Consolidating data to win all-domain command and control

100% of U.S. executive departments rely on Red Hat.[1]

Red Hat products are accredited and certified to meet specific government standards that DoD components must comply with, including FIPS 140-2, FIPS 140-3, Common Criteria, and others.[2]

Evolve from deliberate to dynamic targeting

The U.S. Department of Defense (DoD) must hold peer adversaries at risk, despite the challenges of distance, water, space, and time. Deterrence of and victory against growing, sophisticated peer threats demands a radical shift in targeting from deliberate to dynamic.

A dynamic targeting model focuses on the find, fix, and track elements of a convergence event, which requires mission-quality data to inform decision making. Shifting to dynamic targeting requires compression and coalescence of the DoD's intelligence, surveillance, and reconnaissance (ISR) and command and control (C2) mission systems. This approach helps the systems collect, analyze, and act on large volumes of data at the speed of modern warfare.

Collected data is often uncategorized and unindexed, limiting its usability. Transforming it into valuable insights that support tactical advantages requires:

- A detailed understanding of the multiple transport layers across the area of responsibility (AOR).
- A theater-specific data governance control board responsible for removing the data roadblocks to interoperability across domains.
- A shift to hybrid on-premise or multicloud environments to process mission data and establish continuity of operations. A single cloud strategy poses a threat to operations. A major cloud provider recently had a customer's account wiped out of their cloud, inclusive of backup storage, and recovery took nearly 2 weeks for a full restoration of services.[3]
- An automated multiuse, multitenant tactical edge extension of mission networks to support mission effectiveness and primary, alternate, contingency, and emergency (PACE) communications.
- Standardization of data across sources and commands to support holistic analysis.

Edge computing and artificial intelligence and machine learning (AI/ML) can play key roles in enhancing data orchestration to support successful dynamic targeting.

Stay ahead of the pacing threat with enhanced data orchestration

Red Hat proposes a dual approach for consolidating ISR data environments and enhancing data orchestration:

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[1] Red Hat client data and Fortune 500 list, September 2023.
[2] "Compliance activities and government standards." Red Hat, accessed 16 April 2024.
[3] Amadeo, Ron. "'Unprecedented' Google Cloud event wipes out customer account and its backups." ARS Technica, 17 May 2024.

Engage your Red Hat team

Build an authoritative understanding of the AOR transport layers to support the subsequent establishment and operation of an AOR data control board.

Conduct technical proofs of concept

Complete a series of technical proofs in 90- to 120-day sprints. Initial proofs will focus on coalescing and compressing Title 10 ISR data with C2 data (such as that from air operations centers) to create hybrid, multicloud data fabric layers. These proofs will support the improvement of the find, fix, and track elements of a convergence event. Subsequent proofs will include Title 50 components and will establish tactical edge extensions and zero trust principles for sharing across and between data layers.

The DoD can then adopt a flexible edge platform, like Red Hat® Device Edge, to implement mission system solutions.

Achieve decision dominance on the battlefield

Red Hat Device Edge is a flexible platform that supports the deployment and management of workloads in small resource-constrained devices in challenging field locations, such as satellites at the edge of the AOR.

It delivers a DoD-ready distribution of MicroShift, a lightweight Kubernetes container orchestration solution built from the edge capabilities of Red Hat OpenShift®. This enterprise application platform provides an edge-optimized operating system built from Red Hat Enterprise Linux® and Red Hat Ansible® Automation Platform for consistent Day 1 and Day 2 management of hundreds to thousands of sites and devices pulling data from the battlefield.

Red Hat Device Edge can help the DoD achieve decision dominance and mission success through:

- Implementation of hybrid or multicloud environments for mission data processing.
- Management and distribution of high-volume workloads.
- Standardization of data derived from edge devices in the field.
- Simultaneous integration of critical data across domains.
- Increased resiliency of edge assets on the battlefield.

With Red Hat Device Edge, the shift from deliberate to dynamic targeting becomes a reality.

Balance innovation with consistency and security

For critical missions, agility is key to success. Red Hat products and services can help the DoD respond with innovation while establishing interoperability and maintaining high security posture across all branches and agencies. An open hybrid cloud approach with Red Hat can help the DoD teams connect clouds and processes.

Explore Red Hat's innovative solutions that help address the DoD's technology challenges.

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