Embracing Hybrid Cloud for DOD Mission Success

The defense & intelligence communities are turning to hybrid, multi-cloud environments to meet the needs of the warfighter in the field & the digital world.

The nation’s battlefield has extended from the physical realm to the digital world — and the Department of Defense and Intelligence Community are moving to the cloud to prepare for the future of warfighting. In doing so, the DOD and IC are managing the complexities and operations of multi-cloud and hybrid cloud environments, while continuing IT modernization projects.

Two industry and government experts gathered at a recent FedInsider webinar to discuss the new technologies and tactics they’re exploring to harness the power of data, cloud and innovation to support the warfighter and protect national security.

The following are some of the most important aspects of those efforts.

Moving to Hybrid Cloud Environments

While the DOD ended the Joint Enterprise Defense Infrastructure cloud contract in July, the department is still shifting to a hybrid, multi-cloud environment. Ramesh Menon, chief technology officer in the office of the Chief Information Officer for the Defense Intelligence Agency, said this is good for operational flexibility. “Ultimately, we are providing digital platforms and capabilities to support our warfighter and analysts,” he said.

DIA strives to ensure that data is available to people in the field on-demand, so that cycle time is reduced and personnel are able to operate at the speed of relevance to the mission. “The shift to hybrid multi-cloud will provide the operational flexibility, mission flexibility, and the speed to our missions,” Menon added.

Yet, in order to truly adopt the power of hybrid cloud, DOD leaders and decision makers must leverage the opportunity to accelerate change. “The commercial technologies available today are robust. They’re agile, reliable. And above all, secure,” said Juliana Vida, group vice president and chief technical advisor for public sector at Splunk, Inc. “And this is a huge change from just less than a decade ago when I was in the Pentagon.”

Commercial cloud technology has matured and provides exactly what the DOD needs. Plus, policymakers are passing funding to support commercial cloud investments in a way they weren’t before. “DOD leaders need to put in place the mechanisms to take advantage of this perfect storm of opportunity in order to get the most value from this hybrid cloud technology advancement,” Vida said.

To do so, Vida recommends DOD leaders do three things: adopt open communication and information sharing paths to leverage all the pertinent data flowing across the department; treat hybrid cloud technologies as critical warfighting mission enablers; and prioritize workforce transformation, retraining, reskilling and education.

Technical & Cultural Changes to Managing Multi-Cloud

As DIA embraces the hybrid multi-cloud model, Menon said the most important part of the cloud is the ability to exploit or liberate data that is being shared and collected at the edge to transform DIA’s mission.

“As long as we are liberating technology, and liberating this new, modern platform, to achieve the mission outcome in a tangible, meaningful way, that is our strategic advantage to our country. We will go in that direction,” Menon said.

Workforce transformation is also key, in terms of both skill and culture. “We need to build the skills to make sure we have the ability to dynamically deploy mission applications,” Menon said. As more devices become software-enabled, leaders must understand the value of software in the DOD’s mission state.

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According to Vida, the DOD’s decision to end JEDI and take a different approach to cloud computing shows the department's shift to agile methodologies. When something doesn't work, trying something new is a cultural shift. “The Defense Department isn’t really known for doing that with big programs or large platform purchases. So, I think that's a really positive sign that departmental leaders are getting it,” Vida said.

Plus, she believes the hybrid multi-cloud movement will cause the biggest cultural shift the DOD has seen in decades. Data adds value to the cloud, and a shift to hybrid models will open up a culture of data sharing and trust between desperate military branches.

“All of us need to be coming together, and breaking down those interdepartmental barriers where we can, to unleash the value of all the data that’s at our fingertips, and to make it useful for the warfighters here and when they need it,” Vida said.

**Hybrid Cloud & Security**

To properly secure and defend DOD’s networks while implementing new platforms, Menon said it’s critical to first define and comply with particular security requirements — especially when partnering with industry.

“We need to make sure that assurance of our system, network, platforms, data, everything is understood. We have proper validation goals,” Menon said. “We need to make sure that our systems are protected because our adversaries are always looking for ways to exploit our system.”

Vendors must also comply with the DOD's security regulations to provide a good baseline for any acquired products. Security requirements start with the software architecture, so applications and innovations built on top are foundationally secured.

According to Vida, industry is taking the necessary steps to comply with DOD requirements so that the department can fully leverage technologies and capabilities. “(Splunk and its partner vendors) are all incented to make sure we make the products as secure as possible, and get the certifications we need to provide them to the government,” she said.

**Getting the Most Out of Cloud for Future Innovations**

To truly leverage all that cloud has to offer and benefit from the avalanche of data the DOD generates, Vida said all branches and services in the DOD must have some sort of connective tissue that brings them together, rather than working in silos. Each agency’s instance of a cloud environment is powerful and capable on its own, but for the entire department to get the most value from enterprise data, they must communicate.

“Meaning, information sharing, data sharing across and between these environments,” Vida said. “And that presents risk, but it also presents opportunity.” There’s risk when people can’t see end-to-end visibility of all the data across these clouds, but the opportunity is an amplified capability for everyone to accelerate mission outcomes when they share the data.

Once hybrid cloud environments are in place, the DOD can leverage the technology to its full potential — meaning fast, on-demand access to storage and networks, and extending workloads to the edge for warfighters.

And ultimately, to adopt and develop the right advanced innovations and technologies for the DOD's mission, Vida said it starts in the field. “Starting with the warfighter and the warfighting missions in mind and working backwards, into what technology is needed, and how AI should be trained, and the kind of data that’s captured, that’s really the way to be successful,” she said.