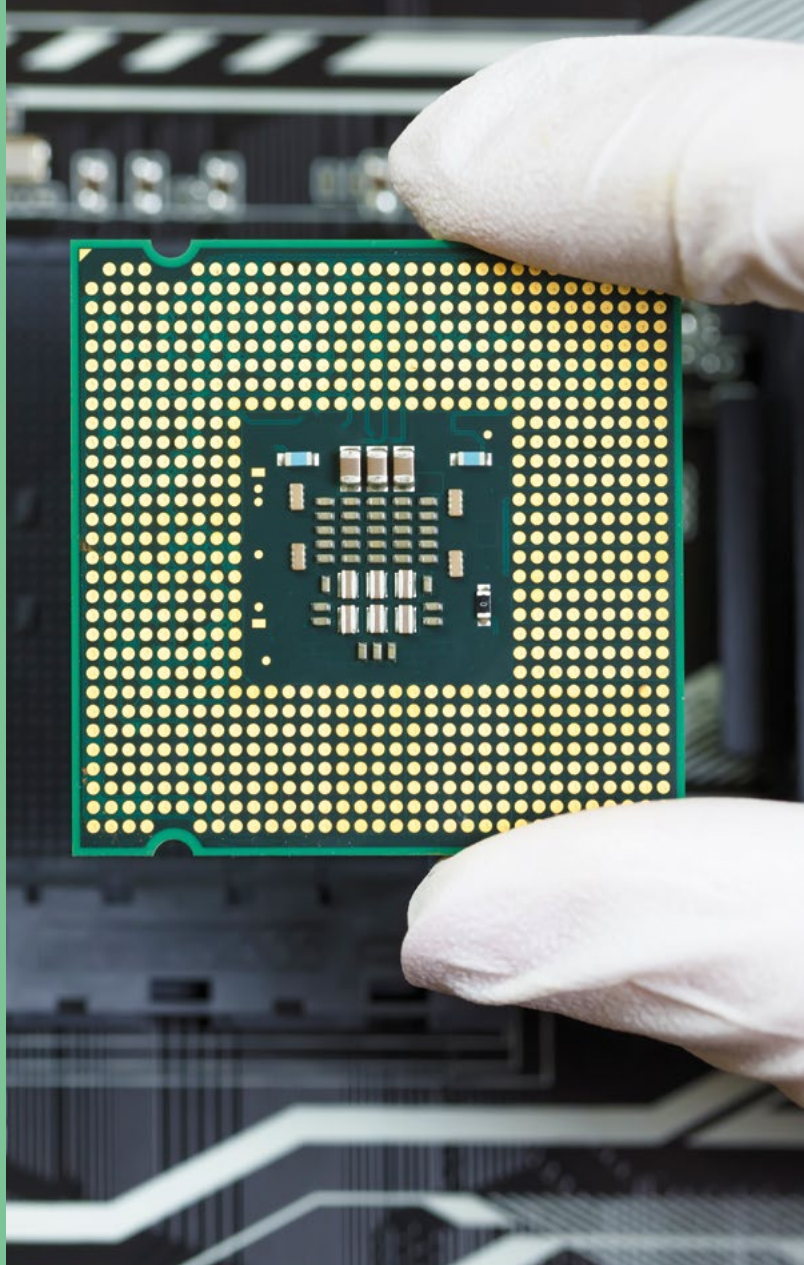


DATASHEET

NetApp Element software product brief

Simplify and automate
data management at scale



Scale, predict, automate

NetApp® Element® software delivers agile automation through scale-out flexibility and guaranteed application performance so that you can build clouds to accelerate new services. You can:

- Achieve nondisruptive system expansion with instant resource availability.
- Deliver predictable performance to hundreds of applications on a single platform.
- Drive your business forward with automated operational simplicity.
- Provide flexible deployment models to fit your next-generation data center needs.

Cloud infrastructures have raised the bar on expectations for IT service delivery. Architects are constantly searching for new ways to eliminate bottlenecks, to increase operational efficiency, and to move the business forward. Cloud infrastructures in today's next-generation data centers need to scale seamlessly like the cloud; provide consistent, predictable performance to multiple workloads like the cloud; and be automated like the cloud.

Element software enables an innovative, automated architecture with scalability and with guaranteed predictable storage performance for your private cloud. This enterprise-scale software increases business productivity and simplifies operations on a highly flexible and efficient cloud architecture. Integrated into your data fabric, Element software delivers flexibility to both your infrastructure and your data.

Flexible

The relentless pace of business change demands constant flexibility to adapt to workload changes. With Element software, you can dynamically scale storage resources to meet those ever-shifting, unpredictable business and application demands.

Element software enables nondisruptive system expansion with instant resource availability. Multiyear capacity and performance planning cycles are eliminated with Element software because your cloud infrastructure can grow independently with your resource demands. Your cloud starts with today's requirements, and your storage platform can expand in granular increments over time. Each new node delivers a precise amount of additional performance and capacity to a usable pool. Data is automatically load-balanced in the background across all nodes in the cluster, maintaining even utilization as the system grows.

Forget forklift upgrades. Element software lets you simply add new nodes into an established cluster. Old nodes are removed and retired on your schedule, not your vendors' schedules. You have nothing to migrate, no interruptions, and no settings to change. The scale-out architecture makes sure that there's plenty of horsepower to reduce and rehydrate data, regardless of performance and capacity demands placed on the system. With Element software, infrastructure managers can easily allocate, manage, and guarantee storage performance natively from every layer of your infrastructure, creating efficiencies that actually improve with scale.

Predictable

To ensure system performance in mixed-workload environments, your system needs to be able to guarantee quality of service (QoS) to each workload. Element software has fine-grained performance control with user-defined minimum, maximum, and burst settings for every workload or application on the system, allowing meaningful consolidation while protecting the performance of each application.

Element software lets you allocate and manage performance independently from capacity. Forget adding capacity that results in unpredictable performance gains. Each storage volume in a system that's enabled by Element software can be allocated a precise amount of capacity and performance, both of which can be changed dynamically without migrating data or interrupting I/O.

This ability means that you can guarantee firm performance SLAs for applications, workloads, and tenants across your infrastructure, whether you use a cloud service provider or have your own enterprise cloud. With Element software, your infrastructure can host a broad range of performance-sensitive and business-critical applications. You can offer performance SLAs to internal or external customers and facilitate the migration of applications to a more cost-effective and predictable storage infrastructure.

Always-on efficiencies maximize utilization of resources, reduce your data center footprint, and lower operational costs. Embedded global data deduplication techniques, multilayer data compression, and granular thin provisioning solve traditional storage deficiencies dynamically to make flash at scale an economic reality, all while delivering superior performance.

Automated

In large storage deployments, automation is the key to operational efficiency. By automating complex storage management tasks, orchestrating workflows, and delivering deep management integration, you can efficiently satisfy your service delivery needs and focus on driving your business forward.

Element software management frameworks provide both an intuitive web-based UI and a robust REST-based API to automate every aspect of storage provisioning, management, and reporting. Whether you build your own management framework or use an off-the-shelf management stack, the API makes automating storage management simple and straightforward.

Deep integration with industry-leading virtualization and cloud platforms helps minimize your development time and overhead, which enables more complete and agile solutions. Standard tools and integrations coupled with ecosystem plug-ins make direct management seamless.

For VMware environments, Element software integrates seamlessly into vStorage APIs - Array Integration (VAAI), vSphere API for Storage Awareness (VASA), Virtual Volumes (vVols), and vRealize, the tools you already use to automate your VMware

infrastructure. And to simplify block storage integration and automation, Element software API functionality has been integrated with the OpenStack, CloudStack, Flexiant, and OnApp frameworks.

Protected

As with any enterprise storage, your data's protection should always come first. With a resilient, self-healing architecture that reduces operational overhead and risk, Element software delivers ironclad data assurance. NetApp SolidFire Helix® data protection can absorb multiple concurrent faults across all levels of the solution without affecting application performance.

Recovering from a failure takes only minutes. In a failure event, each drive in the system redistributes a small percentage of its data in parallel to the free space on all remaining drives. Failure recovery requires no operator intervention, eliminating the fire drills that are common with traditional RAID-based architectures.

Built-in real-time replication, consistent group NetApp Snapshot™ copies, and integration with VMware Site Recovery Manager (SRM) provide a comprehensive set of features that maintain end-to-end system integrity. Seamless integration with third-party backup applications, and with any system compatible with Amazon Simple Storage Service (Amazon S3) or OpenStack Swift, makes it easier to create and execute a comprehensive disaster recovery strategy that allows business operations to continue without impact.

With Element software integration into your data fabric, you can use NetApp SnapMirror® replication for superior data protection. And for disaster recovery, you can move your data from an Element software platform to a platform enabled by NetApp ONTAP® software. With the data fabric, you can use the extended NetApp portfolio of products to protect against storage outages, with easy setup of disaster recovery relationships. Data that's replicated from a NetApp SolidFire® system to a NetApp AFF or FAS system is stored in native format and can benefit from the rich data management capabilities of ONTAP.

Secure

Protect your storage with built-in security features. With Element software, you know that your data is secure. Simply authorize and authenticate users to your system and grant access with centralized management of users. Manage access to volumes in a diverse environment with multiple tenants on hardware with multiple drive-encryption options to ensure security at the hardware level. And control network security by isolating data in flight to prevent volumes from being seen between different tenants' data. You can rest easy knowing that your infrastructure provides enterprise-ready security.

Providing options

As companies move from traditional storage infrastructure to the next-generation data center, they have more options for consuming storage than ever before. Even if one consumption model can accommodate an enterprise's IT needs today, CIOs should expect to accommodate change over time.

Element software delivers the greatest flexibility for how you purchase and grow your storage infrastructure, so you can achieve the next-generation data center on your terms. You can harness SolidFire software's ability to guarantee performance, automate storage tasks, and scale easily. You can rapidly respond to the needs of the business, improve productivity, and reduce management complexity by deploying Element software that's pre-integrated on NetApp hardware through the SolidFire appliance. Or you can use standalone software-defined storage (SolidFire Enterprise SDS) on hardware of your choice. And no matter which model you choose, we have you covered with the only consistent software platform that can provide the same features and functionality across every storage consumption model. Now it's simple and economical to use Element software across your entire data center footprint, precisely aligned with your ever-changing data center needs.

NetApp HCI

Built on the SolidFire architecture, NetApp HCI, a hybrid cloud infrastructure, overcomes the limitations of first-generation hyperconverged infrastructure solutions while simplifying consumption with independent storage and compute.

SolidFire all-flash system

SolidFire is a 100% programmable scale-out storage system that delivers unmatched agility and guaranteed application performance. With the ability to mix node clusters, you can build your private cloud architecture at any scale. SolidFire is ready to meet your business needs as required.

Term capacity licensing

Term capacity licensing offers an innovative pricing model to meet the agility needs of businesses at scale. It decouples purchasing Element software from purchasing the underlying NetApp HCI or SolidFire hardware, resulting in a game-changing option for how you buy, deploy, and consume storage. This model gives you the cost and flexibility benefits of software-only storage without the supply chain, system integration, and support complexity you usually have to deal with.

About NetApp

In a world full of generalists, NetApp is a specialist. We're focused on one thing, helping your business get the most out of your data. NetApp brings the enterprise-grade data services you rely on into the cloud, and the simple flexibility of cloud into the data center. Our industry-leading solutions work across diverse customer environments and the world's biggest public clouds. As a cloud-led, data-centric software company, only NetApp can help build your unique data fabric, simplify and connect your cloud, and securely deliver the right data, services and applications to the right people—anytime, anywhere.

