



ARCHITECTURE DECISION RECORD (ADR)

Decision Summary: Establish a new Software Testing Automation utility category within the Software Factory (SWF) and designate the Automation Tool Interface (ATI) as the Enterprise Standard utility within that category

Approved by the VA Chief Architect (OIT/OCTO) on 8/22/2025

Context

The ATI platform combines open-source tools already used across VA with a library of functions and APIs, forming a reusable testing automation framework adaptable to various testing requirements and solution platforms such as Web, Vista, Windows, 508, and API applications. The Software Testing Operations (QAOps) team's integration of ATI enhances compatibility with multiple Integrated Development Environments (IDEs), optimizing software development efforts. QAOps also provides training and support for this proven framework, currently incorporated in multiple Continuous Integration/Continuous Delivery (CI/CD) pipeline solutions.

ATI supports efficient testing to ensure code quality, facilitate continuous integration, and comply with 508 accessibility standards, covering VA's web-based and Windows applications, SOAP and RESTful web services, and Vista applications. Existing certified test automation tools like JUnit, TestNG, Rest Assured for Java, Requests, .NET, and C++ are included.

Decision

A new SWF Utility category, 'Software Testing Automation,' is established. Within this category, the ATI platform is designated as the Enterprise Standard utility.

Rationale

1. **Testing Efficiency and Reuse:** ATI's portable, repeatable, reusable, and low-maintenance test scripts support various development and testing activities and are maintained in centralized repositories to minimize staff turnover risks.



2. **Standardization and Best Practices:** ATI standardizes testing approaches, increasing test coverage with data-driven tests, reducing costs via open-source tools, and supporting various application platforms customizable by users.
3. **Cost Efficiency:** Adoption of open-source tools provides cost reduction opportunities.
4. **Adaptability:** ATI adapts to both legacy and modern systems, with 64+ VA applications across VBA, NCA, and VHA already utilizing this testing framework.
5. **Testing Coverage and Tool Compatibility:** ATI provides comprehensive functional and non-functional testing and ensures compatibility with a wide range of VA applications. It supports modern programming languages and integrates effectively with build tools like Maven and Gradle and CI/CD pipelines like Jenkins and GitHub Actions.
6. **Extensibility and Integration:** The ATI platform offers extensive customization, a vast library of reusable methods, and scalability, improving efficiency and maintainability while eliminating licensing costs due to its open-source nature.

Impact(s)

- Update TRM product categories to include 'Software Testing Automation.'
- Inform relevant teams of this recommendation to ensure necessary changes to pages are made upon approval.
- No direct technical or system-level impacts are anticipated aside from TRM updates.

For questions or further clarification, contact the Enterprise Architecture team at ea@va.gov.

Sam Kaldawi
Chief Architect
Office of the Chief Technology Officer (OCTO)

**Disclaimer: The Architecture and Engineering Services (AES) team's recommendation in this ADR is provided solely as an architectural guidance and does not imply AES ownership of operational, licensing, or cost responsibilities associated with the adoption of the recommended tool.*

This ADR does not establish the recommended tool as the exclusive solution for the defined use case. Other tools that meet VA requirements may continue to be used or evaluated as part of VA's enterprise technology strategy. Cost considerations, licensing agreements, and operational support for any tool remain the responsibility of the respective program offices and stakeholders.