

Cloud: Pivotal In Meeting Army Modernization Goals

For the **Army Enterprise Cloud Management Agency (ECMA)**, access to on-demand digital infrastructure is a national security concern that not only shapes the foundation for Army modernization today, but sets the Army and DoD on a path to achieving digital overmatch.

Q. What role does the Cloud play to achieve your mission goals at ECMA?

A. Mr. Puckett: We believe that access to on-demand digital infrastructure is a national security concern that not only shapes the foundation for Army modernization today but sets the U.S. Army and the greater Department of Defense on a path to achieving digital overmatch.

Historically, digital infrastructure has been acquired in a costly, custom approach resulting in fragile



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solutions, resulting in the challenges of access, availability and resiliency which only delays the fielding of mission-enabling technology to the field.

The Army's ability to be stronger, better armed and more skillful than its adversaries in the use

of information technology requires us to leverage cloud-smart and cloud-native digital technologies to forge a sustainable, strategic path to the Army of 2030.

It is our mission in ECMA to deliver common cloud, data and software services leveraging cloud computing and greater digital infrastructure as a globally accessible and commodity resource to accelerate the digital transformation of the Army.

Q. What are the top opportunities that you see Cloud helping ECMA to accomplish mission success?

A. Mr. Puckett: We see cloud playing a major role in experimentation and scale. First, we've said for some time now that one of the greatest benefits of cloud computing is decreasing the lead time to experimentation. We believe that many people would be shocked at just how challenging it is to get access to compute and storage resources to validate a hypothesis of whether a software solution has value to enhance the way we fight.

Conversely, we have established a contract vehicle for the Army (and DoD) which enables access to compute and storage resources for established customers in minutes and new customers in less than 30 days, which dramatically decreases their lead time to experiment and, if successful, scales a solution. This brings us to the second top opportunity, which is our ability to scale resources when we deliver a valuable solution for the Army.

Oftentimes scale is difficult to predict especially with the ebb and flow of needs in the Army. With resources pooled and elastic scalability in the cloud, we can scale up or down as the mission dictates and only pay for what we need when we need it. This is a game changer for acquisitions which must buy everything first and becomes unused hardware sitting on a shelf because we estimated incorrectly.

Q. Are you able to share a case study or pilot program that shows the benefits of Cloud Programs at ECMA and across the government?

A. Mr. Puckett: There are a few case studies that highlight the value of cloud programs at the ECMA from common services to business systems and warfighting systems. cDATA, our common-data services in the cloud, allows us to truly commoditize data as the Army moves away from custom point to point connections to a more modern and sustainable enterprise through open interfaces.

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From a business system perspective, our Enterprise Resource Planning systems, the first customers of cARMY in 2020, were able to shift their go-live date to the left three months. They have optimized the design and storage of those systems to see monthly cost avoidance of over \$250,000 as they can now see optimization opportunities through data analysis of their system performance and billing using our CloudTracker service.

Finally, we are seeing a complete re-imagination of force structure and mission command through efforts such as the 18th Airborne Corps (ABC) Project Ridgway. By delivering mission command as a service in the cloud, 18th ABC, working with the network cross functional team and PEO – C3T, has demonstrated the value of a hybrid-cloud solution reducing operational readiness timelines from four weeks to

within 30 minutes of boots on the ground.

Q. Can you share any lessons learned with your Cloud strategies and programs?

A. Mr. Puckett: We have learned so much in delivering services to the Army over the course of the last two-and-a-half years, so there is a lot to share but we will focus on five: common services, architecture, process, training, and culture.

First, someone must be in the business of delivering the full lifecycle of common services that their customers love using, because mandates do not solve the issue of shadow IT, and more importantly, those services must be constantly enhanced and should never go into “sustainment.”

Second, as systems and data are moved to a multi and hybrid-cloud environment, someone needs to play the role in which interoperability and standards matter greatly in delivering a system of systems architecture and more and more services need to share data securely between them.

Third, processes will make or break your mission value and the team responsible for delivering those

processes must have metrics that track value over time and the authority to change those processes to improve the metrics that matter.

Fourth, to scale, more people need to understand and execute the end-to-end workflows to consume cloud services and you must train the trainer to grow outcomes that matter.

Fifth and most importantly, we must incentivize the culture we want of learners and calculated risk takers to self-organize beyond organizational boundaries if we are going to become better and faster leveraging cloud computing as an enabler to our mission. Forcing a new way of doing business into existing charters and authorities is a sure-fire way to turn cloud computing into just somebody else's data center that adds no value to our mission.

You'll see an increased focus on growing the digital natives of cloud computing as we retain, reskill and upskill the Army in all things cloud.

Q. What does the next 1-2 years look like with Cloud applications at ECMA?

A. Mr. Puckett: Over the next two years you will see the digital infrastructure of the ECMA grow into on-premises private cloud and OCONUS cloud footprints as the use cases and ECMA customers grow across the Army and the DoD.

From a common-services perspective, you will see new common services such as a Robotic Process Automation, Virtual Desktop and Mobile Infrastructure, common-data services for ingest and dissemination as well as more robust-software development tooling and paths to production within the Army DevSecOps Platform CReATE.

From a mission perspective, you will see maturity in the analysis and rationalization processes of legacy systems vacating closing data centers and an increase in the security, monitoring and automated remediation of vulnerabilities as we continuously remove implicit trust from our environment in our pursuit of zero trust.

Most importantly, you will see an increased focus on growing the digital natives of cloud computing as we retain, reskill and upskill the Army in all things cloud, software, data and security to build the digital workforce we need to deliver digital overmatch and achieve the goals of the Army Digital Transformation Strategy. ■

Mr. Paul B. Puckett III was appointed to the Senior Executive Service and assumed his duties as the Director of the Enterprise Cloud Management Office at the Headquarters, Department of the Army, Chief Information Officer (CIO)/G-6 in November 2019.

As the Enterprise Cloud Management Office Director, Mr. Puckett serves as the principal adviser to the CIO/G-6 and other Senior Army Leaders on the Army's Cloud strategy. He is responsible for assisting in the development of strategy, use, and optimization of Cloud resources, including the areas of cybersecurity, data protection, commercial capabilities, and ensuring network support to the current and future Army force.

He will also develop Armywide planning and assist with execution of Cloud planning, migration, operation, and incorporation of advanced services and capabilities across the Army's four information mission areas of Artificial Intelligence, Machine Learning, Data Analytics, and Data Protection.