



Top reasons to choose HPE GreenLake for HPC

High-performance computing (HPC) is about solving the world's toughest problems. But HPC platforms are often complex, and there are unique challenges to running HPC applications on platforms that are not optimized for technical computing.

Digital transformation is driving new data-intensive workloads, with real-time analytics operating at an unprecedented scale. As this evolution unfolds, HPC is becoming widely leveraged across many industries for use cases as varied as computer-aided design, engineering, autonomous driving, predictive maintenance, drug discovery, fraud detection, trading analytics, and smart cities, to name a few. For each, the power of HPC is needed to deliver rapid and accurate simulation and modeling to future-proof against diminished staffing levels and skill sets and enable planned growth to scale in place.

Gaining industry insight before your competitors, or before events overtake your analysis, can make the difference between success and failure. That is why Hewlett Packard Enterprise has assembled our team of experts and the best of HPE high-performance technologies and services to create a suite of HPC solutions that speed time to value.



Solving the world's biggest problems

HPE GreenLake for HPC is an on-premises, end-to-end solution for HPC that makes it easier and faster for customers to deploy HPC and artificial intelligence (AI) workloads. This means end users, developers, and data scientists now have the ability to run pure HPC, pure AI, and converged HPC/AI workflows on high-performance clusters leveraging the full HPE GreenLake customer experience.

HPE GreenLake for HPC combines two essential ingredients. The first is industry-leading HPC technology from HPE that was developed specifically to help you solve the world's biggest problems. The second is data and HPC expertise that can help you define, deliver, and reliably integrate the right solution for your use case. And third, HPE GreenLake has emerged as the go-to destination for hybrid cloud. Our industry-leading catalog of cloud services enables organizations like yours to drive data-first modernization for all their workloads, across edge to cloud.

The HPC solution from HPE is offered with standard solution stacks based on best-of-breed components. The suite of offerings addresses every HPC customer need, with a comprehensive and modular software portfolio for HPC and AI workloads, as well as fully integrated system management software for deployment at any scale. For these reasons, more customers choose HPE for HPC than any other vendor.¹

¹ "Hyperion Research HPC Market Update," Hyperion Research, Nov 2022

Enabling accelerated performance for the most demanding workloads

AI and HPC working together creates a uniquely powerful data compute environment. It reduces compute time, lowers costs, increases application flexibility, and facilitates collaboration. Running both AI and advanced analytics on HPC makes the system more versatile—and an order of magnitude more powerful.

There are more compelling reasons why you should look to HPE for HPC solutions:

1. **Simplicity and ease of use.** HPC GreenLake for HPC is simple to buy and easy to use, as you deploy optimized HPC and machine learning (ML) workloads at any scale. It's a fully managed service that provides guardrails for OPEX by helping ensure bursting is at a fixed rate, and planned growth can scale in place.
2. **A consumption-based service.** HPE GreenLake for HPC can scale in place at predictable rates for compute, GPU, and/or storage.
 - a. **Time to value.** You can avoid lengthy rollouts with quick-to-deploy, preconfigured, prevalidated solutions. HPE uses reference architectures that are quickly deployed by HPE experts, and HPE GreenLake works to keep capacity ahead of demand, without lengthy capital approval and purchase time frames.
 - b. **HPE GreenLake Central.** HPE GreenLake for HPC has simple, effective metering, so you can see who is using which resources and mitigate surprise charges at the end of the month. When you experience unplanned surges in workload demand, the service allows your work to burst into on-premises resources rather than the public cloud. When the surge is over, you return to a normal operating state and only pay as you go* for the burst.
 - c. **Scalability.** Your infrastructure and support services are designed to scale, but you can respond quickly to changing business needs with cloud-like flexibility. Furthermore, we have simplified the way you can align growth while meeting on-premises security and compliance regulations.
 - d. **Accelerated time to production.** Removing the need to write infrastructure code makes it easy to set up, manage, secure, and share AI compute clusters.
3. **Optimized services.** HPE experts handle performance tuning, capacity planning, lifecycle management, firmware updating, and patch management—relieving you of the burden of the daily management of your HPC infrastructure—and enabling you to focus on innovation.
4. **Economics.** Experience no capital outlay or up-front costs and get the financial benefits of the cloud with the security and performance of on-premises. Your HPE GreenLake for HPC solution is delivered as a service with a monthly bill based on consumption.
5. **Centralized cloud access to your data.** Unlock the value of your data by deploying HPC workloads that provide a single unified data source for analytics, and support data processing at scale to enable centralized cloud access to that data.
6. **HPE Machine Learning Development Environment.** Provides a comprehensive solution for deploying ML workloads in an HPC environment—delivering high performance and scalability while leveraging the full power of HPC hardware and software.
7. **Sustainability.** More energy-efficient CPUs/GPUs are ideally suited for data and compute-intensive workloads.
 - a. Sustainable manufacturing and components facilitate a high level of recycling.
 - b. Cooling technology that adjusts with the number of HPC servers used fits with existing enterprise infrastructure to avoid large up-front investment.²

* May be subject to minimums or reserve capacity may apply

² "HPE GreenLake For HPC Delivers An Innovative And Flexible Enterprise HPC/AI Solution," Moor Insights & Strategy, June 2022

Is HPE GreenLake for HPC right for your demanding environment?

Recent studies conducted by HPE report that the HPE GreenLake platform can drive critical business outcomes, with 75% faster high performance for compute project deployments, and 40% lower capital expense for investments in HPC solutions.³

With HPE GreenLake, you can leverage on-premises HPC solutions with the flexibility, scalability, and utility-like consumption of the public cloud. Additionally, our existing customers have exhibited increased agility with pay-per-use pricing and pre-installed buffer capacity that is ready to provision on an as-needed basis. If you find that demand for HPC resources spikes suddenly, or you hit a consistent growth spurt, you shall be prepared to accommodate that growth.

Remove barriers and get started

You need high-performance capabilities to unlock the potential of your data, accelerate innovation, and run your workloads efficiently. Enable your organization by leveraging true high-performance technology in a cloud service—to address your most challenging issues and support your most demanding workloads.



³ "HPE GreenLake For HPC Delivers An Innovative And Flexible Enterprise HPC/AI Solution," Moor Insights & Strategy, June 2022

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