

Cloud Native vs. Cloud Smart: Cloud Success Reimagined

Summary of Roundtable, hosted by ATARC in January 2023

WHITE PAPER

As agencies reflect on the various approaches to migrate legacy systems to the cloud, several roadblocks have emerged in addition to several strategies that have proven to help agencies mitigate risks and reimagine cloud success. The Advanced Technology Academic Research Center (ATARC) hosted a roundtable discussion with experts from various industry and federal agencies to share the strategies, challenges, and successes they've had with cloud migration.

Modernization Journey

The goal of most agencies at the roundtable is to transition from a Cloud First environment to Cloud Smart. Depending on when they started, their existing IT architecture, and the resources available to them, some agencies may be farther along on this modernization journey than others. Equally as diverse are the strategies these agencies are taking to achieve 100% native cloud migration.



The reality is that when you move an application to the cloud, you're essentially paying for it twice.

Most agencies are operating in some form of a hybrid multi-cloud model. IT architectures are a mix of various ERPs, SaaS solutions, legacy platforms, applications, and cloud service models. Different business and mission needs often complicate the migration paths from legacy platforms into the cloud. The transition period can take

months or years, which complicates IT operations and security, while driving up the cost for the agency.

Several roundtable participants shared that their goal is to migrate legacy systems and applications to the cloud in an iterative and cost-effective way. A 'lift and shift' approach to modernization, where an application is moved to the cloud to be modernized through a DevSecOps pipeline, while simultaneously still operating on the legacy system.



One of the biggest challenges agencies face with 'lift and shift' is the time it takes to migrate hundreds of applications to the cloud. In fact, one agency with 8,000 enterprise apps is migrating at a rate of two apps per month and has only completed 6% of its cloud adoption journey in three years. Similarly, Gartner studies show that enterprises take up to 7.4 years to migrate 100 apps to the cloud.

As agencies look to optimize their multi-cloud operating models and manage the complexities of working in both

legacy and hyper-scale tech stacks, they are turning to iterative processes that help with repeatability and scalability. Agencies are also using cloud-native platforms optimized for containers to build their applications.

Total Cost of Ownership

One of the more challenging aspects of cloud migration is the ballooning expenses of maintaining a legacy system in conjunction with the cost of operating in the cloud. Agencies also continue to struggle with the number of resources and skilled engineers needed to operate multi-cloud environments. However, industry experts at the roundtable caution against hiring a subject matter expert for each cloud platform, as it can create more complexities and drive up the budget.



If We stopped calling it total cost of ownership. We started calling it total cost to the taxpayer.

Instead, there are solutions available that enable horizontal integration of hyper-scale services, so agencies do not need to hire specific subject matter experts for each cloud service they use. Agencies can rely on these tools for automation and enhanced security as well. The risk ripple effect of operating in multi-cloud environments is simply too big to be manually managed by people.

Another cost that is often overlooked are the various fees associated with the use of data centers. Often agencies are paying for power, hosting fees, and even personnel costs to maintain the data center. A benefit of operating in the cloud is that costs are mostly transparent. Comparing the costs associated with legacy system data centers to those of the cloud might help some agencies move their cloud migration along.

But total cost of ownership also includes value. Agencies should be looking at total cost of ownership from a

different perspective in order to better align things like acquisition vehicles so agencies are not waiting five weeks to complete a small change order.

Key Take Aways

- ❖ Agencies are always looking to improve efficiency and effectiveness, but we're also looking at the cloud as a vehicle for cybersecurity. A flatter attack surface inherently comes from a consistent interface to the public and the rest of the world. The cloud is a great way to streamline and reduce the number of doors and windows that adversaries can use to get in.
- ❖ Cloud migration needs to be iterative. With each iteration, agencies start to accelerate. It may not be a decades-long journey, but agencies need to do it in phases.
- ❖ Communication is key. Bring together all teams to make sure they have a good understanding of how cloud works, and how the cloud and legacy systems are integrated.



A straight line may not be the fastest way to the cloud. Sometimes it's stair stepping to something different.

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