Multi-Cloud and Its Increasing Importance

Summary of Roundtable, hosted by ATARC in October 2022

WHITE PAPER

One of the key enablers of a modern, digital enterprise is a consistent, enterprise cloud operating model. Government IT operations must deliver mission outcomes consistently across multiple networks, infrastructures, application platforms and software services. That consistency must extend to on-premises operations and distributed edge devices, often working through multiple providers. For multi-cloud environments to work efficiently, they must be consistently deployed, managed, and secured from end-to-end.

> "Multi Cloud is the reality.
>
> Technology becomes an enabler of a new way of work."
>
> *Roundtable Participant*

Nearly 90% of today's government agencies have deployed multi-cloud environments, but many arrived there in an ad hoc fashion, rather than by carefully planned intent. Consequently, organizations face challenges integrating data sources and applications in disparate, siloed cloud environments and security models, leading to bloated IT staffing, increased training and costs, and amplified security risks. These complexities only compound at scale and can hamper enterprise digital transformation.

ATARC recently hosted a roundtable discussion with IT leaders from various Federal agencies to discuss the benefits and opportunities of the multi-cloud operating model.

Benefits of Multi-Cloud Government Operations

Operating in a multi-cloud environment gives agencies the scalability and flexibility needed to achieve mission objectives. Cloud operations enable agencies to ramp up responses by easily increasing the number of users and machines. In the past when operations ran through data centers, that flexibility and scalability came at the cost of sending somebody to a data center to increase memory on hard drives. The cloud enables agencies to make those changes instantaneously, thereby saving considerable time and resources.

To achieve great outcomes with operating in the cloud, agencies rely on provisioning tools that are cloud neutral in order to maintain flexibility. Specifically, leveraging Azure provides a very robust and mature scaled Zero Trust solution without sacrificing speed. Speed is becoming the new security paradigm, where having a clear picture of the operational environment is paramount to quickly responding to and affecting change.

Lessons Learned from Multi-Cloud Adoption

One roundtable participant shared the lessons learned from transitioning to a multi-cloud environment in a short time frame. To support cloud adoption, the agency scaled from approximately 50 people working in a single operational environment, to over 1,000 people working on several different networks in multiple classification levels in a few short years.

The agency quickly saw benefits to mission outcomes, but encountered challenges with managing disparate tooling, operation constructs, help desk constructs, and the different security environments between legacy structures, new cloud environments and applications. The agency responded by adding employees to manage the complexity, which unfortunately resulted in more one-off managed services intending to automate around the inefficiencies. Ultimately,

the complexity caught up with the agency and slowed down operations and progress.

Continued Need for Upskilling

To affect change at scale, roundtable participants called out an existing culture reluctant to change. There is a common fear, primarily among system administrators and leadership, of moving away from physical infrastructure and into the cloud. Executives, in particular, need educating and convincing of cloud capabilities, because they are typically bound to outdated policies that mandate physical access to every server applications run on. New technologists hope to educate leadership that those physical access requirements were not included for security reasons, rather to account for the lack of resilience of on premise data centers. When reassessing outdated rules in the context of a cloud environment, often agencies find they no longer make sense.

> "Good mission outcomes are always something that Zero Trust is going to accelerate."
>
> *Roundtable Participant*

Other disinformation about the cloud that technology experts aim to quell is the notion that cloud is primarily about cost savings. While cloud operations have a lower cost basis, the backlog of demand and the costs of transitioning to cloud infrastructure make it unlikely that agencies will see cost savings. As such, cost savings should not be considered a reason to adopt cloud operations. Running hybrid operations, modernizing software practices, and building cloud native applications will take years for most government agencies.

Multi-Cloud and Zero Trust

Roundtable participants also note that there is a widespread tendency to equate Zero Trust with network technologies. A question often asked is whether agencies still need the network once Zero Trust is at the data and identity levels.

The current posture is no, the network is not necessary for those security purposes, but they are still needed to provide diverse connectivity options. To reframe Zero Trust within agencies, roundtable participants suggest starting with the user, their data and their identity, and tracking the user experience from their device out to the networks they need to touch.

Perspective Shifts and Challenges

While widespread culture change will take time, roundtable participants see progress when teams realize what multi-cloud operations can achieve. In the past, technology and infrastructure were viewed as a means to an end, and not in direct connection with mission delivery. Now, as security teams deploy cloud based applications, they see direct service delivery outcomes and begin to understand the power of efficient cloud based technology. The multi-cloud vision must be translated into tangible outcomes for people at the working level.

Until teams spend time on improving processes through standardization and optimization, technology will not be holistically integrated. Technology frees up gray matter, enabling agencies to focus on process changes that will empower a new way of work. Shifting perspectives on how to use technology is the first step. The next is empowering employees to explore technology without too much oversight, so in time they develop ownership of their capabilities.

> "You can deliver the Cadillac, but no one knows how to drive it.
>
> "Let's not confuse the tool with the outcome."
>
> *Roundtable Participant*

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