# Navigating the Enterprise Cloud Transition OnX Canada Well Architected Framework ensures the right cloud for the right business model



White paper

Communications, covered.



# Introduction

There is little doubt that the cloud represents a significant shift for the enterprise. As organizations across all industry verticals transition from the delivery of traditional goods and services to more agile business models centered on digital services, the need for highly dynamic, low-cost infrastructure grows.

At the same time, however, legacy infrastructure will continue to support existing operations for years, perhaps even decades, and in fact remains a significant investment in time, money, and effort that should not be discarded lightly.

This bi-modal state of infrastructure presents a uniquely modern problem for the enterprise. Throughout much of IT's history, technological changes existed within the same basic framework; that is, newer technologies replaced older ones to give the enterprise data environment more processing power, speed, flexibility or some other metric, but it all centered around improving existing processes and business models under a largely cohesive, contained data ecosystem.

Today's digital modernization, however, is about starting fresh. With entirely new virtualized, cloud-based, software-defined architectures on the table, the enterprise has a chance to not only remake infrastructure for the better but revamp the entire business model from top to bottom. Rather than just improving the old way of doing things, these new architectures will allow organizations to develop entirely new services that utilize advanced mobile communications and the Internet of Things (IoT) to create new revenue streams, tap into new markets, and even develop entirely new business models.

To successfully complete digital transformation, the enterprise needs to reimagine the preconceived ideas of today's static data infrastructure in favor of a more flexible, dynamic entity that provides both the scale and performance necessary for a modern service economy. Part of this change involves building cloud-like architectures on internal infrastructure and then seamlessly integrated them with public cloud resources. In this way, the enterprise maintains control over sensitive data and critical workloads while still enjoying unlimited scale on-demand and at low cost.



In this white paper, enterprise executives will learn how to leverage a managed public cloud powered on Amazon Web Services (AWS) to transform their business models for the digital future, while at the same time leveraging OnX Canada's broad experience in next-generation data architectures to make this transition as trouble-free as possible and then gain the maximum benefit when the environment begins supporting production workloads.

## **OnX public cloud on AWS**

Amazon Web Services has proven itself a leader in cloud infrastructure and platform services. Gartner's most recent Magic Quadrant report (July 2019) highlighted the company's prowess by noting it has garnered the highest level of financial commitments by enterprise customers and is trusted with the highest volume of mission-critical workloads. At the same time, AWS supports a broad array of organizations, ranging from small start-ups to mid-level firms and even the largest companies on the planet.

AWS is also a proven visionary when it comes to innovation, continuously integrating new tools and technologies into its various platforms to ensure customers remain on the cutting edge. This is why enterprise executives choose AWS as their top provider of new Infrastructure-as-a-Service (IaaS) and Platform-as-a-Service (PaaS) architectures, all of which are delivered on a global scale with the very latest in security, governance, and compliance.





# Teaming with OnX

OnX's role in the process is to act as the navigator through what would otherwise be a fairly complex journey. Using our lengthy experience in building, deploying, and operating cutting-edge cloud environments, we provide critical guidance and support to ensure that clients implement multiple cloud architectures in ways that enhance performance and streamline budgets.

In becoming an Advanced Consulting Partner with AWS, we have distilled our approach down to four essential elements that form the basis of a strong, durable, and adaptable cloud ecosystem:

### Assessment

We begin by providing a thorough analysis of legacy infrastructure, business models, and other aspects of the client environment to garner a broad understanding of existing data systems and how they support business processes and workloads. Through careful documentation and evaluation, we find that this is the best way to tailor the resulting environment to both current and future needs, whether the end result is a private cloud, a full AWS public environment, or a hybrid solution.

## Design

OnX's certified AWS engineers strive to create high-performing clouds that are both efficient and cost-effective. A key element is the practice of recoding legacy applications to perform at peak levels in the new cloud architecture. Too often, organizations attempt to merely replicate their internal infrastructure on the cloud and then migrate legacy apps as is. But this often leads to failure due to the changes the cloud entails regarding resource mapping, networking, and a host of other factors, particularly once the next step in digital transformation is taken by attempting to automate and orchestrate the business process.

## **Migration**

The key to a successful cloud migration is keeping disruption to a minimum. This is easier said than done, however, which is why an experienced partner like OnX is crucial. A poorly planned migration can bring crucial applications and services to a screeching halt while also leading to data loss or corruption, security vulnerabilities, and other issues that may hamper performance even after the migration is complete.

#### Management

Once the cloud is operational, OnX offers a full suite of management services that allow clients to offload day-to-day monitoring, provisioning, and other tasks. This in turn allows the enterprise workforce to concentrate on core functions designed to boost revenues and expand into new markets. Ultimately, the enterprise is able to break its longstanding support of IT as a cost center and convert it into a core asset.

OnX has also developed a tiered approach to crafting managed public clouds powered by AWS. We have found that this provides for the most efficient allocation of resources for the largest and most varied workloads. This architecture usually consists of:

#### Tier 1: Foundational AWS

The base layer consists mostly of a managed laaS architecture for basic compute and storage services. OnX provides all configuration, support, and maintenance on this layer, including security, ID services, and compliance, as well as higher order functions like content delivery, governance, and even support for more advanced resources like EC2 and Lightsail.

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#### Tier 2: Advanced AWS

Above the foundation, we provide support for sophisticated tools and cloud-native services like OpsWorks and Trusted Advisor. This is also where we house Pinpoint, Simple Email Service, and other user-facing tools, some of which may have to be recoded from their original data center versions to accommodate the cloud and emerging automation and orchestration functions.

#### Tier 3: AWS PaaS DevOps

Once the enterprise has accomplished the first two tiers, it is ready to branch into cutting-edge technologies like Infrastructure as Code (IaC), automated resource deployment, and widespread integration of applications and infrastructure. At this point, we can start to envision seamless DevOps and CI/CD workflows to deliver on the promise of faster product release and updating. At the same time, we can now introduce containers and serverless compute instances to streamline resource consumption and drive down costs.





This is designed to provide both client- and server-side encryption and network protection to enable security for applications and data. OnX and AlertLogic also work directly with AWS to secure all compute, storage, networking and databases on the cloud, in part by taking advantage of the provider's global footprint of regional data centers, availability zones and edge resources.

Maintaining this level of service is the key to OnX's achievement as a certified Advanced Partner with AWS, holding over 50 certifications and the Well Architected Framework designation. Mastery of the five pillars of the framework— operational excellence, security, reliability, performance efficiency, and cost optimization—allows OnX to provide cloud environments in which security, performance, resiliency, and efficiency are second to none.

Digital transformation is perhaps the most consequential endeavor the enterprise will ever pursue. With AWS and OnX on your side, you can rest assured that the process will proceed smoothly, with minimal disruption to ongoing processes, and the end result will be a state-of-the-art data ecosystem that is fully capable of meeting the challenges of today's digital economy while providing the flexibility to quickly adapt to whatever challenges remain in the future.

For information on implementing a managed public cloud powered by AWS, contact OnX Canada at **onx.ca**