

Kalvis

 | Application Generation & Delivery Orchestration**KALVIS**Secure Application
Generation**ASTRA**Infrastructure &
DevSecOps Automation**OPTIBASE**Database STIG
Compliance**VELES**ATO Evidence
Validation

Kalvis is the secure application generation and delivery orchestration engine within the DSD Forge™ platform. It operationalizes AI-assisted software engineering by translating high-level mission requirements directly into enterprise-compliant code, unit tests, and structured work packages under continuous human governance.

CORE FUNCTIONALITY

■ AI-GUIDED REQUIREMENT REFINEMENT

Collaborates with SMEs to structure mission needs and capture edge cases before engineering begins.

■ AI ARCHITECT AGENT DECOMPOSITION

Decomposes complex architectures into structured components aligned with enterprise standards.

■ AUTOMATED CODE & TEST GENERATION

Generates enterprise-aligned, Laravel-compliant code and automates unit test suites.

■ CONTINUOUS COMPLIANCE & RMF TRACEABILITY

Generates authorization artifacts and evidence in real time.

MISSION IMPACT

Kalvis accelerates time-to-mission from months to days, eliminates security technical debt by securing code at inception, provides total AI governance/auditability, and supports multi-environment operational contexts (cloud, hybrid, edge, legacy).

WHERE KALVIS IS USED IN DSD FORGE™

GOAL PHASE

KALVIS

REQUIREMENTS

Define system & security requirements

AI-guided requirement refinement with SMEs into structured work packages.

Captures edge cases.

Astra gathers requirements via questionnaire.

**DESIGN & DEVELOPMENT**

Define architecture & security patterns; write secure code

Decomposes work into structured components and generates Laravel-compliant application code.

Aligned to enterprise standards.

Astra embeds NIST 800-53.

**BUILD & INTEGRATE**

Automate building, testing, and packaging

Astra generates IaC, builds pipelines, and applies secure configuration baselines; IL2-IL4 compliant.

**TEST & SECURE**

Validate functionality and enforce security

AI validation agent runs functional checks. Validates sandbox.

Astra automates scanning.

Optibase scans STIG compliance.

**DEPLOY, AUTHORIZE, OPERATE & MONITOR**

Release; prove secure operation; monitor & maintain compliance

Astra maintains pipeline integrity.

Veles ingests documentation, evaluates evidence, and validates artifacts.

Optibase runs ongoing compliance validation

**CONTACT US FOR A DEMO****DSD
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