



Solution Brief

Protect Your Data with NetApp Element Software

Key Benefits

Data Assurance

Element software's always-on resilient, self-healing architectures reduce stress and operational overhead.

Cross-Platform Protection

Protect your data across the Data Fabric for disaster recovery and more with SnapMirror replication between Element and ONTAP software enabled infrastructures.

Simplified 3rd Party Security

Integrated data protection partners offer rich data management and granular control based on your environment's unique needs.

Today's always-on global business environment demands that data be instantly and always accessible. There is minimal tolerance for downtime, no matter the location—at work, at home, or at play. Even with a highly available storage array, it is crucial to have a data protection strategy in place. Your data protection should also be easy to access for those unexpected standstills, for everything from minor human error to catastrophic natural disasters. Your company's strategy for returning to the on-demand world as quickly as possible could make or break your company's existence.

The cost-to-time ratio continues to be incredibly hard to balance while you maximize your investments today and continue to protect your data into the future. NetApp® Element software's technology helps you keep your eye on the horizon of innovation while protecting your data through three approaches. It offers native functionality for real-time replication and backup and restore, and it tightly integrates into the NetApp Data Fabric for disaster recovery (DR). SolidFire also provides partner integrations for protection by using applications and processes that you already run in your data center.

Built-In Data Protection

As the foundation of your cloud infrastructure, NetApp Element® software was designed to meet the high-availability standards and data assurance that are expected from enterprise-class arrays. It was also designed to be ready for tomorrow's applications and data demands. As protecting data becomes ever more important, the native data protection features of Element software are essential to all infrastructures.

Element software delivers data assurance to your NetApp HCI and SolidFire® infrastructures through a resilient, self-healing architecture that reduces operational overhead and risk. The built-in data protection capabilities can absorb multiple, concurrent faults across all levels of the solution—without affecting application performance. Recovering from a failure takes only minutes and is fully automatic. In a failure event, each drive in the system redistributes a small percentage of its data in parallel to the free space on all the remaining drives. Failure recovery requires no operator intervention, eliminating the fire drills that are common with traditional architectures.

For further data protection, NetApp Snapshot™ technology enables you to create space-efficient, point-in-time copies of your data. If necessary, you can roll a volume back to the state that it was in when the Snapshot copy was created. And with consistent Snapshot copies of multiple volumes, you can safely back up or roll back a database. Snapshot technology provides “crash consistency” across a group of volumes (and their replicas) for restart. You can back up Snapshot copies from a NetApp HCI cluster to an external object store or to another Element enabled cluster for more accessible data.

With the built-in synchronous and asynchronous replication of Element software, you can quickly copy data between multiple sites, regardless of where your NetApp HCI or SolidFire clusters sit. Synchronous replication confirms data synchronization for your mission-critical data in near real time. Asynchronous replication protects

against hardware failure and natural-disaster incidents over long distances through bidirectional replication, allowing each replication partner to fail over or fail back, respectively. And with no additional licenses or support needed, costs are reduced. Plus, by finding additional uses for your remote copies, you can drive more revenue from your data. The simplified management of Element facilitates flexible replication to multiple locations from a single cluster.

Element's native data protection extends past the cluster to any Amazon S3 or Swift-compatible system with integrated backup and restore. The API-driven backup makes it easy to manage at scale, and it automatically resumes backup after an interruption. The incremental backup approach reduces network traffic, and the host impact is also reduced through direct transfer of data. The system maintains data efficiencies during backup, reducing network traffic, shortening backup windows, and using less target storage.

Protecting Across the Data Fabric with SnapMirror Replication

NetApp's continual innovation in its Data Fabric allows it to be more seamlessly connected to hybrid, private, and public cloud environments. The Data Fabric unifies data management across distributed resources to promote consistency and control of data mobility, security, visibility, protection, and access.

Element technology has always enabled data transfer between multiple NetApp HCI or SolidFire systems. But as part of the NetApp Data Fabric, you can replicate and utilize your data further, with SnapMirror replication between Element and NetApp ONTAP® enabled storage systems. If your organization is adding NetApp HCI or SolidFire to its storage environment, you can still leverage your existing investments in NetApp All Flash FAS (AFF) and FAS systems as secondary storage for multiple use cases. You can use AFF or FAS systems to protect against storage outages, with easy disaster recovery (DR) relationship setups. The storage-efficient transport mechanism transfers only changed data to the secondary site, which reduces recovery time and enables more frequent replication.

Because SnapMirror stores data in its native format, it maximizes your investment in DR infrastructure, while your DR site copies can help accelerate development. Further leverage your data protection copies by creating zero-impact copies of the replicated data for development and testing.

Data that is replicated from an Element system to ONTAP can benefit from the rich data management capabilities of ONTAP. NetApp SnapMirror® technology provides an agile, flexible, and secure way to transport data between storage systems, protecting your data and improving accessibility across the Data Fabric.

Independent Backup and Recovery Integrations

The native data assurance and data protection features of Element software provide enterprise-level availability and functionality. Those features combined with our integrated data protection partners help you make the most of your investment, gaining rich data management and granular control based on your environment's unique needs. You can accelerate your return on investment and achieve superior business value from your storage infrastructure when you expand your data protection strategy with integrated offerings from Commvault, Veeam, and Datto IO. You get broader use of Snapshot copies and backups, whether physical, virtual, or cloud-based; archiving; testing and development; and rapid restore to the exact moment that you need.

Commvault has long been integrated with NetApp technologies for primary, vault, and mirror data; deduplication-aware replication; and tiering across storage and cloud repositories. NetApp's partnership with Veeam provides reliable data protection that is specifically for virtualized environments. Veeam's agentless design offers multiple backup options to meet your needs. Features such as source-side deduplication and compression, change block tracking, parallel processing, and automatic load balancing provide fast and efficient backups. Datto IO is a cloud data protection solution that aligns with the SolidFire next-generation data center approach. You get advanced databases and cloud applications that reside on SolidFire storage with an innovative backup and recovery solution.

Conclusion

Your enterprise needs a data protection solution that is reliable, flexible, and easy to use. Element software delivers self-healing resiliency, continuously accessible data, and a range of backup and restore and disaster recovery options to best fit your environment's needs. Element software provides native protection, SnapMirror replication across the Data Fabric, and third-party trusted integrations to keep your dynamic data protected and safe. Element makes it easy to protect your data across infrastructures. Whether you access the benefits of Element software through NetApp HCI or SolidFire, your protected data remains reliable, flexible, and easy to use on the infrastructure that makes the most sense for your business needs.

About NetApp

NetApp is the data authority for hybrid cloud. We provide a full range of hybrid cloud data services that simplify management of applications and data across cloud and on-premises environments to accelerate digital transformation. Together with our partners, we empower global organizations to unleash the full potential of their data to expand customer touchpoints, foster greater innovation and optimize their operations. For more information, visit www.netapp.com. #DataDriven