Specification Sheet

DELL EMC SCv3000 SERIES ARRAY

Now get enterprise-class storage features in our most affordable auto-tiering hybrid array

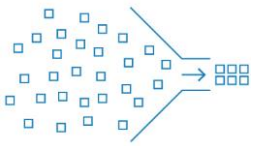
Unprecedented advantage at this price point

Why should budget constraints limit your access to state-of-the-art storage technology? The new SCv3000 Series arrays pack more advanced capabilities in an entry-level hybrid solution than ever before, helping even the smallest companies compete effectively against larger, more expensive deployments.

SCv3000 starting cost is among the lowest in the industry – but don't let the price fool you! This array punches well above its weight, offering a unique combination of features designed to accelerate business outcomes for budget-conscious customers.

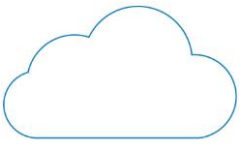
Great hybrid performance

"0-100% Flash" architecture powers over 270,000 max IOPS, >19,000 MB/sec bandwidth, and 1PB raw capacity per array – more than enough headroom to handle multiple demanding workloads.[1]



Self-optimizing architecture

Automate your cost savings to extract more value from fewer, less expensive drives. Multi-tier Data Progression, RAID tiering and Intelligent Compression actively reduce both initial and lifecycle costs.



Future-proof investment

Buy with confidence, knowing SCv3000 has full membership in a broader portfolio that will complement your environment, now and in the future. SC Series replication and federation, robust Dell EMC product support, 3rd-party tie-ins.

What's New?

Compared to the previous-generation SCv2000, SCv3000 Series represents a giant leap forward in capabilities for the SC entry category.

- **Faster hardware platform** – 50% more IOPS, 50% more capacity, 3X more bandwidth, 2X the snapshots.[2]
- **Full SCOS feature set** – Unlike SCv2000, SCv3000 enables the full range of cost-saving SCOS 7 software, including Data Progression, Intelligent Compression, Live Migrate, Live Volume, federation/replication with other SC Series arrays, Thin Clones, Enterprise Chargeback, encryption, DCB, VVols and more…

- **Dell EMC integrations** – VMware support, PowerPath, Data Domain, RecoverPoint, Networker, VPLEX, ViPR and new CloudIQ cloud-based analytics.[3]

More IOPS for online apps. More bandwidth for data mining applications. More of the ecosystem support you need. No matter what mix of workloads you're running, this unique entry-level hybrid array can handle it all. And thanks to the self-optimizing SCOS architecture, you'll get these capabilities at a very low entry AND lifecycle cost.

With the new SCv3000, we're not just leveling the storage playing field – we're tipping it in your favor!

SCv3000 Series Models

The base array is available in two 3U "all-in-one" configurations. Both models include dual controllers with 6-core Intel processors, 32GB memory (16GB per controller) and flexible 10Gb iSCSI, 12Gb SAS or 16Gb FC network connections.

SCv3000 Array
(16) 3.5" drive slots, 3U

SCv3020 Array
(30) 2.5" drive slots, 3U

Optional expansion enclosures let you scale up to 222 drives, or 1PB per array[4] – with even larger scale-out potential in federated multi-array systems. All three expansion enclosures may be used with either base array. All array and expansion enclosure models support a variety of SSD, 15K, 10K and NLSAS drives (including FIPS-certified SEDs).

SCv300 Expansion Enclosure
(12) 3.5" drive slots, 2U

SCv320 Expansion Enclosure
(24) 2.5" drive slots, 2U

SCv360 Expansion Enclosure
(60) 3.5" drive slots, 4U

4:1 All-Flash Storage Efficiency Guarantee

SC Series arrays are efficient in ANY configuration (all-flash, hybrid or HDD) – but we know many businesses are especially concerned about expense when deploying all-flash configurations. That's why we're taking the risk out of AFAs by guaranteeing 4:1 efficiency for all-flash SC configurations. Dell EMC promises our all-flash arrays will provide an effective logical storage capacity at least four times the physical capacity of your purchased drives – or we'll give you more drives at no charge.[5]

SCv3000 Series	
Chassis Overview	
Chassis format	All-in-one (dual controllers, internal drive bays, networking) with expansion options
Rack size	3U
Controllers	2 hot-swappable per chassis (dual active)
Processors	Intel® Xeon® Processor E5-2603v4, 1.7GHz, 6 cores
Internal storage capacity	SCv3000: 16 x 3.5” drive bays SCv3020: 30 x 2.5” drive bays
System memory	32GB per SCv3xxx array (16GB per controller)
Operating system	Dell Storage Center OS (SCOS) 7.2 or greater
Expansion Capacity	
Supported expansion enclosures	SCv300: 16 x 3.5” drive bays (12Gb SAS) SCv320: 30 x 2.5” drive bays (12 Gb SAS) SCv360: 60 x 3.5” drive bays (12Gb SAS)[6]
Maximum drive count	222 (internal plus external expansion), more in federated systems[7]
Max raw capacity	1PB per array (SSD or HDD) [7], more in federated systems[7]
Max raw capacity (NAS)	1 PB[7] per array with optional Dell EMC NX3000 Series Windows NAS appliance
Storage media	SAS and NL-SAS drives; different drive types, transfer rates, rotational speeds can be mixed in the same system. SSD: write-intensive and read-intensive drives HDD: 15K, 10K, 7.2K RPM
Network and Expansion I/O	
Front-end-network protocols	FC, iSCSI, SAS[8] (supports simultaneous multiprotocol) Up to 16 FE ports per array, more in federated systems[6]
Max 16Gb FC ports	8 per array (SFP+)
Max 10Gb/1Gb iSCSI ports	Up to 8 SFP+ or BaseT ports per array
Max 12Gb SAS ports	Up to 8 12Gb SAS ports[8]
Management ports	2 per array (1Gb BASE-T)
Back-end expansion protocols	12Gb SAS
Back-end expansion ports	4 12Gb SAS (wide-Port) per array Up to 16 expansion enclosures per array, more in federated systems[7]
Functional	
Array configurations	All-flash, hybrid or HDD arrays
Storage format	Native block (SAN), file (NAS) from same pool with optional NX3000 Series Windows NAS appliance.

SCv3000 Series	
Data Optimization	
Auto-tiering method	Policy-based migration based on real-time data usage, customizable 512KB-4MB page size.
Auto-tiering structure	Up to 3 primary (media-based) tiers total, up to 2 SSD tiers (write- and read-intensive SSDs)
Tiering customizations	User-defined profiles, option to “pin” volumes to any tier
RAID support	RAID 0, 1, 5, 6, RAID 10, and RAID 10 DM (Dual Mirror); any combination of RAID levels can exist in single array
RAID tiering	Auto-provisions and dynamically restripes multiple RAID levels on the same tier; no need to pre-allocate RAID groups
Thin provisioning	Active by default on all volumes, operates at full performance across all features
Thin snapshots	Records changes only, snapshots auto-migrate to lower-cost storage 4096 maximum snapshots per array
Intelligent compression	Selectable option per volume Applies to SSDs, HDDs or both in hybrid configurations
HDD optimization	FastTrack moves frequently accessed data to outer tracks for quicker response times
Data Mobility and Migration	
Replication	Replicates with other SC Series arrays[9] Synchronous/Asynchronous via FC or iSCSI Target/source relationships may be one-to-many or many-to-one Supports all SC data services on source and target volumes Change replication types and topologies on demand Supports cross-platform replication with PS Series/EqualLogic arrays (either direction)
Volume mobility	Live Migrate (included in base product) enables host-transparent data movement among arrays; see also Federation section. Snapshots maintained/preserved during migration
Thin Import	Space-efficient, non-disruptive data migration from PS Series (EqualLogic) arrays
Thin Clones	Clone standalone volumes with zero duplication of data Clones maintain independent snapshots and replication Ideal for VDI, test/dev, other applications that require discrete instances of common data More efficient than dedupe for database copies
Data Protection, Disaster Recovery, Security	
Business continuity	Live Volume bi-directional auto-failover, auto-repair[10] Continuous operations, disaster recovery, disaster avoidance Includes third-site (tertiary) replication options with Live Volume Managed Replication[10] Zero RTO/RPO with customizable site failover SLAs per volume Does not require identical hardware at each site VMware Metro Stretch Cluster, VMware Site Recovery Manager support
Thin snapshots	Records changes only, snapshots auto-migrate to lower-cost storage 4096 maximum snapshots per array
Replay Manager	Application-consistent snapshots in Microsoft or VMware environments
Data-at-rest encryption	Self-encrypting drives (SEDs) in SSD or HDD formats Full Disk Encryption (FCE) based on AES-256 Drives certified to FIPS 140-2 Level 2 Key Management Server (KMS) options available for FIPS 140-2 Level 1, 2 and 3
External key manager support	Gemalto’s SafeNet KeySecure k460, SafeNet KeySecure k250, SafeNet KeySecure k150v Thales EMS 200

SCv3000 Series	
Management	
Management interface	Dell Storage Manager Multi-array, multi-site and cross-platform (PS Series) management from single interface
Federation	Create large multi-array systems under unified management, with seamless workload migration between arrays via included Live Migrate feature. Add arrays non-disruptively, efficiently utilizing their combined capacity and performance. Volume Advisor monitors federated arrays to suggest optimal data placement and load balancing. Volume movement does not impact snapshots or replication data protection. Federate like or unlike arrays: SC9000, SC8000, SC7020, SC5020, SC4020, SCv3000/3020.[7]
Scripting support	Microsoft PowerShell API RESTful API
Host OS support	Microsoft® Windows Server®, Oracle® Solaris, HP®-UX, Oracle Linux, IBM® AIX®, Novell® NetWare, SLES, Apple, HPTru64, VMware®, Citrix® XenServer®, RedHat®
Third-party application integration	VMware, Microsoft, IBM, OpenStack, Oracle, Symantec, Commvault, Foglight, Docker (see SC Series Management spec sheet for more details)
Coexistence with PS Series arrays	Replication in either direction Day-to-day management from a single interface Thin import: space-efficient, non-disruptive data migration from PS Series arrays
Certifications	VMware vSphere Metro Storage Cluster, VMware SRM, Veritas Storage Foundations Suite, IBM VIOS Recognized, Oracle Validated Infrastructure (OVI); see Dell Storage Support Matrix for additional certifications and details
Reporting/alerts	Support assist (phone home), remote diagnostics and performance monitoring, automated alerts, reports and notifications, departmental chargeback
Workload management	QoS, VVOLs
Physical	
Rack size	3U
Height	13.33 (5.25 inches)
Width	44.5 cm (17.52 inches)
Depth	78.5 cm (30.9 inches)
Weight at max configuration	24.22 kg (53.4 lb)
Weight empty	15.15 kg (33.4 lb)
Power	
Power/wattage	2 hot-swappable 1485W power supplies; 1485W maximum power
Heat dissipation	5,067 BTU/hr maximum
Voltage	200-240 VAC
Frequency	50/60 Hz
Amperage	1485/100 – 14A, 1485/240 – 6.2A

SCv3000 Series	
Environmental Operating Conditions	
Operating temperature	50 - 95°F (10 - 35°C)
Non-operating temperature	-40 - 149°F (-40 - 65°C)
Operating humidity ranges (non-condensing)	10% to 80% with 29°C (84.2°F) maximum dew point
Non-operating humidity (non-condensing)	5% to 95% with 33°C (91°F) maximum dew point
Inlet type	NEMA 5-15/CS22.2, n°42
Services, Warranties[11]	
Services	Dell ProSupport with deployment and consulting services. Optional ProSupport Plus is available offering proactive and preventative services to improve performance and stability. Dell Optimize is available for additional ongoing strategic counsel and guidance from a highly trained system analyst.
Diagnostics engine	Integrated Dell Remote Access Controller (iDRAC)
System sizing	Dell Performance Analysis Collection Kit (DPACK) tool
Drive warranty	All SSDs and HDDs are warrantied for full lifetime wear-out replacement with valid service agreement. SSD warranty covers all formats: SLC, MLC and TLC

OEM-ready version available

From bezel to BIOS to packaging, your storage arrays can look and feel as if they were designed and built by you.[12] For more information, visit Dell.com/OEM.

Footnotes

1) Based on internal tests performed by Dell in June, 2017. 100% sequential reads with 8K sector transfer size. Similar tests also confirmed >250,000 IOPS with latency under 1ms, and >120,000 IOPS when running OLTP-type workloads (70% reads, 30% writes.) Actual performance will vary based on configuration and usage and manufacturing variability. SCv3xxx max capacity may be increased to 2PB capacity using 4MB page size.
2) Based on June 2017 internal Dell EMC testing, compared to previous-generation SCv2000 Series. Actual performance will vary depending upon application and configuration.
3) CloudIQ support requires firmware 7.3 or greater, release schedule to be announced.
4) SCv3xxx max capacity may be increased to 2PB capacity using 4MB page size.
5) See sales rep for details. Terms and Conditions apply. The Dell EMC Flash Storage Efficiency Guarantee applies to new system sales only. Registration and acceptance of guarantee terms and conditions required prior to purchase. Includes SC9000, SC7020, SC5020, SC4020 and SCv3000 Series arrays. Does not apply to SCv2000. Additional information available at www.dellemc.com/4to1guarantee.
6) SCv360 expansion enclosure will be released in Q3 CY17.
7) Multiple SC Series (SC9000, SC7020, SC5020, SC4020, SCv3000 Series) arrays may be deployed in federated configurations using the Live Migrate feature included with firmware version 7.1 and above. Transparent, non-disruptive volume movement among arrays is enabled, allowing the combined capacity and cache of the entire federated cluster to be seamlessly utilized for maximum performance and scalability in expanding data centers. For example, a cluster of eight SC9000 arrays can provide a total of 8,192 drives (up to 48PB raw capacity) with over 4TB of system memory.
8) Front-end SAS only supported with Dell PowerEdge 13th generation servers or later.
9) SC9000, SC7020, SC5020, SC4020, S40 or other SCv3000 Series arrays. Does not support replication with SCv2000 Series arrays.
10) Requires optional Live Volume feature.
11) Availability and terms of Dell Services vary by region. For more information, visit Dell.com/ServiceDescriptions.
12) OEM-ready available on certain models. See your Dell representative for details.

Learn more about Dell EMC SCv3000 solutions

Contact a Dell EMC Expert