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IBM AIX 7.X SECURITY TECHNICAL IMPLEMENTATION GUIDE (STIG) OVERVIEW

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1. INTRODUCTION

1.1 Executive Summary

The IBM AIX 7.x Security Technical Implementation Guide (STIG) is published as a tool to improve the security of Department of Defense (DOD) information systems. The requirements were developed from Federal and DOD consensus, based upon the General Purpose Operating System Security Requirements Guide (GPOS SRG).

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

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 preacquisition 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.

2. ASSESSMENT CONSIDERATIONS

2.1 Additional Required Software

To fully implement the requirements listed in the STIG, the organization must implement software packages that are included on the AIX Expansion Pack DVD and the online IBM AIX toolbox website. Both of these products are produced by IBM and offered to licensed AIX installations at no additional cost to the organization. For specific instructions on how to obtain and install the required software packages, please refer to the appropriate version of the AIX 7 documentation or contact your support representative.

2.2 Command Examples

Some check and fix procedures contain example commands that can be used to obtain information regarding compliance with a requirement or to change a setting to attain compliance with a requirement. These example commands assume use of a standard UNIX shell operating as the root user. If the software used by these commands is not present on the system, the system administrator (SA) or the reviewer is responsible for determining compliance with the requirement using the tools available on the system. Check procedures also contain instructions for evaluating compliance based on the output of these commands.

2.3 Alternate Software

IBM AIX 7.x systems offer extreme flexibility in replacing components provided by IBM with other software to meet operational needs. Many of the check and fix procedures in the AIX 7.x STIG assume the use of the software provided by IBM. If alternate software is used to provide a function ordinarily provided by a default system application, the specific check and fix information for that function is no longer valid. The SA or the reviewer is responsible for evaluating the requirements based on documentation available for the alternate software. The system accreditation package must contain information pertaining to the use of alternate software.

2.4 Requirements for Disabled Functions

The IBM AIX 7.x STIG defines requirements for the further hardening and configuration of system functions that are required to be disabled. These requirements exist to address vulnerabilities in the system resulting from accidental activation, malicious intentional activation, or intentional activation of the system function based on acceptance of risk by the AO. Requirements for a system function remain applicable even when the system function is disabled. Requirements pertaining to software that is not installed on the system, and which has no remaining configuration files on the system, may be evaluated as Not Applicable (NA).

2.5 Software Patching Guidelines

Maintaining the security of an IBM AIX 7.x system requires frequent reviews of security bulletins. Many security bulletins and Information Assurance Vulnerability Management (IAVM) notifications mandate the installation of software patches to overcome noted security vulnerabilities. The SA will

be responsible for installing all such patches. The information system security officer (ISSO) will ensure the vulnerabilities have been remedied.

SAs and ISSOs will regularly check IBM's vendor and third-party application vendor websites for information on new vendor-recommended updates and security patches that are applicable to their site. All applicable vendor-recommended updates and security patches will be applied to the system. A patch is deemed applicable if the product is installed, even if it is not used or is disabled.