Crawl, Walk, Run: Accelerate Agency Data Modernization

How an ODL simplifies and streamlines legacy modernization

An Operational Data Layer (or ODL) is an architectural pattern that centrally integrates and organizes siloed enterprise data, making it available to consuming applications. It enables a range of board-level strategic initiatives such as Legacy Modernization and Data as a Service, and use cases such as single view, real-time analytics, and mainframe offload.

An ODL is an intermediary between existing data sources and consumers that need to access that data, and is deployed in front of legacy systems to enable new business initiatives and meet new requirements that the existing architecture can't handle – without the difficulty and risk of a full rip and replace of legacy systems.

Secure environments for critical workloads
MongoDB offers defense agencies crucial built-in security features like SAML authorization, role-based access controls, network isolation, encryption in-transit and at-rest, tracking account activity, field-level encryption, and more.

Reduce downtime, ensure high availability
Agencies must employ capability on short notice. MongoDB allows for in-depth analysis of data and consolidates into a single view. This technology allows for rapid scaling to ensure high availability and flexibility to put data close to the warfighter, anywhere in the world.

Modern apps for high-tech projects
The defense space has always been at the forefront of technological developments. MongoDB powers modern applications, accelerates digital transformation, and facilitates innovation, all without compromising data security.

Accelerate time to mission

Unparalleled Security

Reliable for Critical workloads

Technology Qualifiers

- MongoDB Enterprise Advanced has achieved over 40 Programmatic ATOs all the way up to TS/SCI and SAP across DoD programs

- MongoDB Enterprise Advanced is the only NoSQL database with a DISA STIG

- MongoDB Atlas for Government (US) is FedRAMP Moderate Authorized

MongoDB

Technology Readiness Levels

Program	Use-case	Impact Level	TRL Level
Unified Data Library	Data Lake	IL-2 to IL-6	TRL-9
Space Camp and Kessel Run Software Factories	Test and Dev for various applications	IL-2 to IL-6	TRL-8
United States Space Force Enterprise Ground System	Archive time series data from ground based sensors	IL-3 to IL-6	TRL-9
MEIS	Cache layer for event and real-time data	IL-3 to IL-6	TRL-9
Open FEMA	Modernize legacy systems w/Operational Data Layer	IL-2	TRL-9

Impact to Warfighter

Today's threat with near-peer adversaries demands a different approach to software development and data storage. Old methods of storing data in relational databases require complex adjustments in the Object Relational Mapping (ORM) — a bridge between applications and relational databases. MongoDB removes the ORM "middleman" with a non-relational database that allows development teams adjustments to applications at speeds critical for vital missions. The first step to modernization of software systems is to store data more effectively to welcome applications changes and iterations.

Siloed, legacy data presents a complex problem. In an operational world with Special Operations Forces, downtime or risk of data loss is unacceptable. An Operational Data Layer approach allows for the preservation of legacy systems while simultaneously allowing to leverage data for modern applications, while slowly offloading legacy systems with reduced risk. MongoDB deploys the same anywhere in the world on-cloud or on-prem, meeting diverse SOF needs across the globe. Data is the center of decision making, predictive analytics, AI/ML, and a host of key decision making aspects of modern warfare. MongoDB is a battle tested solution for storing data optimally to effectively employing data tools.

Additional Resources

- MongoDB for Defense (mongodb.com/government)
- Atlas for Government (mongodb.com/atlasforgov)
- Free online training (university.mongodb.com)
- Documentation (docs.mongodb.com)
- MongoDB download (mongodb.com/download)

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