HPE GreenLake and the birth of "hybrid by design"

How Hewlett Packard Enterprise, an iconic Silicon Valley pioneer, is redefining computing for a new era

Our expectations of technology have never been higher — and our needs from it have never been greater. Today, we expect to seamlessly connect with distant friends and colleagues, instantly access information, conduct complex operations on the fly, and work from any location in the world. And few of us ever stop to think about what it takes to make all this possible.

Whether you're drafting an email or using AI to outline a new report, your interaction passes through a broad range of wildly different computing systems, from edge devices and cloud providers to on-premises servers and even mainframes. This combination of disparate systems working together is known as **hybrid cloud**, and it forms the technology backbone for more than 90% of all modern enterprises.[1]

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[1] "From hybrid cloud by accident to hybrid cloud by design," HPE, 2023

From hybrid by accident to hybrid by design

Most organizations arrived at hybrid cloud via a jumble of cloud and legacy on-premises solutions they had accumulated over decades. This **hybrid-by-accident** approach was messy and inefficient, forcing IT teams to spend valuable resources trying to coax incompatible computing systems to communicate with one another. As such, organizations have seen complexity and costs spiral upward.

But today's most innovative organizations are pursuing a **hybrid-by-design** strategy, combining the agility and flexibility of public cloud services with the manageability and security of on-premises IT. And they're doing it with intent, establishing a consistent cloud operating model across all platforms. Hybrid by design is the key that unlocks the true value of an organization's data and lets businesses take advantage of innovative technologies like generative AI.

And that's what the HPE GreenLake edge-to-cloud platform is all about. This combination of agility, visibility, and simplicity is what is driving a wide range of organizations to the HPE GreenLake hybrid cloud platform.

But until a few years ago, the notion of **hybrid cloud by design** didn't even exist.

The hybrid cloud platform journey begins

In 2018, HPE embarked on an innovative approach to enterprise computing: a unified, hybrid operating model that works the same way across any IT environment, whether in a corporate data center, at a cloud provider, or embedded within edge devices. The resulting HPE GreenLake platform was designed to take the cloud and legacy solutions that enterprises had cobbled together and transform them into a seamless technology environment that could be managed as a single entity.

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I believe every business is a technology company. It is a requirement to participate in a turbocharged digital economy, and the pace of change we see in the market today is truly remarkable. The future never stops."

– Antonio Neri, HPE Discover keynote address, June 22, 2021

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> **The past decade was all about the cloud-first mandate. The next decade will be focused on using data everywhere across your distributed enterprise—a cloud-everywhere mandate."**
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> – Antonio Neri, HPE Discover, June 22, 2021

Key to the HPE GreenLake strategy is the adoption of cloud-native technologies for all IT assets, not just for software and servers in the public cloud. This allows organizations to modernize their entire IT estate regardless of whether it resides in an on-premises data center, in a private cloud at a colocation partner's facility, or with public cloud and software-as-a-service providers.

For enterprises, the advantages of hybrid by design are immediately obvious. Previously siloed systems can be connected and governed by a single set of policies, strengthening security and compliance. Workloads and data can be distributed on the fly to the most optimal platforms. Computing resources can be scaled up or down as needed, combining greater flexibility with better cost controls. Built-in redundancy avoids single points of failure, helping ensure greater business resilience. And IT professionals can keep all these moving parts in sync via a unified, AI-enabled dashboard.

Because there is no one-size-fits-all solution for all organizations — or even for business units within a single organization — HPE GreenLake was designed to offer exceptional flexibility. Customers can go the traditional capital expenditure route and purchase HPE hardware platforms outright, engage HPE as a managed IT services firm, or pay for computing, storage, and networking services on a subscription or consumption basis, helping to fine-tune cost management.

HPE GreenLake also offers access to the company's deep technological expertise as well as its vast partner ecosystem. Support for open cloud standards, Zero Trust architecture, and edge-to-edge observability are key pillars of the platform. And this powerful vision has proved its worth in the marketplace: Today, more than 31,000 customers are using HPE GreenLake to manage more than 3.5 million connected devices, with a retention rate of 97%.[2]

Growing the platform, one acquisition at a time

HPE's transformation from a traditional maker of computing hardware to a nimble, cloud-centric, computing-as-a-service provider resulted in the acquisition of nearly a dozen companies, which together have helped augment the data analysis, cloud management, networking, security, and IT management capabilities of HPE GreenLake.

[2] As per the latest update from HPE Finance

Some of HPE's most critical acquisitions include:

- **BlueData:** Data is the key ingredient in every digital transformation strategy. HPE's acquisition of BlueData in November 2018 is helping customers extract insights from data stored anywhere within the hybrid cloud.

- **MapR:** The purchase of MapR business assets in August 2019 extended the BlueData analytics functions to cloud-native applications, allowing data scientists to create AI data pipelines more easily across diverse environments.

- **Silver Peak:** By adding Silver Peak in September 2020, HPE merged a software-defined wide area networking leader with its existing HPE Aruba Networking business. This delivered a distributed edge-to-cloud experience for all apps and data, no matter where they reside across the enterprise.

- **Zerto:** In September 2021, HPE acquired an industry leader in cloud data management and protection. Organizations using the Zerto service on HPE GreenLake enjoy continuous data protection across all environments, radically reducing data loss and downtime.

- **Athonet:** Edge-to-cloud connections play an increasingly vital role in corporate networking. Acquiring Athonet in February 2023 enabled HPE to deliver private 5G networking capabilities directly to enterprises.

- **Axis Security:** With the dramatic increase in the number and types of edge devices, the need to fortify network connections has become even more critical. Acquiring Axis Security in March 2023 allowed HPE to bolster the existing Secure Access Service Edge (SASE) solution from HPE Aruba Networking, applying strict security controls to anyone using any device.

- **OpsRamp:** Also in March 2023, HPE acquired OpsRamp, enabling it to become a fully functional IT operations management provider. Integrating OpsRamp into the HPE GreenLake platform simplifies the management of multicloud environments while its embedded AIOps features provide end-to-end visibility and control.

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AI will be the most disruptive technology of our lifetime, even bigger than mobile, Web 1.0, and the cloud. It will accelerate opportunities at scale never before seen, transforming the way we live and work in unimaginable ways."

– Antonio Neri, HPE Discover, June 21, 2023
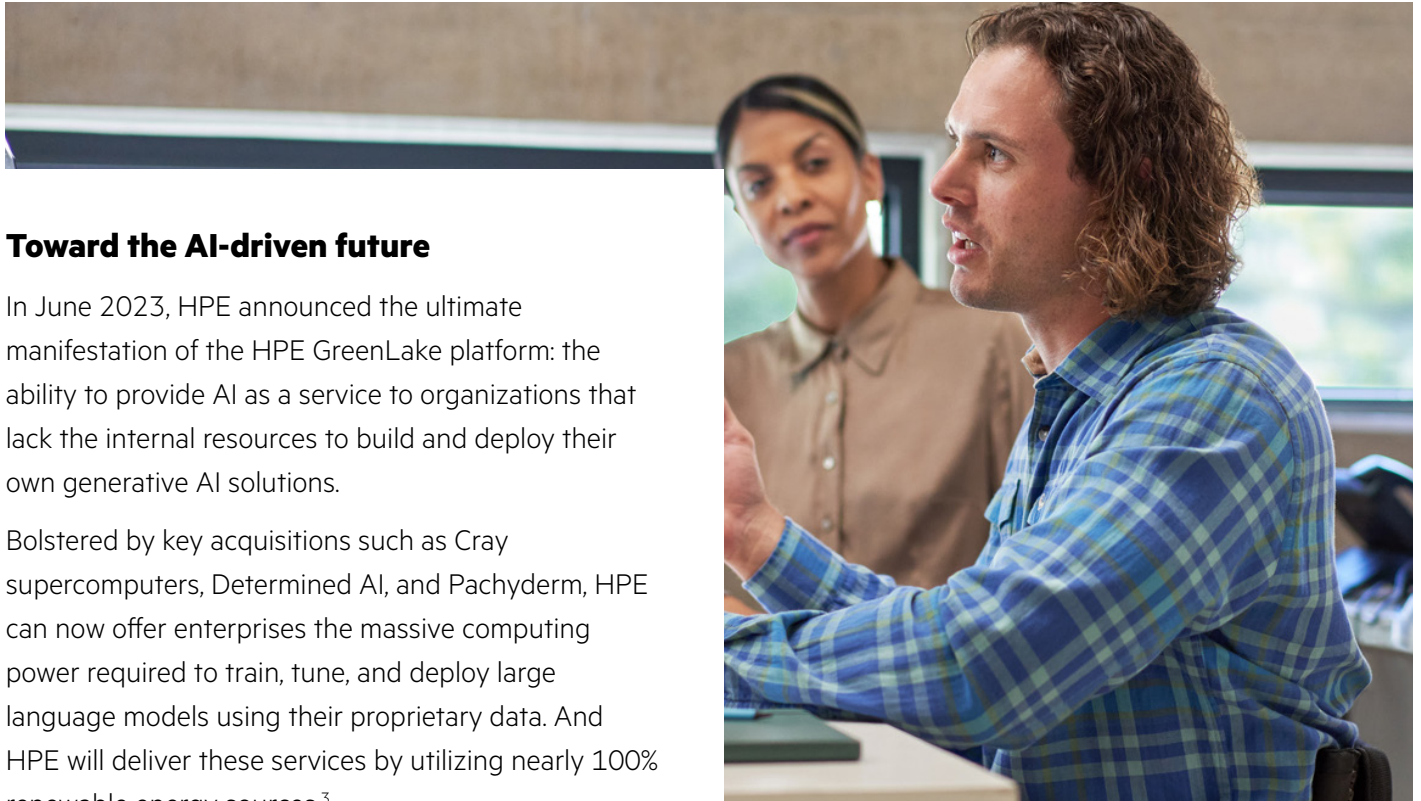
Toward the AI-driven future

In June 2023, HPE announced the ultimate manifestation of the HPE GreenLake platform: the ability to provide AI as a service to organizations that lack the internal resources to build and deploy their own generative AI solutions.

Bolstered by key acquisitions such as Cray supercomputers, Determined AI, and Pachyderm, HPE can now offer enterprises the massive computing power required to train, tune, and deploy large language models using their proprietary data. And HPE will deliver these services by utilizing nearly 100% renewable energy sources.[3]

The $14 billion megadeal unveiled in January 2024 between HPE and Juniper Networks underscores the increasing importance of AI-powered networking. The combination of the two companies, which is expected to close in late 2024 or early 2025, affords HPE a differentiated network-as-a-service (NaaS) offering by integrating HPE GreenLake with the AI capabilities of Juniper's Mist. Customers will be in a unique position to deliver comprehensive, easy-to-deploy NaaS across their enterprises.

CEO Antonio Neri has called this move "one of the boldest bets" in HPE's storied history. Given the continued success of the HPE GreenLake platform, it certainly seems like a winning move.

"With HPE GreenLake, HPE's 'bold bet' has paid off," says Matt Eastwood, senior vice president of worldwide research for IDC. "The years ahead are likely to be even more exciting for the company as it refines its hybrid cloud strategy even further."

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[3] "HPE Discover 2023 CEO Keynote by Antonio Neri," 2023

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