



TALATEK LLC
COMPLIANCE THROUGH RISK MANAGEMENT

NIST 800-53 Rev 5.0

Security and Privacy Controls for Information Systems and Organizations

January 2021

| CONTROL FAMILY | | |
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| AT | Awareness and Training | page 8 |
| AU | Audit and Accountability | page 9 |
| CA | Assessment, Authorization, and Monitoring | page 12 |
| CM | Configuration Management | page 13 |
| CP | Contingency Planning | page 16 |
| IA | Identification and Authentication | page 18 |
| IR | Incident Response | page 22 |
| MA | Maintenance | page 23 |
| MP | Media Protection | page 25 |
| PE | Physical and Environmental Protection | page 26 |
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ACCESS CONTROL (AC)

②

| Control Number | Control Name (Control Enhancement Name) | New | Revised | Withdrawn | Implemented By | Privacy Control Baseline | Control Baseline Low | Control Baseline Moderate | Control Baseline High |
|----------------|--|-----|---------|-----------|----------------|--------------------------|----------------------|---------------------------|-----------------------|
| AC-1 | Policy and Procedures | | | | O | x | x | x | x |
| AC-2 | Account Management | | x | | O | | x | x | x |
| AC-2(1) | Automated System Account Management | | | | O | | | x | x |
| AC-2(2) | Automated Temporary and Emergency Account Management | | | | S | | | x | x |
| AC-2(3) | Disable Accounts | | | | S | | | x | x |
| AC-2(4) | Automated Audit Actions | | | | S | | | x | x |
| AC-2(5) | Inactivity Logout | | | | O/S | | | x | x |
| AC-2(6) | Dynamic Privilege Management | | | | S | | | | |
| AC-2(7) | Privileged User Accounts | | | | O | | | | |
| AC-2(8) | Dynamic Account Management | | | | S | | | | |
| AC-2(9) | Restrictions on Use of Shared and Group Accounts | | | | O | | | | |
| AC-2(10) | Shared and Group Account Credential Change | | | → AC-2k | | | | | |
| AC-2(11) | Usage Conditions | | | | S | | | | x |
| AC-2(12) | Account Monitoring for Atypical Usage | | | | O/S | | | | x |
| AC-2(13) | Disable Accounts for High-Risk Individuals | | | | O | | | x | x |
| AC-3 | Access Enforcement | | | | S | | x | x | x |
| AC-3(2) | Dual Authorization | | | | S | | | | |
| AC-3(3) | Mandatory Access Control | | | | S | | | | |
| AC-3(4) | Discretionary Access Control | | | | S | | | | |
| AC-3(5) | Security-Relevant Information | | | | S | | | | |
| AC-3(7) | Role-Based Access Control | | | | O/S | | | | |
| AC-3(8) | Revocation of Access Authorizations | | | | O/S | | | | |

ACCESS CONTROL (AC)

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|----------------|---|-----|---------|-----------|----------------|--------------------------|----------------------|---------------------------|-----------------------|
| AC-3(9) | Controlled Release | | | | O/S | | | | |
| AC-3(10) | Audited Override of Access Control Mechanisms | | | | O | | | | |
| AC-3(11) | Restrict Access to Specific Information Types | x | | | S | | | | |
| AC-3(12) | Assert and Enforce Application Access | x | | | S | | | | |
| AC-3(13) | Attribute-Based Access Control | x | | | S | | | | |
| AC-3(14) | Individual Access | x | | | S | x | | | |
| AC-3(15) | Discretionary and Mandatory Access Control | x | | | S | | | | |
| AC-4 | Information Flow Enforcement | | | | S | | | x | x |
| AC-4(1) | Object Security and Privacy Attributes | | | | S | | | | |
| AC-4(2) | Processing Domains | | | | S | | | | |
| AC-4(3) | Dynamic Information Flow Control | | | | S | | | | |
| AC-4(4) | Flow Control of Encrypted Information | | | | S | | | | x |
| AC-4(5) | Embedded Data Types | | | | S | | | | |
| AC-4(6) | Metadata | | | | S | | | | |
| AC-4(7) | One-Way Flow Mechanisms | | | | S | | | | |
| AC-4(8) | Security and Privacy Policy Filters | | | | S | | | | |
| AC-4(9) | Human Reviews | | | | O/S | | | | |
| AC-4(10) | Enable and Disable Security or Privacy Policy Filters | | | | S | | | | |
| AC-4(11) | Configuration of Security or Privacy Policy Filters | | | | S | | | | |
| AC-4(12) | Data Type Identifiers | | | | S | | | | |
| AC-4(13) | Decomposition Into Policy-Relevant Subcomponents | | | | S | | | | |

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| AC-4(14) | Security or Privacy Policy Filter Constraints | | | | S | | | | |
| AC-4(15) | Detection of Unsanctioned Information | | | | S | | | | |
| AC-4(17) | Domain Authentication | | | | S | | | | |
| AC-4(18) | Security Attribute Binding | | | → AC-16 | | | | | |
| AC-4(19) | Validation of Metadata | | | | S | | | | |
| AC-4(20) | Approved Solutions | | | | O | | | | |
| AC-4(21) | Physical or Logical Separation of Information Flows | | | | O/S | | | | |
| AC-4(22) | Access Only | | | | S | | | | |
| AC-4(23) | Modify Non-Releasable Information | x | | | O/S | | | | |
| AC-4(24) | Internal Normalized Format | x | | | S | | | | |
| AC-4(25) | Data Sanitization | x | | | S | | | | |
| AC-4(26) | Audit Filtering Actions | x | | | O/S | | | | |
| AC-4(27) | Redundant/Independent Filtering Mechanisms | x | | | S | | | | |
| AC-4(28) | Linear Filter Pipelines | x | | | S | | | | |
| AC-4(29) | Filter Orchestration Engines | x | | | O/S | | | | |
| AC-4(30) | Filter Mechanisms Using Multiple Processes | x | | | S | | | | |
| AC-4(31) | Failed Content Transfer Prevention | x | | | S | | | | |
| AC-4(32) | Process Requirements for Information Transfer | x | | | S | | | | |
| AC-5 | Separation of Duties | | | | O | | | x | x |
| AC-6 | Least Privilege | | | | O | | | x | x |
| AC-6(1) | Authorize Access to Security Functions | | | | O | | | x | x |

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| AC-6(2) | Non-Privileged Access for Nonsecurity Functions | | | | O | | | x | x |
| AC-6(3) | Network Access to Privileged Commands | | | | O | | | | x |
| AC-6(4) | Separate Processing Domains | | | | O/S | | | | |
| AC-6(5) | Privileged Accounts | | | | O | | | x | x |
| AC-6(6) | Privileged Access by Non-Organizational Users | | | | O | | | | |
| AC-6(7) | Review of User Privileges | | | | O | | | x | x |
| AC-6(8) | Privilege Levels for Code Execution | | | | S | | | | |
| AC-6(9) | Log Use of Privileged Functions | | | | S | | | x | x |
| AC-6(10) | Prohibit Non-Privileged Users from Executing Privileged Functions | | | | S | | | x | x |
| AC-7 | Unsuccessful Logon Attempts | | | | S | | x | x | x |
| AC-7(2) | Purge or Wipe Mobile Device | | | | S | | | | |
| AC-7(3) | Biometric Attempt Limiting | x | | | O | | | | |
| AC-7(4) | Use of Alternate Authentication Factor | x | | | O/S | | | | |
| AC-8 | System Use Notification | | | | O/S | | x | x | x |
| AC-9 | Previous Logon Notification | | | | S | | | | |
| AC-9(1) | Unsuccessful Logons | | | | S | | | | |
| AC-9(2) | Successful and Unsuccessful Logons | | | | S | | | | |
| AC-9(3) | Notification of Account Changes | | | | S | | | | |
| AC-9(4) | Additional Logon Information | | | | S | | | | |
| AC-10 | Concurrent Session Control | | | | S | | | | x |
| AC-11 | Device Lock | | | | S | | | x | x |
| AC-11(1) | Pattern-Hiding Displays | | | | S | | | x | x |
| AC-12 | Session Termination | | | | S | | | x | x |

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| AC-12(1) | User-Initiated Logouts | | | | O/S | | | | |
| AC-12(2) | Termination Message | x | | | S | | | | |
| AC-12(3) | Timeout Warning Message | x | | | S | | | | |
| AC-14 | Permitted Actions without Identification or Authentication | | | | O | | x | x | x |
| AC-16 | Security and Privacy Attributes | | x | | O | | | | |
| AC-16(1) | Dynamic Attribute Association | | | | S | | | | |
| AC-16(2) | Attribute Value Changes by Authorized Individuals | | | | S | | | | |
| AC-16(3) | Maintenance of Attribute Associations by System | | | | S | | | | |
| AC-16(4) | Association of Attributes by Authorized Individuals | | | | S | | | | |
| AC-16(5) | Attribute Displays on Objects to be Output | | | | S | | | | |
| AC-16(6) | Maintenance of Attribute Association | | | | O | | | | |
| AC-16(7) | Consistent Attribute Interpretation | | | | O | | | | |
| AC-16(8) | Association Techniques and Technologies | | | | S | | | | |
| AC-16(9) | Attribute Reassignment – Regrading Mechanisms | | | | O | | | | |
| AC-16(10) | Attribute Configuration by Authorized Individuals | | | | O | | | | |
| AC-17 | Remote Access | | | | O | | x | x | x |
| AC-17(1) | Monitoring and Control | | | | O/S | | | x | x |
| AC-17(2) | Protection of Confidentiality and Integrity Using Encryption | | | | S | | | x | x |
| AC-17(3) | Managed Access Control Points | | | | S | | | x | x |
| AC-17(4) | Privileged Commands and Access | | | | O | | | x | x |

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| AC-17(6) | Protection of Mechanism Information | | | | O | | | | |
| AC-17(9) | Disconnect or Disable Access | | | | O | | | | |
| AC-17(10) | Authenticate Remote Commands | x | | | S | | | | |
| AC-18 | Wireless Access | | | | O | | x | x | x |
| AC-18(1) | Authentication and Encryption | | | | S | | | x | x |
| AC-18(3) | Disable Wireless Networking | | | | O/S | | | x | x |
| AC-18(4) | Restrict Configurations by Users | | | | O | | | | x |
| AC-18(5) | Antennas and Transmission Power Levels | | | | O | | | | x |
| AC-19 | Access Control for Mobile Devices | | | | O | | x | x | x |
| AC-19(4) | Restrictions for Classified Information | | | | O | | | | |
| AC-19(5) | Full Device or Container-Based Encryption | | | | O | | | x | x |
| AC-20 | Use of External Systems | | | | O | | x | x | x |
| AC-20(1) | Limits on Authorized Use | | | | O | | | x | x |
| AC-20(2) | Portable Storage Devices — Restricted Use | | | | O | | | x | x |
| AC-20(3) | Non-Organizationally Owned Systems — Restricted Use | | | | O | | | | |
| AC-20(4) | Network Accessible Storage Devices — Prohibited Use | | | | O | | | | |
| AC-20(5) | Portable Storage Devices — Prohibited Use | x | | | O | | | | |
| AC-21 | Information Sharing | | | | O | | | x | x |
| AC-21(1) | Automated Decision Support | | | | S | | | | |
| AC-21(2) | Information Search and Retrieval | | | | S | | | | |
| AC-22 | Publicly Accessible Content | | | | O | | x | x | x |

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| AC-23 | Data Mining Protection | | | | O | | | | |
| AC-24 | Access Control Decisions | | | | O | | | | |
| AC-24(1) | Transmit Access Authorization Information | | | | S | | | | |
| AC-24(2) | No User or Process Identity | | | | S | | | | |
| AC-25 | Reference Monitor | | | | S | | | | |

AWARENESS AND TRAINING (AT)

| | | | | | | | | | |
|---------|---|---|--|--|---|---|---|---|-----------|
| AT-1 | Policy and Procedures | | | | O | x | x | x | x |
| AT-2 | Literacy Training and Awareness | | | | O | x | x | x | x |
| AT-2(1) | Practical Exercises | | | | O | | | | |
| AT-2(2) | Insider Threat | | | | O | | X | x | x |
| AT-2(3) | Social Engineering and Mining | x | | | O | | | x | x |
| AT-2(4) | Suspicious Communications and Anomalous System Behavior | x | | | O | | | | |
| AT-2(5) | Advanced Persistent Threat | x | | | O | | | | |
| AT-2(6) | Cyber Threat Environment | x | | | O | | | | |
| AT-3 | Role-Based Training | | | | O | x | x | x | x |
| AT-3(1) | Environmental Controls | | | | O | | | | |
| AT-3(2) | Physical Security Controls | | | | O | | | | |
| AT-3(3) | Practical Exercises | | | | O | | | | |
| AT-3(4) | Suspicious Communications and Anomalous System Behavior | | | | | | | | → AT-2(4) |
| AT-3(5) | Processing Personally Identifiable Information | x | | | O | x | | | |
| AT-4 | Training Records | | | | O | x | x | x | x |
| AT-6 | Training Feedback | x | | | O | | | | |

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| AU-1 | Policy and Procedures | | | | O | x | x | x | x |
| AU-2 | Event Logging | | x | | O | x | x | x | x |
| AU-2(3) | Reviews and Updates | | | → AU-2 | | | | | |
| AU-3 | Content of Audit Records | | | | S | | x | x | x |
| AU-3(1) | Additional Audit Information | | | | S | | | x | x |
| AU-3(2) | Centralized Management of Planned Audit Record Content | | | → PL-9 | | | | | |
| AU-3(3) | Limit Personally Identifiable Information Elements | x | | | O | x | | | |
| AU-4 | Audit Log Storage Capacity | | | | O/S | | x | x | x |
| AU-4(1) | Transfer to Alternate Storage | | | | O/S | | | | |
| AU-5 | Response to Audit Logging Process Failures | | | | S | | x | x | x |
| AU-5(1) | Storage Capacity Warning | | | | S | | | | x |
| AU-5(2) | Real-Time Alerts | | | | S | | | | x |
| AU-5(3) | Configurable Traffic Volume Thresholds | | | | S | | | | |
| AU-5(4) | Shutdown on Failure | | | | S | | | | |
| AU-5(5) | Alternate Audit Logging Capability | x | | | O | | | | |
| AU-6 | Audit Record Review, Analysis, and Reporting | | x | | O | | x | x | x |
| AU-6(1) | Automated Process Integration | | | | O | | | x | x |
| AU-6(3) | Correlate Audit Record Repositories | | | | O | | | x | x |
| AU-6(4) | Central Review and Analysis | | | | S | | | | |
| AU-6(5) | Integrated Analysis of Audit Records | | | | O | | | | x |
| AU-6(6) | Correlation with Physical Monitoring | | | | O | | | | x |
| AU-6(7) | Permitted Actions | | | | O | | | | |

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| AU-6(8) | Full Text Analysis of Privileged Commands | | | | O | | | | |
| AU-6(9) | Correlation with Information from Nontechnical Sources | | | | O | | | | |
| AU-6(10) | Audit Level Adjustment | | | → AU-6 | | | | | |
| AU-7 | Audit Record Reduction and Report Generation | | | | S | | | x | x |
| AU-7(1) | Automatic Processing | | x | | S | | | x | x |
| AU-7(2) | Automatic Search and Sort | | | → AU-7(1) | | | | | |
| AU-8 | Time Stamps | | | | S | | x | x | x |
| AU-8(1) | Synchronization with Authoritative Time Source | | | → SC-45(1) | | | | | |
| AU-8(2) | Secondary Authoritative Time Source | | | → SC-45(2) | | | | | |
| AU-9 | Protection of Audit Information | | | | S | | x | x | x |
| AU-9(1) | Hardware Write-Once Media | | | | S | | | | |
| AU-9(2) | Store on Separate Physical Systems or Components | | | | S | | | | x |
| AU-9(3) | Cryptographic Protection | | | | S | | | | x |
| AU-9(4) | Access by Subset of Privileged Users | | | | O | | | x | x |
| AU-9(5) | Dual Authorization | | | | O/S | | | | |
| AU-9(6) | Read-Only Access | | | | O/S | | | | |
| AU-9(7) | Store on Component with Different Operating System | x | | | O | | | | |
| AU-10 | Non-repudiation | | | | S | | | | x |
| AU-10(1) | Association of Identities | | | | S | | | | |
| AU-10(2) | Validate Binding of Information Producer Identity | | | | S | | | | |
| AU-10(3) | Chain of Custody | | | | O/S | | | | |

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| AU-10(4) | Validate Binding of Information Reviewer Identity | | | | S | | | | |
| AU-11 | Audit Record Retention | | | | O | x | x | x | x |
| AU-11(1) | Long-Term Retrieval Capability | | | | O | | | | |
| AU-12 | Audit Record Generation | | | | S | | x | x | x |
| AU-12(1) | System-Wide and Time-Correlated Audit Trail | | | | S | | | | x |
| AU-12(2) | Standardized Formats | | | | S | | | | |
| AU-12(3) | Changes by Authorized Individuals | | | | S | | | | x |
| AU-12(4) | Query Parameter Audits of Personally Identifiable Information | x | | | S | | | | |
| AU-13 | Monitoring for Information Disclosure | | | | O | | | | |
| AU-13(1) | Use of Automated Tools | | | | O/S | | | | |
| AU-13(2) | Review of Monitored Sites | | | | O | | | | |
| AU-13(3) | Unauthorized Replication of Information | x | | | O/S | | | | |
| AU-14 | Session Audit | | x | | S | | | | |
| AU-14(1) | System Start-Up | | | | S | | | | |
| AU-14(2) | Capture and Record Content | | | → AU-14 | | | | | |
| AU-14(3) | Remote Viewing and Listening | | | | S | | | | |
| AU-15 | Alternate Audit Logging Capability | | | → AU-5(5) | | | | | |
| AU-16 | Cross-Organizational Audit Logging | | | | O | | | | |
| AU-16(1) | Identity Preservation | | | | O | | | | |
| AU-16(2) | Sharing of Audit Information | | | | O | | | | |
| AU-16(3) | Disassociability | x | | | O | | | | |

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| CA-1 | Policy and Procedures | | | | O | x | x | x | x |
| CA-2 | Control Assessments | | | | O | x | x | x | x |
| CA-2(1) | Independent Assessors | | | | O | | | x | x |
| CA-2(2) | Specialized Assessments | | | | O | | | | x |
| CA-2(3) | Leveraging Results from External Organizations | | | | O | | | | |
| CA-3 | Information Exchange | | | | O | | x | x | x |
| CA-3(1) | Unclassified National Security Connections | | | → SC-7(25) | | | | | |
| CA-3(2) | Classified National Security System Connections | | | → SC-7(26) | | | | | |
| CA-3(3) | Unclassified Non-National Security System Connections | | | → SC-7(27) | | | | | |
| CA-3(4) | Connections to Public Networks | | | → SC-7(28) | | | | | |
| CA-3(5) | Restrictions on External System Connections | | | → SC-7(5) | | | | | |
| CA-3(6) | Transfer Authorizations | x | | | O/S | | | | x |
| CA-3(7) | Transitive Information Exchanges | x | | | O/S | | | | |
| CA-5 | Plan of Action and Milestones | | | | O | x | x | x | x |
| CA-5(1) | Automation Support for Accuracy and Currency | | | | O | | | | |
| CA-6 | Authorization | | | | O | x | x | x | x |
| CA-6(1) | Joint Authorization — Intra-Organization | x | | | O | | | | |
| CA-6(2) | Joint Authorization — Inter-Organization | x | | | O | | | | |
| CA-7 | Continuous Monitoring | | | | O | x | x | x | x |
| CA-7(1) | Independent Assessment | | | | O | | | x | x |
| CA-7(3) | Trend Analyses | | | | O | | | | |
| CA-7(4) | Risk Monitoring | x | | | O/S | x | x | x | x |

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| CA-7(5) | Consistency Analysis | x | | | O | | | | |
| CA-7(6) | Automation Support for Monitoring | x | | | O/S | | | | |
| CA-8 | Penetration Testing | | x | | O | | | | x |
| CA-8(1) | Independent Penetration Testing Agent or Team | | | | O | | | | x |
| CA-8(2) | Red Team Exercises | | | | O | | | | |
| CA-8(3) | Facility Penetration Testing | x | | | O | | | | |
| CA-9 | Internal System Connections | | | | O | | x | x | x |
| CA-9(1) | Compliance Checks | | | | O/S | | | | |

CONFIGURATION MANAGEMENT (CM)

| | | | | | | | | | |
|---------|---|--|---|--------|---|---|---|---|---|
| CM-1 | Policy and Procedures | | | | O | x | x | x | x |
| CM-2 | Baseline Configuration | | x | | O | | x | x | x |
| CM-2(1) | Reviews and Updates | | | → CM-2 | | | | | |
| CM-2(2) | Automation Support for Accuracy and Currency | | | | O | | | x | x |
| CM-2(3) | Retention of Previous Configurations | | | | O | | | x | x |
| CM-2(6) | Development and Test Environments | | | | O | | | | |
| CM-2(7) | Configure Systems and Components for High-Risk Areas | | | | O | | | x | x |
| CM-3 | Configuration Change Control | | | | O | | | x | x |
| CM-3(1) | Automated Documentation, Notification, and Prohibition of Changes | | | | O | | | | x |
| CM-3(2) | Testing, Validation, and Documentation of Changes | | | | O | | | x | x |
| CM-3(3) | Automated Change Implementation | | | | O | | | | |

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| CM-3(4) | Security and Privacy Representatives | | | | O | | | x | x |
| CM-3(5) | Automated Security Response | | | | S | | | | |
| CM-3(6) | Cryptography Management | | | | O | | | | x |
| CM-3(7) | Review System Changes | x | | | O | | | | |
| CM-3(8) | Prevent or Restrict Configuration Changes | x | | | S | | | | |
| CM-4 | Impact Analyses | | | | O | x | x | x | x |
| CM-4(1) | Separate Test Environments | | | | O | | | | x |
| CM-4(2) | Verification of Controls | | | | O | | | x | x |
| CM-5 | Access Restrictions for Change | | | | O | | x | x | x |
| CM-5(1) | Automated Access Enforcement and Audit Records | | | | S | | | | x |
| CM-5(2) | Review System Changes | | | → CM-3(7) | | | | | |
| CM-5(3) | Signed Components | | | → CM-14 | | | | | |
| CM-5(4) | Dual Authorization | | | | O/S | | | | |
| CM-5(5) | Privilege Limitation for Production and Operation | | | | O | | | | |
| CM-5(6) | Limit Library Privileges | | | | O/S | | | | |
| CM-6 | Configuration Settings | | | | O/S | | x | x | x |
| CM-6(1) | Automated Management, Application, and Verification | | | | O | | | | x |
| CM-6(2) | Respond to Unauthorized Changes | | | | O | | | | x |
| CM-7 | Least Functionality | | | | O/S | | x | x | x |
| CM-7(1) | Periodic Review | | | | O/S | | | x | x |
| CM-7(2) | Prevent Program Execution | | | | S | | | x | x |
| CM-7(3) | Registration Compliance | | | | O | | | | |
| CM-7(4) | Unauthorized Software | | | | O/S | | | | |

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|----------------|---|-----|---------|-----------|----------------|--------------------------|----------------------|---------------------------|-----------------------|
| CM-7(5) | Authorized Software | | | | O/S | | | x | x |
| CM-7(6) | Confined Environments with Limited Privileges | x | | | O | | | | |
| CM-7(7) | Code Execution in Protected Environments | x | | | O/S | | | | |
| CM-7(8) | Binary or Machine Executable Code | x | | | O/S | | | | |
| CM-7(9) | Prohibiting the Use of Unauthorized Hardware | x | | | O/S | | | | |
| CM-8 | System Component Inventory | | x | | O | | x | x | x |
| CM-8(1) | Updates During Installation and Removal | | | | O | | | x | x |
| CM-8(2) | Automated Maintenance | | | | O | | | | x |
| CM-8(3) | Automated Unauthorized Component Detection | | x | | O | | | x | x |
| CM-8(4) | Accountability Information | | | | O | | | | x |
| CM-8(5) | No Duplicate Accounting of Components | | | → CM-8 | | | | | |
| CM-8(6) | Assessed Configurations and Approved Deviations | | | | O | | | | |
| CM-8(7) | Centralized Repository | | | | O | | | | |
| CM-8(8) | Automated Location Tracking | | | | O | | | | |
| CM-8(9) | Assignment of Components to Systems | | | | O | | | | |
| CM-9 | Configuration Management Plan | | | | O | | | x | x |
| CM-9(1) | Assignment of Responsibility | | | | O | | | | |
| CM-10 | Software Usage Restrictions | | | | O | | x | x | x |
| CM-10(1) | Open-Source Software | | | | O | | | | |
| CM-11 | User-Installed Software | | | | O | | x | x | x |
| CM-11(1) | Alerts for Unauthorized Installations | | | → CM-8(3) | | | | | |

CONFIGURATION MANAGEMENT (CM)

| Control Number | Control Name (Control Enhancement Name) | New | Revised | Withdrawn | Implemented By | Privacy Control Baseline | Control Baseline Low | Control Baseline Moderate | Control Baseline High |
|----------------|---|-----|---------|-----------|----------------|--------------------------|----------------------|---------------------------|-----------------------|
| CM-11(2) | Software Installation with Privileged Status | | | | S | | | | |
| CM-11(3) | Automated Enforcement and Monitoring | x | | | S | | | | |
| CM-12 | Information Location | x | | | O | | | x | x |
| CM-12(1) | Automated Tools to Support Information Location | x | | | O | | | x | x |
| CM-13 | Data Action Mapping | x | | | O | | | | |
| CM-14 | Signed Components | x | | | O/S | | | | |

CONTINGENCY PLANNING (CP)

| | | | | | | | | | |
|---------|--|--|---|-----------|---|--|---|---|---|
| CP-1 | Policy and Procedures | | | | O | | x | x | x |
| CP-2 | Contingency Plan | | | | O | | x | x | x |
| CP-2(1) | Coordinate with Related Plans | | | | O | | | x | x |
| CP-2(2) | Capacity Planning | | | | O | | | | x |
| CP-2(3) | Resume Mission and Business Functions | | x | | O | | | x | x |
| CP-2(4) | Resume all Mission and Business Functions | | | → CP-2(3) | | | | | |
| CP-2(5) | Continue Mission and Business Functions | | | | O | | | | x |
| CP-2(6) | Alternate Processing and Storage Sites | | | | O | | | | |
| CP-2(7) | Coordinate with External Service Providers | | | | O | | | | |
| CP-2(8) | Identify Critical Assets | | | | O | | | x | x |
| CP-3 | Contingency Training | | | | O | | x | x | x |
| CP-3(1) | Simulated Events | | | | O | | | | x |
| CP-3(2) | Mechanisms Used in Training Environments | | | | O | | | | |
| CP-4 | Contingency Plan Testing | | | | O | | x | x | x |

CONTINGENCY PLANNING (CP)

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|----------------|---|-----|---------|-----------|----------------|--------------------------|----------------------|---------------------------|-----------------------|
| CP-4(1) | Coordinate with Related Plans | | | | O | | | x | x |
| CP-4(2) | Alternate Processing Site | | | | O | | | | x |
| CP-4(3) | Automated Testing | | | | O | | | | |
| CP-4(4) | Full Recovery and Reconstitution | | | | O | | | | |
| CP-4(5) | Self-Challenge | x | | | O/S | | | | |
| CP-6 | Alternate Storage Site | | | | O | | | x | x |
| CP-6(1) | Separation from Primary Site | | | | O | | | x | x |
| CP-6(2) | Recovery Time and Recovery Point Objectives | | | | O | | | | x |
| CP-6(3) | Accessibility | | | | O | | | x | x |
| CP-7 | Alternate Processing Site | | | | O | | | x | x |
| CP-7(1) | Separation from Primary Site | | | | O | | | x | x |
| CP-7(2) | Accessibility | | | | O | | | x | x |
| CP-7(3) | Priority of Service | | | | O | | | x | x |
| CP-7(4) | Preparation for Use | | | | O | | | | x |
| CP-7(6) | Inability to Return to Primary Site | | | | O | | | | |
| CP-8 | Telecommunications Services | | | | O | | | x | x |
| CP-8(1) | Priority of Service Provisions | | | | O | | | x | x |
| CP-8(2) | Single Points of Failure | | | | O | | | x | x |
| CP-8(3) | Separation of Primary and Alternate Providers | | | | O | | | | x |
| CP-8(4) | Provider Contingency Plan | | | | O | | | | x |
| CP-8(5) | Alternate Telecommunication Service Testing | | | | O | | | | |
| CP-9 | System Backup | | | | O | | x | x | x |
| CP-9(1) | Testing for Reliability and Integrity | | | | O | | | x | x |
| CP-9(2) | Test Restoration Using Sampling | | | | O | | | | x |

CONTINGENCY PLANNING (CP)

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|----------------|---|-----|---------|-----------|----------------|--------------------------|----------------------|---------------------------|-----------------------|
| CP-9(3) | Separate Storage for Critical Information | | | | O | | | | x |
| CP-9(5) | Transfer to Alternate Storage Site | | | | O | | | | x |
| CP-9(6) | Redundant Secondary System | | | | O | | | | |
| CP-9(7) | Dual Authorization | | | | O | | | | |
| CP-9(8) | Cryptographic Protection | x | | | O | | | x | x |
| CP-10 | System Recovery and Reconstitution | | | | O | | x | x | x |
| CP-10(2) | Transaction Recovery | | | | O | | | x | x |
| CP-10(4) | Restore Within Time Period | | | | O | | | | x |
| CP-10(6) | Component Protection | | | | O | | | | |
| CP-11 | Alternate Communications Protocols | | | | O | | | | |
| CP-12 | Safe Mode | | | | S | | | | |
| CP-13 | Alternative Security Mechanisms | | | | O/S | | | | |

IDENTIFICATION AND AUTHENTICATION (IA)

| | | | | | | | | | |
|---------|--|--|---|--|-----|--|---|---|-----------|
| IA-1 | Policy and Procedures | | | | O | | x | x | x |
| IA-2 | Identification and Authentication (Organizational Users) | | | | O/S | | x | x | x |
| IA-2(1) | Multi-Factor Authentication to Privileged Accounts | | x | | S | | x | x | x |
| IA-2(2) | Multi-Factor Authentication to Non-Privileged Accounts | | x | | S | | x | x | x |
| IA-2(3) | Local Access to Privileged Accounts | | | | | | | | → IA-2(1) |
| IA-2(4) | Local Access to Non-Privileged Accounts | | | | | | | | → IA-2(2) |
| IA-2(5) | Individual Authentication with Group Authentication | | | | O/S | | | | x |

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|----------------|--|-----|---------|------------|----------------|--------------------------|----------------------|---------------------------|-----------------------|
| IA-2(6) | Access to Accounts — Separate Device | | x | | S | | | | |
| IA-2(7) | Network Access to Non-Privileged Accounts — Separate Device | | | → IA-2(6) | | | | | |
| IA-2(8) | Access to Accounts — Replay Resistant | | x | | S | | x | x | x |
| IA-2(9) | Network Access to Non-Privileged Accounts — Replay Resistant | | | → IA-2(8) | | | | | |
| IA-2(10) | Single Sign-On | | | | S | | | | |
| IA-2(11) | Remote Access — Separate Device | | | → IA-2(6) | | | | | |
| IA-2(12) | Acceptance of PIV Credentials | | | | S | | x | x | x |
| IA-2(13) | Out-of-Band Authentication | | | | S | | | | |
| IA-3 | Device Identification and Authentication | | | | S | | | x | x |
| IA-3(1) | Cryptographic Bidirectional Authentication | | | | S | | | | |
| IA-3(3) | Dynamic Address Allocation | | | | O | | | | |
| IA-3(4) | Device Attestation | | | | O | | | | |
| IA-4 | Identifier Management | | | | O | | x | x | x |
| IA-4(1) | Prohibit Account Identifiers as Public Identifiers | | | | O | | | | |
| IA-4(2) | Supervisor Authorization | | | → IA-12(1) | | | | | |
| IA-4(3) | Multiple Forms of Certification | | | → IA-12(2) | | | | | |
| IA-4(4) | Identify User Status | | | | O | | | x | x |
| IA-4(5) | Dynamic Management | | | | S | | | | |
| IA-4(6) | Cross-Organization Management | | | | O | | | | |
| IA-4(7) | In-Person Registration | | | → IA-12(4) | | | | | |
| IA-4(8) | Pairwise Pseudonymous Identifiers | x | | | O | | | | |
| IA-4(9) | Attribute Maintenance and Protection | x | | | O/S | | | | |

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|----------------|--|-----|---------|--------------|----------------|--------------------------|----------------------|---------------------------|-----------------------|
| IA-5 | Authenticator Management | | | | O/S | | x | x | x |
| IA-5(1) | Password-Based Authentication | | x | | O/S | | x | x | x |
| IA-5(2) | Public Key-Based Authentication | | | | S | | | x | x |
| IA-5(3) | In-Person or Trusted External Party Registration | | | → IA-12(4) | | | | | |
| IA-5(4) | Automated Support for Password Strength Determination | | | → IA-5(1) | | | | | |
| IA-5(5) | Change Authenticators Prior to Delivery | | | | O | | | | |
| IA-5(6) | Protection of Authenticators | | | | O | | | x | x |
| IA-5(7) | No Embedded Unencrypted Static Authenticators | | | | O | | | | |
| IA-5(8) | Multiple System Accounts | | | | O | | | | |
| IA-5(9) | Federated Credential Management | | | | O | | | | |
| IA-5(10) | Dynamic Credential Binding | | | | S | | | | |
| IA-5(11) | Hardware Token-Based Authentication | | | → IA-2(1)(2) | | | | | |
| IA-5(12) | Biometric Authentication Performance | | | | S | | | | |
| IA-5(13) | Expiration of Cached Authenticators | | | | S | | | | |
| IA-5(14) | Managing Content of PKI Trust Stores | | | | O | | | | |
| IA-5(15) | GSA-Approved Products and Services | | | | O | | | | |
| IA-5(16) | In-Person or Trusted External Party Authenticator Issuance | x | | | O | | | | |
| IA-5(17) | Presentation Attack Detection for Biometric Authenticators | x | | | S | | | | |
| IA-5(18) | Password Managers | x | | | S | | | | |
| IA-6 | Authentication Feedback | | | | S | | x | x | x |
| IA-7 | Cryptographic Module Authentication | | | | S | | x | x | x |

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| IA-8 | Identification and Authentication (Non-Organizational Users) | | | | S | | x | x | x |
| IA-8(1) | Acceptance of PIV Credentials from Other Agencies | | | | S | | x | x | x |
| IA-8(2) | Acceptance of External Authenticators | | x | | S | | x | x | x |
| IA-8(3) | Use of FICAM-Approved Products | | | → IA-8(2) | | | | | |
| IA-8(4) | Use of Defined Profiles | | | | S | | x | x | x |
| IA-8(5) | Acceptance of PIV-I Credentials | | | | S | | | | |
| IA-8(6) | Disassociability | x | | | O | | | | |
| IA-9 | Service Identification and Authentication | | x | | O/S | | | | |
| IA-9(1) | Information Exchange | | | → IA-9 | | | | | |
| IA-9(2) | Transmission of Decisions | | | → IA-9 | | | | | |
| IA-10 | Adaptive Authentication | | | | O | | | | |
| IA-11 | Re-authentication | | | | O/S | | x | x | x |
| IA-12 | Identity Proofing | x | | | O | | | x | x |
| IA-12(1) | Supervisor Authorization | x | | | O | | | | |
| IA-12(2) | Identity Evidence | x | | | O | | | x | x |
| IA-12(3) | Identity Evidence Validation and Verification | x | | | O | | | x | x |
| IA-12(4) | In-Person Validation and Verification | x | | | O | | | | x |
| IA-12(5) | Address Confirmation | x | | | O | | | x | x |
| IA-12(6) | Accept Externally-Proofed Identities | x | | | O | | | | |

INCIDENT RESPONSE (IR)

| Control Number | Control Name (Control Enhancement Name) | New | Revised | Withdrawn | Implemented By | Privacy Control Baseline | Control Baseline Low | Control Baseline Moderate | Control Baseline High |
|----------------|---|-----|---------|-----------|----------------|--------------------------|----------------------|---------------------------|-----------------------|
| IR-1 | Policy and Procedures | | | | O | x | x | x | x |
| IR-2 | Incident Response Training | | | | O | x | x | x | x |
| IR-2(1) | Simulated Events | | | | O | | | | x |
| IR-2(2) | Automated Training Environments | | | | O | | | | x |
| IR-2(3) | Breach | x | | | O | x | | | |
| IR-3 | Incident Response Testing | | | | O | x | | x | x |
| IR-3(1) | Automated Testing | | | | O | | | | |
| IR-3(2) | Coordination with Related Plans | | | | O | | | x | x |
| IR-3(3) | Continuous Improvement | x | | | O | | | | |
| IR-4 | Incident Handling | | | | O | x | x | x | x |
| IR-4(1) | Automated Incident Handling Processes | | | | O | | | x | x |
| IR-4(2) | Dynamic Reconfiguration | | | | O | | | | |
| IR-4(3) | Continuity of Operations | | | | O | | | | |
| IR-4(4) | Information Correlation | | | | O | | | | x |
| IR-4(5) | Automatic Disabling of System | | | | O/S | | | | |
| IR-4(6) | Insider Threats | | | | O | | | | |
| IR-4(7) | Insider Threats — Intra-Organization Coordination | | | | O | | | | |
| IR-4(8) | Correlation with External Organizations | | | | O | | | | |
| IR-4(9) | Dynamic Response Capability | | | | O | | | | |
| IR-4(10) | Supply Chain Coordination | | | | O | | | | |
| IR-4(11) | Integrated Incident Response Team | x | | | O | | | | x |
| IR-4(12) | Malicious Code and Forensic Analysis | x | | | O | | | | |
| IR-4(13) | Behavior Analysis | x | | | O | | | | |
| IR-4(14) | Security Operations Center | x | | | O/S | | | | |

INCIDENT RESPONSE (IR)

| Control Number | Control Name (Control Enhancement Name) | New | Revised | Withdrawn | Implemented By | Privacy Control Baseline | Control Baseline Low | Control Baseline Moderate | Control Baseline High |
|----------------|--|-----|---------|------------|----------------|--------------------------|----------------------|---------------------------|-----------------------|
| IR-4(15) | Public Relations and Reputation Repair | x | | | O | | | | |
| IR-5 | Incident Monitoring | | | | O | x | x | x | x |
| IR-5(1) | Automated Tracking, Data Collection, and Analysis | | | | O | | | | x |
| IR-6 | Incident Reporting | | | | O | x | x | x | x |
| IR-6(1) | Automated Reporting | | | | O | | | x | x |
| IR-6(2) | Vulnerabilities Related to Incidents | | | | O | | | | |
| IR-6(3) | Supply Chain Coordination | | | | O | | | x | x |
| IR-7 | Incident Response Assistance | | | | O | x | x | x | x |
| IR-7(1) | Automation Support for Availability of Information and Support | | | | O | | | x | x |
| IR-7(2) | Coordination with External Providers | | | | O | | | | |
| IR-8 | Incident Response Plan | | | | O | x | x | x | x |
| IR-8(1) | Breaches | x | | | O | x | | | |
| IR-9 | Information Spillage Response | | x | | O | | | | |
| IR-9(1) | Responsible Personnel | | | → IR-9 | | | | | |
| IR-9(2) | Training | | | | O | | | | |
| IR-9(3) | Post-Spill Operations | | | | O | | | | |
| IR-9(4) | Exposure to Unauthorized Personnel | | | | O | | | | |
| IR-10 | Integrated Information Security Analysis | | | → IR-4(11) | | | | | |

MAINTENANCE (MA)

| | | | | | | | | | |
|------|------------------------|--|---|--|---|--|---|---|---|
| MA-1 | Policy and Procedures | | x | | O | | x | x | x |
| MA-2 | Controlled Maintenance | | | | O | | x | x | x |

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|----------------|---|-----|---------|-----------|----------------|--------------------------|----------------------|---------------------------|-----------------------|
| MA-2(2) | Automated Maintenance Activities | | | | O | | | | x |
| MA-3 | Maintenance Tools | | | | O | | | x | x |
| MA-3(1) | Inspect Tools | | | | O | | | x | x |
| MA-3(2) | Inspect Media | | | | O | | | x | x |
| MA-3(3) | Prevent Unauthorized Removal | | | | O | | | x | x |
| MA-3(4) | Restricted Tool Use | | | | O/S | | | | |
| MA-3(5) | Execution with Privilege | x | | | O/S | | | | |
| MA-3(6) | Software Updates and Patches | x | | | O/S | | | | |
| MA-4 | Nonlocal Maintenance | | x | | O | | x | x | x |
| MA-4(1) | Logging and Review | | | | O | | | | |
| MA-4(2) | Document Nonlocal Maintenance | | | | → MA-1, MA-4 | | | | |
| MA-4(3) | Comparable Security and Sanitization | | | | O | | | | x |
| MA-4(4) | Authentication and Separation of Maintenance Sessions | | | | O | | | | |
| MA-4(5) | Approvals and Notifications | | | | O | | | | |
| MA-4(6) | Cryptographic Protection | | | | O/S | | | | |
| MA-4(7) | Disconnect Verification | | | | S | | | | |
| MA-5 | Maintenance Personnel | | | | O | | x | x | x |
| MA-5(1) | Individuals without Appropriate Access | | | | O | | | | x |
| MA-5(2) | Security Clearances for Classified Systems | | | | O | | | | |
| MA-5(3) | Citizenship Requirements for Classified Systems | | | | O | | | | |
| MA-5(4) | Foreign Nationals | | | | O | | | | |
| MA-5(5) | Non-System Maintenance | | | | O | | | | |
| MA-6 | Timely Maintenance | | x | | O | | | x | x |
| MA-6(1) | Preventive Maintenance | | | | O | | | | |

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| MA-6(2) | Predictive Maintenance | | | | O | | | | |
| MA-6(3) | Automated Support for Predictive Maintenance | | | | O | | | | |
| MA-7 | Field Maintenance | x | | | O | | | | |

MEDIA PROTECTION (MP)

| | | | | | | | | | |
|---------|--|--|---|--|---|---|---|---|------------|
| MP-1 | Policy and Procedures | | | | O | x | x | x | x |
| MP-2 | Media Access | | | | O | | x | x | x |
| MP-3 | Media Marking | | | | O | | | x | x |
| MP-4 | Media Storage | | | | O | | | x | x |
| MP-4(2) | Automated Restricted Access | | | | O | | | | |
| MP-5 | Media Transport | | | | O | | | x | x |
| MP-5(3) | Custodians | | | | O | | | | |
| MP-5(4) | Cryptographic Protection | | | | | | | | → SC-28(1) |
| MP-6 | Media Sanitization | | | | O | x | x | x | x |
| MP-6(1) | Review, Approve, Track, Document, and Verify | | | | O | | | | x |
| MP-6(2) | Equipment Testing | | | | O | | | | x |
| MP-6(3) | Nondestructive Techniques | | | | O | | | | x |
| MP-6(7) | Dual Authorization | | | | O | | | | |
| MP-6(8) | Remote Purging or Wiping of Information | | | | O | | | | |
| MP-7 | Media Use | | x | | O | | x | x | x |
| MP-7(1) | Prohibit Use without Owner | | | | | | | | → MP-7 |
| MP-7(2) | Prohibit Use of Sanitization-Resistant Media | | | | O | | | | |
| MP-8 | Media Downgrading | | | | O | | | | |
| MP-8(1) | Documentation of Process | | | | O | | | | |

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| MP-8(2) | Equipment Testing | | | | O | | | | |
| MP-8(3) | Controlled Unclassified Information | | | | O | | | | |
| MP-8(4) | Classified Information | | | | O | | | | |

PHYSICAL AND ENVIRONMENTAL PROTECTION (PE)

| | | | | | | | | | |
|---------|--|---|---|---------|---|--|---|---|---|
| PE-1 | Policy and Procedures | | | | O | | x | x | X |
| PE-2 | Physical Access Authorizations | | | | O | | x | x | x |
| PE-2(1) | Access by Position and Role | | | | O | | | | |
| PE-2(2) | Two Forms of Identification | | | | O | | | | |
| PE-2(3) | Restrict Unescorted Access | | | | O | | | | |
| PE-3 | Physical Access Control | | | | O | | x | x | x |
| PE-3(1) | System Access | | | | O | | | | x |
| PE-3(2) | Facility and Systems | | | | O | | | | |
| PE-3(3) | Continuous Guards | | | | O | | | | |
| PE-3(4) | Lockable Casings | | | | O | | | | |
| PE-3(5) | Tamper Protection | | | | O | | | | |
| PE-3(6) | Facility Penetration Testing | | | → CA-8 | | | | | |
| PE-3(7) | Physical Barriers | x | | | O | | | | |
| PE-3(8) | Access Control Vestibules | x | | | O | | | | |
| PE-4 | Access Control for Transmission | | | | O | | | x | x |
| PE-5 | Access Control for Output Devices | | x | | O | | | x | x |
| PE-5(1) | Access to Output by Authorized Individuals | | | → PE-5 | | | | | |
| PE-5(2) | Link to Individual Identity | | | | S | | | | |
| PE-5(3) | Marking Output Devices | | | → PE-22 | | | | | |
| PE-6 | Monitoring Physical Access | | | | O | | x | x | x |

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|----------------|---|-----|---------|------------|----------------|--------------------------|----------------------|---------------------------|-----------------------|
| PE-6(1) | Intrusion Alarms and Surveillance Equipment | | | | O | | | x | x |
| PE-6(2) | Automated Intrusion Recognition and Responses | | | | O | | | | |
| PE-6(3) | Video Surveillance | | | | O | | | | |
| PE-6(4) | Monitoring Physical Access to Systems | | | | O | | | | x |
| PE-8 | Visitor Access Records | | | | O | | x | x | x |
| PE-8(1) | Automated Records Maintenance and Review | | | | O | | | | x |
| PE-8(3) | Limit Personally Identifiable Information Elements | x | | | O | x | | | |
| PE-9 | Power Equipment and Cabling | | | | O | | | x | x |
| PE-9(1) | Redundant Cabling | | | | O | | | | |
| PE-9(2) | Automatic Voltage Controls | | | | O | | | | |
| PE-10 | Emergency Shutoff | | | | O | | | x | x |
| PE-11 | Emergency Power | | | | O | | | x | x |
| PE-11(1) | Alternate Power Supply — Minimal Operational Capability | | | | O | | | | x |
| PE-11(2) | Alternate Power Supply — Self-Contained | | | | O | | | | |
| PE-12 | Emergency Lighting | | | | O | | x | x | x |
| PE-12(1) | Essential Mission and Business Functions | | | | O | | | | |
| PE-13 | Fire Protection | | | | O | | x | x | x |
| PE-13(1) | Detection Systems — Automatic Activation and Notification | | | | O | | | x | x |
| PE-13(2) | Suppression Systems — Automatic Activation and Notification | | x | | O | | | | x |
| PE-13(3) | Automatic Fire Suppression | | | → PE-13(2) | | | | | |
| PE-13(4) | Inspections | | | | O | | | | |

PHYSICAL AND ENVIRONMENTAL PROTECTION (PE)

| Control Number | Control Name (Control Enhancement Name) | New | Revised | Withdrawn | Implemented By | Privacy Control Baseline | Control Baseline Low | Control Baseline Moderate | Control Baseline High |
|----------------|--|-----|---------|-----------|----------------|--------------------------|----------------------|---------------------------|-----------------------|
| PE-14 | Environmental Controls | | | | O | | x | x | x |
| PE-14(1) | Automatic Controls | | | | O | | | | |
| PE-14(2) | Monitoring with Alarms and Notifications | | | | O | | | | |
| PE-15 | Water Damage Protection | | | | O | | x | x | x |
| PE-15(1) | Automation Support | | | | O | | | | x |
| PE-16 | Delivery and Removal | | | | O | | x | x | x |
| PE-17 | Alternate Work Site | | | | O | | | x | x |
| PE-18 | Location of System Components | | | | O | | | | x |
| PE-18(1) | Location of System Components / Facility Site | | | → PE-23 | | | | | |
| PE-19 | Information Leakage | | | | O | | | | |
| PE-19(1) | National Emissions and Tempest Policies and Procedures | | | | O | | | | |
| PE-20 | Asset Monitoring and Tracking | | | | O | | | | |
| PE-21 | Electromagnetic Pulse Protection | x | | | O | | | | |
| PE-22 | Component Marking | x | | | O | | | | |
| PE-23 | Facility Location | x | | | O | | | | |

PLANNING (PL)

| | | | | | | | | | |
|---------|--|--|---|--------|---|---|---|---|---|
| PL-1 | Policy and Procedures | | | | O | x | x | x | x |
| PL-2 | System Security and Privacy Plans | | x | | O | x | x | x | x |
| PL-2(3) | Plan and Coordinate with Other Organizational Entities | | | → PL-2 | | | | | |
| PL-4 | Rules of Behavior | | | | O | x | x | x | x |

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|----------------|---|-----|---------|-----------|----------------|--------------------------|----------------------|---------------------------|-----------------------|
| PL-4(1) | Social Media and External Site/Application Usage Restrictions | | | | O | x | x | x | x |
| PL-7 | Concept of Operations | | | | O | | | | |
| PL-8 | Security and Privacy Architectures | | | | O | x | | x | x |
| PL-8(1) | Defense in Depth | | | | O | | | | |
| PL-8(2) | Supplier Diversity | | | | O | | | | |
| PL-9 | Central Management | | x | | O | x | | | |
| PL-10 | Baseline Selection | x | | | O | | x | x | x |
| PL-11 | Baseline Tailoring | x | | | O | | x | x | x |

PROGRAM MANAGEMENT (PM)

| Control Number | Control Name (Control Enhancement Name) | New | Revised | Withdrawn | Implemented By | Privacy Control Baseline | Control Baseline Low | Control Baseline Moderate | Control Baseline High |
|----------------|--|-----|---------|-----------|----------------|--------------------------|----------------------|---------------------------|-----------------------|
| PM-1 | Information Security Program Plan | | | | O | | x | x | x |
| PM-2 | Information Security Program Leadership Role | | | | O | | x | x | x |
| PM-3 | Information Security and Privacy Resources | | | | O | x | x | x | x |
| PM-4 | Plan of Action and Milestones Process | | | | O | x | x | x | x |
| PM-5 | System Inventory | | | | O | | x | x | x |
| PM-5(1) | Inventory of Personally Identifiable Information | x | | | O | x | x | x | x |
| PM-6 | Measures of Performance | | | | O | x | x | x | x |
| PM-7 | Enterprise Architecture | | | | O | x | x | x | x |
| PM-7(1) | Offloading | x | | | O | | x | x | x |
| PM-8 | Critical Infrastructure Plan | | | | O | x | x | x | x |
| PM-9 | Risk Management Strategy | | | | O | x | x | x | x |
| PM-10 | Authorization Process | | | | O | x | x | x | x |
| PM-11 | Mission and Business Process Definition | | | | O | x | x | x | x |
| PM-12 | Insider Threat Program | | | | O | | x | x | x |
| PM-13 | Security and Privacy Workforce | | | | O | x | x | x | x |
| PM-14 | Testing, Training, and Monitoring | | | | O | x | x | x | x |
| PM-15 | Security and Privacy Groups and Associations | | | | O | | x | x | x |
| PM-16 | Threat Awareness Program | | | | O | | x | x | x |
| PM-16(1) | Automated Means for Sharing Threat Intelligence | x | | | O | | x | x | x |
| PM-17 | Protecting Controlled Unclassified Information on External Systems | x | | | O | x | x | x | x |
| PM-18 | Privacy Program Plan | x | | | O | x | x | x | x |
| PM-19 | Privacy Program Leadership Role | x | | | O | x | x | x | x |

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| PM-20 | Dissemination of Privacy Program Information | x | | | O | x | x | x | x |
| PM-20(1) | Privacy Policies on Websites, Applications, and Digital Services | x | | | O | x | x | x | x |
| PM-21 | Accounting of Disclosures | x | | | O | x | x | x | x |
| PM-22 | Personally Identifiable Information Quality Management | x | | | O | x | x | x | x |
| PM-23 | Data Governance Body | x | | | O | | x | x | x |
| PM-24 | Data Integrity Board | x | | | O | x | x | x | x |
| PM-25 | Minimization of Personally Identifiable Information Used in Testing, Training, and Research | x | | | O | x | x | x | x |
| PM-26 | Complaint Management | x | | | O | x | x | x | x |
| PM-27 | Privacy Reporting | x | | | O | x | x | x | x |
| PM-28 | Risk Framing | x | | | O | x | x | x | x |
| PM-29 | Risk Management Program Leadership Roles | x | | | O | | x | x | x |
| PM-30 | Supply Chain Risk Management Strategy | x | | | O | | x | x | x |
| PM-30(1) | Suppliers of Critical or Mission-Essential Items | x | | | O | | x | x | x |
| PM-31 | Continuous Monitoring Strategy | x | | | O | x | x | x | x |
| PM-32 | Purposing | x | | | O | | x | x | x |

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| PS-1 | Policy and Procedures | | | | O | | x | x | x |
| PS-2 | Position Risk Designation | | | | O | | x | x | x |
| PS-3 | Personnel Screening | | | | O | | x | x | x |
| PS-3(1) | Classified Information | | | | O | | | | |
| PS-3(2) | Formal Indoctrination | | | | O | | | | |
| PS-3(3) | Information with Special Protection Measures | | | | O | | | | |
| PS-3(4) | Citizenship Requirements | x | | | O | | | | |
| PS-4 | Personnel Termination | | | | O | | x | x | x |
| PS-4(1) | Post-Employment Requirements | | | | O | | | | |
| PS-4(2) | Automated Actions | | | | O | | | | x |
| PS-5 | Personnel Transfer | | | | O | | x | x | x |
| PS-6 | Access Agreements | | | | O | x | x | x | x |
| PS-6(2) | Classified Information Requiring Special Protection | | | | O | | | | |
| PS-6(3) | Post-Employment Requirements | | | | O | | | | |
| PS-7 | External Personnel Security | | | | O | | x | x | x |
| PS-8 | Personnel Sanctions | | | | O | | x | x | x |
| PS-9 | Position Descriptions | x | | | O | | x | x | x |

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| PT-1 | Policy and Procedures (PII Processing and Transparency) | x | | | O | x | | | |
| PT-2 | Authority to Process Personally Identifiable Information | x | | | O | x | | | |
| PT-2(1) | Data Tagging | x | | | S | x | | | |
| PT-2(2) | Automation | x | | | O | x | | | |
| PT-3 | Personally Identifiable Information Processing Purposes | x | | | O | x | | | |
| PT-3(1) | Data Tagging | x | | | S | x | | | |
| PT-3(2) | Automation | x | | | O | x | | | |
| PT-4 | Consent | x | | | O | x | | | |
| PT-4(1) | Tailored Consent | x | | | O | x | | | |
| PT-4(2) | Just-in-Time Consent | x | | | O | x | | | |
| PT-4(3) | Revocation | x | | | O | x | | | |
| PT-5 | Privacy Notice | x | | | O | x | | | |
| PT-5(1) | Just-in-Time Notice | x | | | O | x | | | |
| PT-5(2) | Privacy Act Statements | x | | | O | x | | | |
| PT-6 | System of Records Notice | x | | | O | x | | | |
| PT-6(1) | Routine Uses | x | | | O | x | | | |
| PT-6(2) | Exemption Rules | x | | | O | x | | | |
| PT-7 | Specific Categories of Personally Identifiable Information | x | | | O | x | | | |
| PT-7(1) | Social Security Numbers | x | | | O | x | | | |
| PT-7(2) | First Amendment Information | x | | | O | x | | | |
| PT-8 | Computer Matching Requirements | x | | | O | x | | | |

RISK ASSESSMENT (RA)

| Control Number | Control Name (Control Enhancement Name) | New | Revised | Withdrawn | Implemented By | Privacy Control Baseline | Control Baseline Low | Control Baseline Moderate | Control Baseline High |
|----------------|---|-----|---------|-----------|----------------|--------------------------|----------------------|---------------------------|-----------------------|
| RA-1 | Policy and Procedures | | | | O | x | x | x | x |
| RA-2 | Security Categorization | | | | O | | x | x | x |
| RA-2(1) | Impact-Level Prioritization | x | | | O | | | | |
| RA-3 | Risk Assessment | | | | O | x | x | x | x |
| RA-3(1) | Supply Chain Risk Assessment | x | | | O | | x | x | x |
| RA-3(2) | Use of All-Source Intelligence | x | | | O | | | | |
| RA-3(3) | Dynamic Threat Awareness | x | | | O | | | | |
| RA-3(4) | Predictive Cyber Analytics | x | | | O | | | | |
| RA-5 | Vulnerability Monitoring and Scanning | | x | | O | | x | x | x |
| RA-5(1) | Update Tool Capability | | | → RA-5 | | | | | |
| RA-5(2) | Update Vulnerabilities to be Scanned | | | | O | | x | x | x |
| RA-5(3) | Breadth and Depth of Coverage | | | | O | | | | |
| RA-5(4) | Discoverable Information | | | | O | | | | x |
| RA-5(5) | Privileged Access | | | | O | | | x | x |
| RA-5(6) | Automated Trend Analyses | | | | O | | | | |
| RA-5(8) | Review Historic Audit Logs | | | | O | | | | |
| RA-5(10) | Correlate Scanning Information | | | | O | | | | |
| RA-5(11) | Public Disclosure Program | x | | | O | | x | x | x |
| RA-6 | Technical Surveillance Countermeasures Survey | | | | O | | | | |
| RA-7 | Risk Response | x | | | O | x | x | x | x |
| RA-8 | Privacy Impact Assessments | x | | | O | x | | | |
| RA-9 | Criticality Analysis | x | | | O | | | x | x |
| RA-10 | Threat Hunting | x | | | O/S | | | | |

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| SA-1 | Policy and Procedures | | | | 0 | x | x | x | x |
| SA-2 | Allocation of Resources | | | | 0 | x | x | x | x |
| SA-3 | System Development Life Cycle | | | | 0 | x | x | x | x |
| SA-3(1) | Manage Preproduction Environment | x | | | 0 | | | | |
| SA-3(2) | Use of Live or Operational Data | x | | | 0 | | | | |
| SA-3(3) | Technology Refresh | x | | | 0 | | | | |
| SA-4 | Acquisition Process | | | | 0 | x | x | x | x |
| SA-4(1) | Functional Properties of Controls | | | | 0 | | | x | x |
| SA-4(2) | Design and Implementation Information for Controls | | | | 0 | | | x | x |
| SA-4(3) | Development Methods, Techniques, and Practices | | | | 0 | | | | |
| SA-4(5) | System, Component, and Service Configurations | | | | 0 | | | | x |
| SA-4(6) | Use of Information Assurance Products | | | | 0 | | | | |
| SA-4(7) | NIAP-Approved Protection Profiles | | | | 0 | | | | |
| SA-4(8) | Continuous Monitoring Plan for Controls | | | | 0 | | | | |
| SA-4(9) | Functions, Ports, Protocols, and Services in Use | | | | 0 | | | x | x |
| SA-4(10) | Use of Approved PIV Products | | | | 0 | | x | x | x |
| SA-4(11) | System of Records | x | | | 0 | | | | |
| SA-4(12) | Data Ownership | x | | | 0 | | | | |
| SA-5 | System Documentation | | | | 0 | | x | x | x |
| SA-8 | Security and Privacy Engineering Principles | | x | | 0 | | x | x | x |
| SA-8(1) | Clear Abstractions | x | | | O/S | | | | |

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| SA-8(2) | Least Common Mechanism | x | | | | | O/S | | |
| SA-8(3) | Modularity and Layering | x | | | | | O/S | | |
| SA-8(4) | Partially Ordered Dependencies | x | | | | | O/S | | |
| SA-8(5) | Efficiently Mediated Access | x | | | | | O/S | | |
| SA-8(6) | Minimized Sharing | x | | | | | O/S | | |
| SA-8(7) | Reduced Complexity | x | | | | | O/S | | |
| SA-8(8) | Secure Evolvability | x | | | | | O/S | | |
| SA-8(9) | Trusted Components | x | | | | | O/S | | |
| SA-8(10) | Hierarchical Trust | x | | | | | O/S | | |
| SA-8(11) | Inverse Modification Threshold | x | | | | | O/S | | |
| SA-8(12) | Hierarchical Protection | x | | | | | O/S | | |
| SA-8(13) | Minimized Security Elements | x | | | | | O/S | | |
| SA-8(14) | Least Privilege | x | | | | | O/S | | |
| SA-8(15) | Predicate Permission | x | | | | | O/S | | |
| SA-8(16) | Self-Reliant Trustworthiness | x | | | | | O/S | | |
| SA-8(17) | Secure Distributed Composition | x | | | | | O/S | | |
| SA-8(18) | Trusted Communications Channels | x | | | | | O/S | | |
| SA-8(19) | Continuous Protection | x | | | | | O/S | | |
| SA-8(20) | Secure Metadata Management | x | | | | | O/S | | |
| SA-8(21) | Self-Analysis | x | | | | | O/S | | |
| SA-8(22) | Accountability and Traceability | x | | | | | O/S | | |
| SA-8(23) | Secure Defaults | x | | | | | O/S | | |
| SA-8(24) | Secure Failure and Recovery | x | | | | | O/S | | |
| SA-8(25) | Economic Security | x | | | | | O/S | | |
| SA-8(26) | Performance Security | x | | | | | O/S | | |

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| SA-8(27) | Human Factored Security | x | | | O/S | | | | |
| SA-8(28) | Acceptable Security | x | | | O/S | | | | |
| SA-8(29) | Repeatable and Documented Procedures | x | | | O/S | | | | |
| SA-8(30) | Procedural Rigor | x | | | O/S | | | | |
| SA-8(31) | Secure System Modification | x | | | O/S | | | | |
| SA-8(32) | Sufficient Documentation | x | | | O/S | | | | |
| SA-8(33) | Minimization | x | | | O/S | x | | | |
| SA-9 | External System Services | | | | O | x | x | x | x |
| SA-9(1) | Risk Assessments and Organizational Approvals | | | | O | | | | |
| SA-9(2) | Identification of Functions, Ports, Protocols, and Services | | | | O | | | x | x |
| SA-9(3) | Establish and Maintain Trust Relationship with Providers | | | | O | | | | |
| SA-9(4) | Consistent Interests of Consumers and Providers | | | | O | | | | |
| SA-9(5) | Processing, Storage, and Service Location | | | | O | | | | |
| SA-9(6) | Organization-Controlled Cryptographic Keys | x | | | O | | | | |
| SA-9(7) | Organization-Controlled Integrity Checking | x | | | O | | | | |
| SA-9(8) | Processing and Storage Location — US Jurisdiction | x | | | O | | | | |
| SA-10 | Developer Configuration Management | | | | O | | | x | x |
| SA-10(1) | Software and Firmware Integrity Verification | | | | O | | | | |
| SA-10(2) | Alternative Configuration Management Processes | | | | O | | | | |
| SA-10(3) | Hardware Integrity Verification | | | | O | | | | |

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| SA-10(4) | Trusted Generation | | | | 0 | | | | |
| SA-10(5) | Mapping Integrity for Version Control | | | | 0 | | | | |
| SA-10(6) | Trusted Distribution | | | | 0 | | | | |
| SA-10(7) | Security and Privacy Representatives | x | | | 0 | | | | |
| SA-11 | Developer Testing and Evaluation | | | | 0 | x | | x | x |
| SA-11(1) | Static Code Analysis | | | | 0 | | | | |
| SA-11(2) | Threat Modeling and Vulnerability Analyses | | x | | 0 | | | | |
| SA-11(3) | Independent Verification of Assessment Plans and Evidence | | | | 0 | | | | |
| SA-11(4) | Manual Code Reviews | | | | 0 | | | | |
| SA-11(5) | Penetration Testing | | | | 0 | | | | |
| SA-11(6) | Attack Surface Reviews | | | | 0 | | | | |
| SA-11(7) | Verify Scope of Testing and Evaluation | | | | 0 | | | | |
| SA-11(8) | Dynamic Code Analysis | | | | 0 | | | | |
| SA-11(9) | Interactive Application Security Testing | x | | | 0 | | | | |
| SA-12 | Supply Chain Protection | | | → SR Family | | | | | |
| SA-12(1) | Acquisition Strategies, Tools, and Methods | | | → SR-5 | | | | | |
| SA-12(2) | Supplier Reviews | | | → SR-6 | | | | | |
| SA-12(3) | Trusted Shipping and Warehousing | | | → SR-3 | | | | | |
| SA-12(4) | Diversity of Suppliers | | | → SR-3(1) | | | | | |
| SA-12(5) | Limitation of Harm | | | → SR-3(2) | | | | | |
| SA-12(6) | Minimizing Procurement Time | | | → SR-5(1) | | | | | |

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| SA-12(7) | Assessments Prior to Selection / Acceptance / Update | | | → SR-5(2) | | | | | |
| SA-12(8) | Use of All-Source Intelligence | | | → RA-3(2) | | | | | |
| SA-12(9) | Operations Security | | | → SR-7 | | | | | |
| SA-12(10) | Validate as Genuine and Not Altered | | | → SR-4(3) | | | | | |
| SA-12(11) | Penetration Testing / Analysis of Elements, Processes, and Actors | | | → SR-6(1) | | | | | |
| SA-12(12) | Inter-Organizational Agreements | | | → SR-8 | | | | | |
| SA-12(13) | Critical Information System Components | | | → MA-6, RA-9 | | | | | |
| SA-12(14) | Identity and Traceability | | | → SR-4(1)(2) | | | | | |
| SA-12(15) | Process to Address Weaknesses or Deficiencies | | | → SR-3 | | | | | |
| SA-13 | Trustworthiness | | | → SA-8 | | | | | |
| SA-14 | Criticality Analysis | | | → RA-9 | | | | | |
| SA-15 | Development Process, Standards, and Tools | | | | O | | | x | x |
| SA-15(1) | Quality Metrics | | | | O | | | | |
| SA-15(2) | Security and Privacy Tracking Tools | | | | O | | | | |
| SA-15(3) | Criticality Analysis | | | | O | | | x | x |
| SA-15(4) | Threat Modeling and Vulnerability Analysis | | | → SA-11(2) | | | | | |
| SA-15(5) | Attack Surface Reduction | | | | O | | | | |
| SA-15(6) | Continuous Improvement | | | | O | | | | |
| SA-15(7) | Automated Vulnerability Analysis | | | | O | | | | |
| SA-15(8) | Reuse of Threat and Vulnerability Information | | | | O | | | | |
| SA-15(9) | Use of Live Data | | | → SA-3(2) | | | | | |

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| SA-15(10) | Incident Response Plan | | | | 0 | | | | |
| SA-15(11) | Archive System or Component | | | | 0 | | | | |
| SA-15(12) | Minimize Personally Identifiable Information | x | | | 0 | | | | |
| SA-16 | Developer-Provided Training | | | | 0 | | | | x |
| SA-17 | Developer Security and Privacy Architecture and Design | | | | 0 | | | | x |
| SA-17(1) | Formal Policy Model | | | | 0 | | | | |
| SA-17(2) | Security-Relevant Components | | | | 0 | | | | |
| SA-17(3) | Formal Correspondence | | | | 0 | | | | |
| SA-17(4) | Informal Correspondence | | | | 0 | | | | |
| SA-17(5) | Conceptually Simple Design | | | | 0 | | | | |
| SA-17(6) | Structure for Testing | | | | 0 | | | | |
| SA-17(7) | Structure for Least Privilege | | | | 0 | | | | |
| SA-17(8) | Orchestration | x | | | 0 | | | | |
| SA-17(9) | Design Diversity | x | | | 0 | | | | |
| SA-18 | Tamper Resistance and Detection | | | → SR-9 | | | | | |
| SA-18(1) | Multiple Phases of System Development Life Cycle | | | → SR-9(1) | | | | | |
| SA-18(2) | Inspection of Systems or Components | | | → SR-10 | | | | | |
| SA-19 | Component Authenticity | | | → SR-11 | | | | | |
| SA-19(1) | Anti-Counterfeit Training | | | → SR-11(1) | | | | | |
| SA-19(2) | Configuration Control for Component Service and Repair | | | → SR-11(2) | | | | | |
| SA-19(3) | Component Disposal | | | → SR-12 | | | | | |
| SA-19(4) | Anti-Counterfeit Scanning | | | → SR-11(3) | | | | | |
| SA-20 | Customized Development of Critical Components | | | | 0 | | | | |

SYSTEM AND COMMUNICATIONS (SC)

| Control Number | Control Name (Control Enhancement Name) | New | Revised | Withdrawn | Implemented By | Privacy Control Baseline | Control Baseline Low | Control Baseline Moderate | Control Baseline High |
|----------------|---|-----|---------|-----------|----------------|--------------------------|----------------------|---------------------------|-----------------------|
| SA-21 | Developer Screening | | x | | O | | | | x |
| SA-21(1) | Validation of Screening | | | → SA-21 | | | | | |
| SA-22 | Unsupported System Components | | x | | O | | x | x | x |
| SA-22(1) | Alternative Sources for Continued Support | | | → SA-22 | | | | | |
| SA-23 | Specialization | x | | | O | | | | |
| SC-1 | Policy and Procedures | | | | O | | x | x | x |
| SC-2 | Separation of System and User Functionality | | | | S | | | x | x |
| SC-2(1) | Interfaces for Non-Privileged Users | | | | S | | | | |
| SC-2(2) | Disassociability | x | | | S | | | | |
| SC-3 | Security Function Isolation | | | | S | | | | x |
| SC-3(1) | Hardware Separation | | | | S | | | | |
| SC-3(2) | Access and Flow Control Functions | | | | S | | | | |
| SC-3(3) | Minimize Nonsecurity Functionality | | | | O/S | | | | |
| SC-3(4) | Module Coupling and Cohesiveness | | | | O/S | | | | |
| SC-3(5) | Layered Structures | | | | O/S | | | | |
| SC-4 | Information in Shared System Resources | | | | S | | | x | x |
| SC-4(2) | Multilevel or Periods Processing | | | | S | | | | |
| SC-5 | Denial-of-Service Protection | | | | S | | x | x | x |
| SC-5(1) | Restrict Ability to Attack Other Systems | | | | S | | | | |
| SC-5(2) | Capacity, Bandwidth, and Redundancy | | | | S | | | | |
| SC-5(3) | Detection and Monitoring | | | | S | | | | |

SYSTEM AND COMMUNICATIONS (SC)

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| SC-6 | Resource Availability | | | | S | | | | |
| SC-7 | Boundary Protection | | | | S | | x | x | x |
| SC-7(3) | Access Points | | | | S | | | x | x |
| SC-7(4) | External Telecommunications Services | | | | O | | | x | x |
| SC-7(5) | Deny by Default — Allow by Exception | | x | | S | | | x | x |
| SC-7(7) | Split Tunneling for Remote Devices | | | | S | | | x | x |
| SC-7(8) | Route Traffic to Authenticated Proxy Servers | | | | S | | | x | x |
| SC-7(9) | Restrict Threatening Outgoing Communications Traffic | | | | S | | | | |
| SC-7(10) | Prevent Exfiltration | | | | S | | | | |
| SC-7(11) | Restrict Incoming Communications Traffic | | | | S | | | | |
| SC-7(12) | Host-Based Protection | | | | S | | | | |
| SC-7(13) | Isolation of Security Tools, Mechanisms, and Support Components | | | | S | | | | |
| SC-7(14) | Protect Against Unauthorized Physical Connections | | | | S | | | | |
| SC-7(15) | Networked Privileged Accesses | | | | S | | | | |
| SC-7(16) | Prevent Discovery of System Components | | | | S | | | | |
| SC-7(17) | Automated Enforcement of Protocol Formats | | | | S | | | | |
| SC-7(18) | Fail Secure | | | | S | | | | x |
| SC-7(19) | Block Communication from Non-Organizationally Configured Hosts | | | | S | | | | |
| SC-7(20) | Dynamic Isolation and Segregation | | | | S | | | | |
| SC-7(21) | Isolation of System Components | | | | O/S | | | | x |

SYSTEM AND COMMUNICATIONS (SC)

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|----------------|---|-----|---------|-----------|----------------|--------------------------|----------------------|---------------------------|-----------------------|
| SC-7(22) | Separate Subnets for Connecting to Different Security Domains | | | | S | | | | |
| SC-7(23) | Disable Sender Feedback on Protocol Validation Failure | | | | S | | | | |
| SC-7(24) | Personally Identifiable Information | x | | | O/S | x | | | |
| SC-7(25) | Unclassified National Security Connections | x | | | O | | | | |
| SC-7(26) | Classified National Security System Connections | x | | | O | | | | |
| SC-7(27) | Unclassified Non-National Security System Connections | x | | | O | | | | |
| SC-7(28) | Connections to Public Networks | x | | | O | | | | |
| SC-7(29) | Separate Subnets to Isolate Functions | x | | | S | | | | |
| SC-8 | Transmission Confidentiality and Integrity | | | | S | | | x | x |
| SC-8(1) | Cryptographic Protection | | | | S | | | x | x |
| SC-8(2) | Pre- and Post-Transmission Handling | | | | S | | | | |
| SC-8(3) | Cryptographic Protection for Message Externals | | | | S | | | | |
| SC-8(4) | Conceal or Randomize Communications | | | | S | | | | |
| SC-8(5) | Protected Distribution System | x | | | S | | | | |
| SC-10 | Network Disconnect | | | | S | | | x | x |
| SC-11 | Trusted Path | | | | S | | | | |
| SC-11(1) | Irrefutable Communications Path | | | | S | | | | |
| SC-12 | Cryptographic Key Establishment and Management | | | | O/S | | x | x | x |
| SC-12(1) | Availability | | | | O/S | | | | x |

SYSTEM AND COMMUNICATIONS (SC)

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|----------------|--|-----|---------|-----------|----------------|--------------------------|----------------------|---------------------------|-----------------------|
| SC-12(2) | Symmetric Keys | | | | O/S | | | | |
| SC-12(3) | Asymmetric Keys | | | | O/S | | | | |
| SC-12(6) | Physical Control of Keys | x | | | O/S | | | | |
| SC-13 | Cryptographic Protection | | | | S | | x | x | x |
| SC-15 | Collaborative Computing Devices and Applications | | | | S | | x | x | x |
| SC-15(1) | Physical or Logical Disconnect | | | | S | | | | |
| SC-15(3) | Disabling and Removal in Secure Work Areas | | | | O | | | | |
| SC-15(4) | Explicitly Indicate Current Participants | | | | S | | | | |
| SC-16 | Transmission of Security and Privacy Attributes | | | | S | | | | |
| SC-16(1) | Integrity Verification | | | | S | | | | |
| SC-16(2) | Anti-Spoofing Mechanisms | x | | | S | | | | |
| SC-16(3) | Cryptographic Binding | x | | | S | | | | |
| SC-17 | Public Key Infrastructure Certificates | | | | O/S | | | x | x |
| SC-18 | Mobile Code | | | | O | | | x | x |
| SC-18(1) | Identify Unacceptable Code and Take Corrective Actions | | | | S | | | | |
| SC-18(2) | Acquisition, Development, and Use | | | | O | | | | |
| SC-18(3) | Prevent Downloading and Execution | | | | S | | | | |
| SC-18(4) | Prevent Automatic Execution | | | | S | | | | |
| SC-18(5) | Allow Execution Only in Confined Environments | | | | S | | | | |

SYSTEM AND COMMUNICATIONS (SC)

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|----------------|--|-----|---------|-----------|----------------|--------------------------|----------------------|---------------------------|-----------------------|
| SC-19 | Voice over Internet Protocol | | | x | | | | | |
| SC-20 | Secure Name/Address Resolution Service (Authoritative Source) | | | | S | | x | x | x |
| SC-20(2) | Data Origin and Integrity | | | | S | | | | |
| SC-21 | Secure Name/Address Resolution Service (Recursive or Caching Resolver) | | | | S | | x | x | x |
| SC-22 | Architecture and Provisioning for Name/Address Resolution Service | | | | S | | x | x | x |
| SC-23 | Session Authenticity | | | | S | | | x | x |
| SC-23(1) | Invalidate Session Identifiers at Logout | | | | S | | | | |
| SC-23(3) | Unique System-Generated Session Identifiers | | | | S | | | | |
| SC-23(5) | Allowed Certificate Authorities | | | | S | | | | |
| SC-24 | Fail in Known State | | | | S | | | | x |
| SC-25 | Thin Nodes | | | | S | | | | |
| SC-26 | Decoys | | | | S | | | | |
| SC-27 | Platform-Independent Applications | | | | S | | | | |
| SC-28 | Protection of Information at Rest | | | | S | | | x | x |
| SC-28(1) | Cryptographic Protection | | x | | S | | | x | x |
| SC-28(2) | Offline Storage | | | | O | | | | |
| SC-28(3) | Cryptographic Keys | x | | | O/S | | | | |
| SC-29 | Heterogeneity | | | | O | | | | |
| SC-29(1) | Virtualization Techniques | | | | O | | | | |
| SC-30 | Concealment and Misdirection | | | | O | | | | |
| SC-30(2) | Randomness | | | | O | | | | |

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| SC-30(3) | Change Processing and Storage Locations | | | | O | | | | |
| SC-30(4) | Misleading Information | | | | O | | | | |
| SC-30(5) | Concealment of System Components | | | | O | | | | |
| SC-31 | Covert Channel Analysis | | | | O | | | | |
| SC-31(1) | Test Covert Channels for Exploitability | | | | O | | | | |
| SC-31(2) | Maximum Bandwidth | | | | O | | | | |
| SC-31(3) | Measure Bandwidth in Operational Environments | | | | O | | | | |
| SC-32 | System Partitioning | | | | O/S | | | | |
| SC-32(1) | Separate Physical Domains for Privileged Functions | x | | | O/S | | | | |
| SC-34 | Non-Modifiable Executable Programs | | | | S | | | | |
| SC-34(1) | No Writable Storage | | | | O | | | | |
| SC-34(2) | Integrity Protection and Read-Only Media | | | | O | | | | |
| SC-34(3) | Hardware-Based Protection | | | → SC-51 | | | | | |
| SC-35 | External Malicious Code Identification | | | | S | | | | |
| SC-36 | Distributed Processing and Storage | | | | O | | | | |
| SC-36(1) | Polling Techniques | | | | O | | | | |
| SC-36(2) | Synchronization | x | | | O | | | | |
| SC-37 | Out-of-Band Channels | | | | O | | | | |
| SC-37(1) | Ensure Delivery and Transmission | | | | O | | | | |
| SC-38 | Operations Security | | | | O | | | | |
| SC-39 | Process Isolation | | | | S | | x | x | x |

SYSTEM AND COMMUNICATIONS (SC)

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|----------------|--|-----|---------|-----------|----------------|--------------------------|----------------------|---------------------------|-----------------------|
| SC-39(1) | Hardware Separation | | | | S | | | | |
| SC-39(2) | Separate Execution Domain per Thread | | | | S | | | | |
| SC-40 | Wireless Link Protection | | | | S | | | | |
| SC-40(1) | Electromagnetic Interference | | | | S | | | | |
| SC-40(2) | Reduce Detection Potential | | | | S | | | | |
| SC-40(3) | Imitative or Manipulative Communications Deception | | | | S | | | | |
| SC-40(4) | Signal Parameter Identification | | | | S | | | | |
| SC-41 | Port and I/O Device Access | | | | O/S | | | | |
| SC-42 | Sensor Capability and Data | | x | | S | | | | |
| SC-42(1) | Reporting to Authorized Individuals or Roles | | | | O | | | | |
| SC-42(2) | Authorized Use | | | | O | | | | |
| SC-42(3) | Prohibit Use of Devices | | | → SC-42 | | | | | |
| SC-42(4) | Notice of Collection | x | | | O | | | | |
| SC-42(5) | Collection Minimization | x | | | O | | | | |
| SC-43 | Usage Restrictions | | | | O/S | | | | |
| SC-44 | Detonation Chambers | | | | S | | | | |
| SC-45 | System Time Synchronization | x | | | S | | | | |
| SC-45(1) | Synchronization with Authoritative Time Source | x | | | S | | | | |
| SC-45(2) | Secondary Authoritative Time Source | x | | | S | | | | |
| SC-46 | Cross Domain Policy Enforcement | x | | | S | | | | |
| SC-47 | Alternate Communications Paths | x | | | O/S | | | | |
| SC-48 | Sensor Relocation | x | | | O/S | | | | |

SYSTEM AND COMMUNICATIONS (SC)

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|----------------|--|-----|---------|-----------|----------------|--------------------------|----------------------|---------------------------|-----------------------|
| SC-48(1) | Dynamic Relocation of Sensors or Monitoring Capabilities | x | | | O/S | | | | |
| SC-49 | Hardware-Enforced Separation and Policy Enforcement | x | | | O/S | | | | |
| SC-50 | Software-Enforced Separation and Policy Enforcement | x | | | O/S | | | | |
| SC-51 | Hardware-Based Protection | x | | | O/S | | | | |

SYSTEM AND INFORMATION INTEGRITY (SI)

| | | | | | | | | | |
|---------|---|---|---|--------|-----|---|---|---|---|
| SI-1 | Policy and Procedures | | | | O | x | x | x | x |
| SI-2 | Flaw Remediation | | | | O | | x | x | x |
| SI-2(1) | Central Management | | | → PL-9 | | | | | |
| SI-2(2) | Automated Flaw Remediation Status | | | | O | | | x | x |
| SI-2(3) | Time to Remediate Flaws and Benchmarks for Corrective Actions | | | | O | | | | |
| SI-2(4) | Automated Patch Management Tools | x | | | O/S | | | | |
| SI-2(5) | Automatic Software and Firmware Updates | | | | O/S | | | | |
| SI-2(6) | Removal of Previous Versions of Software and Firmware | | | | O/S | | | | |
| SI-3 | Malicious Code Protection | | x | | O/S | | x | x | x |
| SI-3(1) | Central Management | | | → PL-9 | | | | | |
| SI-3(2) | Automatic Updates | | | → SI-3 | | | | | |
| SI-3(4) | Updates Only by Privileged Users | | | | O/S | | | | |
| SI-3(6) | Testing and Verification | | | | O | | | | |

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| SI-3(7) | Nonsignature-Based Detection | | | → SI-3 | | | | | |
| SI-3(8) | Detect Unauthorized Commands | | | | S | | | | |
| SI-3(9) | Authenticate Remote Commands | | | → AC-17(10) | | | | | |
| SI-3(10) | Malicious Code Analysis | | | | O | | | | |
| SI-4 | System Monitoring | | | | O/S | | x | x | x |
| SI-4(1) | System-Wide Intrusion Detection System | | | | O/S | | | | |
| SI-4(2) | Automated Tools and Mechanisms for Real-Time Analysis | | | | S | | | x | x |
| SI-4(3) | Automated Tool and Mechanism Integration | | | | S | | | | |
| SI-4(4) | Inbound and Outbound Communications Traffic | | | | S | | | x | x |
| SI-4(5) | System-Generated Alerts | | | | S | | | x | x |
| SI-4(7) | Automated Response to Suspicious Events | | | | S | | | | |
| SI-4(9) | Testing of Monitoring Tools and Mechanisms | | | | O | | | | |
| SI-4(10) | Visibility of Encrypted Communications | | | | O | | | | x |
| SI-4(11) | Analyze Communications Traffic Anomalies | | | | O/S | | | | |
| SI-4(12) | Automated Organization-Generated Alerts | | | | O/S | | | | x |
| SI-4(13) | Analyze Traffic and Event Patterns | | | | O/S | | | | |
| SI-4(14) | Wireless Intrusion Detection | | | | S | | | | x |
| SI-4(15) | Wireless to Wireline Communications | | | | S | | | | |
| SI-4(16) | Correlate Monitoring Information | | | | O/S | | | | |

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| SI-4(17) | Integrated Situational Awareness | | | | O | | | | |
| SI-4(18) | Analyze Traffic and Covert Exfiltration | | | | O/S | | | | |
| SI-4(19) | Risk for Individuals | | | | O | | | | |
| SI-4(20) | Privileged Users | | | | S | | | | x |
| SI-4(21) | Probationary Periods | | | | O | | | | |
| SI-4(22) | Unauthorized Network Services | | | | S | | | | x |
| SI-4(23) | Host-Based Devices | | | | O | | | | |
| SI-4(24) | Indicators of Compromise | | | | S | | | | |
| SI-4(25) | Optimize Network Traffic Analysis | x | | | S | | | | |
| SI-5 | Security Alerts, Advisories, and Directives | | | | O | | x | x | x |
| SI-5(1) | Automated Alerts and Advisories | | | | O | | | | x |
| SI-6 | Security and Privacy Function Verification | | | | S | | | | x |
| SI-6(2) | Automation Support for Distributed Testing | | | | S | | | | |
| SI-6(3) | Report Verification Results | | | | O | | | | |
| SI-7 | Software, Firmware, and Information Integrity | | | | O/S | | | x | x |
| SI-7(1) | Integrity Checks | | | | S | | | x | x |
| SI-7(2) | Automated Notifications of Integrity Violations | | | | S | | | | x |
| SI-7(3) | Centrally Managed Integrity Tools | | | | O | | | | |
| SI-7(5) | Automated Response to Integrity Violations | | | | S | | | | x |
| SI-7(6) | Cryptographic Protection | | | | S | | | | |

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| SI-7(7) | Integration of Detection and Response | | | | O | | | x | x |
| SI-7(8) | Auditing Capability for Significant Events | | | | S | | | | |
| SI-7(9) | Verify Boot Process | | | | S | | | | |
| SI-7(10) | Protection of Boot Firmware | | | | S | | | | |
| SI-7(11) | Confined Environments with Limited Privileges | | | → CM-7(6) | | | | | |
| SI-7(12) | Integrity Verification | | | | O/S | | | | |
| SI-7(13) | Code Execution in Protected Environments | | | → CM-7(7) | | | | | |
| SI-7(14) | Binary or Machine Executable Code | | | → CM-7(8) | | | | | |
| SI-7(15) | Code Authentication | | | | S | | | | x |
| SI-7(16) | Time Limit on Process Execution without Supervision | | | | O | | | | |
| SI-7(17) | Runtime Application Self-Protection | x | | | O/S | | | | |
| SI-8 | Spam Protection | | | | O | | | x | x |
| SI-8(1) | Central Management | | | → PL-9 | | | | | |
| SI-8(2) | Automatic Updates | | | | S | | | x | x |
| SI-8(3) | Continuous Learning Capability | | | | S | | | | |
| SI-10 | Information Input Validation | | | | S | | | x | x |
| SI-10(1) | Manual Override Capability | | | | O/S | | | | |
| SI-10(2) | Review and Resolve Errors | | | | O | | | | |
| SI-10(3) | Predictable Behavior | | | | O/S | | | | |
| SI-10(4) | Timing Interactions | | | | S | | | | |
| SI-10(5) | Restrict Inputs to Trusted Sources and Approved Formats | | | | S | | | | |
| SI-10(6) | Injection Prevention | x | | | S | | | | |

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| SI-11 | Error Handling | | | | S | | | x | x |
| SI-12 | Information Management and Retention | | | | O | x | x | x | x |
| SI-12(1) | Limit Personally Identifiable Information Elements | x | | | O | x | | | |
| SI-12(2) | Minimize Personally Identifiable Information in Testing, Training, and Research | x | | | O | x | | | |
| SI-12(3) | Information Disposal | x | | | O | x | | | |
| SI-13 | Predictable Failure Prevention | | | | O | | | | |
| SI-13(1) | Transferring Component Responsibilities | | | | O | | | | |
| SI-13(3) | Manual Transfer Between Components | | | | O | | | | |
| SI-13(4) | Standby Component Installation and Notification | | | | O/S | | | | |
| SI-13(5) | Failover Capability | | | | O | | | | |
| SI-14 | Non-Persistence | | | | O | | | | |
| SI-14(1) | Refresh from Trusted Sources | | | | O | | | | |
| SI-14(2) | Non-Persistent Information | x | | | O | | | | |
| SI-14(3) | Non-Persistent Connectivity | x | | | O | | | | |
| SI-15 | Information Output Filtering | | | | S | | | | |
| SI-16 | Memory Protection | | | | S | | | x | x |
| SI-17 | Fail-Safe Procedures | | | | S | | | | |
| SI-18 | Personally Identifiable Information Quality Operations | x | | | O/S | x | | | |
| SI-18(1) | Automation Support | x | | | O/S | | | | |
| SI-18(2) | Data Tags | x | | | O/S | | | | |
| SI-18(3) | Collection | x | | | O/S | | | | |

SYSTEM AND INFORMATION INTEGRITY (SI)

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|----------------|---|-----|---------|-----------|----------------|--------------------------|----------------------|---------------------------|-----------------------|
| SI-18(4) | Individual Requests | x | | | O/S | x | | | |
| SI-18(5) | Notice of Correction or Deletion | x | | | O/S | | | | |
| SI-19 | De-Identification | x | | | O/S | x | | | |
| SI-19(1) | Collection | x | | | O/S | | | | |
| SI-19(2) | Archiving | x | | | O/S | | | | |
| SI-19(3) | Release | x | | | O/S | | | | |
| SI-19(4) | Removal, Masking, Encryption, Hashing, or Replacement of Direct Identifiers | x | | | S | | | | |
| SI-19(5) | Statistical Disclosure Control | x | | | O/S | | | | |
| SI-19(6) | Differential Privacy | x | | | O/S | | | | |
| SI-19(7) | Validated Algorithms Software | x | | | O | | | | |
| SI-19(8) | Motivated Intruder | x | | | O/S | | | | |
| SI-20 | Tainting | x | | | O/S | | | | |
| SI-21 | Information Refresh | x | | | O/S | | | | |
| SI-22 | Information Diversity | x | | | O/S | | | | |
| SI-23 | Information Fragmentation | x | | | O/S | | | | |

SUPPLY CHAIN RISK MANAGEMENT (SR)

| | | | | | | | | | |
|---------|-------------------------------------|---|--|--|-----|--|---|---|---|
| SR-1 | Policy and Procedures | x | | | O | | x | x | x |
| SR-2 | Supply Chain Risk Management Plan | x | | | O | | x | x | x |
| SR-2(1) | Establish SCRM Team | x | | | O | | x | x | x |
| SR-3 | Supply Chain Controls and Processes | x | | | O/S | | x | x | x |
| SR-3(1) | Diverse Supply Base | x | | | O | | | | |
| SR-3(2) | Limitation of Harm | x | | | O | | | | |

SUPPLY CHAIN RISK MANAGEMENT (SR)

| Control Number | Control Name (Control Enhancement Name) | New | Revised | Withdrawn | Implemented By | Privacy Control Baseline | Control Baseline Low | Control Baseline Moderate | Control Baseline High |
|----------------|---|-----|---------|-----------|----------------|--------------------------|----------------------|---------------------------|-----------------------|
| SR-3(3) | Sub-Tier Flow Down | x | | | O | | | | |
| SR-4 | Provenance | x | | | O | | | | |
| SR-4(1) | Identity | x | | | O | | | | |
| SR-4(2) | Track and Trace | x | | | O | | | | |
| SR-4(3) | Validate as Genuine and Not Altered | x | | | O | | | | |
| SR-4(4) | Supply Chain Integrity — Pedigree | x | | | O | | | | |
| SR-5 | Acquisition Strategies, Tools, and Methods | x | | | O | | x | x | x |
| SR-5(1) | Adequate Supply | x | | | O | | | | |
| SR-5(2) | Assessments Prior to Selection, Acceptance, Modification, or Update | x | | | O | | | | |
| SR-6 | Supplier Assessments and Reviews | x | | | O | | | x | x |
| SR-6(1) | Testing and Analysis | x | | | O | | | | |
| SR-7 | Supply Chain Operations Security | x | | | O | | | | |
| SR-8 | Notification Agreements | x | | | O | | x | x | x |
| SR-9 | Tamper Resistance and Detection | x | | | O | | | | x |
| SR-9(1) | Multiple Stages of System Development Life Cycle | x | | | O | | | | x |
| SR-10 | Inspection of Systems or Components | x | | | O | | x | x | x |
| SR-11 | Component Authenticity | x | | | O | | x | x | x |
| SR-11(1) | Anti-Counterfeit Training | x | | | O | | x | x | x |
| SR-11(2) | Configuration Control for Component Service and Repair | x | | | O | | x | x | x |
| SR-11(3) | Anti-Counterfeit Scanning | x | | | O | | | | |
| SR-12 | Component Disposal | x | | | O | | x | x | x |

Legend for NIST 800-53 Rev 5.0, Security Control Guide

Implemented By (sixth column)

- S: A control or control enhancement that is typically implemented by an organizational system through technical means.
 - O: A control or control enhancement that is typically implemented by an organization (i.e., by a human through nontechnical means).
 - O/S: A control or control enhancement that can be implemented by an organization or a system or a combination of the two.
-

Control Baseline Allocation (eighth–tenth columns)

- A control or control enhancement that has been allocated to a control baseline is indicated by an “X” in the column for that baseline.
- A control or control enhancement that has not been allocated to a control baseline is indicated by a blank cell. Controls and control enhancements that are not allocated to any baseline can be selected on an optional basis.

COMPLIANCE THROUGH RISK MANAGEMENT

