



Workload Migration

A Mission Critical Journey

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Application migration isn't new.

Organizations have been migrating computing application workloads for more than thirty years. In the past, migration projects might have required a physical migration or an effort to consolidate using virtualization.

Both options, while time consuming, were generally considered low-risk because the original environment and the target environment shared certain traits, such as

- Clear network design
- Consistent operating systems
- A reliable pre- and post-relocation operating team that was asked to accept a minimal amount of concurrent changes

However, the complexities of modern networks make for complex migrations.

Problems come from taking a “cloud first, ask questions later” approach.

When the Government of Canada declared a “cloud first” approach, it came with several challenges. Most notably, projects became focused on migrating to the cloud, as opposed to achieving the most effective end state.

When projects are driven by technology mandates, instead of operational or business outcomes, success is difficult to achieve.

In their haste to absorb large swaths of workload, the hyper clouds started portraying workload relocation as trivial. They downplayed the reality: that concurrently changing fundamental elements, such as networking and hypervisors, was actually a transformation with no easy way to revert or change once done.

To further confuse stakeholders, many people started to use the terms “transformation” and “migration” interchangeably, leaving many people feeling uncomfortable enough to delay acting. In reality, workload migration can be very simple with limited disruption and complete workload repatriation.

If migration is done correctly, departments will achieve the benefits of increased agility with none of the frustrations of waiting for infrastructure to be provisioned, or of having limited access to the infrastructure supporting their applications.

Get your migration wrong, and you will end up with excessive operating expenses in the cloud. You might also experience application performance and PBMM compliance issues.

You wouldn’t climb Everest without identifying the best path up the mountain and ensuring you have the right provisions in place to support your journey—the same is true of your journey to the cloud.

Identifying migration requirements through a focused discovery and assessment process—to fully understand what you’re dealing with—is an essential first step in any migration.

What to migrate to keep your projects moving forward.

How do you decide what workloads to migrate? Which are good candidates for specific cloud service providers and which may be best kept within Government of Canada facilities?

In an attempt to put their “arms around their workloads,” organizations often delay making decisions. Large migrations can appear daunting and analysis paralysis can take over, waylaying the project.

To combat project paralysis, early focus should be on workloads that have measurable value to the department and two or more years of projected operational runway. If the candidate workload is already deployed on a VMware footprint, it can be migrated quickly, with little disruption and with an option to repatriate without penalty or technical challenge.

In our experience it is important to establish cloud confidence. Starting with a small project that relies on familiar and trusted technology (like VMware) is a great way to lay the foundations for accelerated cloud adoption in the future.

The Gartner article, *Seven Workloads That Should be Moved to the Cloud Right Now*¹, outlines the workloads that should be prioritized in your cloud strategy. Of those seven, there are four that we believe are the most appropriate for departments within the federal government.



Virtual desktops and remote workstation management :

Cloud-based desktop virtualization is more scalable and stable than traditional data centre-based solutions.

Scale-out applications : Scale-out applications are those that benefit from adding additional computing resources when needed, to satisfy increases in demand.

Disaster recovery : Pay-per-use to support unexpected failover requirements should be deployed now.

Business continuity solutions : Redundancies within the cloud operating environment mean that cloud environments are inherently resilient and offer better availability guarantees than most private data centres can support.

You can't outsource confidence.

Remember that the most important consideration when initiating a migration program is to build confidence in the team by focusing on early successes. With greater confidence comes the capacity and capability to take on more complex projects.



Use these four simple steps.

Identify the candidate workload

- It should have limited external dependencies
- It should be stable and not approaching end of life
- Ideally it would benefit from operating on infrastructure that can scale dynamically

Plan

- Group application components into common move groups
- Ideally ensure the network connectivity required
- Define what post migration success will look like

Work the plan

- Do a test migration, and if your chosen target cloud makes that difficult, then stop and reassess your choice of supplier
- Be sure your workload can be repatriated without duress or lock-in
- Measure against the previously identified success criteria

Execute

- With successful testing, the actual execution becomes more about aligning your people and processes

The four approaches to achieving a successful migration.

1. Lift & Shift

Lift and shift migration—a porting effort—moves a current asset to the chosen cloud provider with minimal change to the overall architecture. This approach enables faster migration and deployment and is likely to be the lowest cost, most efficient, and least disruptive option.

This approach won't work in all cases. Your older applications may not be compatible with cloud provider services. In that case, your applications may need to be rearchitected into a cloud native application. It is always wise to start small and expand. This is our preferred approach.

2. Refactor

Platform-as-a-Service (PaaS) can reduce applications operational costs. Refactoring an application to fit a PaaS model is a good idea, but only when you can identify a direct benefit to refactoring.

3. Rebuild

In some cases, the cost and effort required to carry an application forward cannot be justified. You may need to develop new a code base to align with a cloud native approach.

4. Replace

Software-as-a-Service (SaaS) applications can provide all the functionality that you see in a hosted application. A workload can be scheduled for a future replacement, eliminating the need for a transformation effort.

ThinkOn will work with you to securely migrate critical applications and data from an on-premises environment or public cloud to your Canadian cloud provider.

Our team of experts will

- Ensure compliance and security of PBMM-class data, knowing your data will strictly remain in Canada
- Manage and scale services with 24 × 7 multi-level support from ThinkOn
- Deliver transparent pricing with cost optimization consultation and quantitative support to aid your decision-making

Don't let fear or failure stall your migration projects.

Our deep industry experience and vast technical expertise, combined with our start-small approach and outcome-based strategy will help your project succeed. You need a partner who understand your challenges—and have the skills to solve them. ThinkOn is that partner.

Reach out today, and let's talk about your next migration.

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¹Sakpal, Manasi. "7 Workloads That Should Be Moved to Cloud Right Now." Gartner, November 25, 2020.
<https://www.gartner.com/smarterwithgartner/7-workloads-that-should-be-moved-to-cloud-right-now>.