

Business & Enterprise Systems

DAFITC 2024 BES Atlassian Toolset and DevSecOps Pipeline



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BAT Overview

- **Purpose**
- **Integrated Program Office**
- **Capabilities**
- **Key Milestones**
- **Expansion Targets**
- **Additional Services**





BAT Purpose

- ❑ Public Law 115-91 (FY2018 NDAA, Section 874)
 - ❑ Adoption of Agile/ iterative software practices and supporting technologies
- ❑ Provide an accredited, integrated, highly collaborative toolset that enables the BES' Agile transformational journey
 - ❑ Agile tools requirement - focus item from 2020-2021 Agile Maturity Assessment Program
- ❑ Provide a low-cost solution that supports Agile / iterative software practices; owned and operated by BES for BES Capability Delivery Teams (CDTs)
- ❑ Provide a single enterprise Atlassian instance for the Air Force





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BAT Integrated Program Office



Service Management
Service Domain Owner (SDO)
AFLCMC/GBQ
Ms. Katie Serrano

- Service Delivery
- Program Management
- Configuration Management
- Test Management (Manual / Automated)
- Governance
- Migration Management
- Workforce Development

Cybersecurity
Service Domain Owner (SDO)
AFLCMC/GBZ
Mr. William Kramer

- Authority to Operate (ATO)
- IAVMs/CVEs
- System-Level Cybersecurity Configurations
- Day-to-Day Security Operations
 - Maintenance
 - Monitoring / Scanning

Engineering
Service Domain Owner (SDO)
AFLCMC/GBE
Mr. Steve Duffield

- DevSecOps CI/CD Pipeline
- Pipeline Integration w/ the BAT (Bitbucket)

Operations
Service Domain Owner (SDO)
AFLCMC/GBO
Col Heath Frye

- System Configuration / Administration
- Service Desk

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BES Atlassian Toolset (BAT)



BES Atlassian Toolset / AKA The BAT

166 CDTs
449 Projects / Spaces
5,724 Users

STATS

Hosting:

- ☐ Air Force Cloud One

Impact Level:

- ☐ IL-5 – Production
- ☐ IL-4 – Test / Integration
- ☐ IL-2 - Development

ATO: 

ARCHITECTURE / INFRASTRUCTURE

Serverless Compute Engine:

- ☐ Amazon ECS Fargate

Infrastructure as Code (IaC):

- ☐ Terraform

System Architecture:

- ☐ Multi-Node high availability (HA)

INSTANCE SPECIFICS

Hosting Type:

- ☐ Atlassian Data Center

Capabilities:

- ☐ 4 – Products
- ☐ 31 – Plug-Ins
- ☐ 6 – Operational Support Tools
- ☐ 3 - Integrations

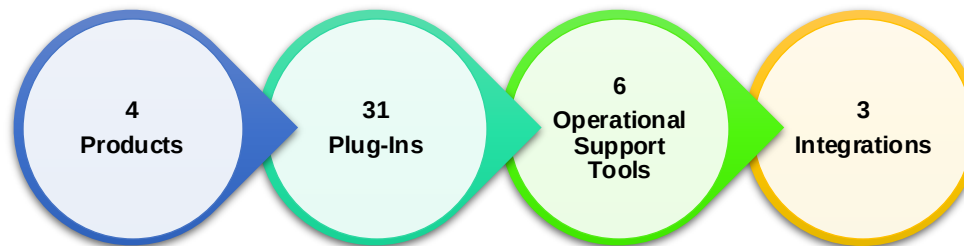


BAT Capabilities



Jira Software

Improve transparency and visibility into tasks and progress; and enhance collaboration across teams through streamline project management and efficient tracking and resolution of issues.



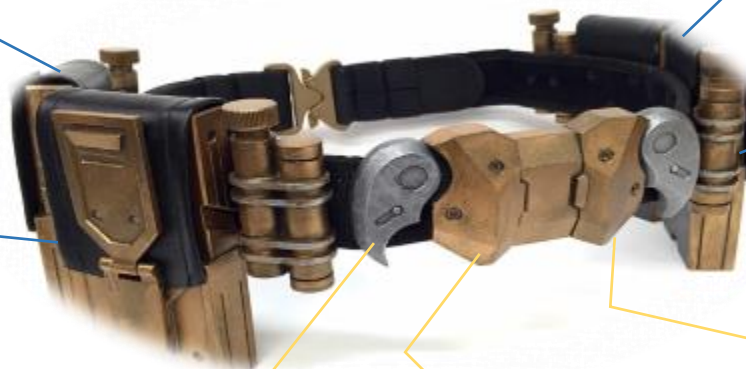
Jira Service Management

Maximize your IT service management efficiency by streamlining processes, resolving issues quickly, empowering self-service, and enhancing customer satisfaction.



Confluence

Increase collaboration and knowledge sharing, empowering teams to create, organize, and access information efficiently to drive innovation.



Microsoft 365 Government Community Cloud (GCC) High / FedRAMP High

Enables Jira Service Management email ingestion of tickets and ticket comments

GBE DevSecOps Pipeline

Enables BES programs to increase the overall quality, security, and speed to deployment with reduced risk for fielding capabilities.

GBZ Cybersecurity Scanning Tools

Provides insights to the quality and security of code being developed.

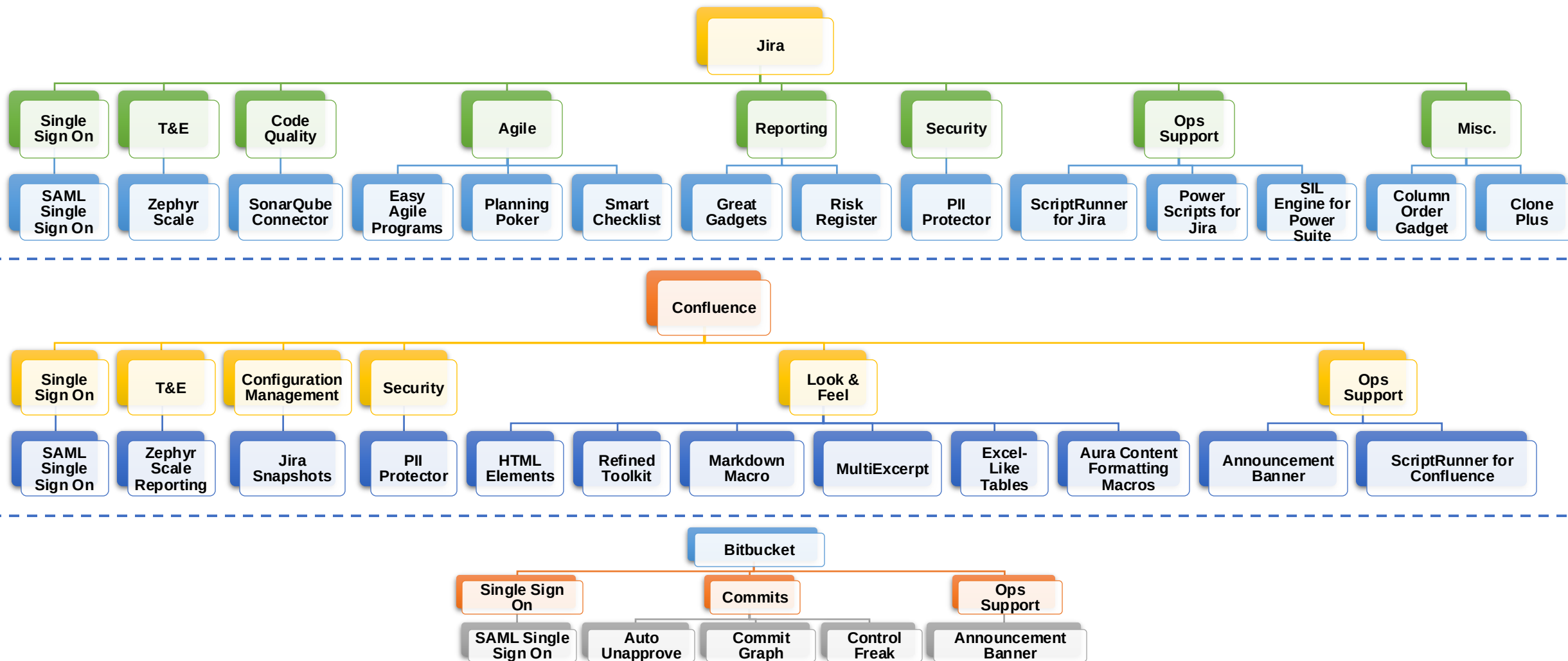
Bitbucket

Accelerate software development by streamlining collaboration, version control, and deployment for enhanced productivity and code quality.





BAT Plug-Ins





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BAT Capability Expansion Targets

- ☐ Instantiation of the ELK Stack for Continuous Monitoring (Completed May-2024)
- ☐ (6) New Plug-Ins (Aug-2024)
 - ☐ Smart Checklist for Jira Pro
 - ☐ Easy Agile Programs
 - ☐ Great Gadgets for Jira DC
 - ☐ ScriptRunner for Confluence
 - ☐ Aura Content Formatting Macros
 - ☐ Jira Snapshots for Confluence
- ☐ Integration of SonarQube to BAT Jira (Aug-2024)
- ☐ Instantiation of ATO/IL-5 Enclave to host Checkmarx One
- ☐ Checkmarx One Instantiation & GBZ Service Desk Subsumption (In Progress)
- ☐ Integration of Checkmarx One to BAT Jira
- ☐ Integration of CastAIP to BAT Jira
- ☐ DSO Pipeline Service Desk Subsumption





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BAT User Expansion Targets

- ☐ Digital Transformation Office (DTO) Pilots
 - ☐ Aug-Sep 2024 - ISR Sensors Division Migration (AFLCMC/WIN)
- ☐ DEAMS Atlassian Instance Subsumption
- ☐ ERP-CS Atlassian Instance Subsumption
- ☐ ISMT Subsumption (A4 Requirements Intake)
- ☐ Advanced Manufacturing Program Office (AFLCMC/RO)
- ☐ C2IMERA (Kessel Run) Migration
- ☐ Bomber PEO Migration (AFLCMC/WB)
- ☐ Future Tankers PEO Migration (AFLCMC/WLY)
- ☐ HQ CCC/SACA Migration
- ☐ DMLS Program Office Migration
- ☐ AFIRM Program Office Migration





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BAT Additional Services

- ☐ Learning Paths
- ☐ Workshops
- ☐ Tools User Forums



Training



- ☐ On-Demand CDT Specific Tools Coaching



Coaching



Knowledge

- ☐ 800+ Knowledge Articles for BAT Capabilities



BAT Questions?

For BAT information check out our Knowledge Base at:

<https://bes-atlassian.cce.af.mil/confluence/display/HIAS/Agile+Services+Knowledge+Base>

***Submit a BAT question / request at:**

<https://bes-atlassian.cce.af.mil/jira/servicedesk/customer/portal/4>

* Must have a CAC to access sites



GBE DSO Core Capabilities and Benefits

■ **Goals**

- Enable BES programs to increase their overall quality, security, and speed to deployment with reduced risks for fielding capabilities
- Provide visibility into the software development activities and the quality of the software being developed

■ **Services**

- Jenkins automation platform providing CI/CD pipeline orchestration
- Automated static code analysis (quality & security)
- Automated testing (unit, functional, security, performance/load)
- Automated application builds and deployments

Reduced software development risk and cost, increased speed of delivery, and improved software quality for BES programs!



GBE DSO Pipeline Capabilities

•Jenkins

- Linux on-demand agents
- Docker agent
- Windows agent

CI/CD Engine



•Bitbucket

- GitLab
- AWS Code Commit
- Microsoft ADO

Source Control Integration



•Maven / Gradle

- NPM
- .Net / MSBuild
- Terraform / Ansible
- AWS CLI / EKS CLI
- Helm / Kubernetes CLI
- JFrog CLI

Automated Build/Deploy



•CycloneDX Tools

- Dependency-Track
- Eagle Eye Focus
- Checkmarx OSA (GBZ)
- Trivy / Syft
- Docker SBOM

Supply Chain Security Tools



•JFrog Artifactory

- Dependency resolution
- CDT artifact storage

Artifact Repository



•JUnit

- Apache JMeter
- Selenium
- OpenText ALM/UFT

Automated Testing



•SonarQube/SonarLint

- CAST AIP (GB4)

Static Code Analysis - Quality



•Checkmarx SAST (GBZ)

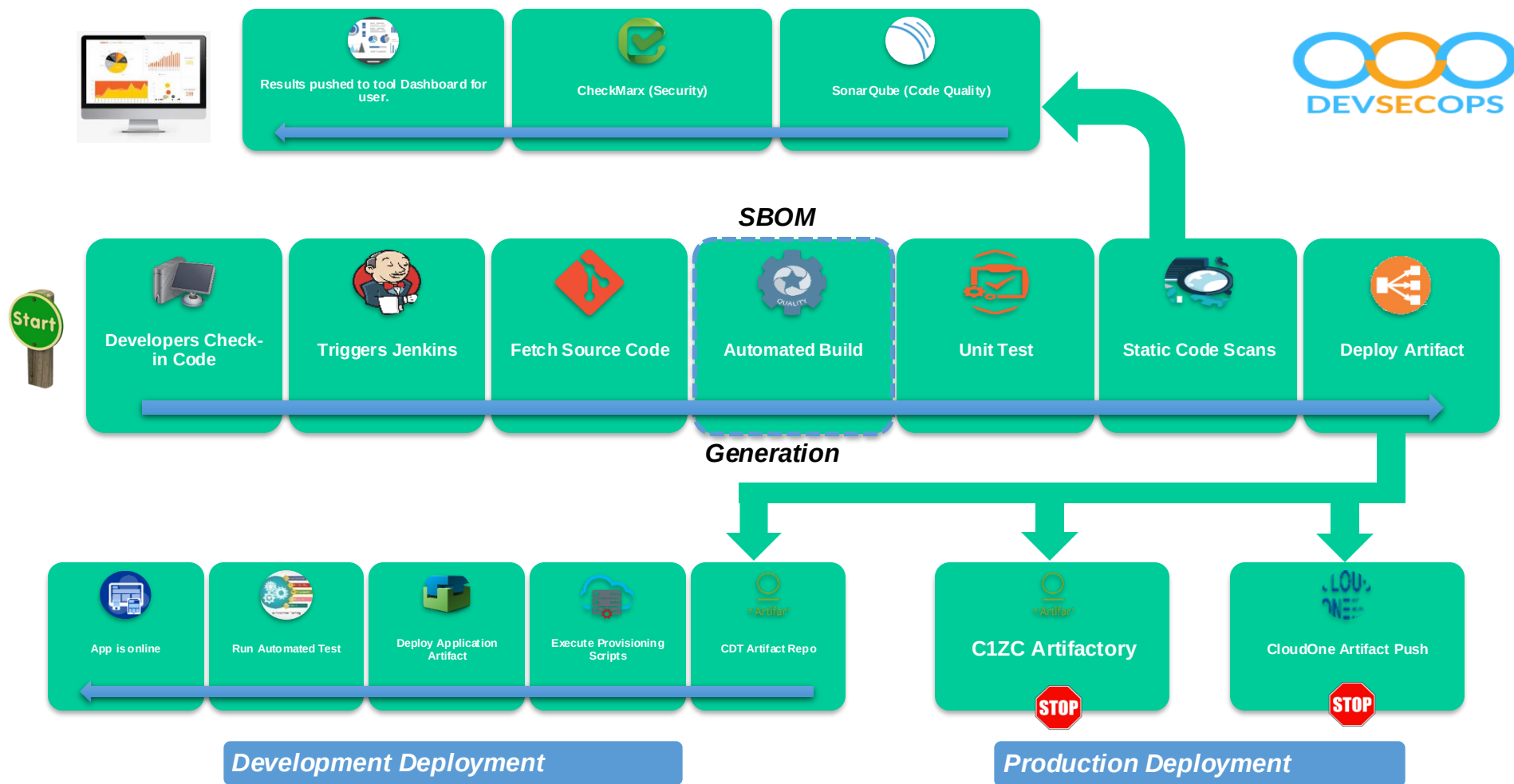
- Checkmarx KICS

Static Code Analysis - Security





DSO Pipeline Sample Flow





DSO Pipeline Component Supply Chain Security Tools

- **Software Bill of Materials (SBOM) Generation**
 - OWASP CycloneDX tool(s) are integrated with source control build mechanisms
 - Tools are per tech stack – See: <https://cyclonedx.org/tool-center/>
 - CycloneDX CLI tool is directly supported in GBE Jenkins
 - Used to merge multiple SBOMs for consumption by SBOM analysis tools
- **SBOM Analysis Support – Direct integration with CI workflow automation**
 - Checkmarx OSA scans
 - Requires access to build dependencies
 - GBE EagleEye Service – Aggregate dashboard/scan capability, release pipelines (pilot)
 - OWASP Dependency-Track – uploaded SBOM analysis dashboard



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DSO Pipeline Questions?

For DSO Pipeline information check out our Knowledge Base at:

<https://bes-atlassian.cce.af.mil/confluence/display/HC/BES+DevSecOps+Pipeline>

Guidance/Troubleshooting support via the DSO Service Desk:

<https://bes-atlassian.cce.af.mil/jira/servicedesk/customer/portal/9/group/32>

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Questions...