5 Key Strategies for a Seamless Cloud Migration

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Migrating to Amazon Web Services (AWS) is a journey. It often feels daunting to start this journey, but it doesn't have to be. With this article, I will run through five key strategies that when used in isolation, as well as when combined, will go a long way in ensuring your migration to AWS is as seamless as possible.

1. Follow a proven process

A successful migration is as much about the preparation as it is about the act of moving workloads. Fail to prepare, prepare to fail as the adage goes. The migration journey can be broken up into four key steps.

Discover: At this stage, it's about defining the initial scope as much as possible. Don't worry about the why, how or when. Focus on documenting which workloads you're aiming to migrate.

Assess: You now know what it is that you want to migrate. Here's where you think about the why, how and when. Any migration should have clear technical and/or business drivers that can be articulated in a business case. At this stage, make an early call on how you want to migrate and in what order.

Mobilize: You wouldn't build a house on top of weak foundations, so don't migrate workloads without configuring AWS properly. Ensure you're setting up a strong Landing Zone that adheres to the AWS Well-Architected Framework. That way,

you'll be secure, operationally ready and aware of costs from day one.

Migrate and modernize: At the sharp end of the process, it's all about migrating applications and modernizing them. This should be seamless if you've done the preparation right. You'll need to consider aspects such as when, or if, you can tolerate a cutover window, as well as clearly document rollback plans if it doesn't go quite to plan.

Related: Researching Cloud Solutions? Lessons from Amazon Web Services.

2. Assign a migration pattern to each workload early

AWS defines a set of migration patterns known as the 7Rs. This set of patterns covers the full spectrum, all the way from retiring workloads to completely re-architecting them to take advantage of all that AWS has to offer. A full list of the 7Rs can be found below.

- Retire
- Retain
- Rehost
- Relocate
- Repurchase
- Replatform
- Refactor

Assigning a migration pattern to each workload early, typically in the Assess phase, sets the scene for the latter phases of Mobilize and Migrate. These patterns aren't set in

stone, but establishing a north star for your migration helps to keep the journey heading in the right direction.

3. Don’t just transform your technology, transform your business

People, process and tools are the trio that many of you will be familiar with. The domains that are integral to a successful migration are no different. When embarking on a migration, it’s all too easy to get caught up in the new and shiny world of designing AWS architectures and dreaming of the better times to come. You must not forget what underpins any successful migration – operational readiness.

Operating workloads on AWS bring with it several changes to consider in your operational posture. Amongst them, you should prioritize these highest:

Cloud financial management: AWS brings with it a very different cost model – there is a sudden shift from capital expenditure (CapEx) to operating expenses (OpEx). On-premises, it is often easy to attribute capital costs – you’re able to directly link a physical piece of infrastructure purchased to the cost center that requested it. With AWS, you need to consider how, or if, you want to attribute costs at an increased granularity and implement the necessary mechanisms to enable it.

Resiliency and disaster recovery (DR): A major advantage of migrating to AWS is the increased possibility for resiliency, but have you considered your resiliency requirements? Defining your return-to-operations (RTO) and recovery-point-objective (RPO) targets helps to determine what level of resilience you require. AWS has published an excellent whitepaper on DR in the cloud, including guidance on how to define a DR strategy depending on your RTO and RPO targets, all whilst balancing with appetite for additional spend.

Security: Operating in the cloud brings with it a shift in mindset when it comes to security. You work on the basis of a "Shared Responsibility Model," where AWS is responsible for the security of the cloud (i.e., physical security of the data centers), and you are responsible for security *in* the cloud (i.e., the configuration of your workloads). You need to consider how this impacts your existing tools and processes and evaluate whether cloud-native security tools are better placed to serve you.

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4. Use the Well-Architected Framework

The Well-Architected Framework contains prescriptive guidance spread across six pillars, designed to make it easy to design and implement solutions that adhere to best practices. The pillars are Operational Excellence, Security, Cost Optimization, Reliability, Performance Efficiency and Sustainability.

Within the framework exists the concept of lenses. These are workload or use-case-specific additions to the standard guidance. One such lens is the migration lens. It covers the usual pillars but provides specific migration-related guidance aligned to the familiar proven phases of the migration journey (discover, assess, mobilize, migrate and modernize).

Keeping this framework and any additional lenses in mind and evaluating against the guidance throughout the migration journey will increase the chance of successful decision-making and subsequently a seamless migration.

5. Leverage specialist AWS partners

For large and complex migrations, it's worth working with a specialist partner to support your journey. AWS makes it easy to identify the right partner through a variety of specialization programs. There are three key types of specializations to consider when you evaluate a partner:

Competencies: These are externally audited awards that verify that a partner has deep expertise and proven experience in either an industry (e.g., Financial Services), use-case (e.g., Migration and Modernization) or workload type (e.g., Microsoft).

Service delivery: These are focused specifically on an AWS service (e.g., Amazon RDS) and are awarded when partners can demonstrate that they can deliver solutions using said service to a consistently high standard and in accordance with best practices.

Well-Architected: The Well-Architected Framework that we discussed earlier has a dedicated partner program that recognizes those partners that are particularly experienced at designing for, evaluating against and remediating to get to AWS best practices.

You can search for an appropriate partner on the AWS Partner Finder.

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You should now have several key strategies front of mind to aid in making your migration seamless. Working to a proven process and leveraging a specialist partner where necessary, keeps your journey on the straight and narrow. Mapping your workloads to migration patterns as early as possible sets you up to make use of the Well-Architected Framework as you get

ready to design your target architecture. Finally, don’t forget to take the whole organization on the migration journey. A successful migration can only be considered truly successful if everyone is bought into and benefits from the transformation.

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