APACHE SERVER 2.4 UNIX SECURITY TECHNICAL IMPLEMENTATION GUIDE (STIG) OVERVIEW

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Developed by DISA for the DOD

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1. INTRODUCTION

1.1 Executive Summary

The Apache Server 2.4 Unix Security Technical Implementation Guide (STIG) provides direction on performing an assessment of a server being used in a web server role using Apache Server 2.4. The STIG should be used to improve the security posture of a Department of Defense (DOD) web server and its associated websites.

This document is a requirement for all DOD-owned information systems and DOD-controlled information systems operated by a contractor and/or other entity on behalf of the DOD that receive, process, store, display, or transmit DOD information, regardless of classification and/or sensitivity. These requirements are designed to assist Security Managers (SMs), Information System Security Managers (ISSMs), Information System Security Officers (ISSOs), and System Administrators (SAs) with configuring and maintaining security controls. This guidance supports DOD information system design, development, implementation, and certification and accreditation efforts but is restricted to policies and configurations specific to web servers and sites.

There are multiple STIG packages for Apache Server 2.4 for Unix: one for Apache Server 2.4 server-related requirements and one for Apache Server 2.4 website-related requirements. Both STIGs must be applied to an Apache Server 2.4 web server for a particular operating system. The individual packages are:

- Apache Server 2.4 – Server – Unix.
- Apache Server 2.4 – Site – Unix.

1.2 Authority

Department of Defense Instruction (DODI) 8500.01 requires that "all IT [information technology] that receives, processes, stores, displays, or transmits DOD information will be […] configured […] consistent with applicable DOD cybersecurity policies, standards, and architectures." The instruction tasks that DISA "develops and maintains control correlation identifiers (CCIs), security requirements guides (SRGs), security technical implementation guides (STIGs), and mobile code risk categories and usage guides that implement and are consistent with DOD cybersecurity policies, standards, architectures, security controls, and validation procedures, with the support of the NSA/CSS [National Security Agency/Central Security Service], using input from stakeholders, and using automation whenever possible." This document is provided under the authority of DODI 8500.01.

Although the use of the principles and guidelines in these SRGs/STIGs provides an environment that contributes to the security requirements of DOD systems, applicable NIST SP 800-53 cybersecurity controls must be applied to all systems and architectures based on the Committee on National Security Systems (CNSS) Instruction (CNSSI) 1253.

1.3 Vulnerability Severity Category Code Definitions

Severity Category Codes (referred to as CAT) are a measure of vulnerabilities used to assess a facility or system security posture. Each security policy specified in this document is assigned a Severity Category Code of CAT I, II, or III.

Table 1-1: Vulnerability Severity Category Code Definitions

Category	DISA Category Code Guidelines
CAT I	Any vulnerability, the exploitation of which will **directly and immediately** result in loss of Confidentiality, Availability, or Integrity.
CAT II	Any vulnerability, the exploitation of which **has a potential** to result in loss of Confidentiality, Availability, or Integrity.
CAT III	Any vulnerability, the existence of which **degrades measures** to protect against loss of Confidentiality, Availability, or Integrity.

1.4 STIG Distribution

Parties within the DOD and federal government's computing environments can obtain the applicable STIG from the DOD Cyber Exchange website at https://cyber.mil/. This site contains the latest copies of STIGs, SRGs, and other related security information. Those without a Common Access Card (CAC) that has DOD Certificates can obtain the STIG from https://public.cyber.mil/.

1.5 SRG Compliance Reporting

All technical NIST SP 800-53 requirements were considered while developing this STIG. Requirements that are applicable and configurable will be included in the final STIG. A report marked Controlled Unclassified Information (CUI) will be available for items that did not meet requirements. This report will be available to component authorizing official (AO) personnel for risk assessment purposes by request via email to: disa.stig_spt@mail.mil.

1.6 Document Revisions

Comments or proposed revisions to this document should be sent via email to the following address: disa.stig_spt@mail.mil. DISA will coordinate all change requests with the relevant DOD organizations before inclusion in this document. Approved changes will be made in accordance with the DISA maintenance release schedule.

1.7 Other Considerations

DISA accepts no liability for the consequences of applying specific configuration settings made on the basis of the SRGs/STIGs. It must be noted that the configuration settings specified should be evaluated in a local, representative test environment before implementation in a production environment, especially within large user populations. The extensive variety of environments makes it impossible to test these configuration settings for all potential software configurations.

For some production environments, failure to test before implementation may lead to a loss of required functionality. Evaluating the risks and benefits to a system's particular circumstances and requirements is the system owner's responsibility. The evaluated risks resulting from not applying specified configuration settings must be approved by the responsible AO. Furthermore, DISA implies no warranty that the application of all specified configurations will make a system 100 percent secure.

Security guidance is provided for the DOD. While other agencies and organizations are free to use it, care must be given to ensure that all applicable security guidance is applied at both the device hardening level and the architectural level due to the fact that some settings may not be configurable in environments outside the DOD architecture.

1.8 Product Approval Disclaimer

The existence of a STIG does not equate to DOD approval for the procurement or use of a product.

STIGs provide configurable operational security guidance for products being used by the DOD. STIGs, along with vendor confidential documentation, also provide a basis for assessing compliance with cybersecurity controls/control enhancements, which supports system assessment and authorization (A&A) under the DOD Risk Management Framework (RMF). Department of Defense AOs may request available vendor confidential documentation for a product that has a STIG for product evaluation and RMF purposes from disa.stig_spt@mail.mil. This documentation is not published for general access to protect the vendor's proprietary information.

AOs have the purview to determine product use/approval in accordance with (IAW) DOD policy and through RMF risk acceptance. Inputs into acquisition or pre-acquisition product selection include such processes as:

- National Information Assurance Partnership (NIAP) evaluation for National Security Systems (NSS) (https://www.niap-ccevs.org/) IAW CNSSP #11.
- National Institute of Standards and Technology (NIST) Cryptographic Module Validation Program (CMVP) (https://csrc.nist.gov/groups/STM/cmvp/) IAW Federal/DOD mandated standards.
- DOD Unified Capabilities (UC) Approved Products List (APL) (https://www.disa.mil/network-services/ucco) IAW DODI 8100.04.

2. CONCEPTS AND TERMINOLOGY CONVENTIONS

System Administrators have the ability to configure Apache in different ways based on preference and site requirements.

For the purposes of STIG development, all configuration directives are identified as being located in the "httpd.conf" file. If the configuration environment does not match the STIG, the user may need to substitute the locations of your configuration files to address this. If using a standard, "out-of-the-box" deployment for Apache, there should not be any issues. In addition, it is permitted to use separate configuration (.conf) files for specific modules. If other configuration files for specific modules exist (i.e., ssl.conf), those files should be checked for the related requirement.

For example, one site might choose to place its SSL directives into an "ssl.conf" file rather than in the "httpd.conf" file. Another example is the use of directives such as "IncludeOptional", which allows inclusion of other configuration files from within the server configuration files. There is nothing wrong with either approach. However, the STIG authors cannot account for all instances in which Apache server can be configured in this manner; therefore, the "httpd.conf" file is the standard configuration file chosen for the STIG. If the environment uses directives such as what is described, the user will have to make adjustments accordingly, substitute for the location of the configuration files, and apply the checks and fixes to those configuration files.