

SecDevOps

Secure Development Operations



WHAT IS SECDEVOPS?

Over the past ten years, the product delivery and IT industry has witnessed the increasing use of a process known as Secure Development Operations (SecDevOps). SecDevOps attempts to integrate software developers, cybersecurity engineers, and operation engineers to rapidly deliver high-quality, highly secure products. Business pressures have driven developers to adapt to changing priorities and requirements with smaller and more frequent code deployments.

Traditionally, once software solutions enter production, the operations team assumes ownership. The greatest challenge is to provide rapid availability, reliability, code quality and security while new capabilities are constantly released into customer test and production environments.

SecDevOps represents a fundamental change to software development, information assurance, and infrastructure management by bringing these interdependent disciplines together through two types of guidance: technological (through the use of tools and automation) and more importantly, cultural (through reimagining team composition and responsibilities).



OUR APPROACH

Leidos' focus of SecDevOps provides an integrated and standard set of tools and methods that, when employed, result in reduced security risk while simultaneously meeting business objectives of faster and more cost-effective project delivery. At Leidos, we empower developer and operations engineers to deliver innovative solutions through an "all things continuous" approach. The Leidos SecDevOps capability provides the following benefits:

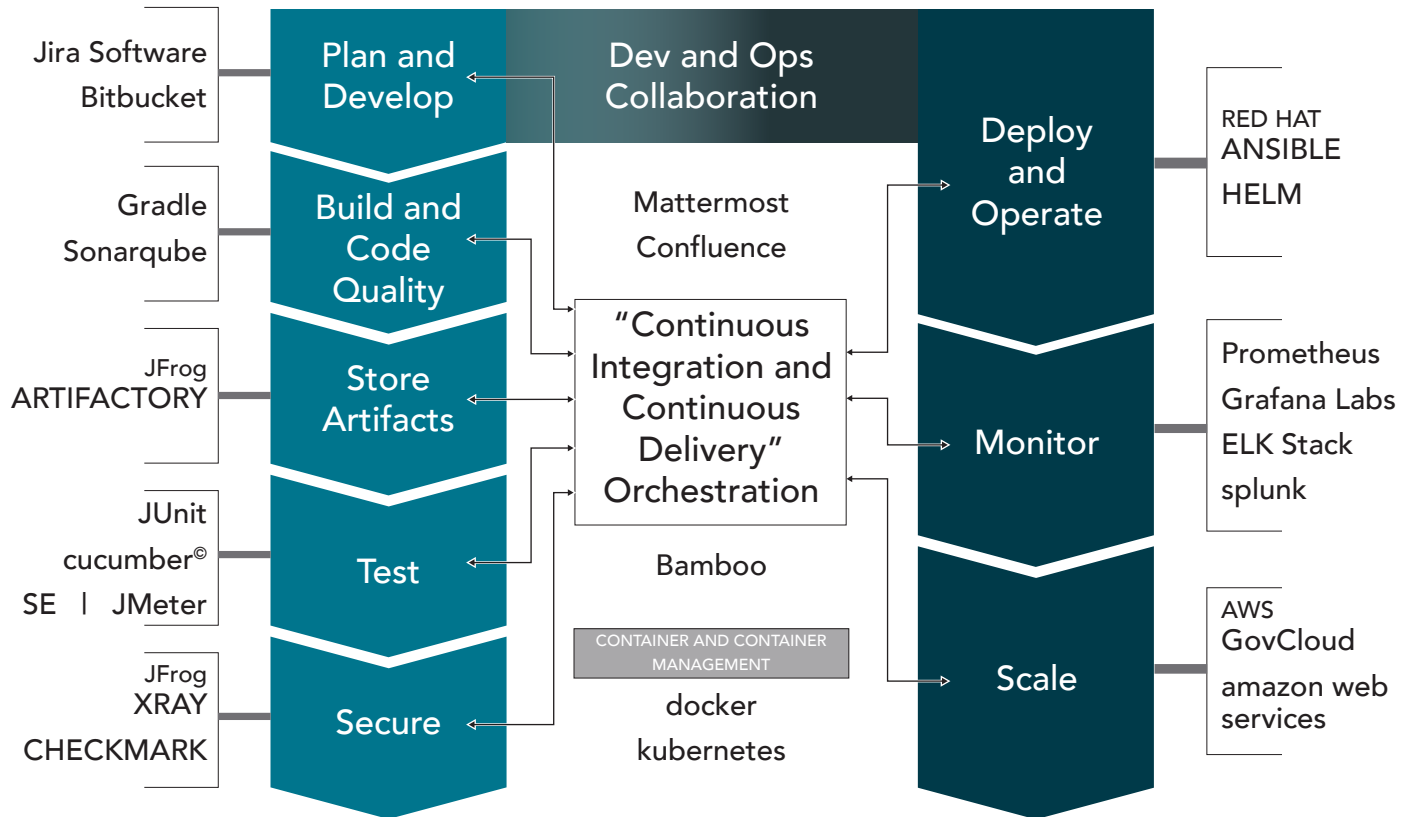
- ▶ Increase efficiency in reuse of artifacts, micro-services, and software capabilities
- ▶ Continuous integration/continuous delivery of secure software solutions
- ▶ Enable implementation of the Leidos Engineering Edge common Agile processes and best practices
- ▶ Fully automate deployments with consistent, repeatable results, including immutable infrastructure and blue-green deployments using infrastructure as code-based deployment techniques

Our SecDevOps capability provides an enterprise-scale code reuse repository for reuse of services, tools, and processes; an integrated and complete SecDevOps toolchain solution that can be adapted to project build, test, and deployment requirements; playbooks and implementation guidelines; and tools that encourage a continuous learning culture where ideas, processes, and capabilities are shared and leveraged.

The Leidos SecDevOps capabilities provide awareness of the product lifecycle across teams, reduces risk associated with implementing SecDevOps and enables projects to reduce time to market, reduce cost, increase development, test and deployment efficiency, and achieve a faster time to authority to operate (ATO) than traditional methods.

The Leidos SecDevOps tools and methods enable increased focus on innovations and customer mission through reduced time spent on infrastructure and consistent, repeatable, and automated delivery.

SecDevOps is not simply employing a team of combined development, security, and operations engineers but a methodology and set of technologies based upon lean engineering and six sigma principles to reduce time and effort associated with IT systems and applications. The key metric associated with SecDevOps is time of idea/discovery to time of delivery. The Leidos SecDevOps technology stack is represented below.



OUR CAPABILITIES

Agile Software Development

- ▶ Standard set of proven and successfully applied Agile processes employed on Agile projects company-wide
- ▶ Standard set of Agile tools
- ▶ Seamless integration with security engineering and operations

Data Center Operations

- ▶ System and network monitoring and optimization
- ▶ Data center consolidation planning and execution
- ▶ Security management
- ▶ Staff allocation and data center process optimization

Technology Refresh and Advisory Services

- ▶ Hardware and software support
- ▶ Capacity planning
- ▶ Systems integration, including COTS products
- ▶ Legacy systems bridging, integration, and retirement

Integrated Metrics-based Governance and Management

- ▶ Policy, standards, and procedures development
- ▶ Risk assessment, cost-benefit, and feasibility analyses
- ▶ Configuration and change control management
- ▶ Metadata, master data, reference data and data quality management; information assurance

Cloud-Based Deployment Automation

- ▶ Infrastructure as Code
- ▶ Blue/Green application deployment
- ▶ Immutable servers

FEATURES AND BENEFITS

KEY FEATURES	BENEFITS
Self Service – easy setup through automation eliminating traditional pre- DevOps stove-piped development and IT environments.	No wait time and no middleman. Creates cost and schedule savings related to automation and rapid project startup.
Highly available and resilient to failures; highly scalable with respect to project size and complexity.	Practically eliminate down time with implementation across multiple AWS availability zones and is readily adaptable to all project types including large and/or highly complex projects.
Reduce time spent on infrastructure through automated configuration of project environments; product builds and execution.	Cost effective, consistent, reusable, increasing development and code efficiency, quality and security, eliminating unnecessary infrastructure costs.
Infrastructure optimization to ensure the security, performance, and reliability of the SecDevOps operational environment.	Provides a secure and hardened environment (S4S & NIST SP 800-171) including hardened OS images (CIS L1 and L2). Provides continuous monitoring.
Faster time to ATO (authority to operate) - process changed from months to weeks and eliminates excessive documentation.	Leidos Program proof point: 85% of your ATO controls are inherited, and 15% remaining are application specific not infrastructure.
Enables repeatable and consistent implementation of the Leidos Engineering Edge® common processes.	Reduces time to market and reduces cost through efficient process implementation. Mitigates risk.
Infrastructure as Code.	Consistent CM controlled deployments using immutable infrastructure resulting in no configuration drift between development and production and consistent, high-quality results.

PROVEN SUCCESS

Leidos worked with a Federal Government Civilian Agency to develop an automated application hosting service. Using templated, self-service deployments and leveraging pre-hardened immutable infrastructure, consumers of the service were provided with fully automated, self-service blue/green deployment capabilities that could be easily integrated into existing CI/CD pipelines. The service provided consumers with up to 85% security control inheritance, taking the typical FISMA Moderate ATO timeline from months to days. The end result was faster delivery of features into production, practically eliminated downtime and improved security, all at a lower price point than was previously possible.

WHY PARTNER WITH LEIDOS?

As the largest Federal Government Systems Integrator, Leidos SecDevOps engineers are able to combine experience executing mission-critical enterprise-class operations with the latest advances in automation, infrastructure as code, and cloud computing to deliver high-quality solutions suitable for the unique requirements of any organization. Our team has proven experience delivering and operating SecDevOps programs in the civilian, DOD, and intelligence communities.

NEXT STEP

We understand that no two organizations are alike. Our SecDevOps professionals work side by side with the customer team to understand their environment and come up with a solution specific to the customer's needs. Contact us today to discuss your next product delivery and/or IT modernization project.

ABOUT LEIDOS

Leidos is a Fortune 500® information technology, engineering, and science solutions and services leader working to solve the world's toughest challenges in the defense, intelligence, homeland security, civil, and health markets. The company's 31,000 employees support vital missions for federal, state, and local governments, private and commercial companies, public utilities, and international organizations. Headquartered in Reston, Virginia, Leidos reported annual revenues of approximately \$10.17 billion for the fiscal ended December 29, 2017.

FOR MORE INFORMATION

secdevops@leidos.com | leidos.com/competencies#secureddevelopment

 **LinkedIn:** Leidos

 **Facebook:** Leidosinc

 **YouTube:** Leidosinc

 **Twitter:** @Leidosinc