NetApp E-Series Storage with IBM Spectrum Scale from ADS

Customized, enterprise-class HPC solutions

Key Benefits

Enable Extreme, Scalable Performance

- Deploy an enterprise-grade parallel file system with NetApp® E-Series storage to deliver up to:
  - 44GBps throughput
  - <100 microseconds latency
  - 99.9999% availability

Maximize Cost Efficiency

- Avoid overpurchasing systems and components by letting the experts at ADS design and configure a right-sized solution.
- Get the economies of object storage with the performance benefits of NVMe flash.
- Reduce storage costs by automatically tiering data from high-performance flash to low-cost storage across a single namespace.

Future-Proof Your Investment

- Seamlessly scale performance and capacity as needed.

Gain a Trusted Advisor

- Join forces with a long-term partner who is focused on your success.

The Challenge

With technologies like artificial intelligence (AI) and Internet of Things (IoT) generating huge amounts of data every day, high-performance computing (HPC) infrastructures are becoming the backbone of any organization's ability to extract insight and innovation from their data. As the adoption of AI and IoT ramps up across all industries, the pressure is on to provide an infrastructure that can quickly process and analyze the incoming data. However, choosing the right technologies and piecing them together into a solution that works seamlessly—without breaking the budget—is challenging.

The Solution

Partnering with a systems integrator like Applied Data Systems (ADS) helps ensure that you get an HPC solution that meets your workload needs. With years of experience, the experts at ADS take the time to thoroughly analyze your current and future needs, and how those needs align with your technical and financial objectives, to help drive your success. Using only industry-leading compute, networking, and storage components, they design, build, deploy, and support a balanced and optimized HPC solution that meets your requirements, fits your budget, and works seamlessly.

One of those solutions includes NetApp E-Series storage with the IBM Spectrum Scale enterprise-grade parallel file system. This proven, integrated solution delivers industry-leading performance, nonstop availability, and extreme scalability—all in an easy-to-manage, cost-optimized building-block architecture that has been tuned, tested, and validated for your environment.

Enable Extreme, Scalable Performance

Even the fastest supercomputer can't meet expectations if it doesn't have equally fast storage to support it.

NetApp E-Series storage with IBM Spectrum Scale gives you consistent, near-real-time access to your data. IBM Spectrum Scale transparently spreads your data across multiple servers and their back-end storage to prevent bottlenecks and to enable continuous high performance. E-Series storage systems can support any number of workloads simultaneously and can deliver up to 44GBps throughput and less than 100 microseconds latency per scalable building block. Optimized for both flash and spinning media, E-Series systems include built-in technology that monitors your workloads and automatically adjusts configurations to maximize performance. With the 99.9999% reliability of E-Series systems, your HPC environment will be available whenever and wherever you need it.

■ NetApp®   Applied DataSystems   IBM Spectrum Scale

A NetApp Gold Partner.   A NetApp Solutions Integrator Partner.

Maximize Cost Efficiency

With an HPC solution designed by ADS experts, you can avoid overpurchasing systems and components. ADS experts can configure a solution that meets your performance and capacity needs today and in the future without having to pay for components you don't need. Built on price/performance-optimized building blocks, the E-Series storage architecture makes configurations of any size cost efficient.

For additional cost efficiency, IBM Spectrum Scale includes a powerful information lifecycle management toolset that includes a rule-based policy engine and ultra-fast metadata scanning to tier data internally across flash and disk storage pools. Frequently accessed files are stored in higher-performing (NVMe flash SSD) storage pools, while files that are not accessed frequently are stored in more economical, high-capacity, slower disk-based storage pools. Migration policies transparently move data from one storage pool to another without changing the file's location in the directory structure. Automated analysis of data usage patterns pulls data back up to higher performance tiers as needed.

Future-Proof Your Investment

To make sure that your HPC environment can handle today's requirements as well as those in the future, you need a solution that can respond quickly to data growth.

A solution built by ADS with NetApp E-Series and IBM Spectrum Scale delivers an agile HPC infrastructure that scales easily and seamlessly. The flexibility and scalability of the solution enable it to support and adapt to evolving workloads, making it a strong foundation for future storage requirements. Modular storage building blocks composed of E-Series hybrid flash arrays give you a granular, building-block approach to growth. By increasing the number of storage building blocks, you can scale up the performance and capacity of the file system, enabling it to seamlessly handle the most extreme workloads. Maintaining your software licenses helps to ensure that your enterprise solution is always up to date with the most current features, functionality, and enhancements—for the life of your solution.

Gain a Trusted Advisor

When you choose ADS, you gain a long-term partner who will stick with you to help make sure that your solution meets your needs. Your success is always a priority, and the experts at ADS draw on their years of experience and strong relationships with industry-leading technology vendors to make sure that you get a solution that exceeds expectations now and in the future. ADS experts' deep knowledge of NetApp, IBM, and your environment enables them to make sure that you're getting all the benefits your solution offers. If you experience a problem with your solution, you can count on ADS to provide the support you need to resolve the issue quickly—no finger pointing and no runaround to different vendors. Customized support plans help ensure that you get the level of support your business requires.

About Applied Data Systems

Applied Data Systems is a leading high-performance computing system integrator. ADS partners with the leading technology companies to help customers solve both technical and financial objectives to drive success. ADS customizes offerings to fit customer requirements. ADS works with companies in the following vertical markets: Government National Labs, Higher Educational Research facilities, Life Science/Genomics, Media & Entertainment, and Oil & Gas. Learn more about ADS at **applieddatasystems.com**.

About NetApp

NetApp is the leader in cloud data services, empowering global organizations to change their world with data. Together with our partners, we are the only ones who can help you build your unique data fabric. Simplify hybrid multicloud and securely deliver the right data, services, and applications to the right people at the right time. Learn more at **www.netapp.com**.