



ARCHITECTURE DECISION RECORD (ADR)

Decision Summary: Migration to GitHub Enterprise Cloud – US (GHEC-US)

Approved by the VA Chief Architect (OIT/OCTO) on June 07, 2025

Context

VA has widely adopted GitHub.com to support software development and collaboration across engineering and product teams. While the tooling has enabled modern development practices, the VA's current GitHub.com configuration presents ongoing limitations related to security, data residency, and identity access management.

GitHub's capabilities have expanded from simply a repository of source code and project data to a full-fledged development tool used for deployment, security analysis, and AI-assisted code creation across hundreds of projects. Reflecting this increase in scope and scale, GitHub's FISMA categorization has increased from "Low" to "Moderate." As a result, the security controls required for VA will also increase.

To address these enterprise risks and align with federal policy, the Office of the CTO and Architecture & Engineering Services (AES), in coordination with the Office of Information Security (OIS), initiated a migration to GitHub Enterprise Cloud – US (GHEC-US). This configuration of GitHub will provide VA with a FedRAMP-aligned environment that ensures stronger protections and will allow VA to adopt centralized controls over access to the VA GitHub organization.

Decision

VA is migrating active GitHub.com repositories and users to GHEC-US. The new environment:

- Leverages Single Sign-On (SSO) using Entra ID (formerly Azure AD)
- Ensures that all VA information (code, metadata, and user identity data) is stored entirely within the U.S.
- Operates under a VA Moderate Managed Service ATO, with GitHub also pursuing a FedRAMP Moderate authorization
- Aligns with VA cybersecurity policy, data residency, and enterprise identity standards



AES is leading the migration effort in coordination with OIS and GitHub. Pre-migration guidance is already available via the VA GitHub Handbook located here: <https://department-of-veterans-affairs.github.io/github-handbook/migrations>.

Rationale

The GHEC-US environment was selected because it uniquely balances GitHub's modern development experience with the stringent federal requirements VA must meet under FISMA, NIST SP 800-53, and FIPS 140-2. This solution enables the following enterprise-wide benefits:

- Data Residency: GHEC-US guarantees that all source code, metadata, and audit logs are stored and processed exclusively within the United States.
- Single Sign-On (SSO): Entra ID integration provides consistent identity and access management across VA, eliminating the need to separately manage access to GitHub and including stronger enforcement of BYOD and policy controls. VA GitHub users will no longer need to maintain a separate GitHub.com account to use on VA projects.
- Compliance & Risk Mitigation: GHEC-US will operate with a VA Moderate Managed Service ATO – with GitHub pursuing a full FedRAMP Moderate ATO, which will minimize the need for exceptions or custom policy workarounds.
- Security for All Products: Both Veteran-facing and internal platforms benefit from enhanced security posture and policy-aligned governance.
- Developer Enablement with Guardrails: Teams retain the flexibility of GitHub workflows while operating within a compliant, enterprise-approved platform.
- Improved Oversight: Domain-level governance, standard tagging, and centralized reporting improve visibility, accountability, and collaboration across product lines.

Impact(s)

- All VA teams using GitHub.com must migrate their repositories and user access to GHEC-US once the environment is declared ready.
- GitHub has published a VA GitHub Handbook to guide teams through the transition process.
- AES and OIS will provide coordinated support and updated guidance on:
 - SSO setup and identity linking
 - Repository migration tools and schedules
 - Tagging and domain governance standards
- Development teams will coordinate with AES and platform leads to migrate repositories, workflows, and configurations using GitHub-supported tooling.



- AES will provide ongoing support and pre-migration guidance through documentation and collaboration channels.
- A phased rollout and flexible support model will ensure teams have adequate time and assistance for a smooth transition.
- VA's GitHub Enterprise Server (GHES), an on-premise instance of GitHub Enterprise, will continue operating separately during this phase and is not included in the initial migration scope. However, we expect that over time all VA projects will migrate to the GHEC-US environment. GHEC-US will become VA's single source of truth for source code management.
- Some VA projects exist as open source, with source code made public by design. VA will maintain its open source presence and will develop a method to ensure that code and other information that is appropriate for public release is maintained in a GitHub repository accessible by the public.
- Interacting with GHEC-US will not require users to be on the VPN or VA-internal network, due to the negative impact such a requirement would have on VA developer productivity.

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

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