

DELL STORAGE SC7020



Dell Storage SC7020

Hardware highlights

- Dual Intel Xeon E5 8-core processors
- 3 PCIe slots per controller
- 6Gb/12Gb SAS back-end
- Multiprotocol front-end support (FC, iSCSI)
- Easy expansion with Dell Storage enclosures
- ENERGY STAR® power efficiency

Software highlights

- Live Migrate multi-array federation included
- Live Volume auto-failover and auto-repair
- Thin snapshots, replication and provisioning
- Manage/replicate with PS Series arrays

World-class services

- Proactive monitoring and integrated support
- Deployment, education and consulting services

Future proof flexibility

The SC7020 provides more capacity and greater flexibility as you manage a variety of workloads. Realize rack space savings with a 3U, 30-drive bay chassis that can expand up to 500 drives with 12Gb SAS expansion enclosures. It is powered by dual Intel® Xeon® E5 processors with 8 cores each for enhanced application performance. SC7020's multiprotocol connectivity options allow you to expand your front-end network connectivity and increase capacity with expansion enclosures.

Designed to handle a variety of workloads, the SC7020 offers high performance with the flexibility to add more capacity as your storage needs change.

Lifecycle efficiencies

Experience real savings with Dell's low-cost-per-gigabyte flash drives — all-flash or a hybrid combination of drive types — to balance both your workload and performance requirements. With automatic policy-based deduplication and compression true optimization of drive capacity is realized.

Simplify management through a single management console and control cost with minimized rack space and cabling complexities. This single array can reduce required rack space by over 60%¹.

Proven features, like the patented Data Progression auto-tiering, leverages diverse drive types to optimize data placement according to actual use, allowing you to achieve your performance needs at a lower cost. Thin-allocation methods are active by default and RAID levels are dynamically provisioned, adjusting and rebalancing automatically to help you achieve your most aggressive application objectives with the fewest drives possible.

Streamlined storage administration

Managing complex storage tasks like live volume, encryption, replication and capacity planning in a federated environment can be challenging obstacles to overcome. Dell Storage Manager (DSM) simplifies administration with an intuitive interface that automates the most common storage tasks. DSM enables day-to-day management of SC and PS Series arrays from a single interface while delivering centralized management of local and remote environments and tight integration with leading technology providers.

With DSM you can streamline administration and reduce operating costs with advanced features like volume-level QoS, VVOLs support and departmental “charge-back” reporting, allowing instant visibility and control of a multi-petabyte, multilocation environment. DSM offers cross-platform replication capabilities between PS Series, SC

¹Based on Dell internal calculation using the rack space required for two SC9000s and two SC420s configuration vs a single SC7020.

Series and FS8600 arrays for seamless management. Configure and verify remote replication processes, monitor storage capacity and drive utilization in real-time. Take advantage of intelligent deduplication and compression with capacity savings of over 10:1.² Achieve seamless business continuity with Live Volume auto-failover between arrays and generate comprehensive storage usage and performance reports — all from a single pane of glass.

Third-party integrations

As a premiere global solutions provider with a huge install base, Dell has the industry touch-points to ensure support for the applications you need. The SC Series has a wide array of integration points with VMware, Microsoft, Oracle, OpenStack and many others. Application Protection Manager Suite, for example, provides application-consistent snapshots in Oracle, VMware and Microsoft environments. Microsoft® Azure Site Recovery support enables VM failover between two private clouds and VMware Metro Stretch Cluster support helps VMs “follow the storage” in the event of an array or site failure.

Additional VMware® integrations, including a vSphere® plug-in, vCenter™ and VAAI support help you manage storage and virtual machines together — and the Microsoft Windows® PowerShell and RESTful APIs streamline system management with intuitive scripting interface options. See the SC Series Management spec sheet for more certified, validated platforms.

Expert services save time and resources

The SC7020 includes ProSupport powered by Copilot offering highly trained storage experts around the clock and around

the globe to address your storage needs, minimize disruptions and maintain a high level of productivity. Beyond that, we offer a flexible suite of services including ProSupport Plus powered by Copilot, Optimize and ProDeploy. We ensure deployments go right the first time and resolve issues before they become a problem with proactive services and in-depth analysis.

ProSupport Plus powered by Copilot

Critical systems need more than break-fix support — they need proactive and preventative measures to get ahead of problems before they happen. Dell ProSupport Plus powered by Copilot combines expertise and technology to proactively improve the performance and stability of your Dell Storage SC7020, allowing you to focus on your strategic goals.

Dell Optimize

Dell Optimize provides in-depth, predictive analysis and consultative guidance to keep your SC Series storage arrays optimized and configured for year-round peak performance. Get highly skilled expertise from a dedicated Dell Storage expert who proactively monitors system health and identifies areas for improvement.

ProDeploy Enterprise Suite

Our end-to-end deployment services ensure your Dell Storage installation, configuration and implementation are completed accurately and quickly — anytime, anywhere — with proven processes based on best practices acquired from thousands of deployments by our highly skilled experts.

| Controller platform | |
|-----------------------------------|---|
| Processors | Dual 2.5GHz 8-core Intel Xeon processors per controller |
| Controllers | 2 dual-active controllers per array |
| Operating system | Dell Storage Center 7.1 or higher |
| Max system memory | 256GB per array (128GB per controller) |
| Internal storage | 30 x 2.5" drive bays |
| Expansion capacity | |
| Max drive count | 500 (30 internal, plus 470 external) |
| Max raw capacity | 3PB per array (SSD or HDD) |
| Storage media | SAS and NL-SAS drives; different drive types, transfer rates and rotational speeds can be mixed in the same system SSD: write-intensive, read-intensive (SLC, MLC and TLC formats) HDD: 15K, 10K, 7.2K RPM |
| Expansion enclosures | Dell Storage SC420 (24 x 2.5" drive slots, 12Gb SAS) Dell Storage SC400 (12 x 3.5" drive slots, 12Gb SAS) Dell Storage SC280 (84 x 3.5" drive slots, 6Gb SAS) Dell Storage SC220 (24 x 2.5" drive slots, 6Gb SAS) Dell Storage SC200 (12 x 3.5" drive slots, 6Gb SAS) |
| Network and expansion I/O | |
| Network/server (front-end) | 4 on-board 10Gb iSCSI ports (SFP+ or Base-T) per array (2 per controller) Optional front-end connectivity: 8Gb/16Gb FC, 1Gb/10Gb iSCSI (SFP+ and Base-T), simultaneous interface support |
| Maximum front-end ports | 24 (Fibre Channel), 12 (1Gb iSCSI), 12 (10Gb iSCSI) per array |
| Back-end connectivity | SAS (6Gb, 12Gb) |

² Based on Dell internal testing, March, 2016. Results may vary depending on application and configuration.

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| Minimum back-end ports | 4 x 12Gb SAS ports per array (2 per controller) |
| Maximum back-end ports | 28 x 12Gb SAS ports per array including on-board ports |
| Data replication | Multiprotocol replication support; supports Fibre Channel and iSCSI replication |
| NAS Deployment (Optional) | FS8600 NAS Gateway Support |
| 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 | Default and user-defined profiles, option to “pin” volumes to any tier |
| RAID | Supports RAID 0, 1, 5, 6, RAID 10 and RAID 10 DM (dual mirror). Any combination of RAID levels can exist on a single Storage Center. Multiple RAID levels can exist on the same storage tier within an array. |
| Thin provisioning | Active by default on all volumes, operates at full performance across all features |
| Deduplication and compression | Selectable option per volume on SSD and/or HDD tiers Compression-only option also available |
| HDD optimization | FastTrack moves frequently accessed data to outer tracks for quicker response times |
| Data mobility and migration | |
| Replication | Synchronous/asynchronous for SAN 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 with base product) enables host-transparent data movement between arrays; see also Federation section Maintains snapshots/replication relationships |
| 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 Continuous operations, disaster recovery, disaster avoidance Includes third-site (tertiary) replication options Zero RTO/RPO with customizable site failover SLAs per volume Does not require identical hardware at each site VMware Metro Stretch Cluster support Microsoft Azure Site Recovery support |
| Thin snapshots | Records changes only, snapshots auto-migrate to lower-cost storage |
| Application data protection | Application Protection Manager Suite protects and restores host-side data from array in Oracle, Microsoft or VMware environments |
| Data-at-rest encryption | Self-encrypting drives (SED) in SSD or HDD formats Full-disk encryption (FDE) based on AES-256 Drives certified to FIPS 140-2 Level 2 Key Management Server 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 |
| Management | |
| Management interface | Dell Storage Manager (included, server-installable), Storage Center Manager (included, on-board browser-based), Dell Storage Manager Chargeback, Replay Manager, command-line interface; multi-array, multi-site, cross-platform 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, SC4020. |

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| Scripting support | Microsoft PowerShell API, RESTful API |
| Host OS support | Microsoft Windows Server®, Oracle® Solaris, HP®-UX, Oracle Enterprise Linux, IBM® AIX®, Novell® NetWare®, SUSE® Enterprise Linux®, Apple®, HPTru64, VMware, Citrix® XenServer®, RedHat® |
| Third-party application integration | VMware, Oracle, Microsoft, IBM, OpenStack™, Symantec™, CommVault®, Foglight™, Docker™; see the SC Series Management spec sheet for additional integrations and details; Symantec, TrendMicro, McAfee Anti-virus engines, Dell and Varonis auditing software |
| Coexistence with PS Series (Equallogic) 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, see Dell Storage Support Matrix for additional certifications and details |
| Reporting/alerts | ProSupport powered by Copilot, remote diagnostics and performance monitoring, automated alerts, reports and notifications |

Physical

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| 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 |
| Inlet type | NEMA 5-15/CS22.2, n°42 |
| Chassis | Height: 13.33 cm (5.25 in) Width: 44.5 cm (17.52 in) Depth: 78.5 cm (30.9 in) Weight: 24.22 kg (53.4 lb) (maximum configuration), 15.15 kg (33.4 lb) (empty) |
| Rack support | ReadyRails™ II static rails for tool-less mounting in 4-post racks with square or unthreaded round holes or tooled mounting in 4-post threaded-hole racks |

Services, warranties³

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| Services | Dell ProSupport powered by Copilot support with deployment and consulting services. Optional ProSupport Plus powered by Copilot 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 (DPAK) tool |
| Drive warranty | All SSDs and HDDs are warranted for full lifetime wear-out replacement with valid service agreement. SSD warranty covers all formats: SLC, MLC and TLC. |

³ Availability and terms of Dell Services vary by region. For more information, visit [Dell.com/servicesdescriptions](https://www.dell.com/servicesdescriptions).

End-to-end technology solutions

Reduce IT complexity, lower costs and eliminate inefficiencies by making IT and business solutions work harder for you. You can count on Dell for end-to-end solutions to maximize your performance and uptime. A proven leader in Servers, Storage and Networking, Dell Enterprise Solutions and Services deliver innovation at any scale. And if you're looking to preserve cash or increase operational efficiency, Dell Financial Services™ has a wide range of options to make technology acquisition easy and affordable. Contact your Dell Sales Representative for more information.

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. For more information, visit Dell.com/OEM.⁴

Learn more at Dell.com/SCseries.

Contact us

To learn more, contact your local representative or authorized reseller.

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⁴ OEM-ready available on certain models.