

Virtual SAN Ready System Recommended Configurations

The purpose of this document is to provide Virtual SAN Ready System configurations. A Virtual SAN Ready System is a preconfigured single-node or multi-node server hardware configuration based on Virtual SAN Ready Nodes. A Ready System configuration includes the type and amount of CPU, Memory, Flash, HDD, and IO Controller devices within each server.

Each Ready System is classified by a Ready System configuration profile. Defined Ready System profiles include

- Performance
- Balanced
- Capacity
- Entry-level

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 (as indicated alongside the configuration). Other configuration assumptions include: Virtual SAN default failures to tolerate policy = 1, approximately 30% free storage capacity for future growth, and usage of a USB/SD device as the vSphere host boot device.

DELL		
Balanced Up to 16.8TB raw capacity, 40 Virtual Machines		
Components	Details	QTY
SYSTEM	Dell PowerEdge R820	1
CPU	2x Intel® Xeon® E5-4620 2.20GHz, 16M Cache, 7.2GT/s QPI, Turbo, 8 Core, 95W, Max Mem 1333MHz	1
MEM	16GB RDIMM, 1333 MT/s, Low Volt, Quad Rank, x4 Data Width	16
Flash	400GB Solid State Drive SAS Value SLC 6Gbps 2.5in Hot-plug Drive	2
HDD	1.2TB 10K RPM SAS 6Gbps 2.5in Hot-plug Hard Drive	14
Controller	H710	1
NIC	Intel X520 DP 10Gb DA/SFP+	2
Virtual Machine Profile: 2 vCPU, 6 GB Memory, 2 x 60 GB virtual disks		

CISCO		
Performance Up to 14TB raw capacity, 40 Virtual Machines		
Components	Details	QTY
SYSTEM	UCS C240	1
CPU	Intel Xeon processor E5 v2 Family	2
MEM	32GB DDR3-1600-MHz RDIMM/PC3-12800/dual rank/1.35v	16
Flash	800GB 2.5 inch Enterprise Performance SAS SSD	2
HDD	1TB 6Gb SATA 7.2K RPM SFF HDD/hot plug/drive sled mounted	14
Controller	MegaRAID 9271CV with 8 internal SAS/SATA ports with Supercap	1
NIC	Cisco VIC 1225T Dual Port 10GBaseT Adapter	1
Virtual Machine Profile: 4 vCPU, 12 GB Memory, 2 x 60 GB virtual disks		

Balanced Up to 14TB raw capacity, 40 Virtual Machines		
Components	Details	QTY
SYSTEM	UCS C240	1
CPU	Intel Xeon processor E5 v2 Family	2
MEM	16GB DDR3-1600-MHz RDIMM/PC3-12800/dual rank/1.35v	16
Flash	800GB 2.5 inch Enterprise Performance SAS SSD	2
HDD	1TB 6Gb SATA 7.2K RPM SFF HDD/hot plug/drive sled mounted	14
Controller	MegaRAID 9271CV with 8 internal SAS/SATA ports with Supercap	1
NIC	Cisco VIC 1225T Dual Port 10GBaseT Adapter	1
Virtual Machine Profile: 2 vCPU, 6 GB Memory, 2 x 60 GB virtual disks		

Capacity Up to 21TB raw capacity, 60 Virtual Machines		
Components	Details	QTY
SYSTEM	UCS C240	1
CPU	Intel Xeon processor E5 v2 Family	2
MEM	16GB DDR3-1600-MHz RDIMM/PC3-12800/dual rank/1.35v	16
Flash	800GB 2.5 inch Enterprise Performance SAS SSD	3
HDD	1TB 6Gb SATA 7.2K RPM SFF HDD/hot plug/drive sled mounted	21
Controller	MegaRAID 9271CV with 8 internal SAS/SATA ports with Supercap	1
NIC	Cisco VIC 1225T Dual Port 10GBaseT Adapter	1
Virtual Machine Profile: 1 vCPU, 3 GB Memory, 2 x 60 GB virtual disks		

SUPERMICRO		
Entry Up to 5TB raw capacity, 15 Virtual Machines		
Components	Details	QTY
SYSTEM	SuperServer 1018D-73MTF	1
CPU	Intel Xeon Processor E5-1270V3 3.5G 8M 5GT/s QPI	1
MEM	8 GB 1600MHz ECC DDR3 SDRAM 72-bit, 240-pin gold-plated DIMMs	4
Flash	Intel S3700 Series 200GB, SATA 6Gb/s, HET MLC 2.5" 7.0mm, 25nm	1
HDD	1TB 7.2K RPM Near-Line SAS 6Gbps 2.5in	5
Controller	LSI 2308	1
NIC	Intel® i210AT dual port GbE Controllers	1
Virtual Machine Profile: 1 vCPU, 3 GB Memory, 60 GB virtual disks		

SUPERMICRO		
Performance Up to 40TB raw capacity, 125 Virtual Machines		
Components	Details	QTY
SYSTEM	SuperServer F627R3-R72B+	4
CPU	Intel Xeon Processor E5-2670V2 2.5G 25M 8GT/s QPI	8
MEM	32GB 1333MHz ECC DDR3 SDRAM 72-bit, 240-pin gold-plated DIMMs	64
Flash	Intel S3700 Series 800GB, SATA 6Gb/s, HET MLC 2.5" 7.0mm, 25nm	4
HDD	2TB 7.2K RPM Near-Line SAS 6Gbps 3.5in	20
Controller	LSI 2208 based controller	4
NIC	10G support w/ X540 chip with 2 x RJ45 or SFP+	4
Virtual Machine Profile: 4 vCPU, 12 GB Memory, 2 x 60 GB virtual disks		

Balanced		
Up to 40TB capacity, 125 Virtual Machines		
Components	Details	QTY
SYSTEM	SuperServer F627R3-R72B+	4
CPU	Intel Xeon Processor E5-2660V2 2.2G 25M 8GT/s QPI	8
MEM	16GB 1866MHz ECC DDR3 SDRAM 72-bit, 240-pin gold-plated DIMMs	64
Flash	Intel S3700 Series 400GB, SATA 6Gb/s, HET MLC 2.5" 7.0mm, 25nm	4
HDD	2TB 7.2K RPM Near-Line SAS 6Gbps 3.5in	20
Controller	LSI 2208 based controller	4
NIC	10G support w/ X540 chip with 2 x RJ45 or SFP+	4
Virtual Machine Profile: 2 vCPU, 6 GB Memory, 2 x 60 GB virtual disks		

Capacity		
Up to 80TB raw capacity, 250 Virtual Machines		
Components	Details	QTY
SYSTEM	SuperServer F627R3-R72B+	4
CPU	Intel Xeon Processor E5-2670V2 2.5G 25M 8GT/s QPI	8
MEM	32GB 1333MHz ECC DDR3 SDRAM 72-bit, 240-pin gold-plated DIMMs	64
Flash	Intel S3700 Series 800GB, SATA 6Gb/s, HET MLC 2.5" 7.0mm, 25nm	4
HDD	4TB 7.2K RPM Near-Line SAS 6Gbps 3.5in	20
Controller	LSI 2208 based controller	4
NIC	10G support w/ X540 chip with 2 x RJ45 or SFP+	4
Virtual Machine Profile: 1 vCPU, 3 GB Memory, 2 x 60 GB virtual disks		