Client

MARINE CORPS TACTICAL SYSTEMS SUPPORT ACTIVITY (MCTSSA)

Agency

Department of Defense

Mission

The Marine Corps Tactical Systems Support Activity (MCTSSA) provides the only Marine Corps organic, operationally relevant, MAGTF Command, Control, Communications, Computers, and Intelligence (C4I) architecture for enterprise-level testing, engineering, analysis, troubleshooting, and solutions.

Challenge

A key to MCTSSA's success is the ability to function as a cohesive collaborative activity. With their unique mission, MCTSSA must take a closer look at internal support technologies and processes. Perform modernizing and automating MCTSSA's process pathways, infrastructure and lab capabilities to better service and support the Marine Corps. Need to provide upgrades, modernization and improvements to the only organic Marine Corps test and engineering facilities and network infrastructure.

Goal

- A Consolidate virtualization efforts throughout MCTSSA and provide an enterprise command level capability within our lab infrastructure on location.
- Technology modernization: Transform current infrastructure to better support customers.
- Cost of ownership: Reduce Hardware/Software License Sprawl
- Develop Marketplace with a DevSecOps approach, to enable self-service consumption

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Cask Action

Cask Government Services provides TS-level technical support services to the Marine Corps Tactical Systems Support Activity (MCTSSA) Testing, Evaluation and Engineering lab Environment (TE3).

Cask follows the ITILv4 Framework for delivering demand driven value through a service value chain. A phased process which includes Plan, Engage, Service Design and Delivery. Following an incremental delivery model that delivers based on value and user need. Each feature goes through an asynchronous design, build, test cycle allowing for the delivery of complete features to initiate feedback and improvement and reduce time to delivery.

In support of the MCTSSA TE3 transformation effort, The Cask Engineering team supported the technical planning, design, implementation, testing and management of a modernized software-defined datacenter (SDDC), enabling Infrastructure as a Service (IaaS) and Infrastructure as Code (IaC) architecture. This solution is developed on prem, utilizing Arista technologies for delivering multi-tenant Layer 2/3 VPN services across the Campus Area Network backbone. Our solution provides a single management platform for enterprise networks with multi-domain consistency, zero-touch automation, and cognitive analytics with machine learning.

VMware Cloud Foundation (VCF) provides the complete set of software-defined services for compute, storage, and network security, while enabling cloud management and lifecycle operational support for both legacy virtual machines (VMs) and

Network Modernization for On-Premises Cloud

VMware Cloud Foundation

Virtual Consolidated Environment (VCE)

- ✔ Campus-wide Portal URL
- ✔ Network Management
- ✔ GitLab Repository
- ✔ SDDC Management
- ✔ Analytics & Monitoring Tools
- ✔ Self-Provision (Test/Dev/Prod)
- ✔ Ability to repeat / recall previous architectures

Creating transformative solutions that drive results.

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Results

Cask was able to design and deliver modernized services to MCTSSA CO and the Infrastructure & Information Services Division (I2SD) that provided value to customers and the enterprise.

Network Architecture	Network Management: Separate Test / Development / Production Traffic
	Provide persistent high availability network
	Enable Out of Band (OOB) Management Network
	Automated provisioning of resources
	Repeatable Deployments, reducing risk of mis-configuration
On-Premises Cloud Architecture	Self-Provisioning Portal, enabling self-service consumption of services, via Campus-wide URL (Marketplace).
	Continuous Delivery – Ensuring Consistent, Repeatable, and Successful architecture Deployment
	Reduction of cost through consolidation and resource management.
	Enable enterprise governance, visibility, and management of hosted systems
	Enable data driven operations and defense, investment decisions and process improvement

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