Jason Bremner
Research Vice President
Industry and Business Solutions

Architecting Your Organization's Cloud Transition Strategy

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To be successful with a cloud strategy, organizations must take a comprehensive approach to adoption so they can accelerate their cloud maturity. Today, IaaS is a major component of any enterprise cloud adoption strategy. By 2020, more than 40% of Canadian organizations will deliver 50% of their application workloads on the cloud. Selecting which workloads to host in a public or private cloud is a major decision.

Before it can be implemented, organizations first need to define and align the high-level goals of their cloud strategy. They also need to design the cloud architecture and make decisions on what should be replaced with a cloud solution (as well as what should not be) and with what kind of solution.

Once organizations have initiated their cloud journey, the hard work begins as they look to digitally transform their businesses. As they increase their cloud usage, they will grow in their maturity and will look to optimize their investment by running workloads in a hybrid IT environment encompassing public cloud, on-premise, and hosted delivery. Cloud then becomes a critical element in building a digital transformation platform for organizations.

The following questions were posed by TeraGo Canada to Jason Bremner, research vice president for IDC Canada's Industry and Business Solutions practice, on behalf of TeraGo's customers.

Q.   **How should a business be implementing its cloud transition strategy?**

A.   Assessing which applications and infrastructure should move to the cloud is a challenge for most Canadian organizations, especially in the minds of line-of-business executives. 74% of Canadian line-of-business executives told IDC that their organizations have low to average ability to assess which workloads to run in the cloud. Organizations should look at their application portfolio needs for the next 24 to 36 months in a comprehensive manner when considering which workloads to move to the cloud. Many workloads could benefit from being migrated to the cloud, but the cost to do so may outweigh the business benefit. The cloud transition strategy should outline which workloads should remain in the current state and which should be migrated to cloud delivery, and in private or public cloud models. It is

important to categorize the workloads before building the cloud transition strategy. IDC suggests organizations categorize workloads as either strategic to move to the cloud, "easy" to move, and other legacy workloads.

Strategic cloud workloads are those that must operate in the cloud to enable strategic digital transformation initiatives for the organization, An example of this is a transportation company using the cloud to collect and monitor tens of thousands of IoT sensors and devices to manage the company's assets on the roads. In this scenario, IoT is the digital initiative and cloud is the enabling platform. These workloads should drive the cloud adoption strategy because of their strategic importance.

Easy cloud workloads are those that are inherently suited for the cloud and require minimal replatforming effort and risk to run in the cloud. Examples of these workloads are websites, employee or supplier portals, and mobile apps. Many Canadian organizations have invested in these applications and want to increase the value of their investments by running the workloads in a cloud model.

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Other legacy workloads in this context are legacy applications that could be migrated to the cloud but that don't fall into the other two categories. Organizations should specify criteria to determine which of these workloads should be migrated. These applications may require significant refactoring to move to the cloud and could result in significant business value in doing so. An example of this could be parts of legacy applications with valuable business logic that could be rewritten into a cloud app that can be accessed by other applications via an API.

Q. **What approach are Canadian organizations taking to measure the risk/reward of moving to the cloud?**

A. Organizations are typically taking one of two approaches to migrating applications to the cloud: "lift and shift" with existing functionality and rewriting the application for the cloud. IDC research says that lift and shift is the commonly preferred approach with 56% of Canadian organizations willing to take this approach, while 44% will rewrite the application for the cloud. Our research indicates the typical Canadian organization has an average of 12 applications in its portfolio, with 46% of those applications being more than five years old. Larger organizations have a bigger challenge with more, older applications. Migrating even a few of these workloads to the cloud will take time.

After categorizing the applications in your portfolio that you are considering migrating to the cloud, we recommend that you compare the benefit and cost of migrating to determine the potential value. We suggest organizations answer these four questions:

1. What is the total cost of ownership (TCO) of keeping the workload in its current model compared to the TCO of the workload in the cloud? The TCO of migrating and running the workload in the cloud compared to the current or baseline TCO is needed for a good investment decision. This question is particularly important for strategic and legacy workloads where the replatforming costs could be significant.

2. What is the additional business value that is created from moving the workload to the cloud? 56% of organizations say they prefer the lift and shift approach in migrating

workloads to the cloud. What business value does that create? For example, if you lift and shift email and collaboration to the cloud – if people don't change how they communicate there could be limited business value. Compare this with the business value that is created if the software enables how they communicate with colleagues, customers, and business partners, and embed those communication flows into other applications. Prioritize workloads that create more business value by moving to the cloud.

3. What is the long-term strategic implication of the workload in running it in the cloud? It might be easier to move all "easy" workloads before moving any strategic workloads but those workloads may not create as much business value as one strategic workload. Furthermore, by delaying migrating the strategic workload, you may put the organization at a big disadvantage to competitors as they digitally transform.

4. Do you have the IT skills and processes to run the workload in the cloud? Talent management is typically a big challenge for IT departments. Running workloads in the cloud can require hard-to-find expertise and different IT management processes. It is often a full-time job to monitor and manage cloud service usage and keep the workload running properly. Our research indicates that 61% of IT executives rate their ability to manage applications in the cloud for security, cost, and downtime as average at best.

Q. **What are the biggest hurdles in transitioning to the cloud?**

A. The biggest hurdles in transitioning to the cloud are vision, know-how, and investment. Most organizations want to transition to the cloud, and many are using cloud services now.

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However, the vision of how broadly and effectively to use cloud services is very high given current usage. IDC uses a five-level framework to benchmark cloud maturity. Today, 71% of Canadian organizations are at the two lowest levels of cloud maturity. Within three years, 50% of organizations want to be at the two highest levels. Achieving that maturity will not be easy. The transition will require a comprehensive strategy and a solid, detailed, and realistic plan to bring that vision to life.

Possessing the expertise to transition to the cloud is a major hurdle too. As noted earlier, most business executives rate their ability to assess their applications to migrate to the cloud as low to average. Almost two-thirds of IT executives rate their ability to manage workloads in the cloud as low to average. Transitioning workloads to cloud is another challenge, with 70% of IT and business executives rating their ability to migrate applications to the cloud with little disruption or problems at low to average. The lack of know-how is why some organizations seek assistance from external service providers when transitioning to the cloud.

The third major hurdle for Canadian organizations is the level of investment in cloud. Most Canadian organizations (55%) surveyed expect IT budgets to increase in 2018 by an average of 5%, which given the amount of demands on IT today means budgets will still be squeezed. To achieve ambitious cloud plans, IT budgets will have to shift to cloud investments. This is what our research indicates is happening, with the percentage of IT budgets spent on cloud increasing by 6 percentage points in 2018 from 2016. For many organizations this may not be enough.

Q. **Thinking beyond workloads, are there any other needs that should be considered for a successful cloud migration?**

A. The performance of cloud infrastructure services and applications can be an issue for end users. Workload performance is the top reason for Canadian organizations to move applications back from the public cloud. Latency issues, throughput, and application availability can be affected by quality of the end users' networks. The network needs to be an enabler of cloud services rather than a roadblock. For example, video and voice workloads become unstable with even small amounts of latency. And backups of large data sets need consistent and fast throughput. Traditional wide area networks were designed for client/server computing when applications run behind firewalls in enterprise datacentres. They were not architected for the cloud or to support digital transformation. Most connectivity providers are making investments in networking technologies to improve workload performance between and within their datacentres, as well as interconnections with other clouds.

Enterprises whose cloud technology road map leads toward a hybrid IT environment need to critically evaluate whether their networks and cloud connectivity options can support their digital transformation objectives. Organizations are recommended to consider investing in more agile and responsive software-defined wide-area-network (SD-WAN) environments that leverage historic networking investments and high-performance external cloud networking options such as interconnected cloud connectivity fabrics. There is strong interest in SD-WAN in Canada, with 71% of Canadian organizations using or considering it in 2018.

Sources:

- *IDC MarketScape: Canadian Infrastructure as a Service 2018 Vendor Assessment* (IDC #CA43241418, February 2018)

- *Cloud Connectivity: The Crucial Bridge Between Enterprises and the Cloud* (IDC #AP42214617, January 2017)

- *Canadian Business Communications Market: Canadian Business Communications Survey, 2017* (IDC #CA41920917, October 2017)

- *IDC PlanScape: Cloud Adoption Strategy* (IDC #US43586818, March 2018)

- *BITAP Survey n2 2018; PaaS Survey 2018: Dispelling the Perception That Cloud Adoption in Canada Lags Behind Other Countries* (IDC #CA41244417, February 2017)

ABOUT THIS ANALYST

Jason Bremner is research vice president of the Industry and Business Solutions analyst team at IDC Canada. His team researches the application software and business services markets in Canada, with specific focus on how different industries are investing in cloud, analytics, mobility, and social technologies to accelerate digital transformation.

The analyst team that Bremner leads helps technology vendors, IT professionals, and business executives make insight-driven, strategic decisions on technology marketing, sales, and deployments. He has worked with many leading technology vendors as a consultant and employee.

Bremner is also the lead analyst for Strategic Sourcing, providing research insights and thought leadership on the key issues and trends affecting the outsourcing markets. Primary focus areas include outsourcing contract analysis and vendor positioning in the areas of infrastructure outsourcing.