



Private cloud infrastructure on bare metal offers flexibility

Achieve cloud-like agility while maintaining control and compliance with VCF on Equinix Metal®.

White Paper



The increased complexity and distributed nature of workload storage, compute, networking and management infrastructure often exceed the capabilities of traditional on-premises environments, yet public cloud infrastructure may not be the right fit either. IT leaders must make pursuing robust, scalable and agile IT infrastructure solutions, such as private cloud, a top priority.

To meet this demand, [VMware](#)® by Broadcom and Equinix partnered to bring VMware Cloud Foundation (VCF) on [Equinix Metal](#) to market. It addresses the complexities of workload modernization and cloud agility with the performance, security and flexibility of VCF in the cloud-like environment of Equinix Metal infrastructure.

Together, we have developed a comprehensive solution that seamlessly blends VCF with the versatility and global reach of Equinix Metal in an environment where organizations can manage, maintain and optimize for cost and performance. We designed VCF on Equinix Metal for businesses that demand the agility of the cloud but still need to retain the stringent requirements of on-premises solutions, such as low latency, compliance and flexibility.

The outcome is a platform that not only addresses the current demands of digital businesses but also anticipates future technological shifts. This helps ensure that organizations are equipped to adapt to market dynamics and advance their digital transformation journeys aligned to their goals. It's the nexus point for businesses to transition on-premises workloads that are not suited for the public cloud or move certain workloads out of the cloud into an agile cloud-like environment.

Partnership: VMware by Broadcom and Equinix Metal

Broadcom marks a strategic expansion of its multicloud strategy with its acquisition of VMware, emphasizing the modernization of private and hybrid cloud ecosystems. Our partnership goes beyond basic technology integration, embodying a unified vision that aims to reshape the cloud and virtualization landscape.

This partnership has positioned Equinix as a VMware by Broadcom 100 Pinnacle Partner, underscoring the significant role Equinix plays in this ecosystem. As a VMware Cloud Service Provider (VCSP) Pinnacle tier partner in the Broadcom Advantage Partner Program, Equinix helps mutual customers innovate by adopting VCF as their private cloud infrastructure.



Six ways VCF on Equinix Metal adds value

VCF on Equinix Metal demonstrates innovative engineering and offers benefits and features tailored to meet today's business requirements. This solution stands out in the digital infrastructure landscape for several reasons:

- 1. Agility and scalability:** VCF on Equinix Metal provides an agile and scalable infrastructure, allowing businesses to adapt to changing needs rapidly. On-demand provisioning and flexible consumption models are essential for businesses looking to grow without infrastructure limitations.
- 2. Optimized performance:** The strategic global placement of our Equinix International Business Exchange™ (IBX) colocation [data centers](#) ensures sub-20 ms latency, which is essential for real-time data processing and interaction. This is particularly crucial for ensuring the high performance of latency-sensitive applications.
- 3. Enhanced security and compliance:** With a focus on data security and compliance, VCF on Equinix Metal meets the stringent requirements of specific sectors. Single-tenant instances and data residency capabilities ensure compliance with data security and regulatory standards to maintain data sovereignty.
- 4. Control over hardware:** We help ensure the infrastructure is secure from the ground up and address physical and virtual security concerns by allowing significant customization and offering VMware-certified hardware.
 - Meet specific regulatory requirements with certified firmware and BIOS settings, making it easier to comply with industry standards and audits.
 - Expand infrastructure as needed with VMware's virtualization platform and Equinix's scalable hardware solutions, ensuring organizations can meet growing demands without compromising performance or compliance.
- 5. Direct hyperscaler connectivity:** Direct connections to major cloud providers via Equinix Fabric®, our virtual networking solution, help organizations streamline hybrid and multicloud architectures, optimizing cloud resource utilization and performance. This connectivity is a game changer for organizations leveraging a multicloud strategy.
- 6. Cloud adjacent storage:** Equinix Metal delivers the scale and control required to tailor infrastructure to meet specific operational needs. This includes complete control over deployed hardware and the flexibility to integrate third-party storage solutions from vendors like Dell Technologies, NetApp and Pure Storage, ensuring the setup is precisely aligned with an organization's requirements.

VCF on Equinix Metal is not just a product; it's a strategic solution. With its blend of performance, security and flexibility, it can be a catalyst for innovation and growth in various sectors.



Solving for industry-specific requirements and use cases

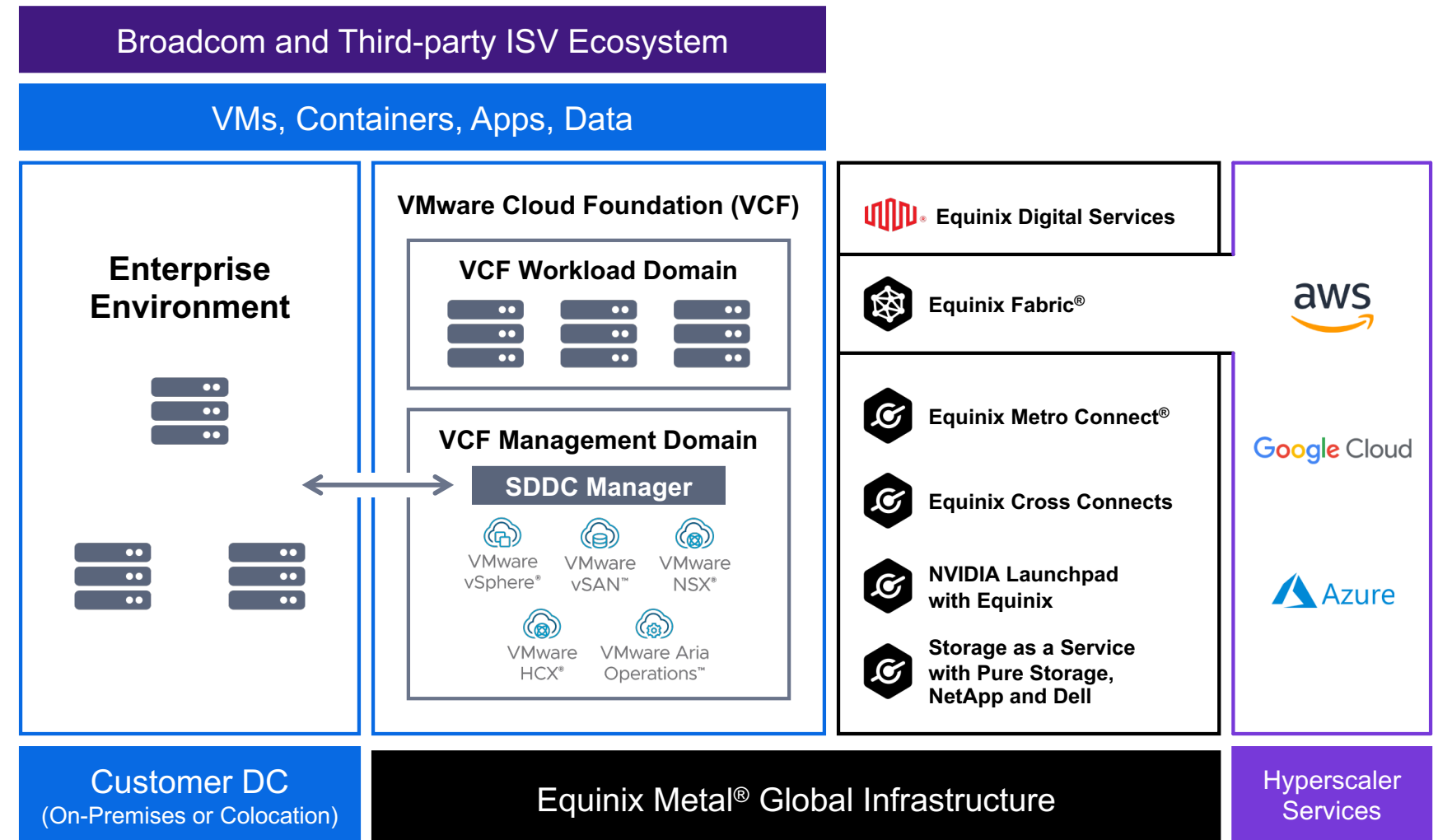
VCF on Equinix Metal is an agile, secure and compliant infrastructure solution designed to meet diverse requirements and use cases. This versatile platform addresses the critical need for low latency, data locality, scalability, modernization, and support for high-demand applications and services across multiple sectors. Industry-specific examples include:

Low-latency applications

Sub-20 ms latency on VCF on Equinix Metal provides the immediate response times required for finance, gaming and retail applications to quickly adapt to hardware failures or performance demands in VMware environments.

- Virtual machine migrations with vMotion are faster and more reliable; both are essential for maintenance, load balancing and disaster recovery without downtime, ensuring continuous operational efficiency.
- The low-latency environment accelerates vSAN data synchronization across clusters, which is crucial for high I/O performance, effective data protection strategies and real-time access to data for distributed applications.

VCF on Equinix Metal



Data locality and compliance

The platform is a robust solution for industries, such as healthcare and finance, with stringent data sovereignty and privacy regulations; its residency capabilities align with the strictest of regulatory standards, securing sensitive information to maintain confidentiality and compliance.

Scalability and modernization

Retail and telecommunications industries rely on VCF on Equinix Metal's scalability to manage fluctuating demands and large data volumes. The platform facilitates data center expansion and modernizes applications without disrupting existing operations during events such as retail expansion and telecom infrastructure upgrades.

Legacy and license application support

VCF on Equinix Metal is valuable for manufacturing and other sectors with complex licensing arrangements. It simplifies the transition of legacy systems to cloud-like environments and navigates software licensing complexities, supporting certified applications such as Microsoft workloads, Oracle, SAP NetWeaver and others.

Real-time data processing

The manufacturing and automotive sectors are increasingly reliant on IoT and real-time analytics. Businesses can leverage VCF on Equinix Metal to process data on the fly. This is crucial for making time-sensitive decisions in manufacturing and when developing connected autonomous vehicles.

High-demand application support

The media, entertainment and gaming industries require high bandwidth and uninterrupted service delivery. VCF on Equinix Metal meets these demands with its enterprise-grade infrastructure, enabling seamless content streaming and enhancing gaming experiences through rapid scaling and global reach.

Managed services

VMware partners can offer managed services like Disaster Recovery as a Service (DRaaS) and specialized solutions for effective critical workload management and improved customer experiences while relying on Equinix for robust hardware support.

These use cases demonstrate the flexibility and strategic value of VCF on Equinix Metal for businesses looking to bridge the gap between traditional on-premises limitations and public cloud adaptability.

Why choose VCF on Equinix Metal?

Equinix customers can benefit from VMware's standard OEM business model in the following ways:

Limited incremental engineering required

Use a standard software and hardware compatibility matrix (i.e., HCL).

Flexibility in software licensing arrangement

Leverage the customer's existing software subscription SKUs.

Agility to respond to customer-driven demand

Deploy VCF software on any Equinix Metal hardware or at any IBX data center location.

Scale the business on demand

Rely on Equinix Metal-led sales and partner enablement.



Balance the agility of cloud with the control of an on-premises environment with private cloud infrastructure to meet these requirements:

1. Scale and efficiency

- Global reach: With a presence in 31 global metros, Equinix Metal enables deployment close to users, reducing latency and improving service delivery, according to Forrester.¹
- Flexible consumption and hyperscaler connectivity: Direct connections to major cloud providers optimize resource utilization—confirmed by a validation of cost savings in storage and egress charges from [TechTarget's Enterprise Strategy Group \(ESG\)](#):
 - 67% lower cost to deliver storage and data services
 - 71% reduction in data egress fees
 - 15% reduction in storage and data services management
 - 24x reduction in data stored in the cloud versus at Equinix
- Predictable costs and a reduction in operations costs, including API calls
- Create hybrid availability zones tailored to customers' unique requirements in multiple markets across the globe.

2. Performance

Strategic locations: Our footprint in high-density business hubs ensures sub-20 ms latency, which is essential for real-time data processing and interaction; aligns with performance benefits highlighted by [Enterprise Strategy Group](#).²

3. Control and assurance

Operational consistency and data security: Delivers an on-premises experience with full control over operations, life cycle management and compliance; supported by [Forrester's insight](#) on improved business agility and lower costs.

4. Future infrastructure requirements

[Per IDC](#), "Bare metal instances play a critical role in supporting key workloads and their growing availability on Dedicated Cloud Infrastructure as a Service (DCIaaS), which is itself seeing explosive growth, is a welcome development for customers."³

Advancing digital transformation journeys

VCF on Equinix Metal is more than a digital infrastructure solution; it's a strategic platform that helps businesses drive their digital transformation journeys forward. Its impact extends beyond immediate operational efficiencies, setting the stage for long-term innovation, growth and sustainability. [Contact Equinix](#) to see how VCF on Equinix Metal can transform your enterprise's infrastructure strategy.

To learn more, read our VCF on Equinix Metal solution brief.

[Learn more](#)

¹ Alexander Parsons, "The Total Economic Impact™ of Equinix Digital Services," Forrester, September 2022.

² Aviv Kaufmann, "Economic Validation: Analyzing the Economic Benefits of Equinix Metal," Enterprise Strategy Group by TechTarget, September 2023.

³ "Future of Digital Infrastructure: Bare Metal on Dedicated Cloud IaaS Supports Rush Toward Generative AI," IDC, November 2023.

