



Building a modern AI stack with HPE GreenLake for File Storage

Artificial intelligence (AI) has become prevalent in almost every enterprise. The need for a modern AI stack has become more important to take advantage of this emerging and disruptive technology. To create a modern AI environment, organizations need a scalable data lake solution that provides the speed, scale, agility, and simplicity required to train and derive deep-learning models. Additionally, they need a reliable fast storage system capable of delivering the performance required to meet these demands.

The solution

[HPE GreenLake for File Storage](#) is an all-flash, scalable file system that provides a cloud-like experience for AI and analytics workloads. This solution delivers the storage requirements for the most demanding AI workload to develop, train, and deploy a model. HPE GreenLake for File Storage provides the performance needed to train neural networks and infer in real-time — with unprecedented bandwidth and IOPS to randomly walk through massive training data sets.

HPE GreenLake for File Storage is built on the [HPE Alletra Storage MP](#) architecture, a modern hardware platform for next-gen workloads. One of the primary benefits of the HPE Alletra Storage MP architecture is its ability to deliver extreme performance using a disaggregated hardware architecture and NVMe technologies. This revolutionary disaggregated and shared-everything architecture enables the ability to process massive amounts of data. Additionally, the architecture is built in an all-active design to help ensure that data is available — even in the event of a component failure. The architecture is designed to grow with customer needs, providing the ability to scale up or down as needed. This scalability is achieved through the use of a modular design, which allows organizations to add capacity and performance as needed without disrupting operations.

In addition, HPE GreenLake for File Storage provides seamless integration with other modern AI tools and software stacks such as Determined AI and Pachyderm for model deployment and data management. This integration helps ensure that organizations can build a comprehensive AI stack that meets their needs.

Key benefits

Scalable, all-flash data lake solution

HPE GreenLake for File Storage provides a modern scalable data lake solution that can grow as organizations' data needs grow. With its all-flash and disaggregated scale-out architecture, HPE GreenLake for File Storage delivers high performance and throughput needed to fast-train models and shorten training time.

Simplified and unified storage management for analytics workloads

HPE GreenLake for File Storage provides a cloud-like experience through the [HPE GreenLake portal](#). It provides a user-friendly interface for managing file services through a single interface. Management, monitoring, and protection enable customers to handle massive amounts of data effectively and efficiently.

Efficiently store unstructured data

Due to the implementation of HPE GreenLake for File Storage data-reduction technologies, massive amounts of data are stored more efficiently. Savings of up to 8:1 for uncompressed time-series data can be achieved.¹

¹ "HPE storage substantiation," HPE, 2023

Figure 1 is an illustration of HPE GreenLake for File Storage integrated into a modern AI environment.

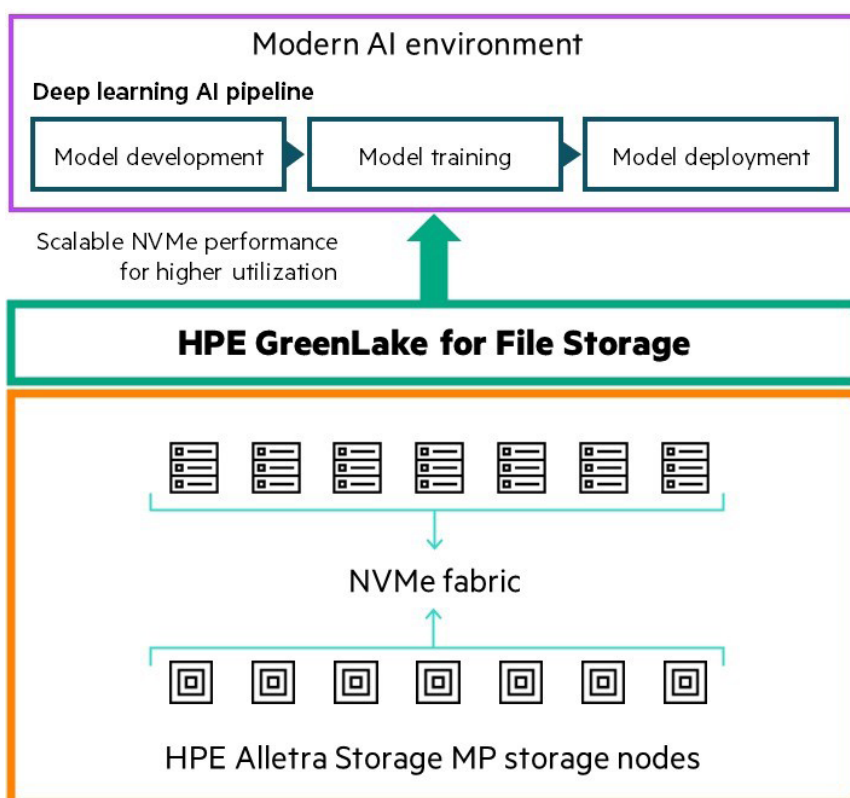


Figure 1. Modern AI environment with HPE GreenLake for File Storage



Conclusion

HPE GreenLake for File Storage is an innovative solution that provides the performance, scale, and simplicity required to build modern AI stacks. By leveraging the power of HPE GreenLake for File Storage and integrating it with other AI tools, data scientists and analytics application owners can build comprehensive AI stacks that meet their needs and help them achieve their AI goals more quickly. The implementation of advanced data-reduction technologies enables storing massive amounts of data for model training more efficiently with a lower TCO advantage. With its all-flash architecture, HPE GreenLake for File Storage delivers high performance for AI use cases, including training neural networks and inferencing. HPE GreenLake for File Storage can be deployed on-premises, providing organizations with the cloud-like flexibility they need to manage their data lake solution.

Learn more at

[HPE.com/data/HPE-GreenLake-file-storage](https://hpe.com/data/HPE-GreenLake-file-storage)

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