84TB NVMe per node		
OS/Boot Devices	2.5" SATA 960GB boot per node				

Ransomware: The importance of data protection with Supermicro, Scality, and Veeam

Ransomware directly targets and infects your infrastructure. It encrypts data so malicious authors can demand a ransom payment in exchange for decryption keys. The ransomware threat is a primary, ubiquitous, and growing concern; attacks are becoming more frequent, larger, and more sophisticated. Supermicro, Scality, and Veeam have partnered to provide industry-leading data protection solutions and validation of ransomware-mitigation capabilities. Scality RING offers enhanced ransomware protection with support for Amazon S3 Object Lock API, which renders data immutable by preventing it from being deleted or overwritten. In addition, Veeam delivers ransomware remediation, automated backup verifications, and fast, reliable recovery.

Key Benefits With the Supermicro, Scality, and Veeam Solution

- Enterprise-grade ransomware protection —

  By supporting Amazon S3 Object Lock, Scality allows administrators to lock down data for specific retention periods. Once set, these object locks prevent anyone, including internal users and administrators with even the highest credentials, from modifying or deleting data until the retention period expires. As a result, Veeam delivers secure ransomware protection with immutable and air-gapped backup and Instant Recovery at the scale of any workload in a multi-cloud infrastructure.

- Lower cost and smaller-capacity entry points —

  Scality, Veeam, and Supermicro offer high availability while reducing TCO by up to 90%. Veeam Backup & Replication leverages Scality RING as a single-backup repository for any data or applications. Running on Supermicro servers and available in single-node capacities, at a starting size of as little as 50TB, Scality solutions provide low-cost solutions for immediate ransomware protection.

- 3-2-1-1-0 Rule for data protection —

  The Supermicro, Scality, and Veeam solutions comply with Veeam's 3-2-1-1-0 Rule, which requires three data copies, with two on different media types, one offsite, one offline or immutable, and 0 errors with recovery verification. These multiple protection layers protect your data against malicious attacks or natural disasters.

- Ease of use —

  Configuring ransomware protection can be done in just a few clicks with Veeam and Scality. The Veeam user interface allows easy connection to external object storage, and the Scality user interface provides data immutability to be easily enabled at bucket level as required.
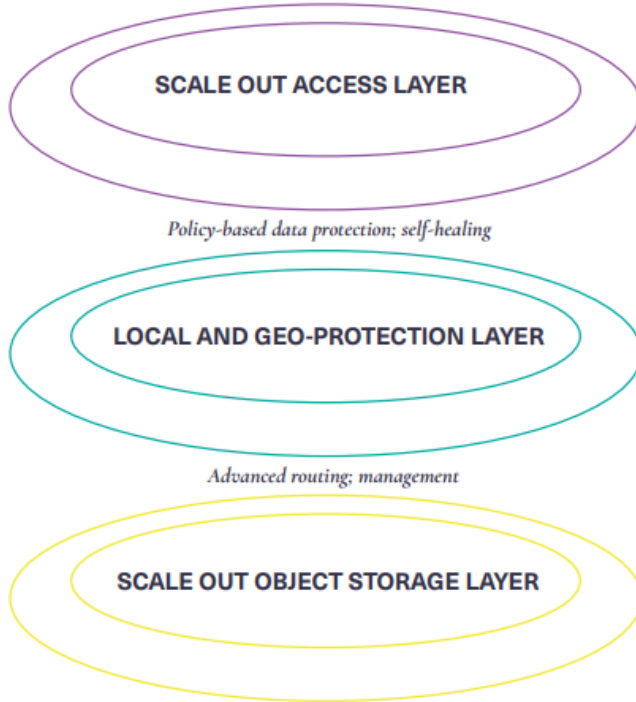
- Higher Availability —

  Supermicro, Scality, and Veeam help guarantee High Availability. Veeam's high-speed and verified recovery process allows your organization to achieve RTOs of less than 15 minutes. With Veeam SureBackup, you can automatically verify the recoverability of every backup. Scality's RING self-healing and fast hard drive recovery allow you to scale your infrastructure while always meeting availability SLAs.

Scality Ring Architecture

Scality is a software-defined storage (SDS) solution that turns a pool of x86 Linux-based servers into an unbounded scale-out storage system that supports object- and file-based applications with various use cases. Scality RING architecture consists of three layers: the scale-out access layer, the local and geo-protection layer, and the Scale-out object storage layer.

SCALE-OUT ACROSS N-NUMBER OR CONNECTORS

FILE
NFS v4
SMB 3.0
Linux FS (FUSE)

OBJECT
S3 API
Scality REST
CDMI REST

SCALE OUT ACCESS LAYER

Policy-based data protection; self-healing

LOCAL AND GEO-PROTECTION LAYER

Advanced routing; management

SCALE OUT OBJECT STORAGE LAYER

SPAN SERVERS, RACKS, SITES - TRILLIONS OF OBJECTS

Figure 1 - Scale-Out File Systems

To scale both storage capacity and performance to massive levels, the Scality RING software is designed as a distributed, parallel, scale-out architecture with a set of intelligent services for data access and presentation, data protection, and systems management to implement these capabilities.
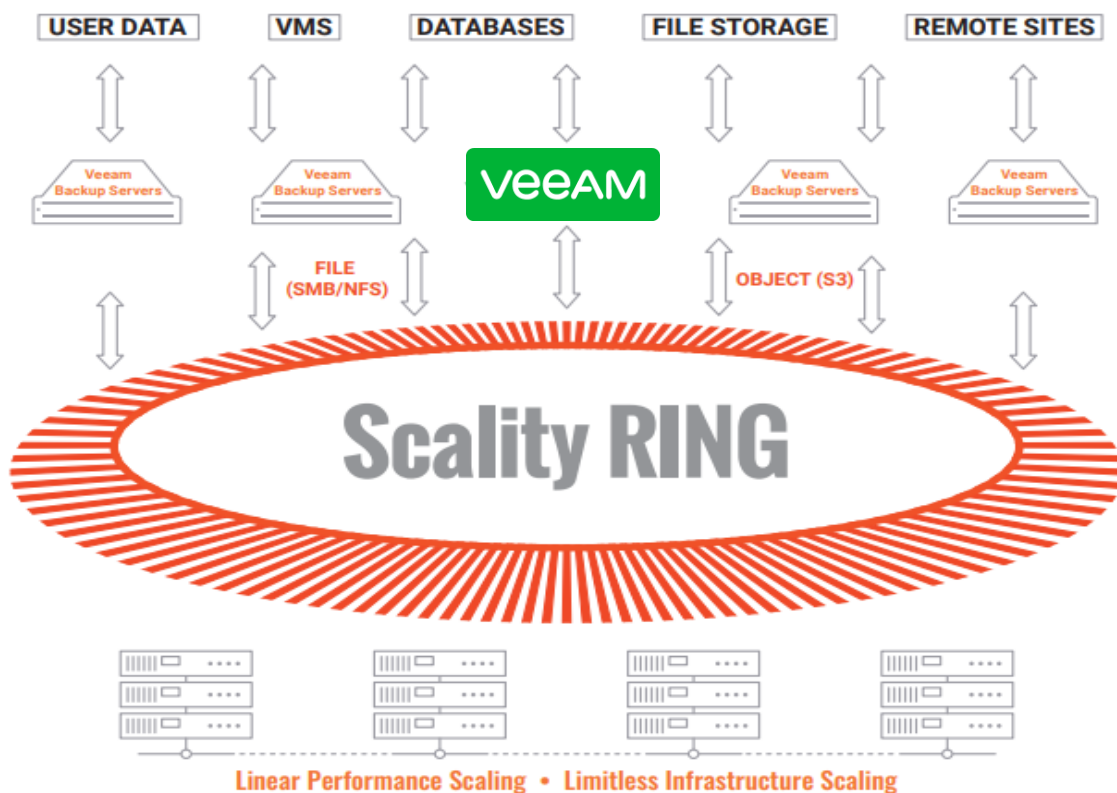

Figure 2 - Scality RING Architecture

Conclusion

Supermicro is a leading provider of high-performance, high-density, and high-capacity SuperStorage servers. SuperStorage configurations provide maximum power and performance, ideal for enterprise, data center, and cloud-computing environments. Scality offers solutions for today's hybrid and multi-cloud data management environment, a recognized leader in distributed file and object storage. Veeam is the global leader in backup, recovery, and data management solutions that deliver Modern Data Protection. Veeam provides a single platform for cloud, virtual, physical, SaaS, and Kubernetes environments that is simple, flexible, reliable, and powerful. In addition, Supermicro, Scality, and Veeam offer enterprise-class availability solutions that help protect against ransomware.

For more information, please visit Supermicro at: **www.supermicro.com**