



# Code2Combat

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VICTORY SMILES UPON  
THOSE WHO  
ANTICIPATE THE  
CHANGE IN THE  
CHARACTER OF WAR

Guilio Douhet







- Software shared between F-22 & F-35
- Rapid updates
- Continuous innovation
- New software sources

enabled through  
**DevSecOps**











# DOD Software Modernization Strategy & Implementation Plan





Joint Warfighting Cloud Capability (JWCC) – DoD’s multi-vendor, enterprise-wide acquisition vehicle

Joint Operational Edge (JOE) Cloud: an integrated mesh of large form factor edge cloud platforms, installed on-premises at DOD locations, to deliver commercial cloud services

Accelerate Enterprise  
Cloud Environment

Establish  
Software Factory  
Ecosystem

Software Defined Compute  
Unified Multi-Cloud Ecosystem  
Resilient, Localized Data Processing  
Strengthen Security Posture  
Future-proofed Infrastructure



# 50+ DoD Software Factories and Growing

Accelerate Enterprise  
Cloud Environment

Establish  
Software Factory  
Ecosystem

Transform Processes

DevSecOps Platforms

Security First

**Shared Services**

**Collaborative Environment**

**Scalable Infrastructure**

**Continuous Integration & Deployment**

**Talent Development**



Establish  
Software Factory  
Ecosystem

Transform Processes

Software Acquisition Pathway 5000.87  
Continuous Authorization (cATO)  
Workforce Development

Agile Acquisition Approach  
**Policy Evolution**  
**User-Centered Design**  
**Modernizing Risk Management**  
**Defensive Cyber Operations**







## **Increasing threats to software supply chain**

Threat actors incorporating attacks on downstream functions

Scale of impact hard to confine using traditional methods

Securing software development

## **Accelerating attack detection and remediation**

Rapid response to zero-day attacks

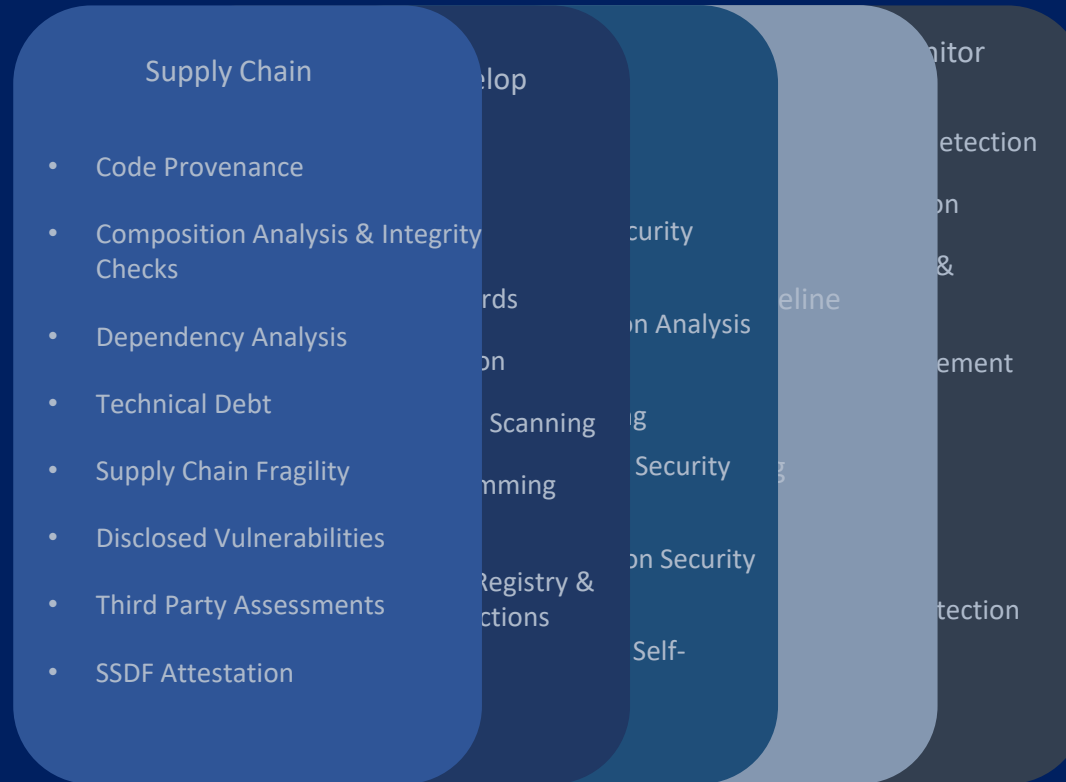
Accelerate delivery of system patches and updates

## **Respond to continuously changing threat environment**

Coordination across all stakeholders (cyber defenders, AO, sys admins, developers, PM, ...)



# Securing the DevSecOps Journey



# Securing the DevSecOps Journey

## Supply Chain

- Code Provenance
- Composition Analysis & Integrity Checks
- Dependency Analysis
- Technical Debt
- Supply Chain Fragility
- Disclosed Vulnerabilities
- Third Party Assessments
- SSDF Attestation

Plan & Develop

Modeling

Security Training

coding standards

code protection

Infrastructure as Code Scanning

Securely Safe Programming  
Practices

Software Component Registry &  
Access Control protections

Security

Static Analysis

Configuration

Security

Container Security

Self-

Monitor

Detection

Response

&

Remediation

Protection

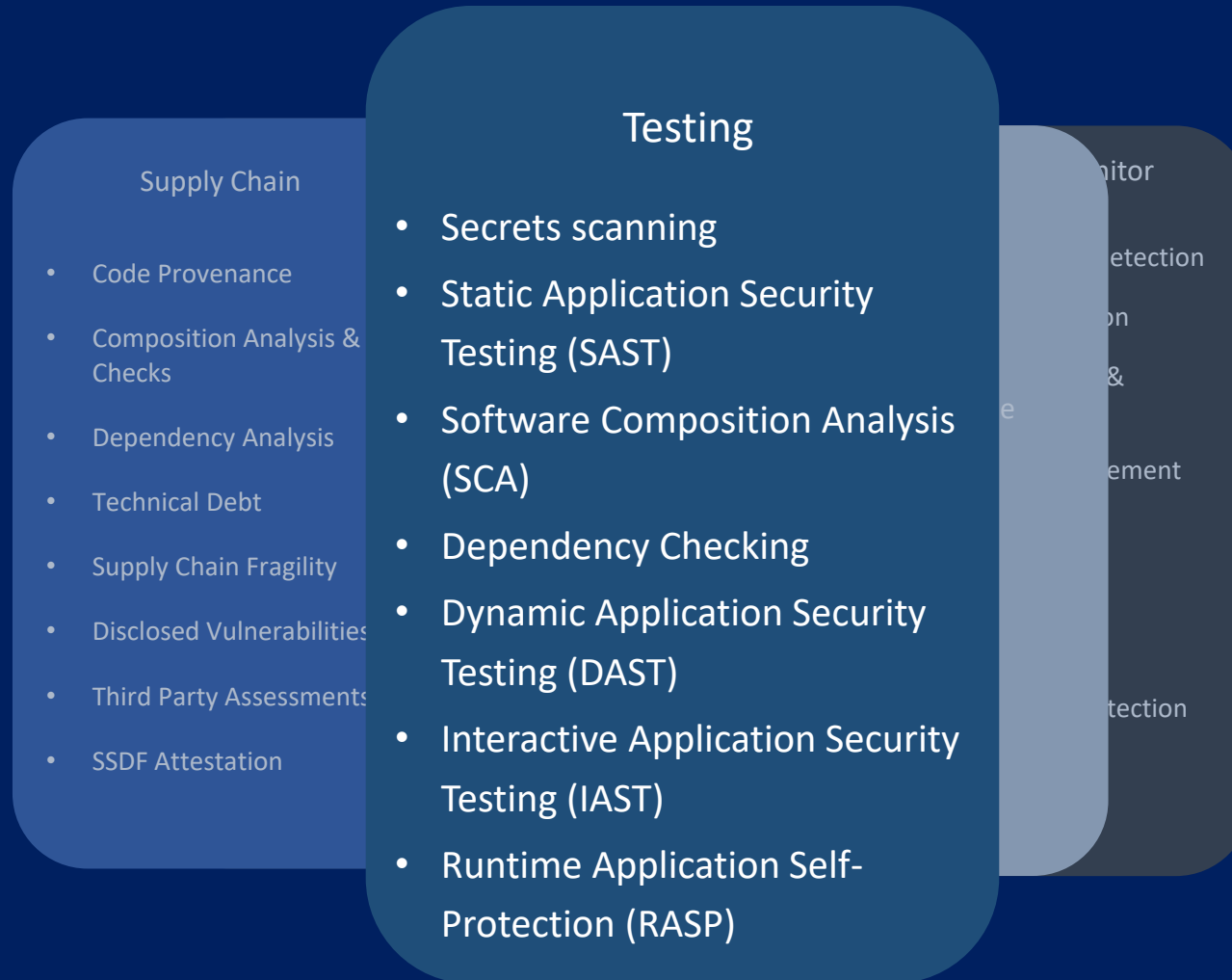


# Securing the DevSecOps Journey

## Plan & Develop

- Threat modeling
- Security Training
- Secure coding standards
- Source code protection
- Infrastructure as Code Scanning
- Memory Safe Programming Languages
- Trusted Component Registry & Typo-squatting protections

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## Release

- SBOM
- Code signing & pipeline integrity
- Fuzz Testing
- Penetration Testing
- Policy-as-Code
- Artifact repository



# Securing the DevSecOps Journey

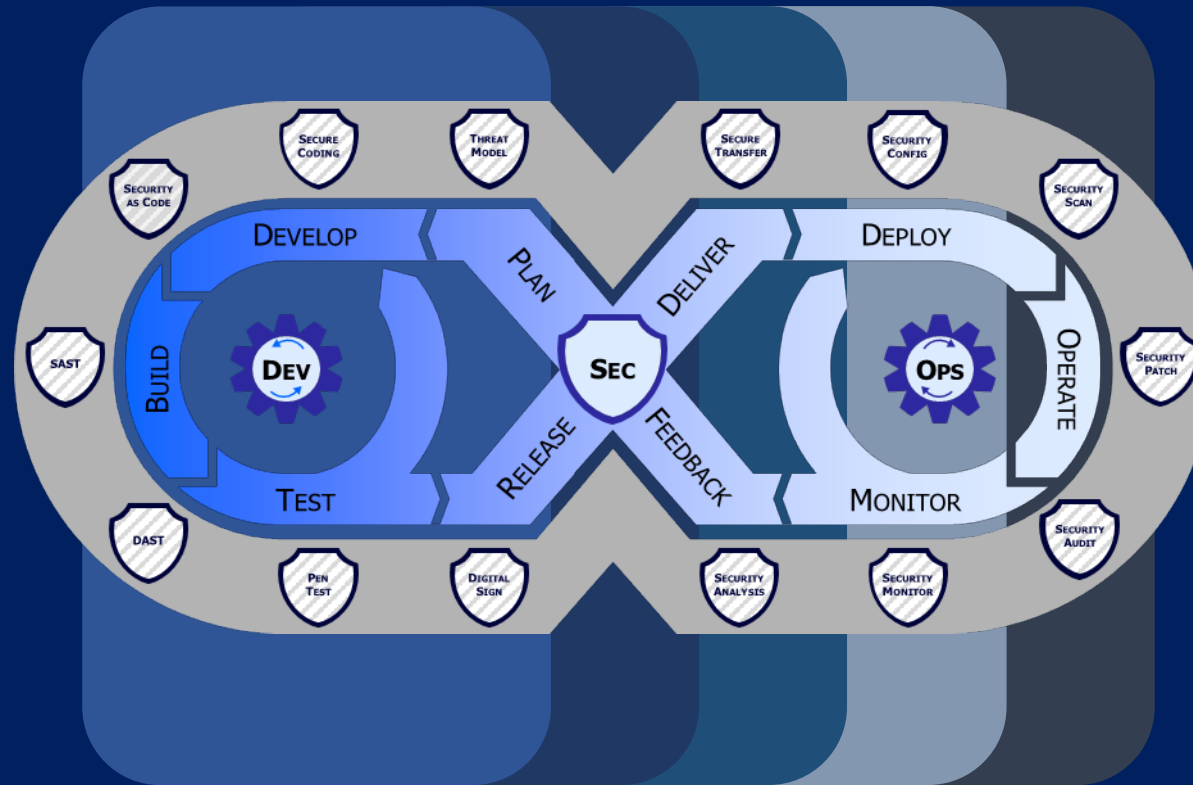
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## Operate & Monitor

- Configuration drift detection
- Secrets leak detection
- Patch management & remediation
- Vulnerability management
- Container security
- ICAM & Zero Trust
- API Protection
- Cloud Workload Protection
- Backup & Recovery

# Securing the DevSecOps Journey



Security Monitoring

DevSecOps Platform Protection & Operations

The #1 skill I want is the  
ability to adapt.  
Adaptability wins - not the  
one who comes up with the  
magic thing

Gen Joe Rainey, Commander US Army Futures Command







# Questions

More Information: [www.cloud.mil](http://www.cloud.mil) & Modern Software Practices at <https://dodcio.defense.gov/library/>