ENTERPRISE IT MODERNIZATION
DevOps

WHAT IS DEVOPS?

Over the past ten years, the IT industry has witnessed the proliferation of a concept known as DevOps. DevOps attempts to bridge the divide between traditional software developers and operation engineers. Business pressures have driven developers toward dynamic, smaller and more frequent code deployments. Classically, once code enters production, the operations team assumes ownership. The challenge this team faces is how to provide availability, reliability, code quality and security while new code is constantly released into the production environment. DevOps attempts to answer this question by providing two types of guidance: technological and cultural.

Taken together, the components of DevOps represent a fundamental change to software development and infrastructure management. By bringing the interdependent disciplines closer together, the results are:

▶ Decreased software development time
▶ Lowered maintenance costs
▶ Increased collaboration

One of the main challenges of implementing DevOps is its vague definition, derived from the fact that most IT professionals define DevOps through the lens of their particular discipline. Further compounding the problem, many IT departments have organizationally grouped professionals and developed their respective skill sets to provide specialized teams of experts who rapidly respond to specific demands. This specialization has resulted in stovepipes, and higher Total Cost of Ownership (TCO) as systems and applications have grown in diversity, form, and function.

OUR APPROACH

Leidos focus of DevOps is to provide reduced security risk while simultaneously meeting business objectives of faster and more cost-effective project delivery and empowering developers to deliver innovative solutions.At Leidos, we achieve this through the use of infrastructure as code-based deployment techniques. This provides fully automated deployments with consistent, repeatable results, including immutable infrastructure and blue-green deployments.

DevOps is not simply employing a team of combined development and operations 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 DevOps is time of idea/discovery to time of delivery. Typical components include:

▶ Continuous delivery and integration (CI/CD)
▶ Automation tools
▶ Unified backlog management
▶ Agile development
▶ Frequent small deployments to minimize risk

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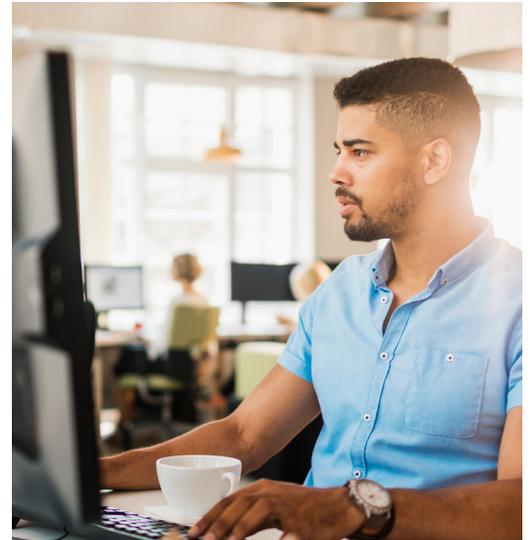
FEATURES AND BENEFITS

Self Service – through automation eliminating traditional pre-DevOps stove-piped IT environment

No wait time and no middleman

Faster time to ATO (authority to operate) - process changed from months to weeks and eliminate excessive documentation

Leidos Program proof point: 85% of your ATO controls are inherited, and 15% remaining are application specific not infrastructure.

Full support to Blue/ Green methodology

Can deploy, test and verify in production-like environment without customer impact

Reduce time spend on infrastructure align more value-add development

Cost effective, consistent, reusable, eliminating unnecessary infrastructure costs

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 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, with a higher uptime and improved security, all at a lower price point than was previously possible.

OUR CAPABILITIES

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

WHY PARTNER WITH LEIDOS?

As the largest Federal Government Systems Integrator, Leidos DevOps 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 government customer. Our team has several years of proven experience delivering and operating DevOps programs in the civilian, DOD, and intelligence communities.

NEXT STEP

We understand that no two organizations are alike. Our DevOps professionals work side by side with your team to understand your environment and come up with a solution specific to your organization's needs. Contact us today to modernization project.

FOR MORE INFORMATION

infrastructure@leidos.com | leidos.com/enterprise-it-modernization

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