

Hyper-Converged Rack-Level Solutions

Inside

Arista Networks and Supermicro Computer have partnered to deliver best-of-breed fully preintegrated Infrastructure & Server Building Block Solutions[®]. Solutions are available with:

VMware EVO:Rail

Using VMware EVO:RAIL software to deliver hyperconverged compute, storage, and cluster management.

VMware Virtual SAN

Hypervisor-converged storage designed and optimized for vSphere virtual infrastructure.

Turnkey Hadoop Clusters

Hadoop optimized racks for reliable storage and analysis of both structured and complex data.

Microsoft Windows Storage Solutions

Running Windows Storage Server 2012 R2 Standard with System Center (OMI) and Active Directory integration for management.

OpenStack/Linux Storage Solutions

Certified for Red Hat's OpenStack distribution with Ceph GlusterFS-based storage.

Arista Networks and Super Micro Computer are now offering rack level solutions with Arista Networks award winning data center networking switches and Arista EOS[®] (Extensible Operating System) software, optimized for hyperscale workloads in Software Defined Data Center (SDDC) and public/private cloud environments.

SUPERMICRO[®]

Converged Solutions For Cloud Scale Data Centers

New integrated, tested and validated hardware and software Converged Infrastructure solutions from Supermicro and Arista are designed for speed, scale and simplicity to accelerate customers cloud infrastructure deployments. Supermicro now integrates Arista's switch products and Arista EOS software with Supermicro servers and storage in preconfigured optimized racks, targeting VMware EVO & Virtual SAN with NSX and ESXi, OpenStack, Hadoop/Big Data, Scale-out Storage, and Microsoft Windows based high performance computing and virtualized workloads. These complete rack solutions are available from Supermicro directly as well as from Supermicro's authorized resellers and channel partners.

The partnership between Supermicro and Arista accelerates the adoption of next generation IT data center architectures, and enables our joint customers to take better advantage of hybrid cloud and cloudscale economics. By leveraging the power of Arista EOS with Supermicro's server and storage solutions, customers can dramatically enhance the delivery and integration of cloud infrastructures with speed, simplicity and scale of pre-integrated solutions from Supermicro.

Supermicro offers the widest array of server, storage and networking Building Block Solutions[®] optimized for best performance, density and utility in hyper-scale Enterprise, Data Center, Cloud and HPC environments. Combined with Arista's standards-based Unified Cloud Networking[™] deployment architecture and advanced data center switch portfolio, complete validated SDDC rack solutions can now be rapidly deployed with unparalleled scalability, availability, flexibility and efficiency. In addition, these Green Computing Solutions transform Enterprise, Data Center and Cloud infrastructures to meet demands for higher density and efficiency with unsurpassed performance.

Supermicro - EVO:Rail Cluster Solution

Supermicro's EVO:RAIL appliance is a complete Hyper-converged Infrastructure Appliance. It combines compute, networking and storage resources into a single 2U, 4-node form factor to create a simple, easy-to-deploy building block for the Software Defined Data Center (SDDC).

- Supermicro's EVO:RAIL appliance starts with four independent hosts and a distributed data store, implemented on the 2U TwinPro2 SuperServer.
- Fault tolerance, reliability and automatic scale-out are key features implemented through VMware software technologies and Supermicro application optimized hardware designs.
- Advanced network level integration and best-in-class performance for EVO:RAIL with Arista EOS virtualization features for EVO built-in to each rack switching component.
- EVO: RAIL Deployment, Configuration, and Management enables power-on to VM creation in minutes, easy VM deployment and non-disruptive upgrade.
- Supermicro's EVO: RAIL appliance embraces latest compute, storage and networking technologies, with leading VMware certified components for peace-of-mind implementation.
- Supermicro's EVO: RAIL appliance is ordered via a single SKU and backed by Supermicro Global Service as a single point of contact for hardware and software support.

Supermicro's 2U TwinPro2™ SuperServer, is the foundation to implement for EVO:RAIL hyper-converged infrastructure. This scale-out solution features an optimal balance of compute, memory, storage and networking in a high-density 4-node, dual processor server appliance, simplifying virtualization across Enterprise, private/hybrid-Cloud, End-user computing and branch office environments.

2U 4-node TwinPro architecture supporting maximized CPU, memory, SSD, NVMe and 10GbE NIC ports offers the industry's highest density, exactly optimized solution for VMware's hyper-converged infrastructure appliance. With Supermicro's Green Computing technologies, customers will benefit not only from the system specification and performance, but also from advanced thermal design and energy efficient technologies such as our Titanium level high-efficiency (96%) power supply, increasing their overall performance per watt, per dollar, per square foot.

Benefits:

- Turnkey Solution – fully Racked/Integrated/Tested
- Arista EOS provides visibility, automation, performance
- Single Point of Contact – Supermicro
- 3-years of Support and Service
- Shortest Time to Deployment
- Low Capex/Opex ; Low TCO



Details:

- 16 Node EVO:RAIL Cluster Solution
- 400 VM's or 1000 VDI hosts *
- 256 Haswell Cores / 3 TB DDR4 Memory / 57 TB Raw Storage Capacity
- 1x SSE-7010T48R-ANT, Arista 7010T, 48-RJ45/4-SFP+, 1Gbps Management Switch
- 2x SSE-7050SX64R, Arista 7050X-series, 48-SFP+/4-QSFP+ 10Gbps ToR Switch
- 2x Server Tech C-12H2-L30M 1U 208V 30A Single Phase Metered PDU 12x C13 L6-30P
- Full cluster assembly/configuration/burn-in/testing/packing
- Single SKU to order - SRS-14UEVO-28TP-01

Availability:

- Call Supermicro - order Now!

Supermicro - Storage Solutions With VMware Virtual SAN

Supermicro's Virtual SAN (vSAN) Ready Nodes focus is on deploying VMware® Virtual SAN™, a hypervisor converged storage, as quickly as possible. Working with VMware, Supermicro delivers an alternative to traditional Fiber Channel SAN virtualization infrastructure, which is known for its complexity and interoperability challenges. Targeted at a multitude of use cases in Virtual Desktop Infrastructure, Tier-1/2/3 production workload and disaster recovery environments, Supermicro's vSAN solutions introduce a new high performance storage tier optimized for virtual environments that is simple, resilient and efficient and reduces the total cost of ownership. It is a perfect solution for Enterprises and SMB to efficiently grow and manage virtualized infrastructure for maximum ROI.

A Virtual SAN Ready Node is a preconfigured single-node or multi-node server hardware configuration for use with Virtual SAN. A Ready Node configuration includes specific type and amount of CPU, Memory, Flash, HDD, and IO Controller devices within each server. Each vSAN Ready Node is classified by a Ready Node configuration profile. Defined Ready Node profiles include: Large/High, Medium and Small server profile, and VDI with Linked Clones or VDI with Full Clones.

Each configuration profile provides a differentiated price/performance focus, targeting multiple use case requirements. Each profile assumes a target number of Virtual Machines per node, utilizing an average Virtual Machine profile size. Fault tolerance is built into the solution with data replication between nodes, and clustering technology. Flash and hard disks are seamlessly integrated to achieve best balance in performance and capacity.

Benefits:

- Single bundle for procurement - comes with the appropriate licenses for vSphere, Virtual SAN and Horizon View. Supermicro production and service works with customer to simplify the setup experience.
- No-hassle turnkey solution - jointly validated by Arista, VMware, and Supermicro - with all racking, cabling, software installation, validation, configuration, burn-in testing, and packing done by Supermicro.
- Radically simpler storage - vSAN integrates seamlessly with vSphere. Provisioning and management is a breeze, and vSAN automatically rebuilds and rebalances storage to maintain Quality of Service.

- Lower TCO by up to 50% - vSAN granularly scales-out storage for growth, eliminating overprovisioning.
- High Performance - vSAN has integrated server-side flash to provide read/write caching, providing lower latency and better throughput than external flash appliances and devices. As a result, VMs and applications have the most optimized I/O data path to support your business demands.
- Fault Tolerance - vSAN uses distributed RAID and cache mirroring to ensure that data is never lost in case of disk, host or network failures. Combined with Supermicro's legendary quality and reliability aids in enhancing system uptime and ensuring business continuity.

Details:

- 32 Node vSAN Cluster Configuration in 42U rack
- 1000 General Purpose VM's* / 448 TB Capacity
- 8x FatTwin SYS-F628R3-VSN002M
- 1x SSE-7010T48R-ANT, Arista 7010T, 48-RJ45/4-SFP+, 1Gbps Management Switch
- 2x SSE-7050SX64R, Arista 7050X-series, 48-SFP+/4-QSFP+ 10Gbps ToR Switch
- 1x APC AP8865 Metered 208V PDU 8.6KW 2G
- 1x Windows SVR 2012 STD license
- 64x VMware Virtual SAN 6 license, 1 processor
- 64x VMware vSphere 6 Standard license, 1 processor
- 1x VMware vCenter Server 6 Standard
- 1x Support/Subscription, Software 1 year
- 1x HW and Arista EOS Switch Support 1 year
- Single SKU to order - SRS-42UVSN-F628-01



Details:

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Supermicro - Turnkey Hadoop Cluster

Hadoop is an open-source project administered by the Apache Software Foundation. Hadoop's contributors work for some of the world's biggest technology companies. That diverse, motivated community has produced a genuinely innovative platform for consolidating, combining and understanding data. Enterprises today collect and generate more data than ever before. Relational and data warehouse products excel at OLAP and OLTP workloads over structured data. Hadoop, however, was designed to solve a different problem: the scalable, reliable storage and analysis of both structured and complex data. As a result, many enterprises deploy Hadoop alongside their legacy IT systems, allowing them to combine old and new data sets in powerful new ways.

Technically, Hadoop consists of two key services: reliable data storage using the Hadoop Distributed File System (HDFS) and high-performance parallel data processing using a technique called MapReduce. Hadoop runs on a collection of commodity, shared-nothing servers. You can add or remove servers in a Hadoop cluster at will; the system detects and compensates for hardware or system problems on any server. Hadoop, in other words, is self-healing. It can deliver data - and can run large-scale, high-performance processing jobs - in spite of system changes or failures.

Why Are Supermicro's Turnkey Cluster Racks With Arista Switches Ideal For Apache Hadoop?

Supermicro designs and develops the ideal turnkey pilot racks for getting started with Apache Hadoop. Leveraging Supermicro's optimized servers and switches as a foundation, Supermicro has designed two turnkey racks to get anyone started - 14U and 42U versions. Supermicro has focused on integration, remote systems and power management to lower the deployment and commissioning timeframes to provide developers access to native hardware environments, quickly and easily.

Benefits:

The industry's broadest line of Enterprise Hadoop Infrastructure & Server Building Block Solutions®:

- Wide range of servers based upon Intel® Xeon® Processor E5-2600 series
- Networking advances from Arista with integrated Hadoop features like MapReduce Tracer and Rapid Automatic Indication of Link-loss (RAIL) enhance visibility, performance, and availability of Hadoop clusters
- Arista Networks switches and Supermicro server innovations enable an organization to build clusters that

keep up with the growth in data, minimize operational expenses, and deliver sophisticated data analytics

- Enterprise-ready compute, networking and storage with high reliability, quality and performance at an affordable price point — conserving Capex and lowering overall TCO
- Hot Swap Direct Attach 4x, 6x, 8x, and 12x 3.5" Hard Disk Drives per Node
- Up to Platinum Level (95%+) Efficiency - Redundant Power Supplies with PMBus
- Remote Systems and Cluster Management with Onboard IPMI and included IPMI View



Availability:

- Call Supermicro for Details!

Supermicro - Super SBB Cluster-In-A-Box (Windows Storage Server)

Mission-Critical, Manageable Enterprise Storage At An Affordable Price

The SuperStorage Bridge Bay (SuperSBB) running Windows Storage Server 2012 R2 Standard will enable SMB and Branch Offices to deploy reliable, manageable, continuous availability storage, typically beyond the budget of these environments, with high transactional performance and capacity to meet growing business requirements.

In addition, IT administrators have recognized the need for better integration between management and platform components of their data centers. Supermicro, Microsoft and Arista have partnered together to implement a standards-based architecture for management of devices in the data center in conjunction with Microsoft Windows Server 2012 R2. Open Management Infrastructure (OMI) and Active Directory integration enhances productivity by increasing the number and types of devices you can manage and by unifying the user experience with standard-based management and automation tools, such as Windows PowerShell and System Center. By supporting the standards-based interfaces, IT administrators can use a common set of tools to manage everything from their servers and hypervisors to the network, thus reducing the complexity of operating a data center, improving productivity and reducing operational expenses.



Key Hardware Features

- Hot-swappable modules for all active components - storage controllers, power supplies, and disk drives.
- Ready-to-deploy - delivered with Windows Storage Server 2012 R2 Standard preinstalled and Failover Clustering preconfigured across the two compute nodes.
- Arista's manageable switches support Microsoft OMI direct integration with Microsoft System Center and Windows Server 2012 R2, providing customers flexibility and cost effectiveness as they implement networking across public and private cloud environments with Microsoft virtualization platforms.
- High-Performance, Tiered Storage Option - models incorporating 4x SSD drives for lightning-fast performance by using the new Storage Tiers feature in Windows Storage Server 2012 R2 Standard.
- Native integration with Active Directory and OMI - enabling fast and easy deployment in existing Windows Server-based IT infrastructures and System Center management components.
- Easily expanded - built-in expansion ports make it easy to connect up to four Super SBB 937R-E2JB JBODs, each of which supports 16x 3.5" SAS1/SAS2 drives, allowing the solution to scale to over 400TB.

Windows Storage Server 2012 R2 Standard Pre-installed

With SuperSBB running Windows Storage Server 2012 R2 Standard, you'll have access to the latest storage innovations from Microsoft, including:

- Data Deduplication and Storage Spaces for maximizing and scaling storage capacity
- Storage Tiers, SMB Direct, SMB Multichannel, and NIC Teaming for maximum performance.
- Enhancements to Failover Clustering and HyperV for improved reliability.
- Arista switches and Arista EOS software advancements are certified compatible with Windows Server 2012 R2
- For more information on all the capabilities built into Windows Storage Server 2012 R2 Standard, visit www.microsoft.com/windowsserver.

Availability

- Call Supermicro for Details!

Supermicro - Scale Out Linux/Openstack Storage Solutions

Supermicro Scale out Storage Solutions provide a reference architecture proven by extensive lab testing as well as production deployments. Supermicro worked closely with software partners to define and validate the most optimized hardware configuration with real application workloads. It takes the guess work out of designing and deploying a truly scalable storage solution that meets the most demanding enterprise IT and data center environments. Supermicro resellers and channel partners can take advantage of the reference design and deploy large scale storage for the customers very efficiently.

Supermicro/CEPH Solutions - Object-Based Storage Cluster

Supermicro object based scale-out storage C-Series are turnkey storage clusters designed and optimized for Ceph, an open-source, massively scalable, software-defined storage system. Built with enterprise class hardware, Supermicro object based scale-out storage C-Series delivers unified object, block and file storage with high performance, high scalability and high availability. Supermicro scale-out storage C-Series is ideal for OpenStack, CloudStack and common hypervisors environments. These fully integrated solutions include all hardware components from server to networking, cabinet and power distribution unit and are fully tested and certified by Red Hat (i.e., via Red Hat's Inktank, the creator of Ceph GlusterFS-based storage offerings).

Red Hat provides enterprise-strength, mission critical, open source software and services in today's most important IT areas: Operating Systems, Storage, Middleware, Virtualization, and Cloud Computing. Arista's partnership with Red Hat's OpenStack distribution and Ceph storage subsystem allows our mutual customers to confidently deploy an OpenStack cloud, with proven interoperability, scalable high-performance storage, and integrated support from Supermicro.

Supermicro's C-Series architecture has been proven by extensive lab testing as well as production deployments. Supermicro worked closely with software partners to define and validate the most optimized hardware configuration with real application workloads. It takes the guess work out of designing and deploying a truly scalable storage solution that meets the most demanding enterprise IT and data center environments. Supermicro resellers and channel partners can take advantage of the turnkey systems and reference architecture to deploy Ceph based storage and infrastructure that scales efficiently.

Supermicro/CEPH Solutions At-A-Glance

- Ceph Optimized Server Configurations
- Object and Block Level Storage with S3 and OpenStack API Support
- Hybrid Disk configurations deliver low-latency performance
- Arista 10/40GbE Frontend/Backend Networking with Arista EOS
- Bonded 10G Backend Networking (20Gbps OSD-to-OSD)
- Out-of-Band Server Management Software (OOB)
- Full Rack Integration with Onsite Installation Available

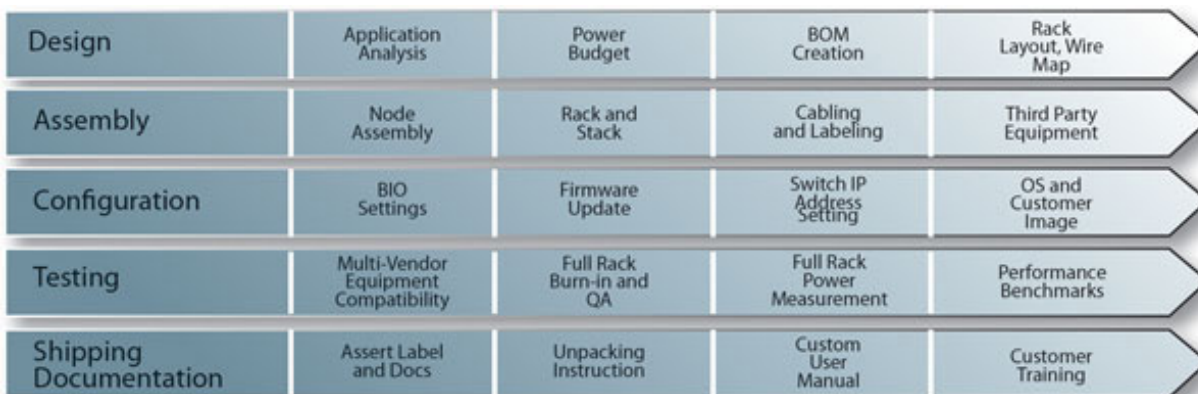


Ready To Deploy Configurations

- Role specific server models – base configurations offer performance, capacity and density to fit popular storage applications. Components are easily customized to meet specific requirements.
- Optimized network configurations – rack level integration offers streamlined deployment of storage and infrastructure with consistency not attainable using improvised expansion methods.
- Storage/Media Ratios to fit user applications - deployment of SSD and rotating media allows the solution to meet demanding performance and density targets.

Availability

- Call Supermicro for Details!



Supermicro Services

Rack Integration Services

Supermicro Rack Integration Services provides a “one-stop shop” for any data center needs, with the confidence, flexibility, and expertise to handle all phases of data center integration projects. From requirements gathering to the delivery of a turn-key solutions - and all phases in between - customers can rely on Supermicro Rack Integration Services as a central resource for project success.

Proof Of Concept Service

The Supermicro Proof of Concept laboratory is a Supermicro engineering facility designed to assist customers and partners with solution design, validation, certification, and benchmarking. Customers and partners can take advantage of Supermicro’s large server product line and extensive systems expertise to design and validate the solutions that best meet their requirements. With the Proof of Concept Service, customers and partners can access the test environment either locally or remotely to run real application workloads. This enables a risk-free decision making process to purchase Supermicro solutions. Key features include:

- Consulting service on solution architecture design
- Test equipment including servers, storage, network switches, cabinets, PDUs, and power meters
- Rack space, power, cooling, networking, and VPN access
- PXE server with OS images and burn-in/testing tools
- Engineering support on installation, configuration and testing

Onsite Services & Support

Supermicro Hardware Maintenance provides flexible and customizable Service Level Agreements for remote help desk and rapid onsite support to cover Supermicro hardware

solutions. Onsite Service Programs offer a 4-hour Onsite Response time option for mission-critical uptime or any tailored solution that will meet specific business requirements. Service level options include:

- *4-Hour Onsite Response:* A Supermicro authorized representative will arrive at the customer’s site to begin hardware maintenance service within 4 hours after the service request has been received and spare parts have been received onsite.
- *Standard Business Hours, Next Business Day (9am to 5pm) Response:* Service is available 8 hours per day within standard business hours, Monday to Friday, excluding local holidays. A Supermicro authorized representative will arrive at the customer’s site to begin hardware maintenance service the next day after the service request has been received and defective parts have been determined and shipped.
- *Integration Service:* Supermicro defines the requirements for the installation, upgrade or migration. We perform the planning, identify service requirements, create and execute the project plan, conduct verification testing, training, and provide technical documentation.

Super Micro Computer, Inc. or Supermicro® (NASDAQ: SMCI), a global leader in high-performance, high-efficiency server technology and innovation, is a premier provider of end-to-end green computing solutions for HPC, Data Center, Cloud Computing, Enterprise IT, Hadoop/Big Data and Embedded Systems worldwide. Supermicro's advanced server Building Block Solutions® offers a vast array of modular, interoperable components for building energy-efficient, application-optimized, computing solutions. This broad line of products includes servers, blades, GPU systems, workstations, motherboards, chassis, power supplies, storage technologies, networking solutions, server management software and SuperRack® cabinets/accessories. Architecture innovations include Twin Architecture, FatTwin™, SuperServer®, SuperBlade®, MicroCloud, Super Storage Bridge Bay (SBB), Double-Sided Storage®, Battery Backup Power (BBP®) modules, Universal I/O (UIO) and WIO expansion technology all of which deliver unrivaled performance and value.

System solutions cover a broad range of applications across world-class data center and cloud services, large scalable server farms, scientific and research supercomputing clusters, businesses with complex computing requirements (such as those in financial services, oil and gas exploration, and media and entertainment companies) industrial applications, medical equipment and digital security and surveillance.

Supermicro's market leadership is based on first-to-market advantages with the most optimized, scalable new technologies coupled with an extraordinarily wide selection of high performance server products offering customers lower TCO.

Supermicro combines 20 years of advanced engineering experience with efficient production and integration expertise to develop first-to-market green computing solutions. The company is committed to protecting the environment through its "We Keep IT Green®" initiative. Founded in 1993 and headquartered in San Jose, California, Supermicro has been profitable every year since its inception. With Operations centers in Silicon Valley, the Netherlands and its Science & Technology Park and Logistics Center in Taiwan, Supermicro is well positioned to further scale its business worldwide.

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