

AFRL

ADVANCED BATTLE MANAGEMENT SYSTEM (ABMS) DEVICEONE SECUREVIEW

ENABLING JADC2-ABMS INFORMATION AT THE TACTICAL EDGE

WHAT IS ADSV?

ABMS DeviceOne SecureView (ADSV) is a flexible platform based upon SecureView®, the premier Cross-Domain Access Solution developed by the Air Force Research Laboratory (AFRL). SecureView® provides users with the ability to access Multiple Independent Levels of Security (MILS) on a single workstation. When used with the Commercial Solutions for Classified (CSfC), ADSV provides secure remote access to classified networks, enabling telework from home or on the road.

WHY ADSV?

Unlike other MILS solutions that require extensive infrastructure upgrades or investments, ADSV deploys with minimal change to network infrastructure, which drastically increases the cost savings and the speed of deployment.

HOW DOES ADSV WORK?

ADSV leverages Virtual Private Network (VPN) tunnels over the existing infrastructure, including unclassified Internet, while maintaining the required separation and protection of the classified networks. ADSV integrates seamlessly with existing Virtual Desktop Infrastructure (VDI) to enable quick and easy access to network resources. For use cases that require classified and unclassified network access, SecureView® hosts multiple guest virtual machines running at different classification levels.

WHAT BENEFITS DOES ADSV PROVIDE?

Both leadership and warfighters on the tactical edge can securely and remotely access classified data from almost anywhere, providing immediate access to mission critical data.

JADC2 – ABMS VISION

- The Joint All-Domain Command & Control (JADC2) Advanced Battle Management System (ABMS) vision is a unified domain and control system that connects existing sensors and shooters, and distributes the available data to all domains (air, land, sea, cyber, and space).
- This joint effort seeks to enable data transfer and/or data access between domains (i.e. every sensor, every shooter) at any time. This necessarily includes cross-domain data transfer and access between differently classified security domains.



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IMPACT ON AIR FORCE RESPONSE TO COVID-19

When the COVID-19 pandemic hit, AFRL responded immediately to Air Force Chief Architect Preston Dunlap who “challenged the Department to bring capability forward faster – both for the warfighter at the edge and now for the enterprise at home.” Dunlap commends the AFRL Rome team for “answering the call without hesitation and working 24/7 to deliver remote, secure computing capability faster than ever before.” He describes AFRL’s efforts as “heroic work” for the Air and Space Force.

BACKGROUND

In 2010, the Air Force Research Laboratory (AFRL) developed SecureView® to answer an important national requirement. The Office of the Director of National Intelligence tasked AFRL with developing a secure workstation meeting the following criteria:

1. Provide the Intelligence Community (IC) with unparalleled security and protection against data exfiltration
2. Support high-performance applications
3. Streamline IT infrastructure requirements for classified networks
4. Enable rapid provisioning & deployment of the solution across the IC and Department of Defense
5. Ensure agility to meet future requirements

HOW ADSV SUPPORTS THE JADC2-ABMS VISION?

ADSV enables the key goals for the JADCS-ABMS vision – connecting sensors and shooters. By using ADSV, the warfighter on the tactical edge gains unfettered access to not just multi-domain data, but also cross-domain data.

ENABLING JADC2-ABMS BEYOND ADSV

AFRL maintains a lead role in the ABMS crossDomainONE. The crossDomainONE product line will implement the technical capabilities to move data into, out of, and within the multi-level secure cloud, as permitted by policy and required for JADCS-ABMS operations. Beyond the cloud, crossDomainONE will also support further development of direct tactical cross-domain links to support system resiliency and timeliness.

To accomplish this, crossDomainONE will achieve network, data type, and protocol agility to meet today’s fast paced, dynamic missions for the Air and Space Forces.

AFRL has developed other cutting-edge cross-domain technologies that advance JADC2-ABMS capabilities. The Voice & Video Cross Domain Solution (V2CDS) enables secure cross-domain audio and video calls; and X-domain Agile Rules-Based Information Transfer Orchestrator (X-ARBITOR), a next-generation transfer solution, which quickly adapts to mission needs and changing data transfer requirements.

ADSV

Capability

- Supports NIPRNet, SIPRNet, and Coalition access on a single PC or laptop
- Intuitive user interface that requires minimal training for end users
- Enables secure mobility solutions for Executive Communication and traveling personnel
- Seamlessly supports high performance and high-bandwidth applications

Security

- Type I bare-metal hypervisor enhances the cyber defense posture of government workstations
- Minimizes Type I encryptors by integrating support for NSA’s Commercial Solutions for Classified (CSfC)
- Ensures 100% Trusted Boot and Secure Isolation in the hardware
- Has received highest MILS evaluation to date against NIST 800-53 Criteria

Flexibility

- Supports either Standard Desktop Configuration (SDC) or Thin Virtual Desktop Infrastructure (VDI)
- Enables rapid provisioning, management, and re-configuration of workstations
- Government off-the-shelf (GOTS) solution based on OpenXT which meets DoD’s open-source requirement

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