



# Unleash your potential with modern HPE private cloud solutions

Why enterprises are taking a fresh look at private cloud

Get started →



# Private cloud, in a hybrid reality

The world is at an accelerated phase of innovation, against a backdrop of new technology adoption, including generative AI (GenAI), continuous cost pressures, an ever-evolving threat landscape, and market dynamics that change constantly. In this dynamic landscape, businesses continue to advance, modernize, and become more agile. While organizations initially started to shift their IT infrastructure attention to public cloud for the perceived ease of deployment and agility, now businesses are fully immersed in a hybrid cloud reality, made up of edge, private cloud, colocation, and public cloud. IDC cites that 88% of cloud buyers have deployed or are deploying a hybrid cloud.<sup>1</sup>

In this new hybrid reality, organizations are turning their attention to unique security, performance and cost profile of each of their workloads. In this environment, a modern private cloud is not merely an alternative for workloads that aren't a fit for to public cloud. It's a defining characteristic of an IT strategy that can unleash your true potential.

One thing is clear. Private cloud has emerged as a strategic choice for organizations when factors like performance, latency, security, data gravity and costs are top of mind. Now with HPE, you don't have to give up what you love about public cloud when you deploy a private cloud.

This eBook looks at what makes a modern private cloud, modern, including uncovering the value of HPE private cloud solutions that are hybrid by design, deliver a self-service cloud experience, enables fine-grained governance and control, and is both workload-optimized and integrated for ease and speed.



<sup>1</sup> "IDC Cloud Pulse Survey Q3" IDC, 2024



# Why private/why now?

The pivot to hybrid cloud led by a modern private cloud has largely been the response to changing IT demands and emerging technologies, including:

- **Unique workload demands:** Specific workloads such as mission-critical, data-intensive, analytic and AI, regulated, low-latency, and readily available workloads demand unique infrastructure options that meet very specific requirements, and make private cloud a compelling option as it can deliver the performance, agility, scale, and control you need.
- **GenAI:** Private clouds also provide greater control over data, security, and access than public cloud—especially important for workloads like GenAI.
- **Data gravity:** Not everything can or should move to public cloud. There's data gravity, where data is distributed and hard to move, making it more practical to bring the workload to the data; and data governance and privacy, especially for GenAI, where the consequences of IP leakage are potentially severe.
- **Cost control:** There's an increasing number of public cloud customers getting cost surprises from cloud bills. For some, cloud cost rose 30% last year.<sup>2</sup> Private cloud solutions deliver cost transparency and predictability across your hybrid environment, along with the ability to optimize TCO.
- **Security conscious:** Security threats remain ever present, demanding secure servers, the ability to manage user access, or in some cases require a fully disconnected site. Private clouds stand out as they can meet all these needs, either independently, or as part of a hybrid estate.
- **Virtualization:** Many enterprises are revisiting their strategy for virtualized workloads and looking for options to replatform and refactor. Private cloud provides an opportunity to modernize virtualized applications to other runtimes, such as containers.

According to data from IDC, for businesses moving apps to the cloud, factors such as increased operational efficiency, sustainability, new GenAI requirements, enhanced IT staff productivity, and expected cost reduction remain top considerations when making the move to cloud overall. Interestingly, when you compare this to companies that are moving from public cloud to dedicated private cloud, these factors pivot a bit to improved and enhanced security, sustainability (particularly in specific geos and industries), **improved performance and availability**—and of course **better control** over the environment.<sup>3</sup>

<sup>2</sup> [“AI adoption drives ‘unmanageable’ spike in cloud costs,”](#) CIO Dive, October 7, 2024

<sup>3</sup> “IDC Cloud Pulse Survey,” IDC, September 2024



# The evolution to a modern private cloud

## Private cloud has come a long way since its start:

Private clouds have been around for a long time, but they have not always been able to meet the demands of today's modern enterprises. For on-premises IT, spanning from the edge to the data center, many enterprises have developed their own way of creating a cloud and building clouds from scratch.

This included private clouds that were:

- **Inflexible appliance, not integrated with your existing tools/processes:** Creating inefficiencies, increased manual effort, and limited visibility across the IT landscape
- **Siloed:** Leading to fragmented workflows, reduced visibility, and potential security risks
- **Complex and self-assembled:** Making it challenging for IT teams to maintain and update their infrastructure, hindering agility and increasing operational costs
- **VM-based:** Restricted flexibility and hindered adoption of newer technologies and deployment models
- **Lacked cost visibility/showback capabilities and pay-as-you-go options:** Limited financial transparency and made it challenging to optimize IT spending



## The new choice: A modern private cloud

Unlike the private clouds of the past, a modern private cloud provides a unified platform for managing your entire hybrid cloud environment. It streamlines tools and processes, enabling self-service provisioning and automation for any workload, on any infrastructure, in any cloud. This gives you complete control over performance, costs, and compliance, all within a consistent and intuitive user experience.

With a modern private cloud solution, you:

- **Access services easily, through self-service:** Empower developers and data scientists with on-demand access to the resources and tools they need, boosting productivity
- **Get hybrid by design:** Means you can use a single pane of glass to manage across your hybrid estate, including private and public clouds and your brownfield IT
- **Achieve fast time to value with new initiatives, such as AI:** Preintegrated and workload-optimized private cloud help accelerate innovation and drive business outcomes with a cloud-like experience for all your workloads
- **Provision containers, bare metal, and VMs seamlessly:** Quickly and easily provision any workload to any surface area on any cloud
- **Move and scale with control to match the needs of the business:** Meet business demand and easily stay on top of resource usage, spending, security, and compliance, with transparency, predictability, workload portability, and choice of financial model



Hybrid by design

Self-service cloud experience

Governance and control

Integrated and optimized

# See what a modern private cloud can do for you

It's time for the next generation of private cloud—one that's truly modern, offering hybrid by design, includes a self-service cloud experience, gives you fine-grained governance and control, and delivers ease and speed with integrated and workload-optimized solutions. See what a modern private cloud can do for you, with HPE.

## 1. Simplify with a private cloud that's hybrid by design

HPE private cloud solutions are hybrid by design as they are built on HPE GreenLake cloud, delivering a single cloud operating model across your enterprise, so you can make on-prem as easy and agile as public cloud. You'll be able to quickly and easily provision, manage, operate, and optimize your private cloud, and through a single pane of glass, be able to manage your private and public clouds and your brownfield IT. Some hybrid by design benefits with HPE include:

- Automate and orchestrate your environment, so you can **provision any workload to any surface area to any cloud**—private or public—self-service and on-demand, with full workload portability.
- **Decrease tool and process fragmentation** and maintain consistent governance and control across the entire estate—so your IT can adapt on-demand.
- Get a single hybrid cloud platform so your **developers and stakeholders** can **access a consistent set of tools familiar to them**.
- **Stay ahead of business requirements** without being gated by resource and skill shortages.
- Gain visibility and control to **manage cost, performance, compliance, and more**, across the entire IT estate.
- **Achieve portability** with the ability to run workloads on HPE or third-party runtime based on cost, performance, and risk.



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## 2. Get the self-service cloud experience in your private environment

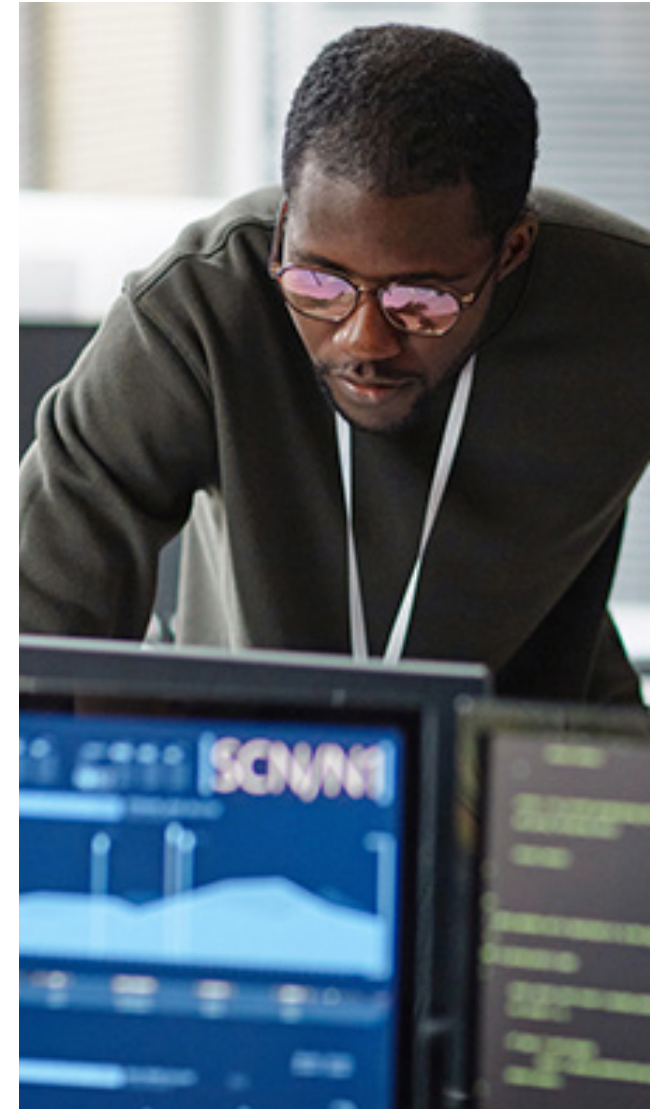
Today's businesses expect a full self-service cloud experience where developers, line of business, and IT can all access whatever they need, whenever they need it, wherever they need it. No more waiting, no more limits to the tools used to innovate, no more lock-in, no more friction or frustration.

Delivered through HPE GreenLake, a robust service catalog, ample tools for orchestration, and powerful infrastructure as code combined with the right set of APIs and CI/CD pipelines **make your private environment as easy and agile as cloud was meant to be**, giving your developers, data scientists, and operators on-demand access to the resources they need and the cloud-native tooling they're familiar with. This includes benefiting from third-party integrations to quickly leverage prevalidated capabilities—all easily accessible through a marketplace.

With HPE, both IT and the business win, as you can:

- **Provision faster**—Quickly deploy and manage resources across your private clouds and public clouds, with the power of self-service infrastructure-as-code helping ensure a seamless and consistent user experience.
- **Boost productivity**—The HPE GreenLake experience makes your private cloud as agile as public cloud, giving your developers, data scientists, and operators on-demand access to the resources they need and the cloud-native tooling they're familiar with, such as Chef, Puppet, Terraform, and command-line tools.
- **Enjoy the freedom of choice**—Access and utilize infrastructure with ease, with a pay-as-you-go\* model and CapEx choices, matched with the needs of your business, with no lock-in. With HPE, you always have a choice of runtime environments, including VMs (using HPE VME hypervisor or VMware® ESXi™), containers, and bare metal, plus

\* May be subject to minimums or reserve capacity may apply



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### 3. Select a private cloud that enables fine-grained governance and control that extends across your hybrid environment

With HPE, you'll have confidence knowing that your valuable data and assets remain within your control. From the edge to your data center, with HPE private cloud solutions you can get:

- **End-to-end visibility**—Gain a unified view of cost across your hybrid estate, including reporting on enterprise, sustainability, and governance metrics.
- **Financial control**—FinOps tools help ensure low and predictable TCO as you benefit from showback/chargeback view of costs, with the ability to easily spot anomalies in usage or spending. Plus, you have the ability to set parameters on spending or usage at any level—by device, location, department.
- **Operational control**—Enable precise controls and automated policies for performance, sovereignty, costs, and compliance.
- **Compliance**—Address unique regulatory environment, sovereign and disconnected needs.
- **Security and access control**—Capabilities like role-based access control (RBAC) help ensure the ability to manage user access across hybrid cloud. Plus, options to access secure infrastructure, from edge to cloud, with an industry-exclusive security capability that protects millions of lines of firmware code, from malware and ransomware, with a digital fingerprint



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## 4. Advance with preintegrated and workload-optimized private cloud solutions

Advancing in today's AI-driven and hybrid world, it's complicated and time consuming to get various models, datasets, tools, and other resources to work together to support your business as you drive efficiencies everywhere.

Enterprises need fast, flexible paths sized correctly. That's why HPE offers a selection of full-stack, preintegrated proven and validated private cloud solutions that include a curated set of tools, the right set of APIs, and integrations spanning networking, storage, and compute—all accessible through a unified self-service experience enabled by HPE GreenLake.

With these turnkey solutions, we can help you accelerate and drive time to value on Day 0/1 startup. Not only have we done the sizing and integrations for you, but you'll also have options for colo providers who offer predeployed offerings, so you can be up and running almost instantly.

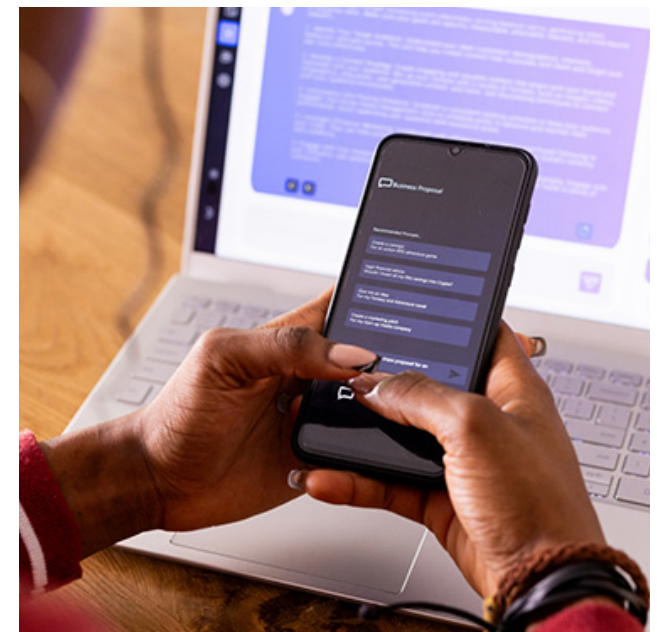
HPE private cloud solutions are workload optimized so you'll be able to identify opportunities to optimize TCO and performance, and advance with sustainability in mind—all while keeping your data and infrastructure secure. This includes workload-optimized infrastructure choices for use cases such as edge clouds, ROBO, GenAI, mission-critical apps, SAP®, analytics, and many more. And if you're operating in regulated environments, we have a full range of options to maintain data privacy and sovereignty.

With HPE, from rethinking your virtualization approach to advancing with AI and analytics, to meeting your unique regulatory requirements, and helping ensure the performance required of your most demand apps and workloads, you'll find solutions sized right for your business.

**Businesses are experiencing real benefits with private cloud**

**50%** lower costs than public cloud<sup>4</sup>

Up to **65%** higher workload performance<sup>5</sup>



<sup>4,5</sup> "The New 2023 Cloud Reality: A Rebalancing Between Private and Public," Constellation Research, Inc. 2023



## Discover the benefits of HPE private cloud

HPE delivers a private cloud experience as it was meant to be—seamlessly orchestrated for self-service experience for developers, with access to the tools needed to drive innovation, coupled with the ease and agility of cloud, like unlike before. As a leader in modern private cloud solutions, HPE can help you optimize your hybrid cloud environment to gain advantages, as you remain confidently in control.

HPE private cloud solutions enable you to:

- Simplify management with a single operating model for your enterprise
- Get a self-service cloud experience in your private environment
- Confidently govern and control your data and IP
- Enjoy the ease and speed of preintegrated and workload-optimized solutions

### Explore more

Self-managed multicloud virtualization environment: [HPE GreenLake for Private Cloud Business Edition](#)

Fully managed IaaS for mission-critical workloads: [HPE GreenLake for Private Cloud Enterprise](#)

Turnkey AI private cloud codeveloped with NVIDIA®: [HPE Private Cloud AI](#)



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About HPE



## About HPE

HPE is the edge-to-cloud company that helps organizations accelerate outcomes by unlocking value from all of their data, everywhere. Built on decades of reimagining the future and innovating to advance the way people live and work, HPE delivers unique, open, and intelligent technology solutions, with a consistent experience across all clouds and edges, to help customers develop new business models, engage in new ways, and increase operational performance.

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