

Tech Tales

"BuyItNow": Singapore-based e-commerce company

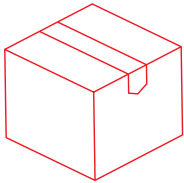


EQUINIX

GLOBAL E-COMMERCE

Expanding into Restrictive Markets

Equinix.com



Equinix's global footprint helps international e-retailer do business in restricted markets

Headquartered in Singapore, BuyItNow is an international e-tailer selling a wide range of consumer products, from household goods to fashionable clothing, in select Asian and Middle Eastern countries. Now the company wanted to expand its platform from an online store to an online mall—an international marketplace where vendors from around the world could sell their own goods to customers globally.

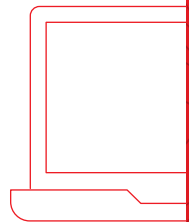
To facilitate this vision, BuyItNow created a full-service partner portal, where vendors could sign up, get onboarded, set up their storefronts and start selling.



GOALS

Business Drivers

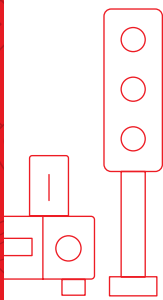
- Meeting regional compliance requirements for localized storage and networking solutions
- Building a distributed system in host countries to provide a high-traffic global vendor platform for seamless retail transactions
- Building a distributed system to provide a secured extranet



SOLUTIONS

Solution Implemented

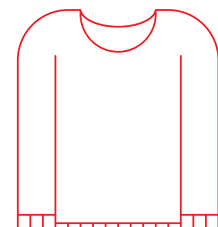
- Secure cabinets in Equinix Colo centers via Equinix Metal
- Direct private connection to regional network providers via Equinix's expansive regional networks
- Virtual network functions (VNFs) and segregated firewalls via Network Edge



OUTCOMES

Benefits Realized

- Localized storage and networking enables access to restricted markets
- Leverage cloud-like costs plus the ownership and control of on-prem
- Repeatable processes, frictionless scaling
- Future-proofing: private local facilities reduce risk of non-compliance





The challenge: local regulations complicate access to markets

The problem was that many prospective partners were in countries with stringent privacy and data protection laws and network access rules, including:

- Privacy and data protection laws requiring companies to store and maintain personal customer data locally (e.g., personal data collected in particular countries must stay in those countries)
- Network rules restricting access to in-country networks from other countries

Requirements like these have become increasingly common. The Information Technology and Innovation Foundation (ITIF) reported in 2021 that “the number of data-localization measures in force around the world has more than doubled in four years. In 2017, 35 countries had implemented 67 such barriers. Now, 62 countries have imposed 144 restrictions—and dozens more are under consideration.”¹

That growing patchwork of regulations presents a serious obstacle to cross-border digital trade, and they complicated BuyItNow’s plans. Though the company would have liked to host all of its portal software and data in its existing Singapore data center, it needed a distributed solution to comply with local regulations and work with partners in all of its target territories.



The solution: localized storage and networking from Equinix

To comply with local regulations and laws, BuyItNow needed an infrastructure partner with global reach and relationships with regional network service providers. Equinix was the clear choice.

BuyItNow created a distributed system running their software and storage on Equinix Metal servers running in their partners’ home countries in Asia, and EMEA. Using Metal gave them access to Equinix’s global facilities along with a rich ecosystem of storage solutions and partners (major vendors providing flash storage, hyperconverged storage and storage as a service). That enabled BuyItNow’s networking team to set up their own in-country private storage facilities that met local privacy and data sovereignty laws. By having a Network Edge connection per partner, IP design became less complex, and each partner was able to perform NAT and Fire Wall (ACLs – access control lists) on a per partner basis.



Importantly, BuyItNow’s development team had already architected the portal as a full-stack software pod designed to run on a standardized hardware pool. This gave them the ability to quickly replicate their front-end apps, transaction processing software and storage as needed in multiple locations and on whatever infrastructure they required via flexible APIs and configuration templates (such as Terraform) for automation.

Along with Metal facilities conveniently located in host countries, Equinix afforded direct private connection to a wide array of local network providers. On Platform Equinix the world’s leading network service providers are available to connect within minutes and they offer a broad choice of connectivity options. For instance, BuyItNow was able to connect directly to carriers in host countries via transit peering in Equinix facilities, enabling BuyItNow to comply with even the strictest network access rules.

In addition to meeting data sovereignty and network access requirements, BuyItNow was able to apply robust security protections matched to individual partners’ policies. Equinix Network Edge, providing easy-to-deploy fully automated virtual network functions (VNFs), allowed BuyItNow the flexibility to create customized security domains, complete with segregated, encrypted connections for each partner via virtual firewalls.

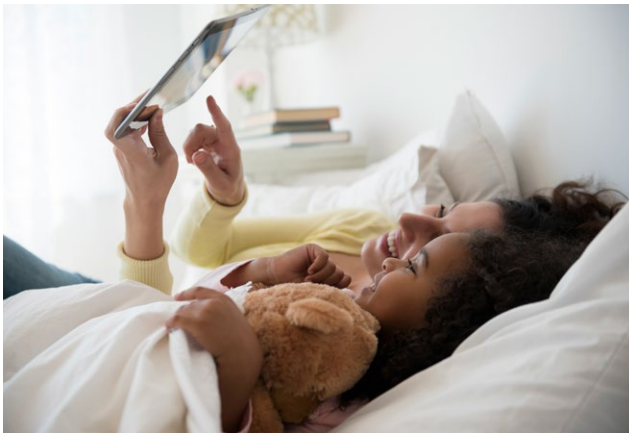
Because of their highly portable and repeatable pod model, and because of the rapid provisioning and deployment made possible by Metal, BuyItNow was able to stand up new instances of the portal in different regions in mere hours. Soon, vendor partners around the world were using their portal to set up shop and sell their wares in BuyItNow’s bustling online marketplace.

¹ How Barriers to Cross-Border Data Flows Are Spreading Globally, What They Cost, and How to Address Them, Information Technology & Innovation Foundation, July 19, 2021.



Next steps: migrating to physical deployments

As BuyItNow's partner network and business volume grew in various regions, it made economic sense to shift from running software on Equinix Metal to operating their own hardware in Equinix Colocation centers. Equinix's colocation footprint enabled BuyItNow with local access into 70+ markets, in 30+ countries around the globe.



Future-proofing the business

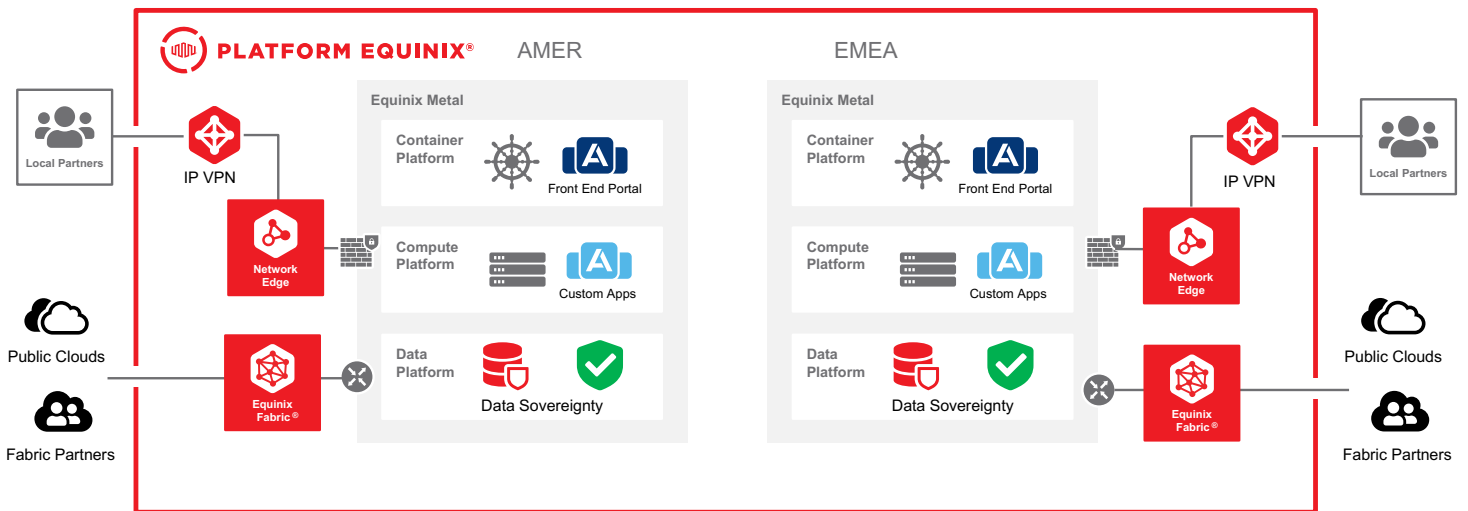
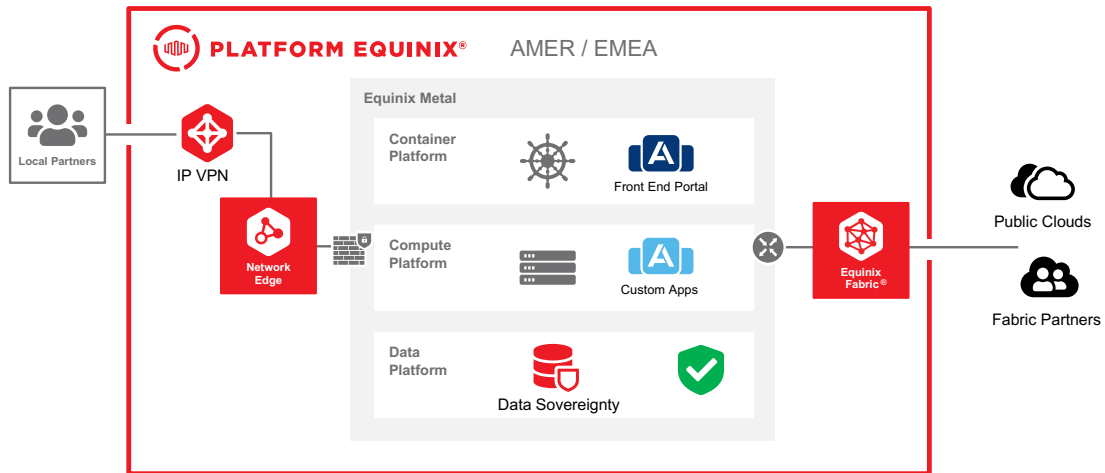
As with Metal, deployment on Colocation facilities was rapid and streamlined: BuyItNow's infrastructure team just rolled in their hardware pools with their software pods running on top and placed them in secure cabinets in Equinix Colocation facilities. BuyItNow was able to expand quickly and frictionlessly as their business grew, while minimizing capital expenditure and operational overhead.

BuyItNow's use of private local storage and direct private connection to regional network providers—made possible by Equinix—gave them complete ownership of and control over their mission-critical assets, enabling them to nimbly adapt in uncertain regulatory environments. Rather than depending on intermediaries and risking non-compliance, BuyItNow had the ability to directly adjust their storage and networking infrastructure to meet evolving requirements.

All of this enabled BuyItNow to navigate a complex regulatory landscape and create a truly cross-border e-commerce model, giving it a decisive advantage over competitors.



Architecture Diagrams





Equinix offerings used



Equinix Metal

Equinix Metal is a bare metal infrastructure service provided by Equinix, which allows users to deploy high-performance bare metal servers across global locations in minutes, and is directly integrated with Equinix Fabric, which is a software-defined network platform.



Global NSP & ISP ecosystem

Create a rich ecosystem of connectivity with direct access to various network and service providers.



Colocation

Equinix's colocation services involve providing physical space within Equinix data centers for businesses to house their IT infrastructure. This includes servers, networking equipment, and storage devices. Customers benefit from accessing Equinix's secure and well-connected facilities, which offer high-performance connectivity to a variety of networks, cloud service providers, and other businesses.



Network Edge VNFs

Equinix Network Edge VNFs are on-demand, virtualized network services at the edge of Equinix's global platform, providing flexibility for routing, security, and optimization without physical infrastructure changes.

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