

Solution Brief

Dell SC4000 Series

Enterprise-class features and performance for the remote branch offices

Multisite organizations face challenges in managing geographically dispersed data growth and the resources, personnel, infrastructure and lifecycle costs associated with it. Managers of distributed multisite environments face additional challenges with lack of IT skills onsite and lack of consistency across the remote and branch office infrastructure. This inconsistency can cause IT costs to spiral and service levels to decline. To resolve these diverse remote and branch office challenges, IT administrators are seeking ways to consolidate and simplify management, reduce IT footprints, and automate data protection processes, all while investing in long-term ROI.

The Dell™ Storage SC Series of storage solutions can meet the needs of small, medium, and large computing environments with flexible and rich set of storage capabilities, all managed from a single Enterprise Manager application. The SC Series storage architecture integrates Fibre Channel, iSCSI and NAS capabilities along with a broad offering of form factors and media types that can be tuned to the various workload requirements. For the remote or branch office site, the newest member of the SC family, the SC4020, integrates seamlessly over the WAN with other SC family storage for replication and data protection between sites and to centralized data centers.

The Dell SC8000 array has found broad success meeting the growing storage needs for enterprise-sized deployments in data center environments based on rich features including Data Progression, auto-tiering, advanced flash support, replay snapshots, and automated replication tools. Remote offices often have the same application performance expectations as the enterprise locations, but with smaller capacity footprint. The Dell SC4020 meets these performance expectations with a more compact footprint and value-oriented price-point, without sacrificing the full range of advanced SC Series features. The SC4020 array combines the benefits of proven Dell Fluid Data™ architecture with resilient Dell hardware design to provide efficiency, quality and durability.

The SC4020 hardware design supports 24 hot-plug, 2.5-inch drives and dual controllers providing automatic failover, combined in a single chassis. This consolidated platform can seamlessly connect to any open-systems server through Fibre Channel or iSCSI connections without the need for server side agents. The SC4020 also includes support for multiple NAS options including local user shares or other file workloads. On the back-end, the SC4020 can be expanded using existing SC200 and SC220 disk enclosures with a full range of drive configurations, including tiered and all-flash options for ultimate workload flexibility, and the ability to customize drive mix and expand the drive footprint over time. For example, a site could start with value 7K drives and later add both capacity and performance to meet the changing application needs, including adding SSD flash tiers and file options.



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The Dell Storage SC4020 offers all of the enterprise-class features of the larger SC8000 array in a compact all-in-one format.

- 24-drive bays and dual controllers in a 2U chassis
- Full-featured array includes replication, snap shots, Data Progression intelligent tiering
- Scalable to 120 drives (over 400TB) with modular expansion enclosures
- Auto-tiering architecture including SLC to MLC tiers
- Flexible drive support (write- and read-intensive SSDs, 2.5 inch and 3.5 inch HDDs)
- Full integration with Dell SC (Storage Center) portfolio – same drives, expansion enclosures, software and licensing model
- Full integration with Dell Fluid File System enables consolidation of block and file workloads



The built-in Storage Center software offers a powerful systems management interface that intelligently optimizes data movement and block-level access to maximize utilization, automate tiered storage, simplify replication and speed data recovery.

Dell's web-based Enterprise Manager software is used to provide simple yet comprehensive administration and monitoring of all local and remote Storage Center environments. Enterprise Manager allows you to gain better insight into your Storage Center deployments, and reduces planning and configuration time for remote replications. A centralized management interface streamlines administration and speeds common storage management tasks. The interface features point-and-click wizard-based setup and management, comprehensive phone home capabilities, automatic notification when user-defined capacity thresholds are reached, and advanced storage consumption and chargeback reporting.

SC4020: 24 x 2.5 inch drives, dual controllers, up to 24 drives per chassis



Add expansion enclosures up to 120 drives per system

2.5 inch SC4020	SSD	200GB	SAS, 6Gb, WISSD
		400GB	SAS, 6Gb, RISSD
		1.6TB	SAS, 6Gb, WISSD
and SC220	HDD	300GB	SAS, 6Gb, 15K
		600GB	SAS, 6Gb, 10K
		900GB	SAS, 6Gb, 10K
		1.2TB	SAS, 6Gb, 10K
		1TB	SAS, 6Gb, 7.2K

3.5 inch SC200	SSD	200GB	SAS, 6Gb, WISSD
		400GB	SAS, 6Gb, RISSD
	HDD	450GB	SAS, 6Gb, 15K
		600GB	SAS, 6Gb, 10K
		2TB	SAS, 6Gb, 7.2K
		3TB	SAS, 6Gb, 7.2K
		4TB	SAS, 6Gb, 7.2K

Fully-automated tiering in the SC Series allows the SC4020 to optimize data placement for multiple consolidated workloads, keeping high IOPS data in tier 1 flash media, while cold data is moved to slower spinning disk media. As drives are added for capacity or performance, data will automatically spread to the new drives and load balance across the new resources.

The SC Series supports flexible combinations of synchronous, asynchronous and Live Volume replication to customize the data protection schemes that work for your business. Multisite replication, such as many remote sites to one central site to cascaded replication to a series of sites, can be customized to your business needs. You can restore all of the replay snapshots and replicated volumes from a central management location to a data center, a VM or to remote sites. The SC4020 provides integration and automation tools using management plug-ins for all major virtualized server components including VMware® vSphere®, Microsoft® Hyper-V®, Citrix® XenServer® and Oracle® VM environments. Additionally, WAN link utilization and recovery can be further enhanced using SonicWALL VPN and other WAN optimization technologies.

SC4020 customers also benefit from Dell's industry-leading Copilot service, which provides proactive health monitoring of all sites, large and small, by a specially trained Dell Copilot support team. Critical for remote-office environments, Copilot also enables the ability to remotely manage and automate updates and configuration changes.

Summary

The Dell SC Series of storage solutions enables a common set of enterprise features to be deployed across small, medium and large enterprise, meeting the unique needs of each site. The SC4020 integrates seamlessly with other SC family storage for replication and data protection between sites, all from a single Enterprise Manager application that consolidates and automates storage center provisioning and monitoring. The SC4020 can be expanded over time to meet your performance and capacity needs, and shares common components with the whole SC Series family, protecting your storage infrastructure investment.