Your Ultimate Guide to US Signal IaaS Providers:

OpenCloud, VMWare, Nutanix & Azure

Infrastructure management has evolved significantly since the early days of time-sharing solutions in the 1960s. Not too long ago, businesses requiring substantial computational power had to invest heavily in on-premise infrastructure, including data centers, storage devices and technical staff to maintain the entire system.

The introduction of hardware virtualization changed everything. Now, you can choose from a variety of private and public cloud infrastructure options at a fraction of the initial cost. Infrastructure-as-a-Service (IaaS) providers allow you to scale computing resources on demand without the hassle of managing physical hardware. They also handle essential areas like cloud security, data backup and disaster recovery (DR), freeing your IT team to focus on more strategic work.

The IaaS market saw a major shift in late 2023 when Broadcom acquired VMware, a major player in the space. This acquisition led to a price increase in 2024, affecting businesses—especially managed service providers (MSPs)—that relied on VMware for cloud operations. In response, new options like OpenCloud emerged, offering advanced IaaS solutions with stable, predictable pricing. Public cloud providers have also grown precipitously because of their reach, scale, service integration and flexible consumption options.

This guide examines four mainstream IaaS providers that US Signal supports—OpenCloud, VMware, Nutanix and Azure—outlining their strengths and weaknesses to help you choose the right fit for your organization.

Key IaaS benefits to consider:

- Scalability: IaaS allows you to scale resources up or down based on demand, so you only pay for what you use.

- Cost Efficiency: By eliminating the need for physical hardware, IaaS reduces upfront capital expenditures and ongoing maintenance costs.

- Disaster Recovery: Many IaaS providers offer built-in disaster recovery solutions, ensuring business continuity in the event of a failure.

- Cloud Security: Leading IaaS providers invest heavily in cloud security, offering robust protection for your data and applications.

Private vs Public Cloud Infrastructure

Before looking at specific IaaS providers, it's important to understand the difference between private and public cloud infrastructure, as this decision will shape your overall IaaS experience.

Private IaaS providers, such as OpenCloud, VMware and Nutanix, offer dedicated infrastructure for a single enterprise. This infrastructure can be hosted on-premises or by a third-party provider. Since the IaaS provider owns the infrastructure, you can customize it to meet specific compliance and security needs. However, private cloud infrastructure often has limited global reach, as data centers are typically located in specific regions.

On the other hand, public IaaS providers like Microsoft Azure offer shared cloud infrastructure in a multi-tenant environment. This model is more cost-effective, allowing you to pay only for the resources you use (often on a pay-as-you-go model). Public cloud providers also have a global presence with data centers worldwide, supporting larger and more complex operations. That said, public solutions may offer less customization since the infrastructure is shared among multiple users.

IaaS Comparison Guide

Now that we've looked at the key differences between public and private cloud infrastructure providers, let's explore the specific features and competitive advantages of the players in this space.

For many businesses, a hybrid infrastructure—combining private and public cloud IaaS—delivers the best results. Private cloud solutions provide the customization and security you need, while public cloud solutions offer the scalability and flexibility to adjust resources as your needs change.

OpenCloud

OpenCloud was introduced in September 2024 by US Signal to fill the gap created by VMware's significant price hike. Broadcom's focus on global enterprises and subsequent move from perpetual licensing to a subscription-based model left many medium and smaller businesses searching for alternatives.

Built on open-source software (Apache CloudStack and KVM), OpenCloud shields your organization from future price increases. The open-source foundation also allows the platform to scale, driven by feedback and contributions from a global community of developers.

Unlike other private cloud solutions where customers have to commit to a specific set of resources in advance, OpenCloud is a private IaaS with the flexibility of a public one—users can pick and choose resources on the go and pay for their usage on a month-to-month basis. Additionally, customers may choose to commit to a longer contract in exchange for a discount. As a private IaaS, OpenCloud also provides full visibility into the location of each data center, strengthening your security posture.

OpenCloud is also SOC2 type 2, PCI-DSS, and HIPAA Compliant, offering native cloud security. Additional security features, such as Managed SOC Services, are available as optional add-ons.

Key differentiators: OpenCloud offers the best of both worlds: the security of a private network with the scalability of a public one. Its flexible resource consumption model means you only pay for what you use. IT teams have full control over remote provisioning of resources and access to a comprehensive API for DevOps and software development. OpenCloud is available on both monthly and longer-term subscription plans, with discounts for annual or multi-year contracts. You can also scale consumption on the go to meet seasonal demand.

Limitations: As a newer player, OpenCloud doesn't yet integrate with mainstream data protection solutions like Veeam, Rubrik and Cohesity. However, many of these vendors are developing integrations with open-source platforms like KVM, which OpenCloud uses. OpenCloud does offer native snapshot data backup and disaster recovery capabilities. US Signal will also launch a tight RPO/RTO DRaaS offering by January 2025, which will solve many challenges around business continuity on the OpenCloud platform.

Best suited for: Security-conscious, small and medium-sized enterprises looking to scale.

Key Benefits

Improved ROI:
Scalable cloud computing solution with remote provisioning of resources allows you to save time and money.

Ultimate flexibility:
Full control over resource usage means you can scale up or down as needed, providing reliable service at all times.

Cost-efficiency:
Automated operations and optimized resource consumption reduce costs and maximize value.

Enhanced productivity:
Streamlined workflows and automated routine tasks improve accuracy and allow stakeholders to focus on other strategic goals.

us signal opencloud

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"As a hosting partner with US Signal, it's refreshing to see such energy put into finding a suitable replacement for VMware, given such a market shake-up. Clearly US Signal is working to return to pre-Broadcom pricing for their services and this step goes a long way to recovering."

- Bill McCord, VP of Cloud Services at EstesGroup

"The CloudStack beta experience was invigorating. Having a product available that supports our needs for hosting and provides similar functionality to what we have now is ensuring."

- Caleb Monteil, Senior Systems Engineer

"Interacting with the API was straightforward, and working with the templates was easy to figure out and nice to use. Some of the smaller features like cron expressions, scheduled jobs, and reporting, were nice to see."

- Marshall Douglas, Senior Systems Engineer

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VMware

Built in the early 2000s, VMware is by far one of the most mature virtualization platforms available on the market today. Initially designed for on-premises workloads typical of private IaaS, VMware has grown into a comprehensive platform supporting hybrid cloud environments. One of its standout features is VMware Cloud Director, which allows for public cloud-like multi-tenancy. This makes it possible for you to manage isolated workloads within a shared infrastructure without the need for capital investments. This provides you with the flexibility and cost-efficiency of public clouds while maintaining the control and security of private ones.

VMware's extensive portfolio includes powerful tools for automation, orchestration, disaster recovery and cloud management. It's ideal for organizations requiring high levels of control, customization and compliance to support both legacy applications and modern workloads. VMware also integrates seamlessly with other private and public cloud solutions, ensuring interoperability.

Key differentiators: VMware's market leadership means many add-on services, such as data backup and disaster recovery, are designed to work exclusively with its platform. Its ability to support private cloud environments alongside hybrid models makes it ideal for organizations that require strict governance, compliance or data residency controls. In addition, VMWare offers robust software packages with rich functionality and customization options—you can tailor configurations to meet specific operational needs, whether through advanced networking, storage management or workload balancing capabilities.

Limitations: One of the major limitations of VMWare is affordability. Not only does the solution cost more, but new customers have to commit to long-term agreements. The wide variety of software packages can introduce a steep learning curve to new users. VMware is also not ideal for microservices and containerization due to limited native support and higher costs compared to dedicated container platforms.

Best suited for: Traditional IT environments that require a high level of customization and control.

Key Benefits

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Full control over resource usage means you can scale up or down as needed, providing reliable service at all times.

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Norco Industries Adopts US Signal's Hosted Private Cloud on VMware

Case Study:

Norco Industries was struggling with an outdated IT infrastructure which prevented it from adopting new technologies and modernizing operations. Many of its warranties were expiring and most of its IT resources were tied to managing and maintaining an old infrastructure that didn't work with most modern applications.

The company came to US Signal to accelerate its digital transformation (DX) and transform its IT department from a cost center to a business asset. Using US Signal's Hosted Private Cloud (based on VMware technologies), Norco moved its on-premises infrastructure to a single-tenant private cloud that came with its own managed disaster recovery (DR) solution and additional security services. US Signal's data center's proximity to the manufacturing floor, where most DX would occur, was a key factor in the decision.

"It was important for key people in our organization to see that US Signal is truly a good data center operator and knows what it's doing. And because we would be moving from on-premises infrastructure to third-party provider, the site visit also helped our people understand where their data would be," says Norco Industries' CIO.

After its transition to the Hosted Private Cloud, Norco Industries had:
- A new ability to run critical IT systems three shifts daily with zero downtime
- Increased productivity
- Better availability of internal IT resources
- A strategic and proactive IT team
- Better support for digital transformation efforts

Nutanix

Nutanix offers a hyperconverged infrastructure (HCI) that bundles storage, compute memory and networking resources into a single, unified ecosystem. Nutanix's intuitive interface simplifies deployment and management, reducing complexity for your IT team.

While VMware focuses on rich functionality and a broad portfolio, Nutanix emphasizes simplicity and ease of use. This makes it an attractive option for hybrid environments where some infrastructure is on-premises and other components are managed by third-party providers. Nutanix allows you to manage and update a unified system, significantly reducing the administrative overhead often associated with traditional IT setups.

Key differentiators: Nutanix integrates all aspects of infrastructure management into a single interface. For example, the platform comes with its own disaster-recovery-as-a-service (DRaaS) solution and other backup and security tools that work seamlessly within the ecosystem. This single-pane-of-glass approach enables administrators to monitor, manage and optimize resources efficiently across both cloud and on-premises environments. This approach not only improves operational efficiency but also offers the adaptability to shift workloads as business needs evolve.

Limitations: HCI can get really expensive at scale. Because Nutanix's storage devices are integrated into physical computing nodes, increasing storage or memory requires purchasing an entirely new compute node. This can drive up costs as you may need to acquire additional technology, like processors or memory, even when only one variable needs adjustment. Nutanix, notably, does not support native multi-tenancy, which means compute clusters must be dedicated to each customer.

Best suited for: Small and medium-sized enterprises that seek reduced complexity and robust performance.

Milwaukee County Moves to ReliaCloud on Nutanix

Case Study:

Milwaukee County sought to modernize its IT infrastructure by replacing expensive, outdated on-premises equipment with a flexible, secure solution that supports a hybrid setup of on-premises, private cloud and public cloud.

After carefully considering several solutions, Milwaukee County chose US Signal's ReliaCloud on Nutanix as its IaaS solution due to its enterprise-grade, high-performing infrastructure and robust network connectivity.

"The Nutanix solution was not only more cost-effective but allowed us to decrease the time it takes to provision IT infrastructure, speeding our delivery on IT projects that help to increase efficiencies and drive innovation," says Chris Sacho, IT Manager Milwaukee County.

The transition helped the county:

- Ensure 100% availability of their data and applications
- Eliminate single points of failure
- Accelerate a long-term initiative to centralize IT resources and spend
- Enable robust change management
- Gain clarity around their current situation for backup, data and servers

Microsoft Azure

Microsoft Azure is the only public cloud provider in this guide and is the largest public IaaS provider by revenue. Its integration with the Microsoft ecosystem makes it a familiar and intuitive platform for enterprises already relying on Microsoft products.

Azure's global network of data centers provides your organization with a global reach, ensuring low latency and high availability. This is ideal for businesses that need fast and secure access to resources across different regions. Azure allows you to deliver services and applications quickly, regardless of user location.

Key differentiators: Azure's global infrastructure and advanced microservices make it a powerful option. Its extensive network of data centers around the world ensures low latency and high availability, making it easier to meet compliance requirements across different regions. You can choose between traditional virtual machines (VMs) or platform-as-a-service (PaaS) offerings (or both), which improve application resilience against server outages. This dual approach gives you the control to adapt your cloud strategy to fit specific needs, balancing control with convenience and robustness.

Limitations: Azure's complexity can be a challenge for businesses without cloud expertise. If you're running traditional VMs, such as ERP or manufacturing execution systems that rely on local resources, a private cloud may be a better fit. Using Azure in these scenarios can introduce latency and reduce performance due to the distance between data centers and VMs. Additionally, Azure performs best and is most cost-effective when utilizing Platform-as-a-service functionality, which means your organization needs PaaS skills to fully realize the benefits.

Best suited for: Global enterprises with a need for high-speed, secure and scalable cloud infrastructure. Azure's PaaS offerings are ideal for companies looking to streamline development and build resilient applications.

Most global organizations, however, would need a mix of public and private cloud services to host their central operations and support subsidiary activities worldwide. A private IaaS can provide a secure, privately owned infrastructure for your company's headquarters, which is concentrated in a single region and might be handling high volumes of sensitive data. A public IaaS, such as Azure, is ideal to then support your global growth and distributed business activities via regional data centers.

Key Benefits

Scalability:
Easily scale your resources up or down based on demand, ensuring optimal performance for workloads of all sizes.

Global reach:
Access a vast network of data centers worldwide, enabling low-latency performance and high availability for global operations.

Cost efficiency:
Pay only for the resources you use, allowing for flexible budgeting and reduced operational costs.

Microservices:
Use select managed services for databases, containers and microservices to reduce operational overhead and improve efficiency.

Strong support ecosystem:
Extensive documentation, community support and professional services to assist in implementation and troubleshooting.

Summary Comparison Chart

	OpenCloud	VMware	Nutanix	Azure
Infrastructure Type	Private	Private	Private	Public
Strengths	• Security of a private network with the scalability of a public one • Available on a monthly basis • Flexible remote provisioning of resources • Comprehensive API	• Robust infrastructure with rich functionality and software packages • Integrates with most third-party data protection providers on the market	• A highly-integrated ecosystem that's easy to deploy • Intuitive and easy-to-use interface	• A global network of data centers can support distributed operations worldwide • Ability to build an infrastructure based on microservices • Platform-as-a-service features
Weaknesses	• Limited integrations with off-the-shelf data protection services	• Expensive • Complex ecosystem • Not suitable for microservices and containerization	• Expensive at scale. • Scaling can be expensive and slow	• Not suitable for IT environments that rely on traditional virtual machines • Difficult to configure and manage without proper skillset
Use Cases	Security-conscious, small and medium-sized enterprises looking to scale	Ideal for traditional IT settings that require great control over their infrastructure	Small and medium-sized enterprises	Global enterprises with a microservices-based infrastructure

Choosing the Ideal IaaS for You

The wide diversity in capabilities across all IaaS providers gives you the flexibility to truly customize your infrastructure to match your current needs and support future plans. For most global organizations, a hybrid approach combining public and private cloud services is the optimal solution.

A private IaaS can provide secure, privately-owned infrastructure for your headquarters, especially if it handles high volumes of sensitive data. Meanwhile, a public IaaS like Azure can support your global growth and distributed business activities through regional data centers. This combination balances security and scalability so you can meet the diverse needs of your organization.

A hybrid approach also helps you avoid vendor lock-in, if you select your provider wisely. Some offer more flexibility in moving workloads between private and public clouds or even among multiple cloud providers so you can avoid dependency on a single platform. Putting your eggs in multiple baskets reduces your risk but also leverages the strengths of various providers, maximizing both performance and cost efficiency.

Which private IaaS provider(s) you go for will depend on many factors, including:

- The size of your operations, i.e., the amount of resources you'd need;

- The types of workloads you anticipate to run;

- The proximity of its data centers to your location;

- Its data protection capabilities;

- Industry-specific compliance considerations;

- Flexibility in resource management;

- API capabilities to integrate with public cloud and other solutions.

As you're thinking about these considerations, assess them against how well an IaaS platform aligns with your broader digital transformation goals. Platforms with robust API ecosystems and strong partnerships can facilitate smoother integration with emerging technologies like AI, machine learning, or blockchain. You'll not only improve your current operations, but also ensure your infrastructure can evolve alongside technological advancements, keeping your business competitive in the years ahead.

If you need help choosing the best IaaS solution for your business, US Signal can help. We've worked with many IaaS providers over the years, so we have an intimate understanding of the IaaS landscape. Our team is available to offer free consultation and answer any questions, so do not hesitate to contact us today.