CONSTURCTION

EQUINIX AND MICROSOFT AZURE CUSTOMER CASE STUDY

PCL CONSTRUCTION

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Global construction contracting company leverages an interconnection-first strategy on Platform Equinix™ with Microsoft Azure, lowering latency by up to 59% in some locations and reducing maximum latency by 29%, while improving user quality of experience for all of its Azure hosted cloud services.

Business Results

- Increased Azure application performance with consistent sub-100 millisecond (ms) latency across its global network infrastructure
- Reduced the network latency 4x between Azure ExpressRoute and its backbone MPLS network, from 13 ms to 3 ms
- Automated delivery of Microsoft Azure services to users in less than 4 hours vs. 8 weeks to deploy new systems/services
- $500,000 reduction in costs per year with a greater user experience

Executive overview

PCL Construction, Canada's largest construction contractor, needed to transform from a traditional, on-premises, hardware-centric IT model to a more cost-effective, agile and high-performance cloud environment to successfully compete in an increasingly digital construction industry. The company selected Microsoft Azure as its cloud platform and Equinix as its West Coast colocation data center and interconnection platform. PCL Construction gained faster, low-latency interconnection to its growing base of hosted cloud services/applications, accelerating its speed of project delivery to users from months to days.

Business challenge

PCL Construction has office locations in 31 major centers in Canada, Australia, the U.S and the Caribbean, which can include over 200 operational remote job sites and over 700 projects at any given time. As the company migrated its IT and back office applications to Microsoft Azure, it realized that it required a more flexible, faster, secure and reliable backbone network infrastructure out to the edge, closer to its remote offices, job sites, workers and customers. Deploying the Equinix Cloud Exchange with Microsoft Azure ExpressRoute to access cloud resources/services enabled the company to increase its Microsoft Azure application performance to its users by lowering latency by up to 59% in some locations.

"Equinix was invaluable in helping us retrofit our global network with the lowest latency and fastest connectivity to Microsoft Azure for our global users, while enabling greater cloud security and reliability."

Chris Palmer, Manager of Advanced Technology Services, PCL Construction

The Approach/Solution

PCL Construction wanted to model its digital transformation around a foundational strategy based on four pillars: cloud, mobility, integration of systems and data, and data and analytics. The company realized that it needed to re-architect its global network backbone infrastructure to best leverage the capabilities and benefits of the Microsoft Azure cloud platform, overcome the limitations of fewer cloud and network providers across Canada, and meet its other real-time data exchange goals. This required it to deploy an interconnection-first solution that would dramatically improve application performance from Azure to its distributed users via low-latency connections, as well as enable faster access to all of its SaaS-hosted cloud services.

Based on Microsoft's recommendation, the company established a point of presence (POP) in Equinix's International Business Exchange™ (IBX®) data center in Seattle to gain direct and secure, low-latency interconnection to Microsoft Azure via the Equinix Cloud Exchange and Microsoft Azure ExpressRoute. The Cloud Exchange provides direct and secure virtualized connections to multiple cloud services globally, including Microsoft Azure and other PaaS, IaaS and SaaS providers. PCL Construction leveraged the Cloud Exchange to deliver ultra-fast access to Microsoft Azure for its global customers, reducing the network latency 4x (from 13 ms to 3 ms) between Azure ExpressRoute and its backbone MPLS/VPN networks.

"By moving into Equinix's San Francisco facility, we can move away from our traditional MPLS network and into a more commodity internet and SD-WAN infrastructure—which is fantastic! It also gets us the proximity and closeness to our data, and the most direct and optimized route as possible to our cloud services."

Chris Palmer, Manager of Advanced Technology Services, PCL Construction

According to Chris Palmer, PCL Construction's Manager of Advanced Technology Services, "Our Azure ExpressRoute and Equinix Cloud Exchange deployment equalized the network latency across all of our different sites, delivering consistent application performance to our users, no matter if they were in Toronto, Vancouver, Denver, Orlando or Hawaii."

Value realized

PCL Construction gained tremendous efficiencies and reduction in capex and opex costs, while at the same time dramatically improving its productivity, application performance, security and user quality of experience. Deploying a more efficient and effective Interconnection Oriented Architecture™ (IOA™) framework on Platform Equinix enabled it to gain faster, more cost-effective access to Microsoft Azure cloud services and realize the following benefits:

- Consistent, predictable connectivity, with up to 59% lower latency in some locations from its network backbone to all of its remote offices and worksites, enabling faster cloud "on-ramps"
- Faster time to market and automation of cloud service delivery, reducing project times from years/months to weeks/days
- A redundant, highly reliable and secure Azure cloud environment

Key take aways

Equinix and Microsoft together empowered PCL Construction to transform to a digital business by accelerating cloud adoption and enabling superior application performance, predictable user experience, reduced risk and increased security. The company leveraged an IOA strategy using the Equinix Cloud Exchange and Microsoft ExpressRoute to achieve up to a 59% lower latency in some locations, bringing the company's users, applications, data and analytics closer to Azure cloud services. This performance gain also enabled optimized access to other Azure-based collaboration and productivity applications and services, such as the company's CraftStream solution for streamlining and accelerating the onboarding of its more than 10,000 hourly contract workers.

PCL Construction's new network backbone infrastructure enables it to leverage emerging SD-WAN technologies and increased access to internet service providers (ISPs) to support greater network route redundancy, optimization and availability. Future deployments include moving its Microsoft Azure interconnection POP from the Seattle Equinix IBX data center to one of its San Francisco IBX facilities, where there is a higher concentration of Microsoft Azure and ISP access points. This will enable the company to realize a greater reduction in latency when connecting to its other locations across North America.

About Microsoft Azure ExpressRoute

Microsoft's physical infrastructure for Azure ExpressRoute resides in Equinix data centers and is available via an Equinix switching fabric that provides secure connectivity and real-time provisioning. By connecting to ExpressRoute across Platform Equinix™, companies are able to bridge their cloud and data center strategies and benefit from full integration between cloud services and internal applications. Azure is commonly leveraged for key workloads that include Big Data, storage, backup and recovery, hybrid applications, productivity applications and media.

azure.microsoft.com

About PCL Construction

PCL is a group of independent construction companies that carries out work across Canada, the United States, the Caribbean and in Australia. Together, these companies have an annual construction volume of more than $8.2 billion, making PCL one of the largest contracting organizations in North America.

pclconstruction.com

About Equinix

Equinix, Inc. (Nasdaq: EQIX) connects the world's leading businesses to their customers, employees and partners inside the most interconnected data centers. In 44 markets across five continents, Equinix is where companies come together to realize new opportunities and accelerate their business, IT and cloud strategies.

In a digital economy where enterprise business models are increasingly interdependent, interconnection is essential to success. Equinix operates the only global interconnection platform, sparking new opportunities that are only possible when companies come together.

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