EQUINIX

Hybrid infrastructure for a digital advantage

Build a high-performance, secure and flexible hybrid infrastructure to power your success

Table of contents

Click on the option below to jump to the different sections.

EQUINIX

Hybrid infrastructure helps businesses meet today's transformation challenges

Enterprise IT is fast becoming hybrid IT

Today's increasingly virtual world has become a hybrid IT world. Most enterprises looking to digitally transform for agility and resiliency, as well as support future business applications, will need to deploy a hybrid digital infrastructure.

IDC predicts that by 2022, the economy will remain focused on its digital destiny, with 65% of global GDP digitalized, driven by an expected $6.8 trillion of direct digital transformation investments for 2020–2023.[1]

[1]IDC White Paper, sponsored by Equinix, "A Blueprint for DX Success: Start with Hybrid Infrastructure and Connected Ecosystems," Doc #US47633921, April 2021.

EQUINIX

Hybrid infrastructure—an overview

So, what is hybrid IT?

Hybrid infrastructure focuses on the foundational infrastructure needed to deploy a digital core. It is an IT infrastructure design and environment made up of a mix of on-premises data centers, private clouds and public clouds. Hybrid IT is important now, because with today's ever-increasing numbers of cloud, network and application services, an organization's infrastructure needs to:

- Respond to current needs/opportunities and equip for a digital future.

- Accommodate the resiliency and flexibility demands of modern IT without compromising performance or security.

- Deliver both legacy and modern applications anywhere they need to do business, globally.

A hybrid infrastructure can get them there.

Enterprises can be at different stages of the cloud transformation journey. However, regardless of where they are in their transformation, with the right strategy on the right platform, businesses can establish a hybrid infrastructure to meet and anticipate digital demands now and in the future to power their success.

Businesses will use hybrid IT in a number of areas—to support their core applications and to deliver services at the digital edge. They will use both public and private clouds and deploy both physical and virtual IT.

EQUINIX

Key challenges driving the need for hybrid IT

As organizations look to gain a digital advantage by transforming IT infrastructure, they may be struggling with infrastructure that is aging, complex and fragmented. They may also be managing workflows through disparate systems spanning public and private environments. Most enterprises looking to support their future business applications will need to deploy a hybrid digital infrastructure with the majority of new applications being deployed to the cloud, and legacy applications being cloud-enabled.

Key challenges they face include:

- Transitioning to the cloud

- Managing both legacy and distributed infrastructure simultaneously

- Working with distributed compute and application integration

- User complexity issues, including: location, security and performance requirements

These are driving the need for businesses to directly connect public and private clouds securely and efficiently.

"In healthcare, the digital journey is just beginning. If anything, the journey is speeding up and it's driving us to do things differently."

Jeff Thomas,
CTO and acting CIO, Sentara Healthcare

EQUINIX

Create an agile, flexible hybrid infrastructure to adapt to ever-changing digital demands

The right platform helps you access the most important locations, with the most relevant interconnected services globally.

As organizations move rapidly to the cloud and deliver services consumed at or near the edge (e.g., AI, IoT or big data) they also need high performance, security, choice and access to applications, anywhere they do business globally.

On the right platform, they can interconnect (via private data exchange) and bring together the foundational digital infrastructure required to:

- Modernize corporate IT, integrating multicloud capabilities.

- Gain access to the edge, high performance and control while keeping an OPEX model.

- Rapidly access new markets through either physical or virtual edge services.

- Gain proximity to networks and clouds for business expansion needs.

- Expand business continuity models locally and globally.

- Offer new capabilities and services closer to customers and users.

EQUINIX
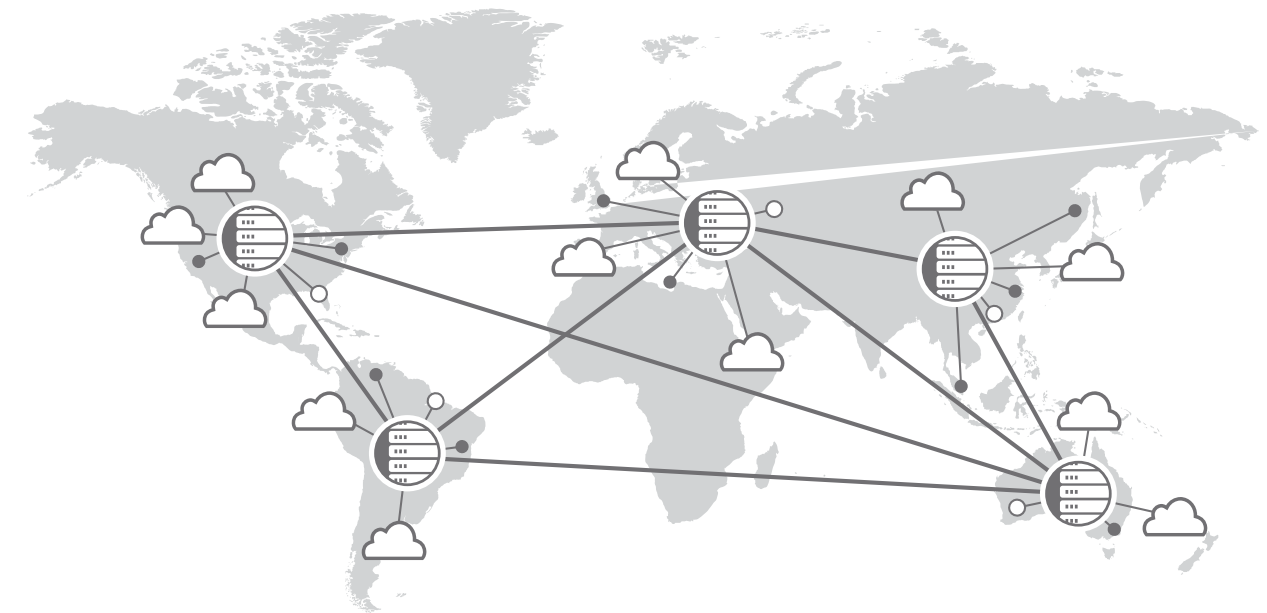
Create an agile, flexible hybrid infrastructure to adapt to ever-changing digital demands
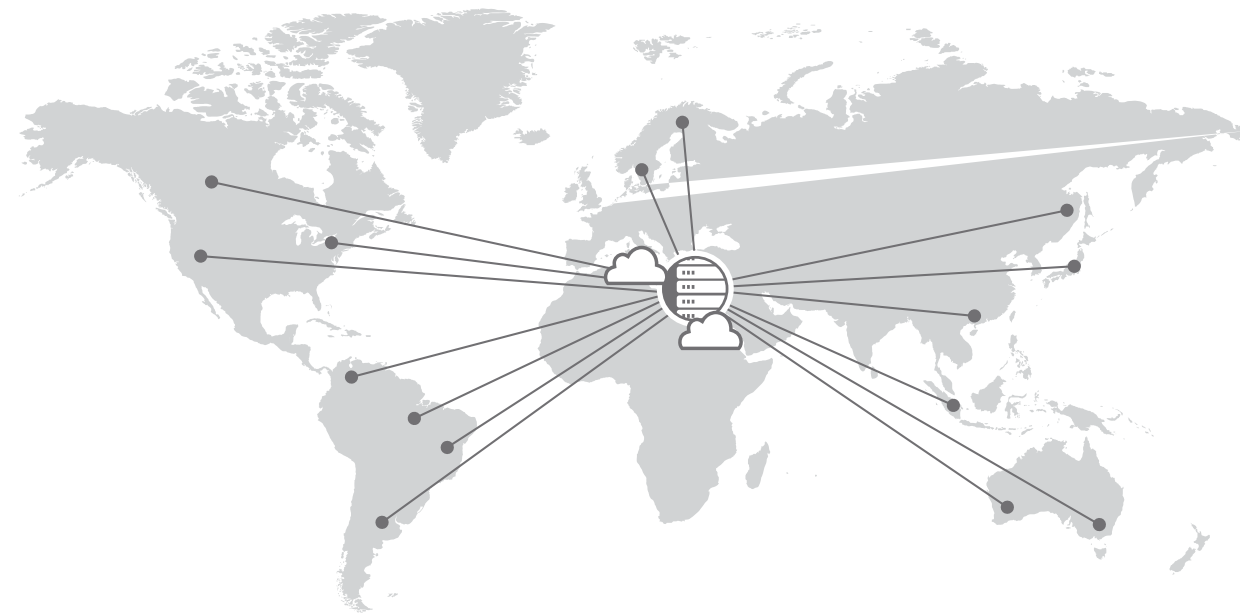
Legacy

- Dedicated application infrastructure

- Centralized, data-center focus

- Physical network and IT environment

Today

- Dedicated and multicloud

- Distributed: edge and core

- Physical and software-defined

EQUINIX

Harness the power of Platform Equinix® to easily adopt hybrid infrastructure

We're helping digital leaders around the world deliver infrastructure for today's hybrid multicloud.

Reaping the benefits of hybrid IT requires a single global platform that can cope with heterogenous environments and is capable of supporting colocation and virtual services. This integrated approach enables connectivity to multiple business ecosystems either physically or virtually—at software speed. By leveraging a simplified platform that offers reliability, security and control, businesses can create the foundation needed to deploy and manage hybrid infrastructure.

63% of IT leaders plan to support company expansions by deploying systems virtually rather than by investing in physical IT infrastructure in-market.

Source: Equinix 2020-21 Global Tech Trends Survey

PLATFORM EQUINIX®
All the Right Places, Partners & Possibilities

EQUINIX

On our trusted platform, leverage consistency and resiliency, and enable easy consumption of digital capabilities

Global reach

Equinix has a presence in all of the major interconnected metro hubs, enabling you to place infrastructure at the on-ramps and the most critical access points (for highest performance).

Direct access to networks

Reaching network providers directly provides the highest performance connections to network infrastructure.

Broad variety of providers

Access to thousands of network providers yields the most flexibility (minimizing vendor lock-in), making network optimization decisions easier.

The most cloud on-ramps

Offering direct access to every major cloud and digital service provider in any location you need.

Physical and virtual deployments

Equinix is at the forefront of offering a mix of virtual and physical infrastructure deployments, such as Equinix Fabric™, providing software-defined interconnection, and Equinix Metal™, to build virtual infrastructure and connect IaaS, private and physical infrastructure.

Robust control points

Natural security and compliance control points located both geographically and at the edge of the network.

EQUINIX

Priorities for delivering a successful hybrid infrastructure

Transform IT architecture with these actions to deliver key benefits.

Set up your network to leverage hybrid multicloud

Assess how to best integrate private vs. public environments, as well as legacy applications.

Deploy the right infrastructure to support the core and the edge

Determine which applications and services should run in the core and at the edge.

Leverage cloud adjacent data

Enable infrastructure to accommodate resiliency and flexibility without sacrificing performance or security.

EQUINIX

Modernize the network to lay the foundation of a hybrid infrastructure

Prepare your network for whatever is next.

Optimize network latency globally

By establishing global points of presence in all the major interconnected metro hubs and placing infrastructure at cloud on-ramps and critical access points, ensure system performance—regardless of workload region.

Scale with the benefits of modern public cloud

Leverage controls, predictable OPEX and mission-critical features.

Maintain zones of control

Systematize management of attack surface and threat-response consistently, wherever needed.

Increase security and efficiency

Integrate multicloud capabilities while safeguarding data and boosting efficiencies.

Transform corporate networks and applications

Get flexible, secure access, wherever you need it.

EQUINIX

Determine edge versus core implementations and which best serve your requirements

Access the most relevant, interconnected services and partners you need, globally.

Meet demands for virtual services at the edge
Adopt an edge-adjacent approach for distributed elements that require direct connection with multiple clouds (e.g., IoT applications for connected vehicles).

Establish core deployments for physical applications
Interconnect with multiple ecosystems at the core when demands require data or applications to stay centralized, such as for data privacy and protection or to lower cloud egress costs.

Reduce your data center footprint
Deliver the same capabilities, with less physical space.

Ensure superior connectivity without compromise
Establish high-quality connections without trade-offs that drive costs up and flexibility down.

Directly connect public and private clouds
Ensure connections are secure and efficient.

EQUINIX

Create a flexible, resilient infrastructure strategy with cloud adjacent data

As modern IT demands more data processing at the edge, proximity to the cloud can also guarantee performance and security.

Accelerate workflows
Speed workflows across hybrid and multicloud connectivity.

Adapt easily to data demands
Accommodate elastic and burst demands on multicloud workflows while rapidly accessing new markets through physical and/or virtual edge services.

Establish interconnectivity with key partners, data centers
Meet the need for rich interconnections with infrastructure providers, SaaS and cloud providers, and between your own data centers.

According to IDC, 80% of enterprises will run varying levels of data processing at the IoT edge. In tandem, organizations will spend over US$6.2 billion on IoT edge infrastructure by 2022.[2]

[2]IDC InfoBrief, sponsored by Equinix, "Unlocking Data with Cloud Adjacency," 2020.

EQUINIX

Hybrid infrastructure in action

Typical use cases where hybrid IT can meet the unique requirements of your business

Hybrid multicloud

With few exceptions, most enterprises looking to support their future business applications with flexibility, security and speed will need to deploy a hybrid digital infrastructure across multiple clouds.

Where to provision

These include public or private cloud; physical or virtual deployments; owned (CAPEX) or leased (OPEX); single supplier/ DIY or multiple partners. This mix of deployment types extends to all functional elements of the infrastructure: core, exchange or edge.

EQUINIX

Customer Example: Sentara Healthcare and Optima Health

Customer Challenge

Integrate siloed IT infrastructure to securely and reliably interconnect 12 hospitals and 300 care centers; run business operations 100% in the cloud. Additionally, integrate 20 physical patient electronic medical record (EMR) systems to the cloud-based EPIC platform.

Results

By building a redundant SD-WAN peering network backbone on Platform Equinix, Sentara interconnected multiple regions and cloud services, and deployed its patient portal and telehealth platforms. This resulted in:

- Up to a 60% reduction in overall infrastructure costs.

- Reduced latency from 20 ms to 4 ms.

- Scalability for its telemedicine platform.

Platform Equinix

The Equinix platform provided the geographic presence needed to reach regional providers and Sentara's patient base, as well as integrate its EMR systems. By building its resilient redundant peering network with VMWare SD-WAN™ by Velocloud®, and a high-performance hybrid multicloud infrastructure, it enabled the direct and secure interconnection required to reduce latency and increase application performance, security and availability.

Equinix Fabric

Equinix Fabric delivered the hybrid multicloud interconnection needed to quickly create customer applications and access cloud services. This connectivity also included backup and recovery for its EPIC EMRs to Microsoft Azure and connecting Amazon Alexa's assistance in patient rooms to AWS to deliver greater patient metrics and care.

EQUINIX

Hybrid infrastructure in action

Typical use cases where hybrid IT can meet the unique requirements of your business

Edge computing (SaaS, IOT, Analytics, Apps)

Most enterprises in today's digital world will be impacted by the move to the edge. They need to be dynamic in their approach, so as business changes and strategic plans shift, they can rapidly provision and deploy on-demand infrastructure, leveraging Equinix Metal, for on-demand, high-performance bare metal, directly integrated with Equinix Fabric, offering flexible, on-demand global interconnection, to put resources where they need to be.

Where to provision

From connected cars and corporate apps running on mobile, to simplifying the cost of moving data around the world, most companies will look to scale and innovate at the edge. This improves user experience, with applications that are edge-enabled with resources close to end users and devices.

EQUINIX

Customer Example: Super League Gaming

Customer Challenge

Super League Gaming is an amateur esports experience platform and content engine empowering and encouraging gamers to participate and create—whether it's a YouTube video, a Minehut service or a gameplay highlight on Framerate.

The California company's DevOps team needed to support unprecedented growth, but in an agile way. Automation, a strong API and Kubernetes support were key requirements.

Results

Equinix Metal has enabled the Super League Gaming site to manage hypergrowth while improving its premium content experience for gamers—providing quicker performance and increased revenue. Results included:

Scalability

Enabling 62% growth in registered users in just a few months.

Skyrocketing usage

70% increase in video views and ad impressions.

Flexibility

Ability to ramp up and support 10% more gameplay hours in one quarter than in the previous 12 months.

Equinix Metal

Leveraging Equinix's DevOps-friendly approach across automated bare metal kept Super League ahead of the game, right-sizing their team's lean footprint.

Platform Equinix

Deploying on the Equinix interconnection platform enabled Super League Gaming to scale with agility to delivery world-class experiences with consistent, global, low-latency performance and superior connectivity.

Hybrid infrastructure in action

Typical use cases where hybrid IT can meet the unique requirements of your business

Cloud adjacent storage

Placing today's ever-increasing volumes of data in private storage outside—but adjacent to—clouds is a cost-effective, compliant and highly performant option. There is a need to solve the challenge of data silos and cloud transformation while unlocking critical business insights.

Where to provision

With the majority of new applications deploying in the cloud and the cloud enablement of legacy applications, there is a huge requirement for cloud-to-cloud interaction and sharing of data. However, this can lead to prohibitive storage costs, as well as data ownership and integrity issues. Large data sets and certain workloads can be better served by placing them in cloud adjacent storage, reducing the complexity and expense of infrastructure management, while maintaining compliance.

EQUINIX

Customer Example: Children's Cancer Institute of Australia (CCIA)

Customer Challenge

Enable connectivity, collaboration, and the private and secure exchange of petabytes of data—per research, per child—with leading healthcare institutions, regardless of location or cloud provider used. CCIA is the only independent medical research institute in Australia wholly dedicated to childhood cancer and works closely with other research facilities in the U.S. and Europe, cross-sharing data for additional clinical trials to advance their research. CCIA required a solution that enabled it to deploy a secure, reliable cloud adjacent architecture and offered private connectivity to AWS, Azure and Google for high-speed data processing and complex genomic profiling.

Results

Australia-based CCIA partnered with Optus telecommunications and Equinix to offer a solution that supports its Zero Childhood Cancer Initiative. This partnership enabled CCIA to deploy a secure, reliable, cloud adjacent architecture and offers private connectivity to AWS, Azure and Google. This gives CCIA the ability to scale resources as it integrates data from around the world to gain insights on the disease and speed up diagnosis timeframes.

Platform Equinix

The Equinix global interconnection platform and its worldwide network of data centers enables CCIA to rapidly and securely integrate Australian patient data with patient data overseas without additional carrier costs.

Equinix Fabric

Equinix Fabric allowed a direct, secure connection with the many different cloud providers that CCIA relies on to connect seamlessly and integrate its systems globally with collaborators. CCIA can take data generated in-house and compare it to data generated anywhere in the world.

Interconnect your digital core to transform successfully into a digital business

Equinix helps businesses build the foundation for hybrid infrastructure

To enable successful digital transformation, you need to build a hybrid IT strategy that accommodates the resiliency and flexibility that modern IT demands, without compromising performance or security. Access your most important locations with the most relevant, interconnected services worldwide, at Equinix.

"Businesses that have digital infrastructure in place have demonstrated the ability to withstand unforeseen circumstances while being better equipped to innovate."[3]

Jennifer Cooke
Research Director, Edge Strategies, IDC

Fast-track agility
Gain proximity to networks and clouds for novel user experiences and growing business needs.

Be a digital leader
Modernize corporate IT systems with multicloud capabilities.

Innovate
Choose from a broad variety of connections to SaaS and business partners to offer new digital capabilities.

[3]IDC InfoBrief, sponsored by Equinix, "Building Digital Infrastructure to Achieve Business Advantage," Doc #US47031620, December 2020.

EQUINIX

Power your digital leadership at Equinix

Equinix is the world's digital infrastructure company™, operating more than 220 global data centers and providing interconnections to all the key clouds and networks.

We're helping digital leaders around the world deliver infrastructure for today's hybrid multicloud. With the expertise, reach and technology to connect to clouds in a flexible, agile, cost-effective and secure way, we can help you build your hybrid IT foundation and drive digital success, now and in the future.

Ready to get started?

Contact us today at Equinix.com/contact-us

EQUINIX