

**NIST IR 8477-Based Set Theory Relationship Mapping (STRM)**

Reference document: Secure Controls Framework (SCF) version 2026.1

STRM Guidance: <https://securecontrolsframework.com/set-theory-relationship-mapping-strm/>Focal Document: **Government Risk and Authorization Management Program (GovRAMP) - Low**Focal Document URL: <https://govramp.org/documents/>Published STRM URL: <https://content.securecontrolsframework.com/strm/scf-strm-general-govramp-low.pdf>

FDE #	FDE Name	Focal Document Element (FDE) Description	STRM Rationale	STRM Relationship	SCF Control	SCF #	Secure Controls Framework (SCF) Control Description	of Relationships	Notes
AC-01	Policy and Procedures	a. Develop, document, and disseminate to [Assignment: organization-defined personnel or roles];1. [Selection (one or more): Organization-level; Mission/business process-level; System-level] access control policy that:a. Addresses purpose, scope, roles, responsibilities, management commitment, coordination among organizational entities, and compliance; andb. Is consistent with applicable laws, executive orders, directives, regulations, policies, standards, and guidelines; and2. Procedures to facilitate the implementation of the access control policy and the associated access controls;b. Designate an [Assignment: organization-defined official] to manage the development, documentation, and dissemination of the access control policy and procedures; andc. Review and update the current access control:1. Policy [Assignment: organization-defined frequency] and following [Assignment: organization-defined events]; and2. Procedures [Assignment: organization-defined frequency] and following [Assignment: organization-defined events].	Functional	Intersects With	Publishing Security, Compliance & Resilience Documentation	GOV-02	Mechanisms exist to establish, maintain and disseminate policies, standards and procedures necessary for secure, compliant and resilient capabilities.	5	
AC-01	Policy and Procedures	a. Develop, document, and disseminate to [Assignment: organization-defined personnel or roles];1. [Selection (one or more): Organization-level; Mission/business process-level; System-level] access control policy that:a. Addresses purpose, scope, roles, responsibilities, management commitment, coordination among organizational entities, and compliance; andb. Is consistent with applicable laws, executive orders, directives, regulations, policies, standards, and guidelines; and2. Procedures to facilitate the implementation of the access control policy and the associated access controls;b. Designate an [Assignment: organization-defined official] to manage the development, documentation, and dissemination of the access control policy and procedures; andc. Review and update the current access control:1. Policy [Assignment: organization-defined frequency] and following [Assignment: organization-defined events]; and2. Procedures [Assignment: organization-defined frequency] and following [Assignment: organization-defined events].	Functional	Intersects With	Periodic Review & Update of Security, Compliance & Resilience Program	GOV-03	Mechanisms exist to review the Security, Compliance & Resilience Program (SCRIP), including policies, standards and procedures, at planned intervals or if significant changes occur to ensure their continuing suitability, adequacy and effectiveness.	5	
AC-01	Policy and Procedures	a. Develop, document, and disseminate to [Assignment: organization-defined personnel or roles];1. [Selection (one or more): Organization-level; Mission/business process-level; System-level] access control policy that:a. Addresses purpose, scope, roles, responsibilities, management commitment, coordination among organizational entities, and compliance; andb. Is consistent with applicable laws, executive orders, directives, regulations, policies, standards, and guidelines; and2. Procedures to facilitate the implementation of the access control policy and the associated access controls;b. Designate an [Assignment: organization-defined official] to manage the development, documentation, and dissemination of the access control policy and procedures; andc. Review and update the current access control:1. Policy [Assignment: organization-defined frequency] and following [Assignment: organization-defined events]; and2. Procedures [Assignment: organization-defined frequency] and following [Assignment: organization-defined events].	Functional	Subset Of	Identity & Access Management (IAM)	IAC-01	Mechanisms exist to facilitate the implementation of identification and access management controls.	10	
AC-02	Account Management	a. Define and document the types of accounts allowed and specifically prohibited for use within the system;b. Assign account managers;c. Require [Assignment: organization-defined prerequisites and criteria] for group and role membership;d. Specify:1. Authorized users of the system;2. Group and role membership; and3. Access authorizations (i.e., privileges) and [Assignment: organization-defined attributes (as required)] for each account;e. Require approvals by [Assignment: organization-defined personnel or roles] for requests to create accounts;f. Create, enable, modify, disable, and remove accounts in accordance with [Assignment: organization-defined policy, procedures, prerequisites, and criteria];g. Monitor the use of accounts;h. Notify account managers and [Assignment: organization-defined personnel or roles] within:1. [Assignment: organization-defined time period] when accounts are no longer required;2. [Assignment: organization-defined time period] when users are terminated or transferred; and3. [Assignment: organization-defined time period] when system usage or need-to-know changes for an individual;i. Authorize access to the system based on:1. A valid access authorization;2. Intended system usage; and3. [Assignment: organization-defined attributes (as required)];j. Review accounts for compliance with account management requirements [Assignment: organization-defined frequency];k. Establish and implement a process for changing shared or group account authenticators (if deployed) when individuals are removed from the group; andl. Align account management processes with personnel termination and transfer processes.	Functional	Intersects With	Termination of Employment	IAC-07.2	Mechanisms exist to revoke user access rights in a timely manner, upon termination of employment or contract.	5	
AC-02	Account Management	a. Define and document the types of accounts allowed and specifically prohibited for use within the system;b. Assign account managers;c. Require [Assignment: organization-defined prerequisites and criteria] for group and role membership;d. Specify:1. Authorized users of the system;2. Group and role membership; and3. Access authorizations (i.e., privileges) and [Assignment: organization-defined attributes (as required)] for each account;e. Require approvals by [Assignment: organization-defined personnel or roles] for requests to create accounts;f. Create, enable, modify, disable, and remove accounts in accordance with [Assignment: organization-defined policy, procedures, prerequisites, and criteria];g. Monitor the use of accounts;h. Notify account managers and [Assignment: organization-defined personnel or roles] within:1. [Assignment: organization-defined time period] when accounts are no longer required;2. [Assignment: organization-defined time period] when users are terminated or transferred; and3. [Assignment: organization-defined time period] when system usage or need-to-know changes for an individual;i. Authorize access to the system based on:1. A valid access authorization;2. Intended system usage; and3. [Assignment: organization-defined attributes (as required)];j. Review accounts for compliance with account management requirements [Assignment: organization-defined frequency];k. Establish and implement a process for changing shared or group account authenticators (if deployed) when individuals are removed from the group; andl. Align account management processes with personnel termination and transfer processes.	Functional	Intersects With	Account Management	IAC-15	Mechanisms exist to proactively govern account management of individual, group, system, service, application, guest and temporary accounts.	5	

FDE #	FDE Name	Focal Document Element (FDE) Description	STRM Rationale	STRM Relationship	SCF Control	SCF #	Secure Controls Framework (SCF) Control Description	of Relationships	Notes
AC-02	Account Management	a. Define and document the types of accounts allowed and specifically prohibited for use within the system;b. Assign account managers;c. Require [Assignment: organization-defined prerequisites and criteria] for group and role membership;d. Specify:1. Authorized users of the system;2. Group and role membership; and3. Access authorizations (i.e., privileges) and [Assignment: organization-defined attributes (as required)] for each account;e. Require approvals by [Assignment: organization-defined personnel or roles] for requests to create accounts;f. Create, enable, modify, disable, and remove accounts in accordance with [Assignment: organization-defined policy, procedures, prerequisites, and criteria];g. Monitor the use of accounts;h. Notify account managers and [Assignment: organization-defined personnel or roles] within:1. [Assignment: organization-defined time period] when accounts are no longer required;2. [Assignment: organization-defined time period] when users are terminated or transferred; and3. [Assignment: organization-defined time period] when system usage or need-to-know changes for an individual;i. Authorize access to the system based on:1. A valid access authorization;2. Intended system usage; and3. [Assignment: organization-defined attributes (as required)];j. Review accounts for compliance with account management requirements [Assignment: organization-defined frequency];k. Establish and implement a process for changing shared or group account authenticators (if deployed) when individuals are removed from the group; andl. Align account management processes with personnel termination and transfer processes.	Functional	Intersects With	Input Data Validation	TDA-18	Mechanisms exist to check the validity of information inputs.	5	
AC-02	Account Management	a. Define and document the types of accounts allowed and specifically prohibited for use within the system;b. Assign account managers;c. Require [Assignment: organization-defined prerequisites and criteria] for group and role membership;d. Specify:1. Authorized users of the system;2. Group and role membership; and3. Access authorizations (i.e., privileges) and [Assignment: organization-defined attributes (as required)] for each account;e. Require approvals by [Assignment: organization-defined personnel or roles] for requests to create accounts;f. Create, enable, modify, disable, and remove accounts in accordance with [Assignment: organization-defined policy, procedures, prerequisites, and criteria];g. Monitor the use of accounts;h. Notify account managers and [Assignment: organization-defined personnel or roles] within:1. [Assignment: organization-defined time period] when accounts are no longer required;2. [Assignment: organization-defined time period] when users are terminated or transferred; and3. [Assignment: organization-defined time period] when system usage or need-to-know changes for an individual;i. Authorize access to the system based on:1. A valid access authorization;2. Intended system usage; and3. [Assignment: organization-defined attributes (as required)];j. Review accounts for compliance with account management requirements [Assignment: organization-defined frequency];k. Establish and implement a process for changing shared or group account authenticators (if deployed) when individuals are removed from the group; andl. Align account management processes with personnel termination and transfer processes.	Functional	Intersects With	Safeguarding Data Over Open Networks	NET-12	Cryptographic mechanisms exist to implement strong cryptography and security protocols to safeguard sensitive/regulated data during transmission over open, public networks.	5	
AC-03	Access Enforcement	Enforce approved authorizations for logical access to information and system resources in accordance with applicable access control policies.	Functional	Intersects With	Access Enforcement	IAC-20	Mechanisms exist to enforce Logical Access Control (LAC) permissions that conform to the principle of "least privilege."	5	
AC-03	Access Enforcement	Enforce approved authorizations for logical access to information and system resources in accordance with applicable access control policies.	Functional	Intersects With	Safeguarding Data Over Open Networks	NET-12	Cryptographic mechanisms exist to implement strong cryptography and security protocols to safeguard sensitive/regulated data during transmission over open, public networks.	5	
AC-03	Access Enforcement	Enforce approved authorizations for logical access to information and system resources in accordance with applicable access control policies.	Functional	Intersects With	Input Data Validation	TDA-18	Mechanisms exist to check the validity of information inputs.	5	
AC-07	Unsuccessful Logon Attempts	a. Enforce a limit of [Assignment: organization-defined number] consecutive invalid logon attempts by a user during a [Assignment: organization-defined time period]; andb. Automatically [Selection (one or more): lock the account or node for an [Assignment: organization-defined time period]; lock the account or node until released by an administrator; delay next logon prompt per [Assignment: organization-defined delay algorithm]; notify system administrator; take other [Assignment: organization-defined action] when the maximum number of unsuccessful attempts is exceeded.	Functional	Equal	Account Lockout	IAC-22	Mechanisms exist to enforce a limit for consecutive invalid login attempts by a user during an organization-defined time period and automatically locks the account when the maximum number of unsuccessful attempts is exceeded.	10	
AC-08	System Use Notification	a. Display [Assignment: organization-defined system use notification message or banner] to users before granting access to the system that provides privacy and security notices consistent with applicable laws, executive orders, directives, regulations, policies, standards, and guidelines and state that:1. Users are accessing a U.S. Government system;2. System usage may be monitored, recorded, and subject to audit;3. Unauthorized use of the system is prohibited and subject to criminal and civil penalties; and4. Use of the system indicates consent to monitoring and recording;b. Retain the notification message or banner on the screen until users acknowledge the usage conditions and take explicit actions to log on to or further access the system; andc. For publicly accessible systems:1. Display system use information [Assignment: organization-defined conditions], before granting further access to the publicly accessible system;2. Display references, if any, to monitoring, recording, or auditing that are consistent with privacy accommodations for such systems that generally prohibit those activities; and3. Include a description of the authorized uses of the system.	Functional	Equal	System Use Notification (Logon Banner)	SEA-18	Mechanisms exist to utilize system use notification / logon banners that display an approved system use notification message or banner before granting access to Technology Assets, Applications and/or Services (TAAS).	10	
AC-14	Permitted Actions Without Identification or Authentication	a. Identify [Assignment: organization-defined user actions] that can be performed on the system without identification or authentication consistent with organizational mission and business functions; andb. Document and provide supporting rationale in the security plan for the system, user actions not requiring identification or authentication.	Functional	Equal	Permitted Actions Without Identification or Authentication	IAC-26	Mechanisms exist to identify and document the supporting rationale for specific user actions that can be performed on a system without identification or authentication.	10	
AC-17	Remote Access	a. Establish and document usage restrictions, configuration/connection requirements, and implementation guidance for each type of remote access allowed; andb. Authorize each type of remote access to the system prior to allowing such connections.	Functional	Intersects With	Remote Access	NET-14	Mechanisms exist to define, control and review organization-approved, secure remote access methods.	5	
AC-18	Wireless Access	a. Establish configuration requirements, connection requirements, and implementation guidance for each type of wireless access; andb. Authorize each type of wireless access to the system prior to allowing such connections.	Functional	Intersects With	Wireless Networking	NET-15	Mechanisms exist to control authorized wireless usage and monitor for unauthorized wireless access.	5	

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AC-18	Wireless Access	a. Establish configuration requirements, connection requirements, and implementation guidance for each type of wireless access; andb. Authorize each type of wireless access to the system prior to allowing such connections.	Functional	Intersects With	Wireless Access Authentication & Encryption	CRY-07	Mechanisms exist to protect the confidentiality and integrity of wireless networking technologies by implementing authentication and strong encryption.	5	
AC-19	Access Control for Mobile Devices	a. Establish configuration requirements, connection requirements, and implementation guidance for organization-controlled mobile devices, to include when such devices are outside of controlled areas; andb. Authorize the connection of mobile devices to organizational systems.	Functional	Equal	Access Control For Mobile Devices	MDM-02	Mechanisms exist to enforce access control requirements for the connection of mobile devices to organizational Technology Assets, Applications and/or Services (TAAS).	10	
AC-20	Use of External Systems	a. [Selection (one or more): Establish (Assignment: organization-defined terms and conditions); Identify (Assignment: organization-defined controls asserted to be implemented on external systems)], consistent with the trust relationships established with other organizations owning, operating, and/or maintaining external systems, allowing authorized individuals to:1. Access the system from external systems; and2. Process, store, or transmit organization-controlled information using external systems; orb. Prohibit the use of (Assignment: organizationally-defined types of external systems).	Functional	Equal	Use of External Technology Assets, Applications and/or Services (TAAS)	DCH-13	Mechanisms exist to govern how external parties, including Technology Assets, Applications and/or Services (TAAS), are used to securely store, process and transmit data.	10	
AT-01	Policy and Procedures	a. Develop, document, and disseminate to (Assignment: organization-defined personnel or roles):1. [Selection (one or more): Organization-level; Mission/business process-level; System-level] awareness and training policy thata. Addresses purpose, scope, roles, responsibilities, management commitment, coordination among organizational entities, and compliance; andb. Is consistent with applicable laws, executive orders, directives, regulations, policies, standards, and guidelines; and2. Procedures to facilitate the implementation of the awareness and training policy and the associated awareness and training controls;b. Designate an (Assignment: organization-defined official) to manage the development, documentation, and dissemination of the awareness and training policy and procedures; andc. Review and update the current awareness and training:1. Policy (Assignment: organization-defined frequency) and following (Assignment: organization-defined events); and2. Procedures (Assignment: organization-defined frequency) and following (Assignment: organization-defined events); and3. Dissemination (Assignment: organization-defined frequency) and following (Assignment: organization-defined events).	Functional	Intersects With	Periodic Review & Update of Security, Compliance & Resilience Program	GOV-03	Mechanisms exist to review the Security, Compliance & Resilience Program (SCRPP), including policies, standards and procedures, at planned intervals or if significant changes occur to ensure their continuing suitability, adequacy and effectiveness.	5	
AT-01	Policy and Procedures	a. Develop, document, and disseminate to (Assignment: organization-defined personnel or roles):1. [Selection (one or more): Organization-level; Mission/business process-level; System-level] awareness and training policy thata. Addresses purpose, scope, roles, responsibilities, management commitment, coordination among organizational entities, and compliance; andb. Is consistent with applicable laws, executive orders, directives, regulations, policies, standards, and guidelines; and2. Procedures to facilitate the implementation of the awareness and training policy and the associated awareness and training controls;b. Designate an (Assignment: organization-defined official) to manage the development, documentation, and dissemination of the awareness and training policy and procedures; andc. Review and update the current awareness and training:1. Policy (Assignment: organization-defined frequency) and following (Assignment: organization-defined events); and2. Procedures (Assignment: organization-defined frequency) and following (Assignment: organization-defined events); and3. Dissemination (Assignment: organization-defined frequency) and following (Assignment: organization-defined events).	Functional	Subset Of	Security, Compliance & Resilience-Minded Workforce	SAT-01	Mechanisms exist to facilitate the implementation of security workforce development and awareness controls.	10	
AT-01	Policy and Procedures	a. Develop, document, and disseminate to (Assignment: organization-defined personnel or roles):1. [Selection (one or more): Organization-level; Mission/business process-level; System-level] awareness and training policy thata. Addresses purpose, scope, roles, responsibilities, management commitment, coordination among organizational entities, and compliance; andb. Is consistent with applicable laws, executive orders, directives, regulations, policies, standards, and guidelines; and2. Procedures to facilitate the implementation of the awareness and training policy and the associated awareness and training controls;b. Designate an (Assignment: organization-defined official) to manage the development, documentation, and dissemination of the awareness and training policy and procedures; andc. Review and update the current awareness and training:1. Policy (Assignment: organization-defined frequency) and following (Assignment: organization-defined events); and2. Procedures (Assignment: organization-defined frequency) and following (Assignment: organization-defined events); and3. Dissemination (Assignment: organization-defined frequency) and following (Assignment: organization-defined events).	Functional	Intersects With	Publishing Security, Compliance & Resilience Documentation	GOV-02	Mechanisms exist to establish, maintain and disseminate policies, standards and procedures necessary for secure, compliant and resilient capabilities.	5	
AT-02	Literacy Training and Awareness	a. Provide security and privacy literacy training to system users (including managers, senior executives, and contractors):1. As part of initial training for new users and (Assignment: organization-defined frequency) thereafter; and2. When required by system changes or following (Assignment: organization-defined events);b. Employ the following techniques to increase the security and privacy awareness of system users (Assignment: organization-defined awareness techniques);c. Update literacy training and awareness content (Assignment: organization-defined frequency) and following (Assignment: organization-defined events); andd. Incorporate lessons learned from internal or external security incidents or breaches into literacy training and awareness techniques.	Functional	Equal	Security, Compliance & Resilience Awareness Training	SAT-02	Mechanisms exist to provide all employees and contractors appropriate security, compliance and resilience awareness education and training that is relevant for their job function.	10	
AT-03	Role-based Training	a. Provide role-based security and privacy training to personnel with the following roles and responsibilities: (Assignment: organization-defined roles and responsibilities):1. Before authorizing access to the system, information, or performing assigned duties, and (Assignment: organization-defined frequency) thereafter; and2. When required by system changes;b. Update role-based training content (Assignment: organization-defined frequency) and following (Assignment: organization-defined events); andc. Incorporate lessons learned from internal or external security incidents or breaches into role-based training.	Functional	Intersects With	Role-Based Security, Compliance & Resilience Training	SAT-03	Mechanisms exist to provide role-based security, compliance and resilience-related training: (1) Before authorizing access to the system or performing assigned duties; (2) When required by system changes; and (3) Annually thereafter.	5	
AT-04	Training Records	a. Document and monitor information security and privacy training activities, including security and privacy awareness training and specific role-based security and privacy training; andb. Retain individual training records for (Assignment: organization-defined time period).	Functional	Equal	Security, Compliance & Resilience Training Records	SAT-04	training activities, including: (1) Initial security, compliance and resilience awareness training; (2) Recurring awareness training; and (3) Technology Assets,	10	

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AU-01	Policy and Procedures	a. Develop, document, and disseminate to [Assignment: organization-defined personnel or roles];1. [Selection (one or more): Organization-level; Mission/business process-level; System-level] audit and accountability policy that:a. Addresses purpose, scope, roles, responsibilities, management commitment, coordination among organizational entities, and compliance; andb. Is consistent with applicable laws, executive orders, directives, regulations, policies, standards, and guidelines; and2. Procedures to facilitate the implementation of the audit and accountability policy and the associated audit and accountability controls;b. Designate an [Assignment: organization-defined official] to manage the development, documentation, and dissemination of the audit and accountability policy and procedures; andc. Review and update the current audit and accountability:1. Policy [Assignment: organization-defined frequency] and following [Assignment: organization-defined events]; and2. Procedures [Assignment: organization-defined frequency] and following [Assignment: organization-defined events].	Functional	Intersects With	Periodic Review & Update of Security, Compliance & Resilience Program	GOV-03	Mechanisms exist to review the Security, Compliance & Resilience Program (SCR), including policies, standards and procedures, at planned intervals or if significant changes occur to ensure their continuing suitability, adequacy and effectiveness.	5	
AU-01	Policy and Procedures	a. Develop, document, and disseminate to [Assignment: organization-defined personnel or roles];1. [Selection (one or more): Organization-level; Mission/business process-level; System-level] audit and accountability policy that:a. Addresses purpose, scope, roles, responsibilities, management commitment, coordination among organizational entities, and compliance; andb. Is consistent with applicable laws, executive orders, directives, regulations, policies, standards, and guidelines; and2. Procedures to facilitate the implementation of the audit and accountability policy and the associated audit and accountability controls;b. Designate an [Assignment: organization-defined official] to manage the development, documentation, and dissemination of the audit and accountability policy and procedures; andc. Review and update the current audit and accountability:1. Policy [Assignment: organization-defined frequency] and following [Assignment: organization-defined events]; and2. Procedures [Assignment: organization-defined frequency] and following [Assignment: organization-defined events].	Functional	Intersects With	Publishing Security, Compliance & Resilience Documentation	GOV-02	Mechanisms exist to establish, maintain and disseminate policies, standards and procedures necessary for secure, compliant and resilient capabilities.	5	
AU-01	Policy and Procedures	a. Develop, document, and disseminate to [Assignment: organization-defined personnel or roles];1. [Selection (one or more): Organization-level; Mission/business process-level; System-level] audit and accountability policy that:a. Addresses purpose, scope, roles, responsibilities, management commitment, coordination among organizational entities, and compliance; andb. Is consistent with applicable laws, executive orders, directives, regulations, policies, standards, and guidelines; and2. Procedures to facilitate the implementation of the audit and accountability policy and the associated audit and accountability controls;b. Designate an [Assignment: organization-defined official] to manage the development, documentation, and dissemination of the audit and accountability policy and procedures; andc. Review and update the current audit and accountability:1. Policy [Assignment: organization-defined frequency] and following [Assignment: organization-defined events]; and2. Procedures [Assignment: organization-defined frequency] and following [Assignment: organization-defined events].	Functional	Subset Of	Continuous Monitoring	MON-01	Mechanisms exist to facilitate the implementation of enterprise-wide monitoring controls.	10	
AU-02	Event Logging	a. Identify the types or events that the system is capable of logging in support of the audit function; [Assignment: organization-defined event types that the system is capable of logging];b. Coordinate the event logging function with other organizational entities requiring audit-related information to guide and inform the selection criteria for events to be logged;c. Specify the following event types for logging within the system: [Assignment: organization-defined event types (subset of the event types defined in AU-02a.) along with the frequency of (or situation requiring) logging for each identified event type];d. Provide a rationale for why the event types selected for logging are deemed to be adequate to support after-the-fact investigations of incidents; ande. Review and update the event types selected for logging [Assignment: organization-defined frequency].	Functional	Intersects With	Security Event Monitoring	MON-01.8	Mechanisms exist to review event logs on an ongoing basis and escalate incidents in accordance with established timelines and procedures.	5	
AU-02	Event Logging	a. Identify the types or events that the system is capable of logging in support of the audit function; [Assignment: organization-defined event types that the system is capable of logging];b. Coordinate the event logging function with other organizational entities requiring audit-related information to guide and inform the selection criteria for events to be logged;c. Specify the following event types for logging within the system: [Assignment: organization-defined event types (subset of the event types defined in AU-02a.) along with the frequency of (or situation requiring) logging for each identified event type];d. Provide a rationale for why the event types selected for logging are deemed to be adequate to support after-the-fact investigations of incidents; ande. Review and update the event types selected for logging [Assignment: organization-defined frequency].	Functional	Intersects With	Centralized Collection of Security Event Logs	MON-02	Mechanisms exist to utilize a Security Incident Event Manager (SIEM), or similar automated tool, to support the centralized collection of security-related event logs.	5	
AU-03	Content of Audit Records	Ensure that audit records contain information that establishes the following:a. What type of event occurred;b. When the event occurred;c. Where the event occurred;d. Source of the event;e. Outcome of the event; andf. Identity of any individuals, subjects, or objects/entities associated with the event.	Functional	Equal	Content of Event Logs	MON-03	Mechanisms exist to configure Technology Assets, Applications and/or Services (TAAS) to produce event logs that contain sufficient information to, at a minimum: (1) Establish what type of event occurred; (2) When (date and time) the event occurred; (3) Where the event occurred; (4) The source of the event; (5) The outcome (success or failure) of the event; and (6) The identity of any user/subject associated with the event.	10	
AU-04	Audit Log Storage Capacity	Allocate audit log storage capacity to accommodate [Assignment: organization-defined audit log retention requirements].	Functional	Equal	Event Log Storage Capacity	MON-04	Mechanisms exist to allocate and proactively manage sufficient event log storage capacity to reduce the likelihood of such capacity being exceeded.	10	
AU-05	Response to Audit Logging Process Failures	a. Alert [Assignment: organization-defined personnel or roles] within [Assignment: organization-defined time period] in the event of an audit logging process failure; andb. Take the following additional actions: [Assignment: organization-defined additional actions].	Functional	Equal	Response To Event Log Processing Failures	MON-05	Mechanisms exist to alert appropriate personnel in the event of a log processing failure and take actions to remedy the disruption.	10	

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AU-06	Audit Record Review, Analysis, and Reporting	a. Review and analyze system audit records [Assignment: organization-defined frequency] for indications of [Assignment: organization-defined inappropriate or unusual activity] and the potential impact of the inappropriate or unusual activity;b. Report findings to [Assignment: organization-defined personnel or roles]; andc. Adjust the level of audit record review, analysis, and reporting within the system when there is a change in risk based on law enforcement information, intelligence information, or other credible sources of information.	Functional	Intersects With	Centralized Collection of Security Event Logs	MON-02	Mechanisms exist to utilize a Security Incident Event Manager (SIEM), or similar automated tool, to support the centralized collection of security-related event logs.	5	
AU-06	Audit Record Review, Analysis, and Reporting	a. Review and analyze system audit records [Assignment: organization-defined frequency] for indications of [Assignment: organization-defined inappropriate or unusual activity] and the potential impact of the inappropriate or unusual activity;b. Report findings to [Assignment: organization-defined personnel or roles]; andc. Adjust the level of audit record review, analysis, and reporting within the system when there is a change in risk based on law enforcement information, intelligence information, or other credible sources of information.	Functional	Intersects With	Audit Level Adjustments	MON-02.6	Mechanisms exist to adjust the level of audit review, analysis and reporting based on evolving threat information from law enforcement, industry associations or other credible sources of threat intelligence.	5	
AU-08	Time Stamps	a. Use internal system clocks to generate time stamps for audit records; andb. Record time stamps for audit records that meet [Assignment: organization-defined granularity of time measurement] and that use Coordinated Universal Time, have a fixed local time offset from Coordinated Universal Time, or that include the local time offset as part of the time stamp.	Functional	Intersects With	Clock Synchronization	SEA-20	Mechanisms exist to utilize time-synchronization technology to synchronize all critical system clocks.	5	
AU-08	Time Stamps	a. Use internal system clocks to generate time stamps for audit records; andb. Record time stamps for audit records that meet [Assignment: organization-defined granularity of time measurement] and that use Coordinated Universal Time, have a fixed local time offset from Coordinated Universal Time, or that include the local time offset as part of the time stamp.	Functional	Intersects With	Time Stamps	MON-07	Mechanisms exist to configure Technology Assets, Applications and/or Services (TAAS) to use an authoritative time source to generate time stamps for event logs.	5	
AU-08(01)	N/A	Withdrawn	Functional	No Relationship	N/A	N/A	N/A	0	Withdrawn in NIST SP 800-53 R5
AU-09	Protection of Audit Information	a. Protect audit information and audit logging tools from unauthorized access, modification, and deletion; andb. Alert [Assignment: organization-defined personnel or roles] upon detection of unauthorized access, modification, or deletion of audit information.	Functional	Equal	Protection of Event Logs	MON-08	Mechanisms exist to protect event logs and audit tools from unauthorized access, modification and deletion.	10	
AU-11	Audit Record Retention	Retain audit records for [Assignment: organization-defined time period consistent with records retention policy] to provide support for after-the-fact investigations of incidents and to meet regulatory and organizational information retention requirements.	Functional	Equal	Event Log Retention	MON-10	Mechanisms exist to retain event logs for a time period consistent with records retention requirements to provide support for after-the-fact investigations of security incidents and to meet statutory, regulatory and contractual retention requirements.	10	
AU-12	Audit Record Generation	a. Provide audit record generation capability for the event types the system is capable of auditing as defined in AU-2a on [Assignment: organization-defined system components];b. Allow [Assignment: organization-defined personnel or roles] to select the event types that are to be logged by specific components of the system; andc. Generate audit records for the event types defined in AU-2c that include the associated components, devices, and data.	Functional	Intersects With	Monitoring Reporting	MON-06	Mechanisms exist to provide an event log report generation capability to aid in detecting and assessing anomalous activities.	5	
CA-01	Policy and Procedures	[Assignment: organization-defined personnel or roles].1. [Selection (one or more): Organization-level; Mission/business process-level; System-level] assessment, authorization, and monitoring policy that:a. Addresses purpose, scope, roles, responsibilities, management commitment, coordination among organizational entities, and compliance; andb. Is consistent with applicable laws, executive orders, directives, regulations, policies, standards, and guidelines; and2. Procedures to facilitate the implementation of the assessment, authorization, and monitoring policy and the associated assessment, authorization, and monitoring controls;b. Designate an [Assignment: organization-defined official] to manage the development, documentation, and dissemination of the assessment, authorization, and monitoring policy and procedures; andc. Review and update the current assessment, authorization, and monitoring:1. Policy [Assignment: organization-defined frequency] and following [Assignment: organization-defined events]; and2. Procedures [Assignment: organization-defined frequency] and following [Assignment: organization-	Functional	Subset Of	Information Assurance (IA) Operations	IAO-01	Mechanisms exist to facilitate the implementation of security, compliance and resilience assessment and authorization controls.	10	
CA-01	Policy and Procedures	[Assignment: organization-defined personnel or roles].1. [Selection (one or more): Organization-level; Mission/business process-level; System-level] assessment, authorization, and monitoring policy that:a. Addresses purpose, scope, roles, responsibilities, management commitment, coordination among organizational entities, and compliance; andb. Is consistent with applicable laws, executive orders, directives, regulations, policies, standards, and guidelines; and2. Procedures to facilitate the implementation of the assessment, authorization, and monitoring policy and the associated assessment, authorization, and monitoring controls;b. Designate an [Assignment: organization-defined official] to manage the development, documentation, and dissemination of the assessment, authorization, and monitoring policy and procedures; andc. Review and update the current assessment, authorization, and monitoring:1. Policy [Assignment: organization-defined frequency] and following [Assignment: organization-defined events]; and2. Procedures [Assignment: organization-defined frequency] and following [Assignment: organization-	Functional	Intersects With	Periodic Review & Update of Security, Compliance & Resilience Program	GOV-03	Mechanisms exist to review the Security, Compliance & Resilience Program (SCRPP), including policies, standards and procedures, at planned intervals or if significant changes occur to ensure their continuing suitability, adequacy and effectiveness.	5	
CA-01	Policy and Procedures	[Assignment: organization-defined personnel or roles].1. [Selection (one or more): Organization-level; Mission/business process-level; System-level] assessment, authorization, and monitoring policy that:a. Addresses purpose, scope, roles, responsibilities, management commitment, coordination among organizational entities, and compliance; andb. Is consistent with applicable laws, executive orders, directives, regulations, policies, standards, and guidelines; and2. Procedures to facilitate the implementation of the assessment, authorization, and monitoring policy and the associated assessment, authorization, and monitoring controls;b. Designate an [Assignment: organization-defined official] to manage the development, documentation, and dissemination of the assessment, authorization, and monitoring policy and procedures; andc. Review and update the current assessment, authorization, and monitoring:1. Policy [Assignment: organization-defined frequency] and following [Assignment: organization-defined events]; and2. Procedures [Assignment: organization-defined frequency] and following [Assignment: organization-	Functional	Intersects With	Publishing Security, Compliance & Resilience Documentation	GOV-02	Mechanisms exist to establish, maintain and disseminate policies, standards and procedures necessary for secure, compliant and resilient capabilities.	5	

FDE #	FDE Name	Focal Document Element (FDE) Description	STRM Rationale	STRM Relationship	SCF Control	SCF #	Secure Controls Framework (SCF) Control Description	of Relationships	Notes
CA-02	Control Assessments	a. Select the appropriate assessor or assessment team for the type of assessment to be conducted;b. Develop a control assessment plan that describes the scope of the assessment including:1. Controls and control enhancements under assessment;2. Assessment procedures to be used to determine control effectiveness; and3. Assessment environment, assessment team, and assessment roles and responsibilities;c. Ensure the control assessment plan is reviewed and approved by the authorizing official or designated representative prior to conducting the assessment;d. Assess the controls in the system and its environment of operation [Assignment: organization-defined frequency] to determine the extent to which the controls are implemented correctly, operating as intended, and producing the desired outcome with respect to meeting established security and privacy requirements;e. Produce a control assessment report that document the results of the assessment; andf. Provide the results of the control assessment to [Assignment: organization-defined individuals or roles].	Functional	Intersects With	Functional Review Of Security, Compliance & Resilience Controls	CPL-03.2	Mechanisms exist to regularly review Technology Assets, Applications and/or Services (TAAS) for adherence to the organization's security, compliance and/or resilience policies and standards.	5	
CA-02	Control Assessments	a. Select the appropriate assessor or assessment team for the type of assessment to be conducted;b. Develop a control assessment plan that describes the scope of the assessment including:1. Controls and control enhancements under assessment;2. Assessment procedures to be used to determine control effectiveness; and3. Assessment environment, assessment team, and assessment roles and responsibilities;c. Ensure the control assessment plan is reviewed and approved by the authorizing official or designated representative prior to conducting the assessment;d. Assess the controls in the system and its environment of operation [Assignment: organization-defined frequency] to determine the extent to which the controls are implemented correctly, operating as intended, and producing the desired outcome with respect to meeting established security and privacy requirements;e. Produce a control assessment report that document the results of the assessment; andf. Provide the results of the control assessment to [Assignment: organization-defined individuals or roles].	Functional	Intersects With	Technical Verification	IAO-06	Mechanisms exist to perform Information Assurance Program (IAP) activities to evaluate the design, implementation and effectiveness of technical security, compliance and resilience controls.	5	
CA-02	Control Assessments	a. Select the appropriate assessor or assessment team for the type of assessment to be conducted;b. Develop a control assessment plan that describes the scope of the assessment including:1. Controls and control enhancements under assessment;2. Assessment procedures to be used to determine control effectiveness; and3. Assessment environment, assessment team, and assessment roles and responsibilities;c. Ensure the control assessment plan is reviewed and approved by the authorizing official or designated representative prior to conducting the assessment;d. Assess the controls in the system and its environment of operation [Assignment: organization-defined frequency] to determine the extent to which the controls are implemented correctly, operating as intended, and producing the desired outcome with respect to meeting established security and privacy requirements;e. Produce a control assessment report that document the results of the assessment; andf. Provide the results of the control assessment to [Assignment: organization-defined individuals or roles].	Functional	Intersects With	Security, Compliance & Resilience In Project Management	PRM-04	Mechanisms exist to assess security, compliance and resilience controls in system project development to determine the extent to which the controls are implemented correctly, operating as intended and producing the desired outcome with respect to meeting the requirements.	5	
CA-02	Control Assessments	a. Select the appropriate assessor or assessment team for the type of assessment to be conducted;b. Develop a control assessment plan that describes the scope of the assessment including:1. Controls and control enhancements under assessment;2. Assessment procedures to be used to determine control effectiveness; and3. Assessment environment, assessment team, and assessment roles and responsibilities;c. Ensure the control assessment plan is reviewed and approved by the authorizing official or designated representative prior to conducting the assessment;d. Assess the controls in the system and its environment of operation [Assignment: organization-defined frequency] to determine the extent to which the controls are implemented correctly, operating as intended, and producing the desired outcome with respect to meeting established security and privacy requirements;e. Produce a control assessment report that document the results of the assessment; andf. Provide the results of the control assessment to [Assignment: organization-defined individuals or roles].	Functional	Intersects With	Assessments	IAO-02	Mechanisms exist to formally assess the security, compliance and resilience controls in Technology Assets, Applications and/or Services (TAAS) through Information Assurance Program (IAP) activities to determine the extent to which the controls are implemented correctly, operating as intended and producing the desired outcome with respect to meeting expected requirements.	5	
CA-02	Control Assessments	a. Select the appropriate assessor or assessment team for the type of assessment to be conducted;b. Develop a control assessment plan that describes the scope of the assessment including:1. Controls and control enhancements under assessment;2. Assessment procedures to be used to determine control effectiveness; and3. Assessment environment, assessment team, and assessment roles and responsibilities;c. Ensure the control assessment plan is reviewed and approved by the authorizing official or designated representative prior to conducting the assessment;d. Assess the controls in the system and its environment of operation [Assignment: organization-defined frequency] to determine the extent to which the controls are implemented correctly, operating as intended, and producing the desired outcome with respect to meeting established security and privacy requirements;e. Produce a control assessment report that document the results of the assessment; andf. Provide the results of the control assessment to [Assignment: organization-defined individuals or roles].	Functional	Intersects With	Security, Compliance & Resilience Assessments	CPL-03	Mechanisms exist to regularly review processes and documented procedures to ensure conformity with the organization's security, compliance and/or resilience policies, standards and other applicable requirements.	5	
CA-02(01)	Control Assessments   Independent Assessors	Employ independent assessors or assessment teams to conduct control assessments.	Functional	Equal	Assessor Independence	IAO-02.1	Mechanisms exist to ensure assessors or assessment teams have the appropriate independence to conduct security, compliance and/or resilience control assessments.	10	
CA-03	Information Exchange	a. Approve and manage the exchange of information between the system and other systems using [Selection (one or more): interconnection security agreements; information exchange security agreements; memoranda of understanding or agreement; service level agreements; user agreements; nondisclosure agreements; [Assignment: organization-defined type of agreement]]; b. Document, as part of each exchange agreement, the interface characteristics, security and privacy requirements, controls, and responsibilities for each system, and the impact level of the information communicated; andc. Review and update the agreements [Assignment: organization-defined frequency].	Functional	Intersects With	Interconnection Security Agreements (ISAs)	NET-05	Mechanisms exist to authorize connections from systems to other systems using Interconnection Security Agreements (ISAs), or similar methods, that document, for each interconnection: (1) Interface characteristics; (2) Security, compliance and resilience requirements; and (3) The nature of the information communicated.	5	
CA-05	Plan of Action and Milestones	a. Develop a plan of action and milestones for the system to document the planned remediation actions of the organization to correct weaknesses or deficiencies noted during the assessment of the controls and to reduce or eliminate known vulnerabilities in the system; andb. Update existing plan of action and milestones [Assignment: organization-defined frequency] based on the findings from control assessments, independent audits or reviews, and continuous monitoring activities.	Functional	Intersects With	Capabilities Deficiency Tracking	IAO-05	control; (3) Description of the deficiency(ies); (4) Risk associated with the deficiency(ies); (5) Source deficiency identification/detection; (6) Temporary compensating controls, if applicable; (7) Point of Contact (POC) (e.g.,	5	

FDE #	FDE Name	Focal Document Element (FDE) Description	STRM Rationale	STRM Relationship	SCF Control	SCF #	Secure Controls Framework (SCF) Control Description	of Relationships	Notes
CA-06	Authorization	a. Assign a senior official as the authorizing official for the system;b. Assign a senior official as the authorizing official for common controls available for inheritance by organizational systems;c. Ensure that the authorizing official for the system, before commencing operations:1. Accepts the use of common controls inherited by the system; and2. Authorizes the system to operate;d. Ensure that the authorizing official for common controls authorizes the use of those controls for inheritance by organizational systems;e. Update the authorizations [Assignment: organization-defined frequency]	Functional	Equal	Security Authorization	IAO-07	Mechanisms exist to ensure Technology Assets, Applications and/or Services (TAAS) are officially authorized prior to "go live" in a production environment.	10	
CA-07	Continuous Monitoring	Develop a system-level continuous monitoring strategy and implement continuous monitoring in accordance with the organization-level continuous monitoring strategy that includes:a. Establishing the following system-level metrics to be monitored: [Assignment: organization-defined system-level metrics];b. Establishing [Assignment: organization-defined frequencies] for monitoring and [Assignment: organization-defined frequencies] for assessments of control effectiveness;c. Ongoing control assessments in accordance with the continuous monitoring strategy;d. Ongoing monitoring of system and organization-defined metrics in accordance with the continuous monitoring strategy;e. Correlation and analysis of information generated by control assessments and monitoring;f. Response actions to address results of the analysis of control assessment and monitoring information; andg. Reporting the security and privacy status of the system to [Assignment: organization-defined personnel or roles]	Functional	Intersects With	Security, Compliance & Resilience Controls Oversight	CPL-02	Mechanisms exist to provide a security, compliance and resilience controls oversight function that reports to the organization's executive leadership.	5	
CA-09	Internal System Connections	Authorize internal connections of [Assignment: organization-defined system components or classes of components] to the system;b. Document, for each internal connection, the interface characteristics, security and privacy requirements, and the nature of the information communicated;c. Terminate internal system connections after [Assignment: organization-defined conditions]; andd. Review [Assignment: organization-defined frequency] the continued need for each internal connection	Functional	Equal	Internal System Connections	NET-05.2	Mechanisms exist to control internal system connections through authorizing internal connections of systems and documenting, for each internal connection, the interface characteristics, security requirements and the nature of the information communicated.	10	
CM-01	Policy and Procedures	a. Develop, document, and disseminate to [Assignment: organization-defined personnel or roles]:1. [Selection (one or more): Organization-level; Mission/business process-level; System-level] configuration management policy that:a. Addresses purpose, scope, roles, responsibilities, management commitment, coordination among organizational entities, and compliance; andb. Is consistent with applicable laws, executive orders, directives, regulations, policies, standards, and guidelines; and2. Procedures to facilitate the implementation of the configuration management policy and the associated configuration management controls;b. Designate an [Assignment: organization-defined official] to manage the development, documentation, and dissemination of the configuration management policy and procedures; andc. Review and update the current configuration management:1. Policy [Assignment: organization-defined frequency] and following [Assignment: organization-defined events]; and2. Procedures [Assignment: organization-defined frequency] and following [Assignment: organization-defined events]	Functional	Subset Of	Configuration Management Program	CFG-01	Mechanisms exist to facilitate the implementation of configuration management controls.	10	
CM-01	Policy and Procedures	a. Develop, document, and disseminate to [Assignment: organization-defined personnel or roles]:1. [Selection (one or more): Organization-level; Mission/business process-level; System-level] configuration management policy that:a. Addresses purpose, scope, roles, responsibilities, management commitment, coordination among organizational entities, and compliance; andb. Is consistent with applicable laws, executive orders, directives, regulations, policies, standards, and guidelines; and2. Procedures to facilitate the implementation of the configuration management policy and the associated configuration management controls;b. Designate an [Assignment: organization-defined official] to manage the development, documentation, and dissemination of the configuration management policy and procedures; andc. Review and update the current configuration management:1. Policy [Assignment: organization-defined frequency] and following [Assignment: organization-defined events]; and2. Procedures [Assignment: organization-defined frequency] and following [Assignment: organization-defined events]	Functional	Intersects With	Periodic Review & Update of Security, Compliance & Resilience Program	GOV-03	Mechanisms exist to review the Security, Compliance & Resilience Program (SCRPP), including policies, standards and procedures, at planned intervals or if significant changes occur to ensure their continuing suitability, adequacy and effectiveness.	5	
CM-01	Policy and Procedures	a. Develop, document, and disseminate to [Assignment: organization-defined personnel or roles]:1. [Selection (one or more): Organization-level; Mission/business process-level; System-level] configuration management policy that:a. Addresses purpose, scope, roles, responsibilities, management commitment, coordination among organizational entities, and compliance; andb. Is consistent with applicable laws, executive orders, directives, regulations, policies, standards, and guidelines; and2. Procedures to facilitate the implementation of the configuration management policy and the associated configuration management controls;b. Designate an [Assignment: organization-defined official] to manage the development, documentation, and dissemination of the configuration management policy and procedures; andc. Review and update the current configuration management:1. Policy [Assignment: organization-defined frequency] and following [Assignment: organization-defined events]; and2. Procedures [Assignment: organization-defined frequency] and following [Assignment: organization-defined events]	Functional	Intersects With	Publishing Security, Compliance & Resilience Documentation	GOV-02	Mechanisms exist to establish, maintain and disseminate policies, standards and procedures necessary for secure, compliant and resilient capabilities.	5	
CM-02	Baseline Configuration	a. Develop, document, and disseminate to [Assignment: organization-defined personnel or roles] configuration control, a current baseline configuration of the system; andb. Review and update the baseline configuration of the system:1. [Assignment: organization-defined frequency];2. When required due to [Assignment: organization-defined circumstances]; and3. When system components are installed or replaced	Functional	Intersects With	Reviews & Updates	CFG-02.1	Mechanisms exist to review and update baseline configurations: (1) At least annually; (2) When required due to so; or (3) As part of system component installations and upgrades.	5	
CM-02	Baseline Configuration	a. Develop, document, and disseminate to [Assignment: organization-defined personnel or roles] configuration control, a current baseline configuration of the system; andb. Review and update the baseline configuration of the system:1. [Assignment: organization-defined frequency];2. When required due to [Assignment: organization-defined circumstances]; and3. When system components are installed or replaced	Functional	Intersects With	Secure Baseline Configurations	CFG-02	Mechanisms exist to document and maintain secure baseline configurations for Technology Assets, Applications and/or Services (TAAS) that are consistent with industry-accepted system hardening standards.	5	
CM-04	Impact Analyses	Analyze changes to the system to determine potential security and privacy impacts prior to change implementation.	Functional	Equal	Security Impact Analysis for Changes	CHG-03	Mechanisms exist to analyze proposed changes for potential security impacts, prior to the implementation of the change.	10	

FDE #	FDE Name	Focal Document Element (FDE) Description	STRM Rationale	STRM Relationship	SCF Control	SCF #	Secure Controls Framework (SCF) Control Description	of Relationships	Notes
CM-06	Configuration Settings	components employed within the system that reflect the most restrictive mode consistent with operational requirements using [Assignment: organization-defined common secure configurations];b. Implement the configuration settings;c. Identify, document, and approve any deviations from established configuration settings for [Assignment: organization-defined system components] based on [Assignment: organization-defined operational requirements]; andd. Monitor and control changes to the configuration settings in accordance with organizational policies and	Functional	Intersects With	Secure Baseline Configurations	CFG-02	Mechanisms exist to develop, document and maintain secure baseline configurations for Technology Assets, Applications and/or Services (TAAS) that are consistent with industry-accepted system hardening standards.	5	
CM-06	Configuration Settings	components employed within the system that reflect the most restrictive mode consistent with operational requirements using [Assignment: organization-defined common secure configurations];b. Implement the configuration settings;c. Identify, document, and approve any deviations from established configuration settings for [Assignment: organization-defined system components] based on [Assignment: organization-defined operational requirements]; andd. Monitor and control changes to the configuration settings in accordance with organizational policies and	Functional	Intersects With	Approved Configuration Deviations	CFG-02.7	Mechanisms exist to document, assess risk and approve or deny deviations to standardized configurations.	5	
CM-07	Least Functionality	a. Configure the system to provide only [Assignment: organization-defined mission essential capabilities]; andb. Prohibit or restrict the use of the following functions, ports, protocols, software, and/or services: [Assignment: organization-defined prohibited or restricted functions, system ports, protocols, software, and/or services].	Functional	Equal	Least Functionality	CFG-03	Mechanisms exist to configure systems to provide only essential capabilities by specifically prohibiting or restricting the use of ports, protocols, and/or services.	10	
CM-08	System Component Inventory	a. Develop and document an inventory of system components that:1. Accurately reflects the system;2. Includes all components within the system;3. Does not include duplicate accounting of components or components assigned to any other system;4. Is at the level of granularity deemed necessary for tracking and reporting; and5. Includes the following information to achieve system component accountability: [Assignment: organization-defined information deemed necessary to achieve effective system component accountability]; andb. Review and update the system component inventory [Assignment: organization-defined frequency].	Functional	Intersects With	Asset Inventories	AST-02	Mechanisms exist to perform inventories of Technology Assets, Applications, Services and/or Data (TAASD) that: (1) Accurately reflects the current TAASD in use; (2) Identifies authorized software products, including business justification details; (3) Is at the level of granularity deemed necessary for tracking and reporting; (4) Includes organization-defined information deemed necessary to achieve effective property accountability; and (5) Is available for review and audit by designated organizational personnel.	5	
CM-08	System Component Inventory	a. Develop and document an inventory of system components that:1. Accurately reflects the system;2. Includes all components within the system;3. Does not include duplicate accounting of components or components assigned to any other system;4. Is at the level of granularity deemed necessary for tracking and reporting; and5. Includes the following information to achieve system component accountability: [Assignment: organization-defined information deemed necessary to achieve effective system component accountability]; andb. Review and update the system component inventory [Assignment: organization-defined frequency].	Functional	Intersects With	Component Duplication Avoidance	AST-02.3	Mechanisms exist to establish and maintain an authoritative source and repository to provide a trusted source and accountability for approved and implemented system components that prevents assets from being duplicated in other asset inventories.	5	
CM-08(01)	System Component Inventory   Updates During Installation and Removal	Update the inventory of system components as part of component installations, removals, and system updates.	Functional	Equal	Updates During Installations / Removals	AST-02.1	Mechanisms exist to update asset inventories as part of component installations, removals and asset upgrades.	10	
CM-11	User-installed Software	a. Establish [Assignment: organization-defined policies] governing the installation of software by users;b. Enforce software installation policies through the following methods: [Assignment: organization-defined methods]; andc. Monitor policy compliance [Assignment: organization-defined frequency].	Functional	Intersects With	Prohibit Installation Without Privileged Status	END-03	Automated mechanisms exist to prohibit software installations without explicitly assigned privileged status.	5	
CM-11	User-installed Software	a. Establish [Assignment: organization-defined policies] governing the installation of software by users;b. Enforce software installation policies through the following methods: [Assignment: organization-defined methods]; andc. Monitor policy compliance [Assignment: organization-defined frequency].	Functional	Intersects With	User-Installed Software	CFG-05	Mechanisms exist to restrict the ability of non-privileged users to install unauthorized software.	5	
CP-01	Policy and Procedures	[Assignment: organization-defined personnel or roles];1. [Selection (one or more): Organization-level; Mission/business process-level; System-level] contingency planning policy that:a. Addresses purpose, scope, roles, responsibilities, management commitment, coordination among organizational entities, and compliance; andb. Is consistent with applicable laws, executive orders, directives, regulations, policies, standards, and guidelines; and2. Procedures to facilitate the implementation of the contingency planning policy and the associated contingency planning controls;b. Designate an [Assignment: organization-defined official] to manage the development, documentation, and dissemination of the contingency planning policy and procedures; andc. Review and update the current contingency planning:1. Policy [Assignment: organization-defined frequency] and following [Assignment: organization-defined events]; and2. Procedures [Assignment: organization-defined frequency] and following [Assignment: organization-defined events].	Functional	Intersects With	Periodic Review & Update of Security, Compliance & Resilience Program	GOV-03	Mechanisms exist to review the Security, Compliance & Resilience Program (SCRPR), including policies, standards and procedures, at planned intervals or if significant changes occur to ensure their continuing suitability, adequacy and effectiveness.	5	
CP-01	Policy and Procedures	[Assignment: organization-defined personnel or roles];1. [Selection (one or more): Organization-level; Mission/business process-level; System-level] contingency planning policy that:a. Addresses purpose, scope, roles, responsibilities, management commitment, coordination among organizational entities, and compliance; andb. Is consistent with applicable laws, executive orders, directives, regulations, policies, standards, and guidelines; and2. Procedures to facilitate the implementation of the contingency planning policy and the associated contingency planning controls;b. Designate an [Assignment: organization-defined official] to manage the development, documentation, and dissemination of the contingency planning policy and procedures; andc. Review and update the current contingency planning:1. Policy [Assignment: organization-defined frequency] and following [Assignment: organization-defined events]; and2. Procedures [Assignment: organization-defined frequency] and following [Assignment: organization-defined events].	Functional	Subset Of	Business Continuity Management System (BCMS)	BCD-01	Mechanisms exist to facilitate the implementation of contingency planning controls to help ensure resilient Technology Assets, Applications and/or Services (TAAS) (e.g., Continuity of Operations Plan (COOP) or Business Continuity & Disaster Recovery (BC/DR) playbooks).	10	

FDE #	FDE Name	Focal Document Element (FDE) Description	STRM Rationale	STRM Relationship	SCF Control	SCF #	Secure Controls Framework Control Description	of Relationships	Notes
CP-01	Policy and Procedures	a. Develop, document, and disseminate to [Assignment: organization-defined personnel or roles]. [Selection (one or more): Organization-level; Mission/business process-level; System-level] contingency planning policy that:a. Addresses purpose, scope, roles, responsibilities, management commitment, coordination among organizational entities, and compliance; andb. Is consistent with applicable laws, executive orders, directives, regulations, policies, standards, and guidelines; and2. Procedures to facilitate the implementation of the contingency planning policy and the associated contingency planning controls;b. Designate an [Assignment: organization-defined official] to manage the development, documentation, and dissemination of the contingency planning policy and procedures; andc. Review and update the current contingency planning:1. Policy [Assignment: organization-defined frequency] and following [Assignment: organization-defined events]; and2. Procedures [Assignment: organization-defined frequency] and following [Assignment: organization-defined events].	Functional	Intersects With	Publishing Security, Compliance & Resilience Documentation	GOV-02	Mechanisms exist to establish, maintain and disseminate policies, standards and procedures necessary for secure, compliant and resilient capabilities.	5	
CP-02	Contingency Plan	Identifies essential mission and business functions and associated contingency requirements;2. Provides recovery objectives, restoration priorities, and metrics;3. Addresses contingency roles, responsibilities, assigned individuals with contact information;4. Addresses maintaining essential mission and business functions despite a system disruption, compromise, or failure;5. Addresses eventual, full system restoration without deterioration of the controls originally planned and implemented;6. Addresses the sharing of contingency information; and7. Is reviewed and approved by [Assignment: organization-defined personnel or roles];b. Distribute copies of the contingency plan to [Assignment: organization-defined key contingency personnel (identified by name and/or by role) and organizational elements];c. Coordinate contingency planning activities with incident handling activities;d. Review the contingency plan for the system [Assignment: organization-defined frequency];e. Update the contingency plan to address changes to the organization, system, or environment of operation and problems encountered during contingency plan implementation, execution, or testing;f. Communicate contingency plan changes to [Assignment: organization-defined key contingency personnel (identified by name and/or by role) and organizational elements];g. Incorporate lessons learned from contingency plan testing, training, or actual contingency activities into contingency testing and training; andh. Protect the contingency plan from unauthorized access.	Functional	Subset Of	Business Continuity Management System (BCMS)	BCD-01	Mechanisms exist to facilitate the implementation of contingency planning controls to help ensure resilient Technology Assets, Applications and/or Services (TAAS) (e.g., Continuity of Operations Plan (COOP) or Business Continuity & Disaster Recovery (BC/DR) playbooks).	10	
CP-02	Contingency Plan	Identifies essential mission and business functions and associated contingency requirements;2. Provides recovery objectives, restoration priorities, and metrics;3. Addresses contingency roles, responsibilities, assigned individuals with contact information;4. Addresses maintaining essential mission and business functions despite a system disruption, compromise, or failure;5. Addresses eventual, full system restoration without deterioration of the controls originally planned and implemented;6. Addresses the sharing of contingency information; and7. Is reviewed and approved by [Assignment: organization-defined personnel or roles];b. Distribute copies of the contingency plan to [Assignment: organization-defined key contingency personnel (identified by name and/or by role) and organizational elements];c. Coordinate contingency planning activities with incident handling activities;d. Review the contingency plan for the system [Assignment: organization-defined frequency];e. Update the contingency plan to address changes to the organization, system, or environment of operation and problems encountered during contingency plan implementation, execution, or testing;f. Communicate contingency plan changes to [Assignment: organization-defined key contingency personnel (identified by name and/or by role) and organizational elements];g. Incorporate lessons learned from contingency plan testing, training, or actual contingency activities into contingency testing and training; andh. Protect the contingency plan from unauthorized access.	Functional	Intersects With	Ongoing Contingency Planning	BCD-06	Mechanisms exist to update contingency plans due to changes affecting: (1) People (e.g., personnel changes); (2) Processes (e.g., new, altered or decommissioned business practices, including third-party services); (3) Technologies (e.g., new, altered or decommissioned technologies); (4) Data (e.g., changes to data flows and/or data repositories); (5) Facilities (e.g., new, altered or decommissioned physical infrastructure); and/or (6) Feedback from contingency plan testing activities.	5	
CP-03	Contingency Training	a. Provide contingency training to system users consistent with assigned roles and responsibilities:1. Within [Assignment: organization-defined time period] of assuming a contingency role or responsibility;2. When [Assignment: organization-defined frequency] thereafter; andb. Review and update contingency training content [Assignment: organization-defined frequency] and following [Assignment: organization-defined events].	Functional	Equal	Contingency Training	BCD-03	Mechanisms exist to adequately train contingency personnel and applicable stakeholders in their contingency roles and responsibilities.	10	
CP-04	Contingency Plan Testing	a. Test the contingency plan for the system [Assignment: organization-defined frequency] using the following tests to determine the effectiveness of the plan and the readiness to execute the plan: [Assignment: organization-defined tests]b. Review the contingency plan test results; andc. Initiate corrective actions, if needed.	Functional	Intersects With	Contingency Plan Root Cause Analysis (RCA) & Lessons Learned	BCD-05	Mechanisms exist to conduct a Root Cause Analysis (RCA) and "lessons learned" activity every time the contingency plan is activated.	5	
CP-04	Contingency Plan Testing	a. Test the contingency plan for the system [Assignment: organization-defined frequency] using the following tests to determine the effectiveness of the plan and the readiness to execute the plan: [Assignment: organization-defined tests]b. Review the contingency plan test results; andc. Initiate corrective actions, if needed.	Functional	Intersects With	Contingency Plan Testing & Exercises	BCD-04	Mechanisms exist to conduct tests and/or exercises to evaluate the contingency plan's effectiveness and the organization's readiness to execute the plan.	5	
CP-09	System Backup	a. Conduct backups of user-level information contained in [Assignment: organization-defined system components] [Assignment: organization-defined frequency] consistent with recovery time and recovery point objectives;b. Conduct backups of system-level information contained in the system [Assignment: organization-defined frequency] consistent with recovery time and recovery point objectives;c. Conduct backups of system documentation, including security- and privacy-related documentation [Assignment: organization-defined frequency] consistent with recovery time and recovery point objectives; andd. Protect the confidentiality, integrity, and availability of backup information.	Functional	Intersects With	Data Backups	BCD-11	Mechanisms exist to create recurring backups of data, software and/or system images, as well as verify the integrity of these backups, to ensure the availability of the data to satisfy Recovery Time Objectives (RTOs) and Recovery Point Objectives (RPOs).	5	
CP-10	System Recovery and Reconstitution	Provide for the recovery and reconstitution of the system to a known state within [Assignment: organization-defined time period] consistent with recovery time and recovery point objectives] after a disruption, compromise, or failure.	Functional	Intersects With	Technology Assets, Applications and/or Services (TAAS) Recovery & Reconstitution	BCD-12	Mechanisms exist to ensure the secure recovery and reconstitution of Technology Assets, Applications and/or Services (TAAS) to a known state after a disruption, compromise or failure.	5	
CP-10	System Recovery and Reconstitution	Provide for the recovery and reconstitution of the system to a known state within [Assignment: organization-defined time period] consistent with recovery time and recovery point objectives] after a disruption, compromise, or failure.	Functional	Intersects With	Business Continuity Management System (BCMS)	BCD-01	Mechanisms exist to facilitate the implementation of contingency planning controls to help ensure resilient Technology Assets, Applications and/or Services (TAAS) (e.g., Continuity of Operations Plan (COOP) or Business Continuity & Disaster Recovery (BC/DR) playbooks).	5	

FDE #	FDE Name	Focal Document Element (FDE) Description	STRM Rationale	STRM Relationship	SCF Control	SCF #	Secure Controls Framework Control (SCF) Description	of Relationships	Notes
CP-10	System Recovery and Reconstitution	Provide for the recovery and reconstitution of the system to a known state within [Assignment: organization-defined time period consistent with recovery time and recovery point objectives] after a disruption, compromise, or failure.	Functional	Intersects With	Recovery Time / Point Objectives (RTO / RPO)	BCD-01.4	Mechanisms exist to facilitate recovery operations in accordance with Recovery Time Objectives (RTOs) and Recovery Point Objectives (RPOs).	5	
IA-01	Policy and Procedures	[Assignment: organization-defined personnel or roles].1. [Selection (one or more): Organization-level; Mission/business process-level; System-level] identification and authentication policy that:a. Addresses purpose, scope, roles, responsibilities, management commitment, coordination among organizational entities, and compliance; andb. Is consistent with applicable laws, executive orders, directives, regulations, policies, standards, and guidelines; and2. Procedures to facilitate the implementation of the identification and authentication policy and the associated identification and authentication controls;b. Designate an [Assignment: organization-defined official] to manage the development, documentation, and dissemination of the identification and authentication policy and procedures; andc. Review and update the current identification and authentication:1. Policy [Assignment: organization-defined frequency] and following [Assignment: organization-defined events]; and2. Procedures [Assignment: organization-defined frequency] and following [Assignment: organization-	Functional	Intersects With	Periodic Review & Update of Security, Compliance & Resilience Program	GOV-03	Mechanisms exist to review the Security, Compliance & Resilience Program (SCRIP), including policies, standards and procedures, at planned intervals or if significant changes occur to ensure their continuing suitability, adequacy and effectiveness.	5	
IA-01	Policy and Procedures	[Assignment: organization-defined personnel or roles].1. [Selection (one or more): Organization-level; Mission/business process-level; System-level] identification and authentication policy that:a. Addresses purpose, scope, roles, responsibilities, management commitment, coordination among organizational entities, and compliance; andb. Is consistent with applicable laws, executive orders, directives, regulations, policies, standards, and guidelines; and2. Procedures to facilitate the implementation of the identification and authentication policy and the associated identification and authentication controls;b. Designate an [Assignment: organization-defined official] to manage the development, documentation, and dissemination of the identification and authentication policy and procedures; andc. Review and update the current identification and authentication:1. Policy [Assignment: organization-defined frequency] and following [Assignment: organization-defined events]; and2. Procedures [Assignment: organization-defined frequency] and following [Assignment: organization-	Functional	Subset Of	Identity & Access Management (IAM)	IAC-01	Mechanisms exist to facilitate the implementation of identification and access management controls.	10	
IA-01	Policy and Procedures	[Assignment: organization-defined personnel or roles].1. [Selection (one or more): Organization-level; Mission/business process-level; System-level] identification and authentication policy that:a. Addresses purpose, scope, roles, responsibilities, management commitment, coordination among organizational entities, and compliance; andb. Is consistent with applicable laws, executive orders, directives, regulations, policies, standards, and guidelines; and2. Procedures to facilitate the implementation of the identification and authentication policy and the associated identification and authentication controls;b. Designate an [Assignment: organization-defined official] to manage the development, documentation, and dissemination of the identification and authentication policy and procedures; andc. Review and update the current identification and authentication:1. Policy [Assignment: organization-defined frequency] and following [Assignment: organization-defined events]; and2. Procedures [Assignment: organization-defined frequency] and following [Assignment: organization-	Functional	Intersects With	Publishing Security, Compliance & Resilience Documentation	GOV-02	Mechanisms exist to establish, maintain and disseminate policies, standards and procedures necessary for secure, compliant and resilient capabilities.	5	
IA-02	Identification and Authentication (organizational Users)	Uniquely identify and authenticate organizational users and associate that unique identification with processes acting on behalf of those users.	Functional	Equal	Identification & Authentication for Organizational Users	IAC-02	Mechanisms exist to uniquely identify and centrally Authenticate, Authorize and Audit (AAA) organizational users and processes acting on behalf of organizational users.	10	
IA-02(01)	Identification and Authentication (organizational Users)   Multi-factor Authentication to Privileged Accounts	Implement multi-factor authentication for access to privileged accounts.	Functional	Intersects With	Multi-Factor Authentication (MFA)	IAC-06	Automated mechanisms exist to enforce Multi-Factor Authentication (MFA) for: (1) Remote network access; (2) Third-party Technology Assets, Applications and/or Services (TAAS); and/ (3) Non-console access to critical TAAS that store, transmit and/or process sensitive/regulated data.	5	
IA-02(01)	Identification and Authentication (organizational Users)   Multi-factor Authentication to Privileged Accounts	Implement multi-factor authentication for access to privileged accounts.	Functional	Intersects With	Local Access to Privileged Accounts	IAC-06.3	Mechanisms exist to utilize Multi-Factor Authentication (MFA) to authenticate local access for privileged accounts.	5	
IA-02(01)	Identification and Authentication (organizational Users)   Multi-factor Authentication to Privileged Accounts	Implement multi-factor authentication for access to privileged accounts.	Functional	Intersects With	Information Assurance Enabled Products	TDA-02.2	Mechanisms exist to limit the use of commercially-provided Information Assurance (IA) and IA-enabled IT products to those products that have been successfully evaluated against a National Information Assurance partnership (NIAP)-approved Protection Profile or the cryptographic module is FIPS-validated or NSA-approved.	5	
IA-02(01)	Identification and Authentication (organizational Users)   Multi-factor Authentication to Privileged Accounts	Implement multi-factor authentication for access to privileged accounts.	Functional	Intersects With	Out-of-Band Multi-Factor Authentication	IAC-06.4	Mechanisms exist to implement Multi-Factor Authentication (MFA) for access to privileged and non-privileged accounts such that one of the factors is independently provided by a device separate from the system being accessed.	5	
IA-02(01)	Identification and Authentication (organizational Users)   Multi-factor Authentication to Privileged Accounts	Implement multi-factor authentication for access to privileged accounts.	Functional	Intersects With	Network Access to Privileged Accounts	IAC-06.1	Mechanisms exist to utilize Multi-Factor Authentication (MFA) to authenticate network access for privileged accounts.	5	
IA-02(01)	Identification and Authentication (organizational Users)   Multi-factor Authentication to Privileged Accounts	Implement multi-factor authentication for access to privileged accounts.	Functional	Intersects With	Network Access to Non-Privileged Accounts	IAC-06.2	Mechanisms exist to utilize Multi-Factor Authentication (MFA) to authenticate network access for non-privileged accounts.	5	
IA-02(01)	Identification and Authentication (organizational Users)   Multi-factor Authentication to Privileged Accounts	Implement multi-factor authentication for access to privileged accounts.	Functional	Intersects With	Hardware Token-Based Authentication	IAC-10.7	Automated mechanisms exist to ensure organization-defined token quality requirements are satisfied for hardware token-based authentication.	5	

FDE #	FDE Name	Focal Document Element (FDE) Description	STRM Rationale	STRM Relationship	SCF Control	SCF #	Secure Controls Framework (SCF) Control Description	of Relationships	Notes
IA-04	Identifier Management	Manage system identifiers by: a. Receiving authorization from [Assignment: organization-defined personnel or roles] to assign an individual, group, role, service, or device identifier; b. Selecting an identifier that identifies an individual, group, role, service, or device; c. Assigning the identifier to the intended individual, group, role, service, or device; and d. Preventing reuse of identifiers for [Assignment: organization-defined purposes].	Functional	Intersects With	Authenticate, Authorize and Audit (AAA)	IAC-01.2	Mechanisms exist to strictly govern the use of Authenticate, Authorize and Audit (AAA) solutions, both on-premises and those hosted by an External Service Provider (ESP).	5	
IA-04	Identifier Management	Manage system identifiers by: a. Receiving authorization from [Assignment: organization-defined personnel or roles] to assign an individual, group, role, service, or device identifier; b. Selecting an identifier that identifies an individual, group, role, service, or device; c. Assigning the identifier to the intended individual, group, role, service, or device; and d. Preventing reuse of identifiers for [Assignment: organization-defined purposes].	Functional	Intersects With	Identifier Management (User Names)	IAC-09	Mechanisms exist to govern naming standards for usernames and Technology Assets, Applications and/or Services (TAAS).	5	
IA-05	Authenticator Management	Manage system authenticators by: a. Verifying a portion of the initial authenticator distribution, the identity of the individual, group, role, service, or device receiving the authenticator; b. Establishing initial authenticator content for any authenticators issued by the organization; c. Ensuring that authenticators have sufficient strength of mechanism for their intended use; d. Establishing and implementing administrative procedures for initial authenticator distribution, for lost or compromised or damaged authenticators, and for revoking authenticators; e. Changing default authenticators prior to first use; f. Changing or refreshing authenticators [Assignment: organization-defined time period by authenticator type] or when [Assignment: organization-defined events] occur; g. Protecting authenticator content from unauthorized disclosure and modification; h. Requiring individuals to take, and having devices implement, specific controls to protect authenticators; and i. Changing authenticators for group or role accounts when [Assignment: organization-defined events] occur.	Functional	Intersects With	Default Authenticators	IAC-10.8	Mechanisms exist to ensure default authenticators are changed as part of account creation or system installation.	5	
IA-05(01)	Authenticator Management   Password-based Authentication	For password-based authentication: a. Maintain a list of commonly-used, expected, or compromised passwords and update the list [Assignment: organization-defined frequency] and when organizational passwords are suspected to have been compromised directly or indirectly; b. Verify, when users create or update passwords, that the passwords are not found on the list of commonly-used, expected, or compromised passwords in IA-5(1)(a); c. Transmit passwords only over cryptographically-protected channels; d. Store passwords using an approved salted key derivation function, preferably using a keyed hash; e. Require immediate selection of a new password upon account recovery; f. Allow user selection of long passwords and passphrases, including spaces and all printable characters; g. Employ automated tools to assist the user in selecting strong password authenticators; and h. Enforce the following composition and complexity rules: [Assignment: organization-defined composition and complexity rules].	Functional	Intersects With	Automated Support For Password Strength	IAC-10.4	Automated mechanisms exist to determine if password authenticators are sufficiently strong enough to satisfy organization-defined password length and complexity requirements.	5	
IA-05(01)	Authenticator Management   Password-based Authentication	For password-based authentication: a. Maintain a list of commonly-used, expected, or compromised passwords and update the list [Assignment: organization-defined frequency] and when organizational passwords are suspected to have been compromised directly or indirectly; b. Verify, when users create or update passwords, that the passwords are not found on the list of commonly-used, expected, or compromised passwords in IA-5(1)(a); c. Transmit passwords only over cryptographically-protected channels; d. Store passwords using an approved salted key derivation function, preferably using a keyed hash; e. Require immediate selection of a new password upon account recovery; f. Allow user selection of long passwords and passphrases, including spaces and all printable characters; g. Employ automated tools to assist the user in selecting strong password authenticators; and h. Enforce the following composition and complexity rules: [Assignment: organization-defined composition and complexity rules].	Functional	Intersects With	Password-Based Authentication	IAC-10.1	Mechanisms exist to enforce complexity, length and lifespan considerations to ensure strong criteria for password-based authentication.	5	
IA-05(01)	Authenticator Management   Password-based Authentication	For password-based authentication: a. Maintain a list of commonly-used, expected, or compromised passwords and update the list [Assignment: organization-defined frequency] and when organizational passwords are suspected to have been compromised directly or indirectly; b. Verify, when users create or update passwords, that the passwords are not found on the list of commonly-used, expected, or compromised passwords in IA-5(1)(a); c. Transmit passwords only over cryptographically-protected channels; d. Store passwords using an approved salted key derivation function, preferably using a keyed hash; e. Require immediate selection of a new password upon account recovery; f. Allow user selection of long passwords and passphrases, including spaces and all printable characters; g. Employ automated tools to assist the user in selecting strong password authenticators; and h. Enforce the following composition and complexity rules: [Assignment: organization-defined composition and complexity rules].	Functional	Intersects With	Authenticator Management	IAC-10	Mechanisms exist to: (1) Securely manage authenticators for users and devices; and (2) Ensure the strength of authentication is appropriate to the classification of the data being accessed.	5	
IA-05(11)	N/A	Withdrawn	Functional	No Relationship	N/A	N/A	N/A	0	Withdrawn in NIST SP 800-53 R5
IA-06	Authentication Feedback	Obscure feedback of authentication information during the authentication process to protect the information from possible exploitation and use by unauthorized individuals.	Functional	Equal	Authenticator Feedback	IAC-11	Mechanisms exist to obscure the feedback of authentication information during the authentication process to protect the information from possible exploitation/use by unauthorized individuals.	10	
IA-07	Cryptographic Module Authentication	Implement mechanisms for authentication to a cryptographic module that meet the requirements of applicable laws, executive orders, directives, policies, regulations, standards, and guidelines for such authentication.	Functional	Intersects With	Cryptographic Module Authentication	IAC-12	Mechanisms exist to ensure cryptographic modules adhere to applicable statutory, regulatory and contractual requirements for security strength.	5	
IA-07	Cryptographic Module Authentication	Implement mechanisms for authentication to a cryptographic module that meet the requirements of applicable laws, executive orders, directives, policies, regulations, standards, and guidelines for such authentication.	Functional	Intersects With	Automated Authentication Through Cryptographic Modules	CRY-02	Automated mechanisms exist to enable systems to authenticate to a cryptographic module.	5	

FDE #	FDE Name	Focal Document Element (FDE) Description	STRM Rationale	STRM Relationship	SCF Control	SCF #	Secure Controls Framework (SCF) Control Description	of Relationships	Notes
IR-01	Policy and Procedures	a. Develop, document, and disseminate to [Assignment: organization-defined personnel or roles];1. [Selection (one or more): Organization-level; Mission/business process-level; System-level] incident response policy that:a. Addresses purpose, scope, roles, responsibilities, management commitment, coordination among organizational entities, and compliance; andb. Is consistent with applicable laws, executive orders, directives, regulations, policies, standards, and guidelines; and2. Procedures to facilitate the implementation of the incident response policy and the associated incident response controls;b. Designate an [Assignment: organization-defined official] to manage the development, documentation, and dissemination of the incident response policy and procedures; andc. Review and update the current incident response:1. Policy [Assignment: organization-defined frequency] and following [Assignment: organization-defined events]; and2. Procedures [Assignment: organization-defined frequency] and following [Assignment: organization-defined events].	Functional	Intersects With	Publishing Security, Compliance & Resilience Documentation	GOV-02	Mechanisms exist to establish, maintain and disseminate policies, standards and procedures necessary for secure, compliant and resilient capabilities.	5	
IR-01	Policy and Procedures	a. Develop, document, and disseminate to [Assignment: organization-defined personnel or roles];1. [Selection (one or more): Organization-level; Mission/business process-level; System-level] incident response policy that:a. Addresses purpose, scope, roles, responsibilities, management commitment, coordination among organizational entities, and compliance; andb. Is consistent with applicable laws, executive orders, directives, regulations, policies, standards, and guidelines; and2. Procedures to facilitate the implementation of the incident response policy and the associated incident response controls;b. Designate an [Assignment: organization-defined official] to manage the development, documentation, and dissemination of the incident response policy and procedures; andc. Review and update the current incident response:1. Policy [Assignment: organization-defined frequency] and following [Assignment: organization-defined events]; and2. Procedures [Assignment: organization-defined frequency] and following [Assignment: organization-defined events].	Functional	Subset Of	Incident Response Operations	IRO-01	Mechanisms exist to implement and govern processes and documentation to facilitate an organization-wide response capability for cybersecurity and data protection-related incidents.	10	
IR-01	Policy and Procedures	a. Develop, document, and disseminate to [Assignment: organization-defined personnel or roles];1. [Selection (one or more): Organization-level; Mission/business process-level; System-level] incident response policy that:a. Addresses purpose, scope, roles, responsibilities, management commitment, coordination among organizational entities, and compliance; andb. Is consistent with applicable laws, executive orders, directives, regulations, policies, standards, and guidelines; and2. Procedures to facilitate the implementation of the incident response policy and the associated incident response controls;b. Designate an [Assignment: organization-defined official] to manage the development, documentation, and dissemination of the incident response policy and procedures; andc. Review and update the current incident response:1. Policy [Assignment: organization-defined frequency] and following [Assignment: organization-defined events]; and2. Procedures [Assignment: organization-defined frequency] and following [Assignment: organization-defined events].	Functional	Intersects With	IRP Update	IRO-04.2	Mechanisms exist to regularly review and modify incident response practices to incorporate lessons learned, business process changes and industry developments, as necessary.	5	
IR-01	Policy and Procedures	a. Develop, document, and disseminate to [Assignment: organization-defined personnel or roles];1. [Selection (one or more): Organization-level; Mission/business process-level; System-level] incident response policy that:a. Addresses purpose, scope, roles, responsibilities, management commitment, coordination among organizational entities, and compliance; andb. Is consistent with applicable laws, executive orders, directives, regulations, policies, standards, and guidelines; and2. Procedures to facilitate the implementation of the incident response policy and the associated incident response controls;b. Designate an [Assignment: organization-defined official] to manage the development, documentation, and dissemination of the incident response policy and procedures; andc. Review and update the current incident response:1. Policy [Assignment: organization-defined frequency] and following [Assignment: organization-defined events]; and2. Procedures [Assignment: organization-defined frequency] and following [Assignment: organization-defined events].	Functional	Intersects With	Root Cause Analysis (RCA) & Lessons Learned	IRO-13	Mechanisms exist to incorporate lessons learned from analyzing and resolving cybersecurity and data protection incidents to reduce the likelihood or impact of future incidents.	5	
IR-01	Policy and Procedures	a. Develop, document, and disseminate to [Assignment: organization-defined personnel or roles];1. [Selection (one or more): Organization-level; Mission/business process-level; System-level] incident response policy that:a. Addresses purpose, scope, roles, responsibilities, management commitment, coordination among organizational entities, and compliance; andb. Is consistent with applicable laws, executive orders, directives, regulations, policies, standards, and guidelines; and2. Procedures to facilitate the implementation of the incident response policy and the associated incident response controls;b. Designate an [Assignment: organization-defined official] to manage the development, documentation, and dissemination of the incident response policy and procedures; andc. Review and update the current incident response:1. Policy [Assignment: organization-defined frequency] and following [Assignment: organization-defined events]; and2. Procedures [Assignment: organization-defined frequency] and following [Assignment: organization-defined events].	Functional	Intersects With	Periodic Review & Update of Security, Compliance & Resilience Program	GOV-03	Mechanisms exist to review the Security, Compliance & Resilience Program (SCRCP), including policies, standards and procedures, at planned intervals or if significant changes occur to ensure their continuing suitability, adequacy and effectiveness.	5	
IR-02	Incident Response Training	a. Provide incident response training to system users consistent with assigned roles and responsibilities:1. Within [Assignment: organization-defined time period] of assuming an incident response role or responsibility or acquiring system access;2. When required by system changes; and3. [Assignment: organization-defined frequency] thereafter; andb. Review and update incident response training content [Assignment: organization-defined frequency] and following [Assignment: organization-defined events].	Functional	Intersects With	Incident Response Training	IRO-05	Mechanisms exist to train personnel in their incident response roles and responsibilities.	5	
IR-03	Incident Response Testing	Test the effectiveness of the incident response capability for the system [Assignment: organization-defined frequency] using the following tests: [Assignment: organization-defined tests].	Functional	Intersects With	Incident Response Testing	IRO-06	Mechanisms exist to formally test incident response capabilities through realistic exercises to determine the operational effectiveness of those capabilities.	5	
IR-04	Incident Handling	a. Implement an incident handling capability for incidents that is consistent with the incident response plan and includes preparation, detection and analysis, containment, eradication, and recovery;b. Coordinate incident handling activities with contingency planning activities;c. Incorporate lessons learned from ongoing incident handling activities into incident response procedures, training, and testing, and implement the resulting changes accordingly; andd. Ensure the rigor, intensity, scope, and results of incident handling activities are comparable and predictable across the organization.	Functional	Equal	Incident Handling	IRO-02	Mechanisms exist to cover: (1) Preparation; (2) Automated event detection or manual incident report intake; (3) Analysis; (4) Containment; (5) Eradication; and (6) Recovery.	10	

FDE #	FDE Name	Focal Document Element (FDE) Description	STRM Rationale	STRM Relationship	SCF Control	SCF #	Secure Controls Framework (SCF) Control Description	of Relationships	Notes
IR-05	Incident Monitoring	Track and document incidents.	Functional	Equal	Situational Awareness For Incidents	IRO-09	Mechanisms exist to document, monitor and report the status of cybersecurity and data protection incidents to internal stakeholders all the way through the resolution of the incident.	10	
IR-06	Incident Reporting	a. Require personnel to report suspected incidents to the organizational incident response capability within [Assignment: organization-defined time period]; andb. Report incident information to [Assignment: organization-defined authorities].	Functional	Intersects With	Incident Stakeholder Reporting	IRO-10	Mechanisms exist to timely-report incidents to applicable: (1) Internal stakeholders; (2) Affected clients & third-parties; and (3)Regulatory authorities.	5	
IR-06	Incident Reporting	a. Require personnel to report suspected incidents to the organizational incident response capability within [Assignment: organization-defined time period]; andb. Report incident information to [Assignment: organization-defined authorities].	Functional	Intersects With	Regulatory & Law Enforcement Contacts	IRO-14	Mechanisms exist to maintain incident response contacts with applicable regulatory and law enforcement agencies.	5	
IR-06	Incident Reporting	a. Require personnel to report suspected incidents to the organizational incident response capability within [Assignment: organization-defined time period]; andb. Report incident information to [Assignment: organization-defined authorities].	Functional	Intersects With	Contacts With Authorities	GOV-06	Mechanisms exist to identify and document appropriate contacts with relevant law enforcement and regulatory bodies.	5	
IR-07	Incident Response Assistance	Provide an incident response support resource, integral to the organizational incident response capability, that offers advice and assistance to users of the system for the handling and reporting of incidents.	Functional	Equal	Incident Reporting Assistance	IRO-11	Mechanisms exist to provide incident response advice and assistance to users of Technology Assets, Applications and/or Services (TAAS) for the handling and reporting of actual and potential cybersecurity and data protection incidents.	10	
IR-08	Incident Response Plan	a. Develop an incident response plan that:1. Provides the organization with a roadmap for implementing its incident response capability;2. Describes the structure and organization of the incident response capability;3. Provides a high-level approach for how the incident response capability fits into the overall organization;4. Meets the unique requirements of the organization, which relate to mission, size, structure, and functions;5. Defines reportable incidents;6. Provides metrics for measuring the incident response capability within the organization;7. Defines the resources and management support needed to effectively maintain and mature an incident response capability;8. Addresses the sharing of incident information;9. Is reviewed and approved by [Assignment: organization-defined personnel or roles] [Assignment: organization-defined frequency]; and10. Explicitly designates responsibility for incident response to [Assignment: organization-defined entities, personnel, or roles];b. Distribute copies of the incident response plan to [Assignment: organization-defined incident response personnel (identified by name and/or by role) and organizational elements];c. Update the incident response plan to address system and organizational changes or problems encountered during plan implementation, execution, or testing;d. Communicate incident response plan changes to [Assignment: organization-defined incident response personnel (identified by name and/or by role) and organizational elements]; ande. Protect the incident response plan from unauthorized disclosure and modification.	Functional	Equal	Incident Response Plan (IRP)	IRO-04	Mechanisms exist to maintain and make available a current and viable Incident Response Plan (IRP) to all stakeholders.	10	
MA-01	Policy and Procedures	a. Develop, document, and disseminate to [Assignment: organization-defined personnel or roles];1. [Selection (one or more): Organization-level; Mission/business process-level; System-level] maintenance policy that:a. Addresses purpose, scope, roles, responsibilities, management commitment, coordination among organizational entities, and compliance; andb. Is consistent with applicable laws, executive orders, directives, regulations, policies, standards, and guidelines; and2. Procedures to facilitate the implementation of the maintenance policy and the associated maintenance controls;b. Designate an [Assignment: organization-defined official] to manage the development, documentation, and dissemination of the maintenance policy and procedures; andc. Review and update the current maintenance:1. Policy [Assignment: organization-defined frequency] and following [Assignment: organization-defined events]; and2. Procedures [Assignment: organization-defined frequency] and following [Assignment: organization-defined events].	Functional	Subset Of	Maintenance Operations	MNT-01	Mechanisms exist to develop, disseminate, review & update procedures to facilitate the implementation of maintenance controls across the enterprise.	10	
MA-01	Policy and Procedures	a. Develop, document, and disseminate to [Assignment: organization-defined personnel or roles];1. [Selection (one or more): Organization-level; Mission/business process-level; System-level] maintenance policy that:a. Addresses purpose, scope, roles, responsibilities, management commitment, coordination among organizational entities, and compliance; andb. Is consistent with applicable laws, executive orders, directives, regulations, policies, standards, and guidelines; and2. Procedures to facilitate the implementation of the maintenance policy and the associated maintenance controls;b. Designate an [Assignment: organization-defined official] to manage the development, documentation, and dissemination of the maintenance policy and procedures; andc. Review and update the current maintenance:1. Policy [Assignment: organization-defined frequency] and following [Assignment: organization-defined events]; and2. Procedures [Assignment: organization-defined frequency] and following [Assignment: organization-defined events].	Functional	Intersects With	Remote Maintenance Notifications	MNT-05.2	Mechanisms exist to require maintenance personnel to notify affected stakeholders when remote, non-local maintenance is planned (e.g., date/time).	5	
MA-01	Policy and Procedures	a. Develop, document, and disseminate to [Assignment: organization-defined personnel or roles];1. [Selection (one or more): Organization-level; Mission/business process-level; System-level] maintenance policy that:a. Addresses purpose, scope, roles, responsibilities, management commitment, coordination among organizational entities, and compliance; andb. Is consistent with applicable laws, executive orders, directives, regulations, policies, standards, and guidelines; and2. Procedures to facilitate the implementation of the maintenance policy and the associated maintenance controls;b. Designate an [Assignment: organization-defined official] to manage the development, documentation, and dissemination of the maintenance policy and procedures; andc. Review and update the current maintenance:1. Policy [Assignment: organization-defined frequency] and following [Assignment: organization-defined events]; and2. Procedures [Assignment: organization-defined frequency] and following [Assignment: organization-defined events].	Functional	Intersects With	Auditing Remote Maintenance	MNT-05.1	Mechanisms exist to audit remote, non-local maintenance and diagnostic sessions, as well as review the maintenance action performed during remote maintenance sessions.	5	

FDE #	FDE Name	Focal Document Element (FDE) Description	STRM Rationale	STRM Relationship	SCF Control	SCF #	Secure Controls Framework Control Description (SCF)	of Relationships	Notes
MA-01	Policy and Procedures	a. Develop, document, and disseminate to [Assignment: organization-defined personnel or roles];1. [Selection (one or more): Organization-level; Mission/business process-level; System-level] maintenance policy that:a. Addresses purpose, scope, roles, responsibilities, management commitment, coordination among organizational entities, and compliance; andb. Is consistent with applicable laws, executive orders, directives, regulations, policies, standards, and guidelines; and2. Procedures to facilitate the implementation of the maintenance policy and the associated maintenance controls;b. Designate an [Assignment: organization-defined official] to manage the development, documentation, and dissemination of the maintenance policy and procedures; andc. Review and update the current maintenance:1. Policy [Assignment: organization-defined frequency] and following [Assignment: organization-defined events]; and2. Procedures [Assignment: organization-defined frequency] and following [Assignment: organization-defined events].	Functional	Intersects With	Periodic Review & Update of Security, Compliance & Resilience Program	GOV-03	Mechanisms exist to review the Security, Compliance & Resilience Program (SCRCP), including policies, standards and procedures, at planned intervals or if significant changes occur to ensure their continuing suitability, adequacy and effectiveness.	5	
MA-01	Policy and Procedures	a. Develop, document, and disseminate to [Assignment: organization-defined personnel or roles];1. [Selection (one or more): Organization-level; Mission/business process-level; System-level] maintenance policy that:a. Addresses purpose, scope, roles, responsibilities, management commitment, coordination among organizational entities, and compliance; andb. Is consistent with applicable laws, executive orders, directives, regulations, policies, standards, and guidelines; and2. Procedures to facilitate the implementation of the maintenance policy and the associated maintenance controls;b. Designate an [Assignment: organization-defined official] to manage the development, documentation, and dissemination of the maintenance policy and procedures; andc. Review and update the current maintenance:1. Policy [Assignment: organization-defined frequency] and following [Assignment: organization-defined events]; and2. Procedures [Assignment: organization-defined frequency] and following [Assignment: organization-defined events].	Functional	Intersects With	Publishing Security, Compliance & Resilience Documentation	GOV-02	Mechanisms exist to establish, maintain and disseminate policies, standards and procedures necessary for secure, compliant and resilient capabilities.	5	
MA-02	Controlled Maintenance	maintenance, repair, and replacement on system components in accordance with manufacturer or vendor specifications and/or organizational requirements;b. Approve and monitor all maintenance activities, whether performed on site or remotely and whether the system or system components are serviced on site or removed to another location;c. Require that [Assignment: organization-defined personnel or roles] explicitly approve the removal of the system or system components from organizational facilities for off-site maintenance, repair, or replacement;d. Sanitize equipment to remove the following information from associated media prior to removal from organizational facilities for off-site maintenance, repair, or replacement: [Assignment: organization-defined information];e. Check all potentially impacted controls to verify that the controls are still functioning properly following maintenance, repair, or replacement actions; andf. Include the following information in organizational maintenance records: [Assignment: organization-defined information];g. Approve and monitor remote maintenance and diagnostic activities;b. Allow the use of nonlocal maintenance and diagnostic tools only as consistent with organizational policy and documented in the security plan for the system;c. Employ strong authentication in the establishment of nonlocal maintenance and diagnostic sessions;d. Maintain records for nonlocal maintenance and diagnostic activities; ande. Terminate session and network connections when nonlocal maintenance is completed	Functional	Equal	Controlled Maintenance	MNT-02	Mechanisms exist to conduct controlled maintenance activities throughout the lifecycle of the Technology Asset, Application and/or Service (TAAS).	10	
MA-04	Nonlocal Maintenance	maintenance, repair, and replacement on system components in accordance with manufacturer or vendor specifications and/or organizational requirements;b. Approve and monitor remote maintenance and diagnostic activities;b. Allow the use of nonlocal maintenance and diagnostic tools only as consistent with organizational policy and documented in the security plan for the system;c. Employ strong authentication in the establishment of nonlocal maintenance and diagnostic sessions;d. Maintain records for nonlocal maintenance and diagnostic activities; ande. Terminate session and network connections when nonlocal maintenance is completed	Functional	Intersects With	Remote Maintenance	MNT-05	Mechanisms exist to authorize, monitor and control remote, non-local maintenance and diagnostic activities.	5	
MA-04	Nonlocal Maintenance	maintenance, repair, and replacement on system components in accordance with manufacturer or vendor specifications and/or organizational requirements;b. Approve and monitor remote maintenance and diagnostic activities;b. Allow the use of nonlocal maintenance and diagnostic tools only as consistent with organizational policy and documented in the security plan for the system;c. Employ strong authentication in the establishment of nonlocal maintenance and diagnostic sessions;d. Maintain records for nonlocal maintenance and diagnostic activities; ande. Terminate session and network connections when nonlocal maintenance is completed	Functional	Intersects With	Remote Maintenance Notifications	MNT-05.2	Mechanisms exist to require maintenance personnel to notify affected stakeholders when remote, non-local maintenance is planned (e.g., date/time).	5	
MA-04	Nonlocal Maintenance	maintenance, repair, and replacement on system components in accordance with manufacturer or vendor specifications and/or organizational requirements;b. Approve and monitor remote maintenance and diagnostic activities;b. Allow the use of nonlocal maintenance and diagnostic tools only as consistent with organizational policy and documented in the security plan for the system;c. Employ strong authentication in the establishment of nonlocal maintenance and diagnostic sessions;d. Maintain records for nonlocal maintenance and diagnostic activities; ande. Terminate session and network connections when nonlocal maintenance is completed	Functional	Intersects With	Auditing Remote Maintenance	MNT-05.1	Mechanisms exist to audit remote, non-local maintenance and diagnostic sessions, as well as review the maintenance action performed during remote maintenance sessions.	5	
MA-05	Maintenance Personnel	a. Establish a process for maintenance personnel authorization and maintain a list of authorized maintenance organizations or personnel;b. Verify that non-escorted personnel performing maintenance on the system possess the required access authorizations; andc. Designate organizational personnel with required access authorizations and technical competence to supervise the maintenance activities of personnel who do not possess the required access authorizations.	Functional	Equal	Authorized Maintenance Personnel	MNT-06	Mechanisms exist to maintain a current list of authorized maintenance organizations or personnel.	10	
MP-01	Policy and Procedures	a. Develop, document, and disseminate to [Assignment: organization-defined personnel or roles];1. [Selection (one or more): Organization-level; Mission/business process-level; System-level] media protection policy that:a. Addresses purpose, scope, roles, responsibilities, management commitment, coordination among organizational entities, and compliance; andb. Is consistent with applicable laws, executive orders, directives, regulations, policies, standards, and guidelines; and2. Procedures to facilitate the implementation of the media protection policy and the associated media protection controls;b. Designate an [Assignment: organization-defined official] to manage the development, documentation, and dissemination of the media protection policy and procedures; andc. Review and update the current media protection:1. Policy [Assignment: organization-defined frequency] and following [Assignment: organization-defined events]; and2. Procedures [Assignment: organization-defined frequency] and following [Assignment: organization-defined events].	Functional	Intersects With	Periodic Review & Update of Security, Compliance & Resilience Program	GOV-03	Mechanisms exist to review the Security, Compliance & Resilience Program (SCRCP), including policies, standards and procedures, at planned intervals or if significant changes occur to ensure their continuing suitability, adequacy and effectiveness.	5	

FDE #	FDE Name	Focal Document Element (FDE) Description	STRM Rationale	STRM Relationship	SCF Control	SCF #	Secure Controls Framework (SCF) Control Description	of Relationships	Notes
MP-01	Policy and Procedures	a. Develop, document, and disseminate to [Assignment: organization-defined personnel or roles];1. [Selection (one or more): Organization-level; Mission/business process-level; System-level] media protection policy that;a. Addresses purpose, scope, roles, responsibilities, management commitment, coordination among organizational entities, and compliance; andb. Is consistent with applicable laws, executive orders, directives, regulations, policies, standards, and guidelines; and2. Procedures to facilitate the implementation of the media protection policy and the associated media protection controls;b. Designate an [Assignment: organization-defined official] to manage the development, documentation, and dissemination of the media protection policy and procedures; andc. Review and update the current media protection:1. Policy [Assignment: organization-defined frequency] and following [Assignment: organization-defined events]; and2. Procedures [Assignment: organization-defined frequency] and following [Assignment: organization-defined events].	Functional	Subset Of	Data Protection	DCH-01	Mechanisms exist to facilitate the implementation of data protection controls.	10	
MP-01	Policy and Procedures	a. Develop, document, and disseminate to [Assignment: organization-defined personnel or roles];1. [Selection (one or more): Organization-level; Mission/business process-level; System-level] media protection policy that;a. Addresses purpose, scope, roles, responsibilities, management commitment, coordination among organizational entities, and compliance; andb. Is consistent with applicable laws, executive orders, directives, regulations, policies, standards, and guidelines; and2. Procedures to facilitate the implementation of the media protection policy and the associated media protection controls;b. Designate an [Assignment: organization-defined official] to manage the development, documentation, and dissemination of the media protection policy and procedures; andc. Review and update the current media protection:1. Policy [Assignment: organization-defined frequency] and following [Assignment: organization-defined events]; and2. Procedures [Assignment: organization-defined frequency] and following [Assignment: organization-defined events].	Functional	Intersects With	Publishing Security, Compliance & Resilience Documentation	GOV-02	Mechanisms exist to establish, maintain and disseminate policies, standards and procedures necessary for secure, compliant and resilient capabilities.	5	
MP-02	Media Access	Restrict access to [Assignment: organization-defined types of digital and/or non-digital media] to [Assignment: organization-defined personnel or roles].	Functional	Intersects With	Media Access	DCH-03	Mechanisms exist to control and restrict access to digital and non-digital media to authorized	5	
MP-02	Media Access	Restrict access to [Assignment: organization-defined types of digital and/or non-digital media] to [Assignment: organization-defined personnel or roles].	Functional	Intersects With	Endpoint Device Management (EDM)	END-01	Mechanisms exist to facilitate the implementation of Endpoint Device Management (EDM) controls.	5	
MP-06	Media Sanitization	a. Sanitize [Assignment: organization-defined system media] prior to disposal, release out of organizational control, or release for reuse using [Assignment: organization-defined sanitization techniques and procedures]; andb. Employ sanitization mechanisms with the strength and integrity commensurate with the security category or classification of the information.	Functional	Intersects With	Physical Media Disposal	DCH-08	Mechanisms exist to securely dispose of media when it is no longer required, using formal procedures.	5	
MP-06	Media Sanitization	a. Sanitize [Assignment: organization-defined system media] prior to disposal, release out of organizational control, or release for reuse using [Assignment: organization-defined sanitization techniques and procedures]; andb. Employ sanitization mechanisms with the strength and integrity commensurate with the security category or classification of the information.	Functional	Intersects With	System Media Sanitization	DCH-09	Mechanisms exist to sanitize system media with the strength and integrity commensurate with the classification or sensitivity of the information prior to disposal, release out of organizational control or release for reuse.	5	
MP-06	Media Sanitization	a. Sanitize [Assignment: organization-defined system media] prior to disposal, release out of organizational control, or release for reuse using [Assignment: organization-defined sanitization techniques and procedures]; andb. Employ sanitization mechanisms with the strength and integrity commensurate with the security category or classification of the information.	Functional	Intersects With	Sanitization of Personal Data (PD)	DCH-09.3	Mechanisms exist to facilitate the sanitization of Personal Data (PD).	5	
PE-01	Policy and Procedures	[Assignment: organization-defined personnel or roles];1. [Selection (one or more): Organization-level; Mission/business process-level; System-level] physical and environmental protection policy that;a. Addresses purpose, scope, roles, responsibilities, management commitment, coordination among organizational entities, and compliance; andb. Is consistent with applicable laws, executive orders, directives, regulations, policies, standards, and guidelines; and2. Procedures to facilitate the implementation of the physical and environmental protection policy and the associated physical and environmental protection controls;b. Designate an [Assignment: organization-defined official] to manage the development, documentation, and dissemination of the physical and environmental protection policy and procedures; andc. Review and update the current physical and environmental protection:1. Policy [Assignment: organization-defined frequency] and following [Assignment: organization-defined events]; and2. Procedures [Assignment: organization-defined frequency] and following [Assignment: organization-	Functional	Intersects With	Publishing Security, Compliance & Resilience Documentation	GOV-02	Mechanisms exist to establish, maintain and disseminate policies, standards and procedures necessary for secure, compliant and resilient capabilities.	5	
PE-01	Policy and Procedures	[Assignment: organization-defined personnel or roles];1. [Selection (one or more): Organization-level; Mission/business process-level; System-level] physical and environmental protection policy that;a. Addresses purpose, scope, roles, responsibilities, management commitment, coordination among organizational entities, and compliance; andb. Is consistent with applicable laws, executive orders, directives, regulations, policies, standards, and guidelines; and2. Procedures to facilitate the implementation of the physical and environmental protection policy and the associated physical and environmental protection controls;b. Designate an [Assignment: organization-defined official] to manage the development, documentation, and dissemination of the physical and environmental protection policy and procedures; andc. Review and update the current physical and environmental protection:1. Policy [Assignment: organization-defined frequency] and following [Assignment: organization-defined events]; and2. Procedures [Assignment: organization-defined frequency] and following [Assignment: organization-	Functional	Subset Of	Physical & Environmental Protections	PES-01	Mechanisms exist to facilitate the operation of physical and environmental protection controls.	10	

FDE #	FDE Name	Focal Document Element (FDE) Description	STRM Rationale	STRM Relationship	SCF Control	SCF #	Secure Controls Framework (SCF) Control Description	of Relationships	Notes
PE-01	Policy and Procedures	[Assignment: organization-defined personnel or roles].1. [Selection (one or more): Organization-level; Mission/business process-level; System-level] physical and environmental protection policy that:a. Addresses purpose, scope, roles, responsibilities, management commitment, coordination among organizational entities, and compliance; andb. Is consistent with applicable laws, executive orders, directives, regulations, policies, standards, and guidelines; and2. Procedures to facilitate the implementation of the physical and environmental protection policy and the associated physical and environmental protection controls;b. Designate an [Assignment: organization-defined official] to manage the development, documentation, and dissemination of the physical and environmental protection policy and procedures; andc. Review and update the current physical and environmental protection:1. Policy [Assignment: organization-defined frequency] and following [Assignment: organization-defined events]; and2. Procedures [Assignment: organization-defined frequency] and following [Assignment: organization-defined events].	Functional	Intersects With	Periodic Review & Update of Security, Compliance & Resilience Program	GOV-03	Mechanisms exist to review the Security, Compliance & Resilience Program (SCR), including policies, standards and procedures, at planned intervals or if significant changes occur to ensure their continuing suitability, adequacy and effectiveness.	5	
PE-02	Physical Access Authorizations	a. Develop, approve, and maintain a list of individuals with authorized access to the facility where the system resides;b. Issue authorization credentials for facility access;c. Review the access list detailing authorized facility access by individuals [Assignment: organization-defined frequency]; andd. Remove individuals from the facility access list when access is no longer needed.	Functional	Equal	Physical Access Authorizations	PES-02	Physical access control mechanisms exist to maintain a current list of personnel with authorized access to organizational facilities (except for those areas within the facility officially designated as publicly accessible).	10	
PE-03	Physical Access Control	[Assignment: organization-defined entry and exit points to the facility where the system resides] by:1. Verifying individual access authorizations before granting access to the facility; and2. Controlling ingress and egress to the facility using [Selection (one or more): [Assignment: organization-defined physical access control systems or devices]; guards];b. Maintain physical access audit logs for [Assignment: organization-defined entry or exit points];c. Control access to areas within the facility designated as publicly accessible by implementing the following controls: [Assignment: organization-defined physical access controls];d. Escort visitors and control visitor activity [Assignment: organization-defined circumstances requiring visitor escorts and control of visitor activity];e. Secure keys, combinations, and other physical access devices;f. Inventory [Assignment: organization-defined physical access devices] every [Assignment: organization-defined frequency]; andg. Change combinations and keys [Assignment: organization-defined frequency] and/or when keys are lost, combinations are compromised, or when individuals possessing the keys or combinations	Functional	Intersects With	Physical Access Control	PES-03	Physical access control mechanisms exist to enforce physical access authorizations for all physical access points (including designated entry/exit points) to facilities (excluding those areas within the facility officially designated as publicly accessible).	5	
PE-06	Monitoring Physical Access	a. Monitor physical access to the facility where the system resides to detect and respond to physical security incidents;b. Review physical access logs [Assignment: organization-defined frequency] and upon occurrence of [Assignment: organization-defined events or potential indications of events]; andc. Coordinate results of reviews and investigations with the organizational incident response capability.	Functional	Equal	Monitoring Physical Access	PES-05	Physical access control mechanisms exist to monitor for, detect and respond to physical security incidents.	10	
PE-08	Visitor Access Records	a. Maintain visitor access records to the facility where the system resides for [Assignment: organization-defined time period];b. Review visitor access records [Assignment: organization-defined frequency]; andc. Report anomalies in visitor access records to [Assignment: organization-defined personnel].	Functional	Equal	Physical Access Logs	PES-03.3	Physical access control mechanisms generate a log entry for each access attempt through controlled ingress and egress points.	10	
PE-13	Fire Protection	Employ and maintain fire detection and suppression systems that are supported by an independent energy source.	Functional	Equal	Fire Protection	PES-08	Facility security mechanisms exist to utilize and maintain fire suppression and detection devices/systems for the system that are supported by an independent energy source.	10	
PE-14	Environmental Controls	a. Maintain [Selection (one or more): temperature; humidity; pressure; radiation; [Assignment: organization-defined environmental control]] levels within the facility where the system resides at [Assignment: organization-defined acceptable levels]; andb. Monitor environmental control levels [Assignment: organization-defined frequency].	Functional	Equal	Temperature & Humidity Controls	PES-09	Facility security mechanisms exist to maintain and monitor temperature and humidity levels within the facility.	10	
PE-15	Water Damage Protection	Protect the system from damage resulting from water leakage by providing master shutoff or isolation valves that are accessible, working properly, and known to key personnel.	Functional	Equal	Water Damage Protection	PES-07.5	Facility security mechanisms exist to protect systems from damage resulting from water leakage by providing master shutoff valves that are accessible, working properly and known to key personnel.	10	
PE-16	Delivery and Removal	a. Authorize and control [Assignment: organization-defined types of system components] entering and exiting the facility; andb. Maintain records of the system components.	Functional	Equal	Delivery & Removal	PES-10	Physical security mechanisms exist to isolate information processing facilities from points such as delivery and loading areas and other points to avoid unauthorized access.	10	
PL-01	Policy and Procedures	[Assignment: organization-defined personnel or roles].1. [Selection (one or more): Organization-level; Mission/business process-level; System-level] planning policy that:a. Addresses purpose, scope, roles, responsibilities, management commitment, coordination among organizational entities, and compliance; andb. Is consistent with applicable laws, executive orders, directives, regulations, policies, standards, and guidelines; and2. Procedures to facilitate the implementation of the planning policy and the associated planning controls;b. Designate an [Assignment: organization-defined official] to manage the development, documentation, and dissemination of the planning policy and procedures; andc. Review and update the current planning:1. Policy [Assignment: organization-defined frequency] and following [Assignment: organization-defined events]; and2. Procedures [Assignment: organization-defined frequency] and following [Assignment: organization-defined events].	Functional	Subset Of	Security, Compliance & Resilience Protection Portfolio Management	PRM-01	Mechanisms exist to facilitate the implementation of resource planning controls that provide a portfolio management approach to achieve security, compliance and resilience objectives.	10	
PL-01	Policy and Procedures	[Assignment: organization-defined personnel or roles].1. [Selection (one or more): Organization-level; Mission/business process-level; System-level] planning policy that:a. Addresses purpose, scope, roles, responsibilities, management commitment, coordination among organizational entities, and compliance; andb. Is consistent with applicable laws, executive orders, directives, regulations, policies, standards, and guidelines; and2. Procedures to facilitate the implementation of the planning policy and the associated planning controls;b. Designate an [Assignment: organization-defined official] to manage the development, documentation, and dissemination of the planning policy and procedures; andc. Review and update the current planning:1. Policy [Assignment: organization-defined frequency] and following [Assignment: organization-defined events]; and2. Procedures [Assignment: organization-defined frequency] and following [Assignment: organization-defined events].	Functional	Subset Of	Statutory, Regulatory & Contractual Compliance	CPL-01	Mechanisms exist to facilitate the identification and implementation of relevant statutory, regulatory and contractual controls.	10	

FDE #	FDE Name	Focal Document Element (FDE) Description	STRM Rationale	STRM Relationship	SCF Control	SCF #	Secure Controls Framework (SCF) Control Description	of Relationships	Notes
PL-01	Policy and Procedures	Develop, document, and disseminate to [Assignment: organization-defined personnel or roles].1. [Selection (one or more): Organization-level; Mission/business process-level; System-level] planning policy that:a. Addresses purpose, scope, roles, responsibilities, management commitment, coordination among organizational entities, and compliance; andb. Is consistent with applicable laws, executive orders, directives, regulations, policies, standards, and guidelines; and2. Procedures to facilitate the implementation of the planning policy and the associated planning controls;b. Designate an [Assignment: organization-defined official] to manage the development, documentation, and dissemination of the planning policy and procedures; andc. Review and update the current planning:1. Policy [Assignment: organization-defined frequency] and following [Assignment: organization-defined events]; and2. Procedures [Assignment: organization-defined frequency] and following [Assignment: organization-	Functional	Subset Of	Technology Development & Acquisition	TDA-01	Mechanisms exist to facilitate the implementation of tailored development and acquisition strategies, contract tools and procurement methods to meet unique business needs.	10	
PL-01	Policy and Procedures	Develop, document, and disseminate to [Assignment: organization-defined personnel or roles].1. [Selection (one or more): Organization-level; Mission/business process-level; System-level] planning policy that:a. Addresses purpose, scope, roles, responsibilities, management commitment, coordination among organizational entities, and compliance; andb. Is consistent with applicable laws, executive orders, directives, regulations, policies, standards, and guidelines; and2. Procedures to facilitate the implementation of the planning policy and the associated planning controls;b. Designate an [Assignment: organization-defined official] to manage the development, documentation, and dissemination of the planning policy and procedures; andc. Review and update the current planning:1. Policy [Assignment: organization-defined frequency] and following [Assignment: organization-defined events]; and2. Procedures [Assignment: organization-defined frequency] and following [Assignment: organization-	Functional	Intersects With	Periodic Review & Update of Security, Compliance & Resilience Program	GOV-03	Mechanisms exist to review the Security, Compliance & Resilience Program (SCR), including policies, standards and procedures, at planned intervals or if significant changes occur to ensure their continuing suitability, adequacy and effectiveness.	5	
PL-01	Policy and Procedures	Develop, document, and disseminate to [Assignment: organization-defined personnel or roles].1. [Selection (one or more): Organization-level; Mission/business process-level; System-level] planning policy that:a. Addresses purpose, scope, roles, responsibilities, management commitment, coordination among organizational entities, and compliance; andb. Is consistent with applicable laws, executive orders, directives, regulations, policies, standards, and guidelines; and2. Procedures to facilitate the implementation of the planning policy and the associated planning controls;b. Designate an [Assignment: organization-defined official] to manage the development, documentation, and dissemination of the planning policy and procedures; andc. Review and update the current planning:1. Policy [Assignment: organization-defined frequency] and following [Assignment: organization-defined events]; and2. Procedures [Assignment: organization-defined frequency] and following [Assignment: organization-	Functional	Intersects With	Publishing Security, Compliance & Resilience Documentation	GOV-02	Mechanisms exist to establish, maintain and disseminate policies, standards and procedures necessary for secure, compliant and resilient capabilities.	5	
PL-02	System Security and Privacy Plans	Enterprise architecture;2. Explicitly define the constituent system components;3. Describe the operational context of the system in terms of mission and business processes;4. Identify the individuals that fulfill system roles and responsibilities;5. Identify the information types processed, stored, and transmitted by the system;6. Provide the security categorization of the system, including supporting rationale;7. Describe any specific threats to the system that are of concern to the organization;8. Provide the results of a privacy risk assessment for systems processing personally identifiable information;9. Describe the operational environment for the system and any dependencies on or connections to other systems or system components;10. Provide an overview of the security and privacy requirements for the system;11. Identify any relevant control baselines or overlays, if applicable;12. Describe the controls in place or planned for meeting the security and privacy requirements, including a rationale for any tailoring decisions;13. Include risk determinations for security and privacy architecture and design decisions;14. Include security- and privacy-related activities affecting the system that require planning and coordination with [Assignment: organization-defined individuals or groups]; and15. Are reviewed and approved by the authorizing official or designated representative prior to plan implementation.b. Distribute copies of the plans and communicate subsequent changes to the plans to [Assignment: organization-defined personnel or roles];c. Review the plans [Assignment: organization-defined frequency];d. Update the plans to address changes to the system and environment of operation or problems identified during plan implementation or control assessments;	Functional	Intersects With	Plan / Coordinate with Other Organizational Entities	IAO-03.1	Mechanisms exist to plan and coordinate Information Assurance Program (IAP) activities with affected stakeholders before conducting such activities in order to reduce the potential impact on operations.	5	
PL-02	System Security and Privacy Plans	Enterprise architecture;2. Explicitly define the constituent system components;3. Describe the operational context of the system in terms of mission and business processes;4. Identify the individuals that fulfill system roles and responsibilities;5. Identify the information types processed, stored, and transmitted by the system;6. Provide the security categorization of the system, including supporting rationale;7. Describe any specific threats to the system that are of concern to the organization;8. Provide the results of a privacy risk assessment for systems processing personally identifiable information;9. Describe the operational environment for the system and any dependencies on or connections to other systems or system components;10. Provide an overview of the security and privacy requirements for the system;11. Identify any relevant control baselines or overlays, if applicable;12. Describe the controls in place or planned for meeting the security and privacy requirements, including a rationale for any tailoring decisions;13. Include risk determinations for security and privacy architecture and design decisions;14. Include security- and privacy-related activities affecting the system that require planning and coordination with [Assignment: organization-defined individuals or groups]; and15. Are reviewed and approved by the authorizing official or designated representative prior to plan implementation.b. Distribute copies of the plans and communicate subsequent changes to the plans to [Assignment: organization-defined personnel or roles];c. Review the plans [Assignment: organization-defined frequency];d. Update the plans to address changes to the system and environment of operation or problems identified during plan implementation or control assessments;	Functional	Intersects With	Applied Security, Compliance and Resilience Controls Documentation	IAO-03	Mechanisms exist to generate authoritative documentation (e.g., System Security Plan (SSP)) that: (1) Identifies key architectural and implementation information on in-scope Technology Assets, Applications and/or Services (TAAS); (2) Reflects the current state of applied security, compliance and resilience controls on applicable People, Processes, Technologies, Data and/or Facilities (PPTDF) that are contained within the system boundary; and (3) Provides a historical record of applied security controls, including changes.	5	

FDE #	FDE Name	Focal Document Element (FDE) Description	STRM Rationale	STRM Relationship	SCF Control	SCF #	Secure Controls Framework (SCF) Control Description	of Relationships	Notes
PL-02	System Security and Privacy Plans	enterprise architecture;2. Explicitly define the constituent system components;3. Describe the operational context of the system in terms of mission and business processes;4. Identify the individuals that fulfill system roles and responsibilities;5. Identify the information types processed, stored, and transmitted by the system;6. Provide the security categorization of the system, including supporting rationale;7. Describe any specific threats to the system that are of concern to the organization;8. Provide the results of a privacy risk assessment for systems processing personally identifiable information;9. Describe the operational environment for the system and any dependencies on or connections to other systems or system components;10. Provide an overview of the security and privacy requirements for the system;11. Identify any relevant control baselines or overlays, if applicable;12. Describe the controls in place or planned for meeting the security and privacy requirements, including a rationale for any tailoring decisions;13. Include risk determinations for security and privacy architecture and design decisions;14. Include security- and privacy-related activities affecting the system that require planning and coordination with [Assignment: organization-defined individuals or groups]; and15. Are reviewed and approved by the authorizing official or designated representative prior to plan implementation.b. Distribute copies of the plans and communicate subsequent changes to the plans to [Assignment: organization-defined personnel or roles];c. Review the plans [Assignment: organization-defined frequency];d. Update the plans to address changes to the system and environment of operation or problems identified during plan implementation or control assessments;	Functional	Intersects With	Network Diagrams & Data Flow Diagrams (DFDs)	AST-04	Mechanisms exist to maintain network architecture diagrams that: (1) Contain sufficient detail to assess the security of the network's architecture; (2) Reflect the current architecture of the network environment; and (3) Document all sensitive/regulating data flows.	5	
PL-04	Rules of Behavior	Establish and provide to individuals requiring access to the system, the rules that describe their responsibilities and expected behavior for information and system usage, security, and privacy;b. Receive a documented acknowledgment from such individuals, indicating that they have read, understand, and agree to abide by the rules of behavior, before authorizing access to information and the system;c. Review and update the rules of behavior [Assignment: organization-defined frequency]; andd. Require individuals who have acknowledged a previous version of the rules of behavior to read and re-acknowledge [Selection (one or more): [Assignment: organization-defined frequency]; when the rules are revised or	Functional	Intersects With	Terms of Employment	HRS-05	Mechanisms exist to require all employees and contractors to apply cybersecurity and data protection principles in their daily work to enable secure, compliant and resilient capabilities.	5	
PL-04	Rules of Behavior	Establish and provide to individuals requiring access to the system, the rules that describe their responsibilities and expected behavior for information and system usage, security, and privacy;b. Receive a documented acknowledgment from such individuals, indicating that they have read, understand, and agree to abide by the rules of behavior, before authorizing access to information and the system;c. Review and update the rules of behavior [Assignment: organization-defined frequency]; andd. Require individuals who have acknowledged a previous version of the rules of behavior to read and re-acknowledge [Selection (one or more): [Assignment: organization-defined frequency]; when the rules are revised or	Functional	Intersects With	Rules of Behavior	HRS-05.1	Mechanisms exist to define acceptable and unacceptable rules of behavior for the use of technologies, including consequences for unacceptable behavior.	5	
PL-04	Rules of Behavior	Establish and provide to individuals requiring access to the system, the rules that describe their responsibilities and expected behavior for information and system usage, security, and privacy;b. Receive a documented acknowledgment from such individuals, indicating that they have read, understand, and agree to abide by the rules of behavior, before authorizing access to information and the system;c. Review and update the rules of behavior [Assignment: organization-defined frequency]; andd. Require individuals who have acknowledged a previous version of the rules of behavior to read and re-acknowledge [Selection (one or more): [Assignment: organization-defined frequency]; when the rules are revised or	Functional	Intersects With	Technology Use Restrictions	HRS-05.3	Mechanisms exist to establish usage restrictions and implementation guidance for organizational technologies based on the potential to cause damage to Technology Assets, Applications and/or Services (TAAS), if used maliciously.	5	
PS-01	Policy and Procedures	Develop, document, and disseminate to [Assignment: organization-defined personnel or roles];1. [Selection (one or more): Organization-level; Mission/business process-level; System-level] personnel security policy that;a. Addresses purpose, scope, roles, responsibilities, management commitment, coordination among organizational entities, and compliance; andb. Is consistent with applicable laws, executive orders, directives, regulations, policies, standards, and guidelines; and2. Procedures to facilitate the implementation of the personnel security policy and the associated personnel security controls;b. Designate an [Assignment: organization-defined official] to manage the development, documentation, and dissemination of the personnel security policy and procedures; andc. Review and update the current personnel security:1. Policy [Assignment: organization-defined frequency] and following [Assignment: organization-defined events]; and2. Procedures [Assignment: organization-defined frequency] and following [Assignment: organization-defined events];	Functional	Intersects With	Publishing Security, Compliance & Documentation	GOV-02	Mechanisms exist to establish, maintain and disseminate policies, standards and procedures necessary for secure, compliant and resilient capabilities.	5	
PS-01	Policy and Procedures	Develop, document, and disseminate to [Assignment: organization-defined personnel or roles];1. [Selection (one or more): Organization-level; Mission/business process-level; System-level] personnel security policy that;a. Addresses purpose, scope, roles, responsibilities, management commitment, coordination among organizational entities, and compliance; andb. Is consistent with applicable laws, executive orders, directives, regulations, policies, standards, and guidelines; and2. Procedures to facilitate the implementation of the personnel security policy and the associated personnel security controls;b. Designate an [Assignment: organization-defined official] to manage the development, documentation, and dissemination of the personnel security policy and procedures; andc. Review and update the current personnel security:1. Policy [Assignment: organization-defined frequency] and following [Assignment: organization-defined events]; and2. Procedures [Assignment: organization-defined frequency] and following [Assignment: organization-defined events];	Functional	Intersects With	Periodic Review & Update of Security, Compliance & Resilience Program	GOV-03	Mechanisms exist to review the Security, Compliance & Resilience Program (SCR), including policies, standards and procedures, at planned intervals or if significant changes occur to ensure their continuing suitability, adequacy and effectiveness.	5	

FDE #	FDE Name	Focal Document Element (FDE) Description	STRM Rationale	STRM Relationship	SCF Control	SCF #	Secure Controls Framework (SCF) Control Description	of Relationships	Notes
PS-01	Policy and Procedures	a. Develop, document, and disseminate to [Assignment: organization-defined personnel or roles].1. [Selection (one or more): Organization-level; Mission/business process-level; System-level] personnel security policy that:a. Addresses purpose, scope, roles, responsibilities, management commitment, coordination among organizational entities, and compliance; andb. Is consistent with applicable laws, executive orders, directives, regulations, policies, standards, and guidelines; and2. Procedures to facilitate the implementation of the personnel security policy and the associated personnel security controls;b. Designate an [Assignment: organization-defined official] to manage the development, documentation, and dissemination of the personnel security policy and procedures; andc. Review and update the current personnel security:1. Policy [Assignment: organization-defined frequency] and following [Assignment: organization-defined events]; and2. Procedures [Assignment: organization-defined frequency] and following [Assignment: organization-defined events].	Functional	Subset Of	Human Resources Security Management	HRS-01	Mechanisms exist to facilitate the implementation of personnel security controls.	10	
PS-03	Personnel Screening	a. Screen individuals prior to authorizing access to the system; andb. Rescreen individuals in accordance with [Assignment: organization-defined conditions requiring rescreening and, where rescreening is so indicated, the frequency of rescreening].	Functional	Equal	Personnel Screening	HRS-04	Mechanisms exist to manage personnel security risk by screening individuals prior to authorizing access.	10	
PS-04	Personnel Termination	Upon termination of individual employment:a. Disable system access within [Assignment: organization-defined time period];b. Terminate or revoke any authenticators and credentials associated with the individual;c. Conduct exit interviews that include a discussion of [Assignment: organization-defined information security topics];d. Retrieve all security-related organizational system-related property; ande. Retain access to organizational information and systems formerly controlled by terminated individual.	Functional	Equal	Personnel Termination	HRS-09	Mechanisms exist to govern the termination of individual employment.	10	
PS-05	Personnel Transfer	a. Review and document ongoing operations necessary to current logical and physical access authorizations to systems and facilities when individuals are reassigned or transferred to other positions within the organization;b. Initiate [Assignment: organization-defined transfer or reassignment actions] within [Assignment: organization-defined time period] following the formal transfer action;c. Modify access authorization as needed to correspond with any changes in operational need due to reassignment or transfer; andd. Notify [Assignment: organization-defined personnel or roles] within [Assignment: organization-defined time period] following the formal transfer action.	Functional	Equal	Personnel Transfer	HRS-08	Mechanisms exist to adjust logical and physical access authorizations to Technology Assets, Applications and/or Services (TAAS) and facilities upon personnel reassignment or transfer, in a timely manner.	10	
PS-06	Access Agreements	a. Develop and document access agreements for organizational systems;b. Review and update the access agreements [Assignment: organization-defined frequency]; andc. Verify that individuals requiring access to organizational information and systems:1. Sign appropriate access agreements prior to being granted access; and2. Re-sign access agreements to maintain access to organizational systems when access agreements have been updated or [Assignment: organization-defined frequency].	Functional	Intersects With	Confidentiality Agreements	HRS-06.1	Mechanisms exist to require Non-Disclosure Agreements (NDAs) or similar confidentiality agreements that reflect the needs to protect data and operational details, or both employees and third-parties.	5	
PS-06	Access Agreements	a. Develop and document access agreements for organizational systems;b. Review and update the access agreements [Assignment: organization-defined frequency]; andc. Verify that individuals requiring access to organizational information and systems:1. Sign appropriate access agreements prior to being granted access; and2. Re-sign access agreements to maintain access to organizational systems when access agreements have been updated or [Assignment: organization-defined frequency].	Functional	Intersects With	Access Agreements	HRS-06	Mechanisms exist to require internal and third-party users to sign appropriate access agreements prior to being granted access.	5	
PS-07	External Personnel Security	a. Establish personnel security requirements, including security roles and responsibilities for external providers;b. Require external providers to comply with personnel security policies and procedures established by the organization;c. Document personnel security requirements;d. Require external providers to notify [Assignment: organization-defined personnel or roles] of any personnel transfers or terminations of external personnel who possess organizational credentials and/or badges, or who have system privileges within [Assignment: organization-defined time period]; ande. Monitor provider compliance with personnel security requirements.	Functional	Equal	Third-Party Personnel	HRS-10	Mechanisms exist to govern third-party personnel by reviewing and monitoring third-party security, compliance and/or resilience roles and responsibilities.	10	
PS-08	Personnel Sanctions	a. Employ a formal sanctions process for individuals failing to comply with established information security and privacy policies and procedures; andb. Notify [Assignment: organization-defined personnel or roles] within [Assignment: organization-defined time period] when a formal employee sanctions process is initiated, identifying the individual sanctioned and the reason for the sanction.	Functional	Equal	Personnel Sanctions	HRS-07	Mechanisms exist to sanction personnel failing to comply with established security policies, standards and procedures.	10	
RA-01	Policy and Procedures	a. Develop, document, and disseminate to [Assignment: organization-defined personnel or roles].1. [Selection (one or more): Organization-level; Mission/business process-level; System-level] risk assessment policy that:a. Addresses purpose, scope, roles, responsibilities, management commitment, coordination among organizational entities, and compliance; andb. Is consistent with applicable laws, executive orders, directives, regulations, policies, standards, and guidelines; and2. Procedures to facilitate the implementation of the risk assessment policy and the associated risk assessment controls;b. Designate an [Assignment: organization-defined official] to manage the development, documentation, and dissemination of the risk assessment policy and procedures; andc. Review and update the current risk assessment:1. Policy [Assignment: organization-defined frequency] and following [Assignment: organization-defined events]; and2. Procedures [Assignment: organization-defined frequency] and following [Assignment: organization-defined events].	Functional	Intersects With	Periodic Review & Update of Security, Compliance & Resilience Program	GOV-03	Mechanisms exist to review the Security, Compliance & Resilience Program (SCRPR), including policies, standards and procedures, at planned intervals or if significant changes occur to ensure their continuing suitability, adequacy and effectiveness.	5	
RA-01	Policy and Procedures	a. Develop, document, and disseminate to [Assignment: organization-defined personnel or roles].1. [Selection (one or more): Organization-level; Mission/business process-level; System-level] risk assessment policy that:a. Addresses purpose, scope, roles, responsibilities, management commitment, coordination among organizational entities, and compliance; andb. Is consistent with applicable laws, executive orders, directives, regulations, policies, standards, and guidelines; and2. Procedures to facilitate the implementation of the risk assessment policy and the associated risk assessment controls;b. Designate an [Assignment: organization-defined official] to manage the development, documentation, and dissemination of the risk assessment policy and procedures; andc. Review and update the current risk assessment:1. Policy [Assignment: organization-defined frequency] and following [Assignment: organization-defined events]; and2. Procedures [Assignment: organization-defined frequency] and following [Assignment: organization-defined events].	Functional	Subset Of	Risk Management Program	RSK-01	Mechanisms exist to facilitate the implementation of strategic, operational and tactical risk management controls.	10	

FDE #	FDE Name	Focal Document Element (FDE) Description	STRM Rationale	STRM Relationship	SCF Control	SCF #	Secure Controls Framework (SCF) Control Description	of Relationships	Notes
RA-01	Policy and Procedures	a. Develop, document, and disseminate to [Assignment: organization-defined personnel or roles];1. [Selection (one or more): Organization-level; Mission/business process-level; System-level] risk assessment policy that:a. Addresses purpose, scope, roles, responsibilities, management commitment, coordination among organizational entities, and compliance; andb. Is consistent with applicable laws, executive orders, directives, regulations, policies, standards, and guidelines; and2. Procedures to facilitate the implementation of the risk assessment policy and the associated risk assessment controls;b. Designate an [Assignment: organization-defined official] to manage the development, documentation, and dissemination of the risk assessment policy and procedures; andc. Review and update the current risk assessment:1. Policy [Assignment: organization-defined frequency] and following [Assignment: organization-defined events]; and2. Procedures [Assignment: organization-defined frequency] and following [Assignment: organization-defined events].	Functional	Intersects With	Publishing Security, Compliance & Resilience Documentation	GOV-02	Mechanisms exist to establish, maintain and disseminate policies, standards and procedures necessary for secure, compliant and resilient capabilities.	5	
RA-02	Security Categorization	a. Categorize the system and information it processes, stores, and transmits;b. Document the security categorization results, including supporting rationale, in the security plan for the system; andc. Verify that the authorizing official or authorizing official designated representative reviews and approves the security categorization decision.	Functional	Equal	Risk-Based Security Categorization	RSK-02	Mechanisms exist to categorize Technology Assets, Applications, Services and/or Data (TAASD) in accordance with applicable laws, regulations and contractual obligations that: (1) Document the security categorization results (including supporting rationale) in the security plan for systems; and (2) Ensure the security categorization decision is reviewed and approved by the asset owner.	10	
RA-03	Risk Assessment	a. Conduct a risk assessment, including:1. Identifying threats to and vulnerabilities in the system;2. Determining the likelihood and magnitude of harm from unauthorized access, use, disclosure, disruption, modification, or destruction of the system, the information it processes, stores, or transmits, and any related information; and3. Determining the likelihood and impact of adverse effects on individuals arising from the processing of personally identifiable information;b. Integrate risk assessment results and risk management decisions from the organization and mission or business process perspectives with system-level risk assessments;c. Document risk assessment results in [Selection (one): security and privacy plans; risk assessment report; [Assignment: organization-defined document]];d. Review risk assessment results [Assignment: organization-defined frequency];e. Disseminate risk assessment results to [Assignment: organization-defined personnel or roles]; andf. Update the risk assessment [Assignment: organization-defined frequency] or when there are significant changes to the system, its environment of operation, or other conditions that may impact the security or privacy state of the system.	Functional	Intersects With	Functional Review Of Security, Compliance & Resilience Controls	CPL-03.2	Mechanisms exist to regularly review Technology Assets, Applications and/or Services (TAAS) for adherence to the organization's security, compliance and/or resilience policies and standards.	5	
RA-03	Risk Assessment	a. Conduct a risk assessment, including:1. Identifying threats to and vulnerabilities in the system;2. Determining the likelihood and magnitude of harm from unauthorized access, use, disclosure, disruption, modification, or destruction of the system, the information it processes, stores, or transmits, and any related information; and3. Determining the likelihood and impact of adverse effects on individuals arising from the processing of personally identifiable information;b. Integrate risk assessment results and risk management decisions from the organization and mission or business process perspectives with system-level risk assessments;c. Document risk assessment results in [Selection (one): security and privacy plans; risk assessment report; [Assignment: organization-defined document]];d. Review risk assessment results [Assignment: organization-defined frequency];e. Disseminate risk assessment results to [Assignment: organization-defined personnel or roles]; andf. Update the risk assessment [Assignment: organization-defined frequency] or when there are significant changes to the system, its environment of operation, or other conditions that may impact the security or privacy state of the system.	Functional	Intersects With	Risk Assessment	RSK-04	Mechanisms exist to conduct recurring assessments of risk that includes the likelihood and magnitude of harm, from unauthorized access, use, disclosure, disruption, modification or destruction of the organization's Technology Assets, Applications, Services and/or Data (TAASD).	5	
RA-05	Vulnerability Monitoring and Scanning	and hosted applications [Assignment: organization-defined frequency and/or randomly in accordance with organization-defined process] and when new vulnerabilities potentially affecting the system are identified and reported;b. Employ vulnerability monitoring tools and techniques that facilitate interoperability among tools and automate parts of the vulnerability management process by using standards for:1. Enumerating platforms, software flaws, and improper configurations;2. Formatting checklists and test procedures; and3. Measuring vulnerability impact;c. Analyze vulnerability scan reports and results from vulnerability monitoring;d. Remediate legitimate vulnerabilities [Assignment: organization-defined response times] in accordance with an organizational assessment of risk;e. Share information obtained from the vulnerability monitoring process and control assessments with [Assignment: organization-defined personnel or roles] to help eliminate similar vulnerabilities in other systems; andf. Employ vulnerability monitoring tools that include the capability to readily update the vulnerabilities to be	Functional	Intersects With	Vulnerability Scanning	VPM-06	Mechanisms exist to detect vulnerabilities and configuration errors by routine vulnerability scanning of systems and applications.	5	
RA-05	Vulnerability Monitoring and Scanning	and hosted applications [Assignment: organization-defined frequency and/or randomly in accordance with organization-defined process] and when new vulnerabilities potentially affecting the system are identified and reported;b. Employ vulnerability monitoring tools and techniques that facilitate interoperability among tools and automate parts of the vulnerability management process by using standards for:1. Enumerating platforms, software flaws, and improper configurations;2. Formatting checklists and test procedures; and3. Measuring vulnerability impact;c. Analyze vulnerability scan reports and results from vulnerability monitoring;d. Remediate legitimate vulnerabilities [Assignment: organization-defined response times] in accordance with an organizational assessment of risk;e. Share information obtained from the vulnerability monitoring process and control assessments with [Assignment: organization-defined personnel or roles] to help eliminate similar vulnerabilities in other systems; andf. Employ vulnerability monitoring tools that include the capability to readily update the vulnerabilities to be	Functional	Intersects With	Update Tool Capability	VPM-06.1	Mechanisms exist to update vulnerability scanning tools.	5	
RA-05(01)	N/A	Withdrawn	Functional	No Relationship	N/A	N/A	N/A	0	Withdrawn in NIST SP 800-53 R5
RA-05(02)	Vulnerability Monitoring and Scanning   Update Vulnerabilities to Be Scanned	Update the system vulnerabilities to be scanned [Selection (one or more): [Assignment: organization-defined frequency]; prior to a new scan; when new vulnerabilities are identified and reported].	Functional	Intersects With	Update Tool Capability	VPM-06.1	Mechanisms exist to update vulnerability scanning tools.	5	



FDE #	FDE Name	Focal Document Element (FDE) Description	STRM Rationale	STRM Relationship	SCF Control	SCF #	Secure Controls Framework (SCF) Control Description	of Relationships	Notes
SA-05	System Documentation	a. Obtain or develop administrator documentation for the system, system component, or system service that describes:1. Secure configuration, installation, and operation of the system, component, or service;2. Effective use and maintenance of security and privacy functions and mechanisms; and3. Known vulnerabilities regarding configuration and use of administrative or privileged functions;b. Obtain or develop user documentation for the system, system component, or system service that describes:1. User-accessible security and privacy functions and mechanisms and how to effectively use those functions and mechanisms;2. Methods for user interaction, which enables individuals to use the system, component, or service in a more secure manner and protect individual privacy; and3. User responsibilities in maintaining the security of the system, component, or service and privacy of individuals;c. Document attempts to obtain system, system component, or system service documentation when such documentation is either unavailable or nonexistent and take [Assignment: organization-defined actions] in response; andd. Distribute documentation to [Assignment: organization-defined personnel or roles].	Functional	Intersects With	Documentation Requirements	TDA-04	Mechanisms exist to obtain, protect and distribute administrator documentation for Technology Assets, Applications and/or Services (TAAS) that describe: (1) Secure configuration, installation and operation of the TAAS; (2) Effective use and maintenance of security features/functions; and (3) Known vulnerabilities regarding configuration and use of administrative (e.g., privileged) functions.	5	
SA-05	System Documentation	a. Obtain or develop administrator documentation for the system, system component, or system service that describes:1. Secure configuration, installation, and operation of the system, component, or service;2. Effective use and maintenance of security and privacy functions and mechanisms; and3. Known vulnerabilities regarding configuration and use of administrative or privileged functions;b. Obtain or develop user documentation for the system, system component, or system service that describes:1. User-accessible security and privacy functions and mechanisms and how to effectively use those functions and mechanisms;2. Methods for user interaction, which enables individuals to use the system, component, or service in a more secure manner and protect individual privacy; and3. User responsibilities in maintaining the security of the system, component, or service and privacy of individuals;c. Document attempts to obtain system, system component, or system service documentation when such documentation is either unavailable or nonexistent and take [Assignment: organization-defined actions] in response; andd. Distribute documentation to [Assignment: organization-defined personnel or roles].	Functional	Intersects With	Asset Scope Classification	AST-04.1	Mechanisms exist to determine security, compliance and resilience control applicability by identifying, assigning and documenting the appropriate asset scope categorization for all Technology Assets, Applications and/or Services (TAAS) and personnel (internal and third-parties).	5	
SA-09	External System Services	a. Require that providers of external system services comply with organizational security and privacy requirements and employ the following controls: [Assignment: organization-defined controls];b. Define and document organizational oversight and user roles and responsibilities with regard to external system services; andc. Employ the following processes, methods, and techniques to monitor control compliance by external service providers on an ongoing basis: [Assignment: organization-defined processes, methods, and techniques].	Functional	Equal	Third-Party Services	TPM-04	Mechanisms exist to mitigate the risks associated with third-party access to the organization's Technology Assets, Applications, Services and/or Data (TAASD).	10	
SC-01	Policy and Procedures	a. Develop, document, and disseminate to [Assignment: organization-defined personnel or roles]:1. [Selection (one or more): Organization-level; Mission/business process-level; System-level] system and communications protection policy that:a. Addresses purpose, scope, roles, responsibilities, management commitment, coordination among organizational entities, and compliance; andb. Is consistent with applicable laws, executive orders, directives, regulations, policies, standards, and guidelines; and2. Procedures to facilitate the implementation of the system and communications protection policy and the associated system and communications protection controls;b. Designate an [Assignment: organization-defined official] to manage the development, documentation, and dissemination of the system and communications protection policy and procedures; andc. Review and update the current system and communications protection:1. Policy [Assignment: organization-defined frequency] and following [Assignment: organization-defined events]; and2. Procedures [Assignment: organization-defined frequency] and following [Assignment: organization-defined events].	Functional	Intersects With	Publishing Security, Compliance & Resilience Documentation	GOV-02	Mechanisms exist to establish, maintain and disseminate policies, standards and procedures necessary for secure, compliant and resilient capabilities.	5	
SC-01	Policy and Procedures	a. Develop, document, and disseminate to [Assignment: organization-defined personnel or roles]:1. [Selection (one or more): Organization-level; Mission/business process-level; System-level] system and communications protection policy that:a. Addresses purpose, scope, roles, responsibilities, management commitment, coordination among organizational entities, and compliance; andb. Is consistent with applicable laws, executive orders, directives, regulations, policies, standards, and guidelines; and2. Procedures to facilitate the implementation of the system and communications protection policy and the associated system and communications protection controls;b. Designate an [Assignment: organization-defined official] to manage the development, documentation, and dissemination of the system and communications protection policy and procedures; andc. Review and update the current system and communications protection:1. Policy [Assignment: organization-defined frequency] and following [Assignment: organization-defined events]; and2. Procedures [Assignment: organization-defined frequency] and following [Assignment: organization-defined events].	Functional	Subset Of	Network Security Controls (NSC)	NET-01	Mechanisms exist to develop, govern & update procedures to facilitate the implementation of Network Security Controls (NSC).	10	
SC-01	Policy and Procedures	a. Develop, document, and disseminate to [Assignment: organization-defined personnel or roles]:1. [Selection (one or more): Organization-level; Mission/business process-level; System-level] system and communications protection policy that:a. Addresses purpose, scope, roles, responsibilities, management commitment, coordination among organizational entities, and compliance; andb. Is consistent with applicable laws, executive orders, directives, regulations, policies, standards, and guidelines; and2. Procedures to facilitate the implementation of the system and communications protection policy and the associated system and communications protection controls;b. Designate an [Assignment: organization-defined official] to manage the development, documentation, and dissemination of the system and communications protection policy and procedures; andc. Review and update the current system and communications protection:1. Policy [Assignment: organization-defined frequency] and following [Assignment: organization-defined events]; and2. Procedures [Assignment: organization-defined frequency] and following [Assignment: organization-defined events].	Functional	Subset Of	Secure Engineering Principles	SEA-01	Mechanisms exist to facilitate the implementation of industry-recognized security, compliance and resilience practices in the specification, design, development, implementation and modification of Technology Assets, Applications and/or Services (TAAS).	10	

FDE #	FDE Name	Focal Document Element (FDE) Description	STRM Rationale	STRM Relationship	SCF Control	SCF #	Secure Controls Framework (SCF) Control Description	of Relationships	Notes
SC-01	Policy and Procedures	a. Develop, document, and disseminate to [Assignment: organization-defined personnel or roles].1. [Selection (one or more): Organization-level; Mission/business process-level; System-level] system and communications protection policy that:a. Addresses purpose, scope, roles, responsibilities, management commitment, coordination among organizational entities, and compliance; andb. Is consistent with applicable laws, executive orders, directives, regulations, policies, standards, and guidelines; and2. Procedures to facilitate the implementation of the system and communications protection policy and the associated system and communications protection controls;b. Designate an [Assignment: organization-defined official] to manage the development, documentation, and dissemination of the system and communications protection policy and procedures; andc. Review and update the current system and communications protection:1. Policy [Assignment: organization-defined frequency] and following [Assignment: organization-defined events]; and2. Procedures [Assignment: organization-defined frequency] and following [Assignment: organization-defined events].	Functional	Intersects With	Periodic Review & Update of Security, Compliance & Resilience Program	GOV-03	Mechanisms exist to review the Security, Compliance & Resilience Program (SCR), including policies, standards and procedures, at planned intervals or if significant changes occur to ensure their continuing suitability, adequacy and effectiveness.	5	
SC-05	Denial-of-service Protection	a. [Selection (one): Protect against; Limit] the effects of the following types of denial-of-service events: [Assignment: organization-defined types of denial-of-service events]; andb. Employ the following controls to achieve the denial-of-service objective: [Assignment: organization-defined controls by type of denial-of-service event].	Functional	Intersects With	Resource Priority	CAP-02	Mechanisms exist to control resource utilization of Technology Assets, Applications and/or Services (TAAS) that are susceptible to Denial of Service (DoS) attacks to limit and prioritize the use of resources.	5	
SC-05	Denial-of-service Protection	a. [Selection (one): Protect against; Limit] the effects of the following types of denial-of-service events: [Assignment: organization-defined types of denial-of-service events]; andb. Employ the following controls to achieve the denial-of-service objective: [Assignment: organization-defined controls by type of denial-of-service event].	Functional	Intersects With	Capacity Planning	CAP-03	Mechanisms exist to conduct capacity planning so that necessary capacity for information processing, telecommunications and environmental support will exist during contingency operations.	5	
SC-05	Denial-of-service Protection	a. [Selection (one): Protect against; Limit] the effects of the following types of denial-of-service events: [Assignment: organization-defined types of denial-of-service events]; andb. Employ the following controls to achieve the denial-of-service objective: [Assignment: organization-defined controls by type of denial-of-service event].	Functional	Intersects With	Capacity & Performance Management	CAP-01	Mechanisms exist to facilitate the implementation of capacity management controls to ensure optimal system performance to meet expected and anticipated future capacity requirements.	5	
SC-05	Denial-of-service Protection	a. [Selection (one): Protect against; Limit] the effects of the following types of denial-of-service events: [Assignment: organization-defined types of denial-of-service events]; andb. Employ the following controls to achieve the denial-of-service objective: [Assignment: organization-defined controls by type of denial-of-service event].	Functional	Intersects With	Denial of Service (DoS) Protection	NET-02.1	Automated mechanisms exist to protect against or limit the effects of denial of service attacks.	5	
SC-07	Boundary Protection	a. Monitor and control communications at the external managed interfaces to the system and at key internal managed interfaces within the system;b. Implement subnetworks for publicly accessible system components that are [Selection (one): physically; logically] separated from internal organizational networks; andc. Connect to external networks or systems only through managed interfaces consisting of boundary protection devices arranged in accordance with an organizational security and privacy architecture.	Functional	Intersects With	Boundary Protection	NET-03	Mechanisms exist to monitor and control communications at the external network boundary and at key internal boundaries within the network.	5	
SC-12	Cryptographic Key Establishment and Management	Establish and manage cryptographic keys when cryptography is employed within the system in accordance with the following key management requirements: [Assignment: organization-defined requirements for key generation, distribution, storage, access, and destruction].	Functional	Intersects With	Public Key Infrastructure (PKI)	CRY-08	Mechanisms exist to securely implement an internal Public Key Infrastructure (PKI) infrastructure or obtain PKI services from a reputable PKI service provider.	5	
SC-13	Cryptographic Protection	a. Determine the [Assignment: organization-defined cryptographic uses]; andb. Implement the following types of cryptography required for each specified cryptographic use: [Assignment: organization-defined types of cryptography for each specified cryptographic use].	Functional	Intersects With	Encrypting Data At Rest	CRY-05	Cryptographic mechanisms exist to prevent unauthorized disclosure of data at rest.	5	
SC-13	Cryptographic Protection	a. Determine the [Assignment: organization-defined cryptographic uses]; andb. Implement the following types of cryptography required for each specified cryptographic use: [Assignment: organization-defined types of cryptography for each specified cryptographic use].	Functional	Intersects With	Export-Controlled Cryptography	CRY-01.2	Mechanisms exist to address the exporting of cryptographic technologies in compliance with relevant statutory and regulatory requirements.	5	
SC-13	Cryptographic Protection	a. Determine the [Assignment: organization-defined cryptographic uses]; andb. Implement the following types of cryptography required for each specified cryptographic use: [Assignment: organization-defined types of cryptography for each specified cryptographic use].	Functional	Intersects With	Use of Cryptographic Controls	CRY-01	Mechanisms exist to facilitate the implementation of cryptographic protections controls using known public standards and trusted cryptographic technologies.	5	
SC-20	Secure Name/address Resolution Service (authoritative Source)	a. Provide additional data origin authentication and integrity verification artifacts along with the authoritative name resolution data the system returns in response to external name/address resolution queries; andb. Provide the means to indicate the security status of child zones and (if the child supports secure resolution services) to enable verification of a chain of trust among parent and child domains, when operating as part of a distributed, hierarchical namespace.	Functional	Intersects With	Domain Name Service (DNS) Resolution	NET-10	Mechanisms exist to ensure Domain Name Service (DNS) resolution is designed, implemented and managed to protect the security of name / address resolution.	5	
SC-21	Secure Name/address Resolution Service (recursive or Caching Resolver)	Request and perform data origin authentication and data integrity verification on the name/address resolution responses the system receives from authoritative sources.	Functional	Equal	Secure Name / Address Resolution Service (Recursive or Caching Resolver)	NET-10.2	Mechanisms exist to perform data origin authentication and data integrity verification on the Domain Name Service (DNS) resolution responses received from authoritative sources when requested by client systems.	10	
SC-22	Architecture and Provisioning for Name/address Resolution Service	Ensure the systems that collectively provide name/address resolution service for an organization are fault-tolerant and implement internal and external role separation.	Functional	Equal	Architecture & Provisioning for Name / Address Resolution Service	NET-10.1	Mechanisms exist to ensure systems that collectively provide Domain Name Service (DNS) resolution service are fault-tolerant and implement internal/external role separation.	10	
SC-39	Process Isolation	Maintain a separate execution domain for each executing system process.	Functional	Equal	Process Isolation	SEA-04	Mechanisms exist to implement a separate execution domain for each executing process.	10	
SI-01	Policy and Procedures	a. Develop, document, and disseminate to [Assignment: organization-defined personnel or roles].1. [Selection (one or more): Organization-level; Mission/business process-level; System-level] system and information integrity policy that:a. Addresses purpose, scope, roles, responsibilities, management commitment, coordination among organizational entities, and compliance; andb. Is consistent with applicable laws, executive orders, directives, regulations, policies, standards, and guidelines; and2. Procedures to facilitate the implementation of the system and information integrity policy and the associated system and information integrity controls;b. Designate an [Assignment: organization-defined official] to manage the development, documentation, and dissemination of the system and information integrity policy and procedures; andc. Review and update the current system and information integrity:1. Policy [Assignment: organization-defined frequency] and following [Assignment: organization-defined events]; and2. Procedures [Assignment: organization-defined frequency] and following [Assignment: organization-defined events].	Functional	Intersects With	Periodic Review & Update of Security, Compliance & Resilience Program	GOV-03	Mechanisms exist to review the Security, Compliance & Resilience Program (SCR), including policies, standards and procedures, at planned intervals or if significant changes occur to ensure their continuing suitability, adequacy and effectiveness.	5	

FDE #	FDE Name	Focal Document Element (FDE) Description	STRM Rationale	STRM Relationship	SCF Control	SCF #	Secure Controls Framework (SCF) Control Description	of Relationships	Notes
SI-01	Policy and Procedures	a. Develop, document, and disseminate to [Assignment: organization-defined personnel or roles]; 1. [Selection (one or more): Organization-level; Mission/business process-level; System-level] system and information integrity policy that: a. Addresses purpose, scope, roles, responsibilities, management commitment, coordination among organizational entities, and compliance; and b. Is consistent with applicable laws, executive orders, directives, regulations, policies, standards, and guidelines; and 2. Procedures to facilitate the implementation of the system and information integrity policy and the associated system and information integrity controls; b. Designate an [Assignment: organization-defined official] to manage the development, documentation, and dissemination of the system and information integrity policy and procedures; and c. Review and update the current system and information integrity: 1. Policy [Assignment: organization-defined frequency] and following [Assignment: organization-defined events]; and 2. Procedures [Assignment: organization-defined frequency] and following [Assignment: organization-defined events]	Functional	Subset Of	Secure Engineering Principles	SEA-01	Mechanisms exist to facilitate the implementation of industry-recognized security, compliance and resilience practices in the specification, design, development, implementation and modification of Technology Assets, Applications and/or Services (TAAS).	10	
SI-01	Policy and Procedures	a. Develop, document, and disseminate to [Assignment: organization-defined personnel or roles]; 1. [Selection (one or more): Organization-level; Mission/business process-level; System-level] system and information integrity policy that: a. Addresses purpose, scope, roles, responsibilities, management commitment, coordination among organizational entities, and compliance; and b. Is consistent with applicable laws, executive orders, directives, regulations, policies, standards, and guidelines; and 2. Procedures to facilitate the implementation of the associated system and information integrity controls; b. Designate an [Assignment: organization-defined official] to manage the development, documentation, and dissemination of the system and information integrity policy and procedures; and c. Review and update the current system and information integrity: 1. Policy [Assignment: organization-defined frequency] and following [Assignment: organization-defined events]; and 2. Procedures [Assignment: organization-defined frequency] and following [Assignment: organization-defined events]	Functional	Intersects With	Publishing Security, Compliance & Resilience Documentation	GOV-02	Mechanisms exist to establish, maintain and disseminate policies, standards and procedures necessary for secure, compliant and resilient capabilities.	5	
SI-02	Flaw Remediation	a. Identify, report, and correct system flaws; b. Test software and firmware updates related to flaw remediation for effectiveness and potential side effects before installation; c. Install security-relevant software and firmware updates within [Assignment: organization-defined time period] of the release of the updates; and d. Incorporate flaw remediation into the organizational configuration management process.	Functional	Intersects With	Vulnerability & Patch Management Program (VPMP)	VPM-01	Mechanisms exist to facilitate the implementation and monitoring of vulnerability management controls.	5	
SI-02	Flaw Remediation	a. Identify, report, and correct system flaws; b. Test software and firmware updates related to flaw remediation for effectiveness and potential side effects before installation; c. Install security-relevant software and firmware updates within [Assignment: organization-defined time period] of the release of the updates; and d. Incorporate flaw remediation into the organizational configuration management process.	Functional	Intersects With	Software & Firmware Patching	VPM-05	Mechanisms exist to conduct software patching for all deployed Technology Assets, Applications and/or Services (TAAS), including firmware.	5	
SI-02	Flaw Remediation	a. Identify, report, and correct system flaws; b. Test software and firmware updates related to flaw remediation for effectiveness and potential side effects before installation; c. Install security-relevant software and firmware updates within [Assignment: organization-defined time period] of the release of the updates; and d. Incorporate flaw remediation into the organizational configuration management process.	Functional	Intersects With	Automatic Antimalware Signature Updates	END-04.1	Automated mechanisms exist to update antimalware technologies, including signature definitions.	5	
SI-03	Malicious Code Protection	a. Implement [Selection (one or more): signature based; non-signature based] malicious code protection mechanisms at system entry and exit points to detect and eradicate malicious code; b. Automatically update malicious code protection mechanisms as new releases are available in accordance with organizational configuration management policy and procedures; c. Configure malicious code protection mechanisms to: 1. Perform periodic scans of the system [Assignment: organization-defined frequency] and real-time scans of files from external sources at [Selection (one or more): endpoint; network entry and exit points] as the files are downloaded, opened, or executed in accordance with organizational policy; and 2. [Selection (one or more): block malicious code; quarantine malicious code; take [Assignment: organization-defined action]]; and send alert to [Assignment: organization-defined personnel or roles] in response to malicious code detection; and d. Address the receipt of false positives during malicious code detection and eradication and the resulting potential impact on the availability of the system.	Functional	Intersects With	Software & Firmware Patching	VPM-05	Mechanisms exist to conduct software patching for all deployed Technology Assets, Applications and/or Services (TAAS), including firmware.	5	
SI-03	Malicious Code Protection	a. Implement [Selection (one or more): signature based; non-signature based] malicious code protection mechanisms at system entry and exit points to detect and eradicate malicious code; b. Automatically update malicious code protection mechanisms as new releases are available in accordance with organizational configuration management policy and procedures; c. Configure malicious code protection mechanisms to: 1. Perform periodic scans of the system [Assignment: organization-defined frequency] and real-time scans of files from external sources at [Selection (one or more): endpoint; network entry and exit points] as the files are downloaded, opened, or executed in accordance with organizational policy; and 2. [Selection (one or more): block malicious code; quarantine malicious code; take [Assignment: organization-defined action]]; and send alert to [Assignment: organization-defined personnel or roles] in response to malicious code detection; and d. Address the receipt of false positives during malicious code detection and eradication and the resulting potential impact on the availability of the system.	Functional	Intersects With	Vulnerability & Patch Management Program (VPMP)	VPM-01	Mechanisms exist to facilitate the implementation and monitoring of vulnerability management controls.	5	
SI-03	Malicious Code Protection	a. Implement [Selection (one or more): signature based; non-signature based] malicious code protection mechanisms at system entry and exit points to detect and eradicate malicious code; b. Automatically update malicious code protection mechanisms as new releases are available in accordance with organizational configuration management policy and procedures; c. Configure malicious code protection mechanisms to: 1. Perform periodic scans of the system [Assignment: organization-defined frequency] and real-time scans of files from external sources at [Selection (one or more): endpoint; network entry and exit points] as the files are downloaded, opened, or executed in accordance with organizational policy; and 2. [Selection (one or more): block malicious code; quarantine malicious code; take [Assignment: organization-defined action]]; and send alert to [Assignment: organization-defined personnel or roles] in response to malicious code detection; and d. Address the receipt of false positives during malicious code detection and eradication and the resulting potential impact on the availability of the system.	Functional	Intersects With	Malicious Code Protection (Anti-Malware)	END-04	Mechanisms exist to utilize antimalware technologies to detect and eradicate malicious code.	5	

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SI-03	Malicious Code Protection	a. Implement [Selection (one or more): signature based; non-signature based] malicious code protection mechanisms at system entry and exit points to detect and eradicate malicious code;b. Automatically update malicious code protection mechanisms as new releases are available in accordance with organizational configuration management policy and procedures;c. Configure malicious code protection mechanisms to:1. Perform periodic scans of the system [Assignment: organization-defined frequency] and real-time scans of files from external sources at [Selection (one or more): endpoint; network entry and exit points] as the files are downloaded, opened, or executed in accordance with organizational policy; and2. [Selection (one or more): block malicious code; quarantine malicious code; take [Assignment: organization-defined action]]; and send alert to [Assignment: organization-defined personnel or roles] in response to malicious code detection; andd. Address the receipt of false positives during malicious code detection and eradication and the resulting potential impact on the availability of the system.	Functional	Intersects With	Heuristic / Nonsignature-Based Detection	END-04.4	Mechanisms exist to utilize heuristic / nonsignature-based antimalware detection capabilities.	5	
SI-03	Malicious Code Protection	a. Implement [Selection (one or more): signature based; non-signature based] malicious code protection mechanisms at system entry and exit points to detect and eradicate malicious code;b. Automatically update malicious code protection mechanisms as new releases are available in accordance with organizational configuration management policy and procedures;c. Configure malicious code protection mechanisms to:1. Perform periodic scans of the system [Assignment: organization-defined frequency] and real-time scans of files from external sources at [Selection (one or more): endpoint; network entry and exit points] as the files are downloaded, opened, or executed in accordance with organizational policy; and2. [Selection (one or more): block malicious code; quarantine malicious code; take [Assignment: organization-defined action]]; and send alert to [Assignment: organization-defined personnel or roles] in response to malicious code detection; andd. Address the receipt of false positives during malicious code detection and eradication and the resulting potential impact on the availability of the system.	Functional	Intersects With	Safeguarding Data Over Open Networks	NET-12	Cryptographic mechanisms exist to implement strong cryptography and security protocols to safeguard sensitive/regulated data during transmission over open, public networks.	5	
SI-03	Malicious Code Protection	a. Implement [Selection (one or more): signature based; non-signature based] malicious code protection mechanisms at system entry and exit points to detect and eradicate malicious code;b. Automatically update malicious code protection mechanisms as new releases are available in accordance with organizational configuration management policy and procedures;c. Configure malicious code protection mechanisms to:1. Perform periodic scans of the system [Assignment: organization-defined frequency] and real-time scans of files from external sources at [Selection (one or more): endpoint; network entry and exit points] as the files are downloaded, opened, or executed in accordance with organizational policy; and2. [Selection (one or more): block malicious code; quarantine malicious code; take [Assignment: organization-defined action]]; and send alert to [Assignment: organization-defined personnel or roles] in response to malicious code detection; andd. Address the receipt of false positives during malicious code detection and eradication and the resulting potential impact on the availability of the system.	Functional	Intersects With	Automatic Antimalware Signature Updates	END-04.1	Automated mechanisms exist to update antimalware technologies, including signature definitions.	5	
SI-03	Malicious Code Protection	a. Implement [Selection (one or more): signature based; non-signature based] malicious code protection mechanisms at system entry and exit points to detect and eradicate malicious code;b. Automatically update malicious code protection mechanisms as new releases are available in accordance with organizational configuration management policy and procedures;c. Configure malicious code protection mechanisms to:1. Perform periodic scans of the system [Assignment: organization-defined frequency] and real-time scans of files from external sources at [Selection (one or more): endpoint; network entry and exit points] as the files are downloaded, opened, or executed in accordance with organizational policy; and2. [Selection (one or more): block malicious code; quarantine malicious code; take [Assignment: organization-defined action]]; and send alert to [Assignment: organization-defined personnel or roles] in response to malicious code detection; andd. Address the receipt of false positives during malicious code detection and eradication and the resulting potential impact on the availability of the system.	Functional	Intersects With	Input Data Validation	TDA-18	Mechanisms exist to check the validity of information inputs.	5	
SI-04	System Monitoring	a. Monitor the system to detect:1. Attacks and indicators of potential attacks in accordance with the following monitoring objectives: [Assignment: organization-defined monitoring objectives]; and2. Unauthorized local, network, and remote connections;b. Identify unauthorized use of the system through the following techniques and methods: [Assignment: organization-defined techniques and methods];c. Invoke internal monitoring capabilities or deploy monitoring devices:1. Strategically within the system to collect organization-determined essential information; and2. At ad hoc locations within the system to track specific types of transactions of interest to the organization;d. Analyze detected events and anomalies;e. Adjust the level of system monitoring activity when there is a change in risk to organizational operations and assets, individuals, other organizations, or the Nation;f. Obtain legal opinion regarding system monitoring activities; andg. Provide [Assignment: organization-defined system monitoring information] to [Assignment: organization-defined personnel or roles] [Selection (one or more): as needed; [Assignment: organization-defined frequency]].	Functional	Intersects With	Input Data Validation	TDA-18	Mechanisms exist to check the validity of information inputs.	5	
SI-04	System Monitoring	a. Monitor the system to detect:1. Attacks and indicators of potential attacks in accordance with the following monitoring objectives: [Assignment: organization-defined monitoring objectives]; and2. Unauthorized local, network, and remote connections;b. Identify unauthorized use of the system through the following techniques and methods: [Assignment: organization-defined techniques and methods];c. Invoke internal monitoring capabilities or deploy monitoring devices:1. Strategically within the system to collect organization-determined essential information; and2. At ad hoc locations within the system to track specific types of transactions of interest to the organization;d. Analyze detected events and anomalies;e. Adjust the level of system monitoring activity when there is a change in risk to organizational operations and assets, individuals, other organizations, or the Nation;f. Obtain legal opinion regarding system monitoring activities; andg. Provide [Assignment: organization-defined system monitoring information] to [Assignment: organization-defined personnel or roles] [Selection (one or more): as needed; [Assignment: organization-defined frequency]].	Functional	Intersects With	Centralized Collection of Security Event Logs	MON-02	Mechanisms exist to utilize a Security Incident Event Manager (SIEM), or similar automated tool, to support the centralized collection of security-related event logs.	5	

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SI-04	System Monitoring	a. Monitor the system to detect:1. Attacks and indicators of potential attacks in accordance with the following monitoring objectives: [Assignment: organization-defined monitoring objectives]; and2. Unauthorized local, network, and remote connections;b. Identify unauthorized use of the system through the following techniques and methods: [Assignment: organization-defined techniques and methods];c. Invoke internal monitoring capabilities or deploy monitoring devices:1. Strategically within the system to collect organization-determined essential information; and2. At ad hoc locations within the system to track specific types of transactions of interest to the organization;d. Analyze detected events and anomalies;e. Adjust the level of system monitoring activity when there is a change in risk to organizational operations and assets, individuals, other organizations, or the Nation;f. Obtain legal opinion regarding system monitoring activities; andg. Provide [Assignment: organization-defined system monitoring information] to [Assignment: organization-defined personnel or roles] [Selection (one or more): as needed; [Assignment: organization-defined frequency]].	Functional	Intersects With	Safeguarding Data Over Open Networks	NET-12	Cryptographic mechanisms exist to implement strong cryptography and security protocols to safeguard sensitive/regulated data during transmission over open, public networks.	5	
SI-04	System Monitoring	a. Monitor the system to detect:1. Attacks and indicators of potential attacks in accordance with the following monitoring objectives: [Assignment: organization-defined monitoring objectives]; and2. Unauthorized local, network, and remote connections;b. Identify unauthorized use of the system through the following techniques and methods: [Assignment: organization-defined techniques and methods];c. Invoke internal monitoring capabilities or deploy monitoring devices:1. Strategically within the system to collect organization-determined essential information; and2. At ad hoc locations within the system to track specific types of transactions of interest to the organization;d. Analyze detected events and anomalies;e. Adjust the level of system monitoring activity when there is a change in risk to organizational operations and assets, individuals, other organizations, or the Nation;f. Obtain legal opinion regarding system monitoring activities; andg. Provide [Assignment: organization-defined system monitoring information] to [Assignment: organization-defined personnel or roles] [Selection (one or more): as needed; [Assignment: organization-defined frequency]].	Functional	Intersects With	Continuous Monitoring	MON-01	Mechanisms exist to facilitate the implementation of enterprise-wide monitoring controls.	5	
SI-05	Security Alerts, Advisories, and Directives	a. Receive system security alerts, advisories, and directives from [Assignment: organization-defined external organizations] on an ongoing basis;b. Generate internal security alerts, advisories, and directives as deemed necessary;c. Disseminate security alerts, advisories, and directives to: [Selection (one or more): [Assignment: organization-defined personnel or roles]; [Assignment: organization-defined elements within the organization]; [Assignment: organization-defined external organizations]]; andd. Implement security directives in accordance with established time frames, or notify the issuing organization of the degree of noncompliance.	Functional	Intersects With	Input Data Validation	TDA-18	Mechanisms exist to check the validity of information inputs.	5	
SI-05	Security Alerts, Advisories, and Directives	a. Receive system security alerts, advisories, and directives from [Assignment: organization-defined external organizations] on an ongoing basis;b. Generate internal security alerts, advisories, and directives as deemed necessary;c. Disseminate security alerts, advisories, and directives to: [Selection (one or more): [Assignment: organization-defined personnel or roles]; [Assignment: organization-defined elements within the organization]; [Assignment: organization-defined external organizations]]; andd. Implement security directives in accordance with established time frames, or notify the issuing organization of the degree of noncompliance.	Functional	Intersects With	Threat Intelligence Feeds	THR-03	Mechanisms exist to maintain situational awareness of vulnerabilities and evolving threats by leveraging the knowledge of attacker tactics, techniques and procedures to facilitate the implementation of preventative and compensating controls.	5	
SI-05	Security Alerts, Advisories, and Directives	a. Receive system security alerts, advisories, and directives from [Assignment: organization-defined external organizations] on an ongoing basis;b. Generate internal security alerts, advisories, and directives as deemed necessary;c. Disseminate security alerts, advisories, and directives to: [Selection (one or more): [Assignment: organization-defined personnel or roles]; [Assignment: organization-defined elements within the organization]; [Assignment: organization-defined external organizations]]; andd. Implement security directives in accordance with established time frames, or notify the issuing organization of the degree of noncompliance.	Functional	Intersects With	Safeguarding Data Over Open Networks	NET-12	Cryptographic mechanisms exist to implement strong cryptography and security protocols to safeguard sensitive/regulated data during transmission over open, public networks.	5	
SI-12	Information Management and Retention	Manage and retain information within the system and information output from the system in accordance with applicable laws, executive orders, directives, regulations, policies, standards, guidelines and operational requirements.	Functional	Intersects With	Media & Data Retention	DCH-18	Mechanisms exist to retain media and data in accordance with applicable statutory, regulatory and contractual obligations.	5	
SI-12	Information Management and Retention	Manage and retain information within the system and information output from the system in accordance with applicable laws, executive orders, directives, regulations, policies, standards, guidelines and operational requirements.	Functional	Intersects With	Personal Data (PD) Retention & Disposal	PRI-05	Mechanisms exist to: (1) Retain Personal Data (PD), including metadata, for an organization-defined time period to fulfill the purpose(s) identified in the notice or as required by law; (2) Dispose of, destroys, erases, and/or anonymizes the PD, regardless of the method of storage; and (3) Use organization-defined techniques or methods to ensure secure deletion or destruction of PD (including originals, copies and archived records).	5	
SI-16	Memory Protection	Implement the following controls to protect the system memory from unauthorized code execution: [Assignment: organization-defined controls].	Functional	Equal	Memory Protection	SEA-10	Mechanisms exist to implement security safeguards to protect system memory from unauthorized code execution.	10	