Set Theory Relationship Mapping (STRM)

Reference Document : Secure Controls Framework (SCF) version 2024.4
Focal Document: NIST SP 800-207, Zero Trust Architecture
Focal Document URL: https://csrc.nist.gov/pubs/sp/800/207/final
STRM URL: https://securecontrolsframework.com/content/strm/scf-strm-nist-800-207.pdf

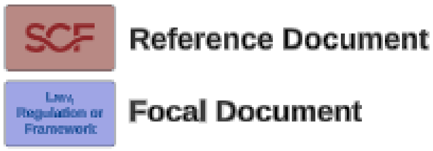
Set Theory Relationship Mapping (STRM) is well-suited for mapping between sets of elements that exist in two distinct concepts that are mostly the same as each other (e.g., cybersecurity & data privacy requirements). STRM also allows the strength of the mapping to be captured.

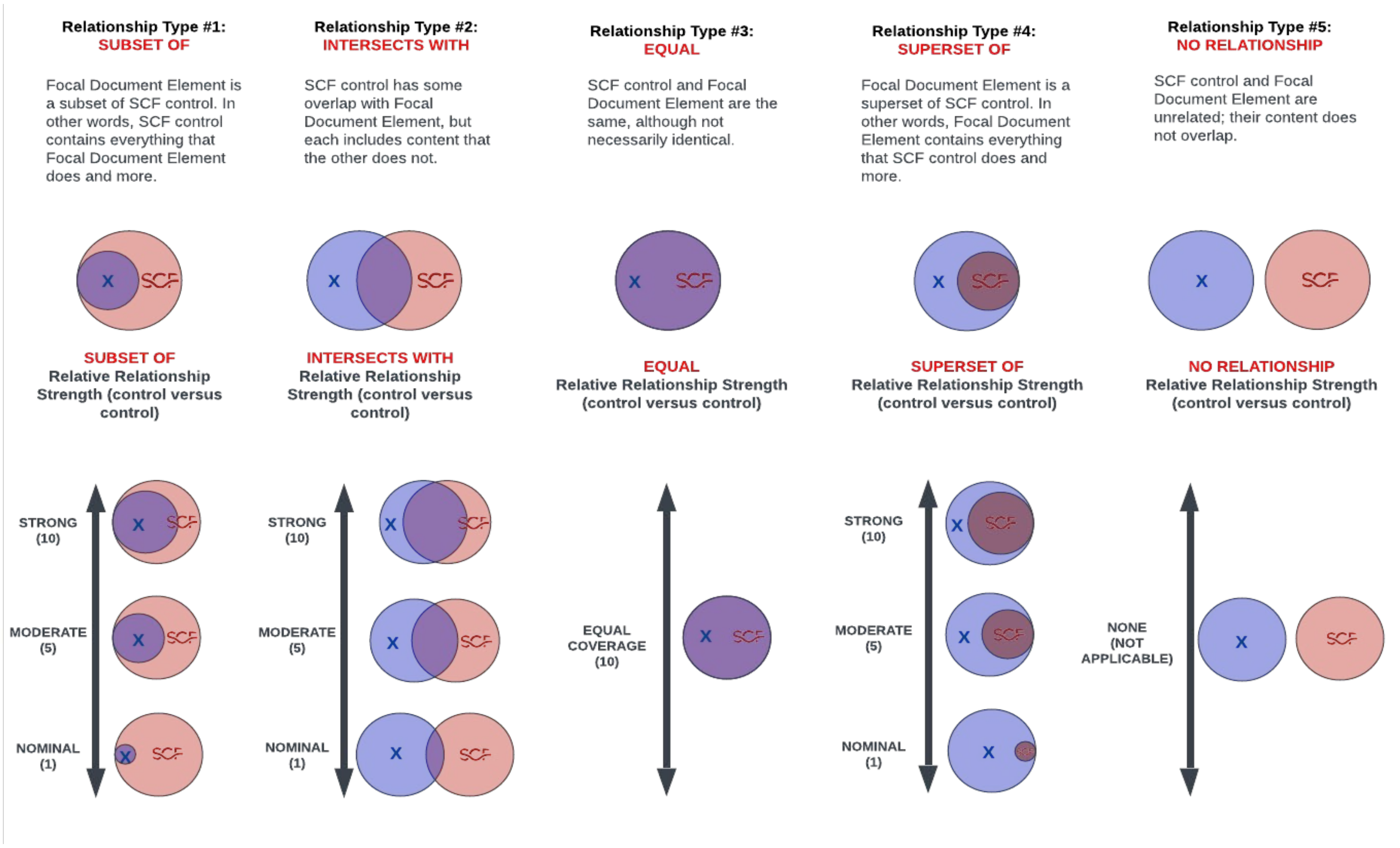
STRM relies on a justification for the relationship claim. There are three (3) options for the rationale, which is a high-level context within which the two concepts are related:

1. **Syntactic**: How similar is the wording that expresses the two concepts? This is a word-for-word analysis of the relationship, not an interpretation of the language.
2. **Semantic**: How similar are the meanings of the two concepts? This involves some interpretation of each concept's language.
3. **Functional**: How similar are the results of executing the two concepts? This involves understanding what will happen if the two concepts are implemented, performed, or otherwise executed.

Based on NIST IR 8477, STRM supports five (5) five relationship types to describe the logical similarity between two distinct concepts:

1. **Subset Of**
2. **Intersects With**
3. **Equal**
4. **Superset Of**
5. **No Relationship**




Relationship Type #1: SUBSET OF

Focal Document Element is a subset of SCF control. In other words, SCF control contains everything that Focal Document Element does and more.

SUBSET OF
Relative Relationship Strength (control versus control)

Relationship Type #2: INTERSECTS WITH

SCF control has some overlap with Focal Document Element, but each includes content that the other does not.

INTERSECTS WITH
Relative Relationship Strength (control versus control)

Relationship Type #3: EQUAL

SCF control and Focal Document Element are the same, although not necessarily identical.

EQUAL
Relative Relationship Strength (control versus control)

Relationship Type #4: SUPERSET OF

Focal Document Element is a superset of SCF control. In other words, Focal Document Element contains everything that SCF control does and more.

SUPERSET OF
Relative Relationship Strength (control versus control)

Relationship Type #5: NO RELATIONSHIP

SCF control and Focal Document Element are unrelated; their content does not overlap.

NO RELATIONSHIP
Relative Relationship Strength (control versus control)

FDE #	Focal Document Element (FDE) Description	STRM Rationale	STRM Relationship	SCF Control	SCF #	Secure Controls Framework (SCF) Control Description	Strength of Relationship (optional)	Notes (optional)
NIST Tenet 1	All data sources and computing services are considered resources.	Functional	subset of	Asset Governance	AST-01	Mechanisms exist to facilitate an IT Asset Management (ITAM) program to implement and manage asset management controls.	10	
		Functional	intersects	Asset-Service Dependencies	AST-01.1	Mechanisms exist to identify and assess the security of technology assets that support more than one critical business function.	5	
		Functional	intersects	Asset Inventories	AST-02	Mechanisms exist to perform inventories of technology assets that: (1) Accurately reflects the current systems, applications and services 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	
		Functional	intersects	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	
		Functional	intersects	Data Action Mapping	AST-02.8	Mechanisms exist to create and maintain a map of technology assets where sensitive/regulated data is stored, transmitted or processed.	5	
		Functional	intersects	Configuration Management Database (CMDB)	AST-02.9	Mechanisms exist to implement and manage a Configuration Management Database (CMDB), or similar technology, to monitor and govern technology asset-specific information.	5	
		Functional	intersects	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/regulated data flows.	5	
		Functional	intersects	Asset Scope Classification	AST-04.1	Mechanisms exist to determine cybersecurity & data privacy control applicability by identifying, assigning and documenting the appropriate asset scope categorization for all systems, applications, services and personnel (internal and third-parties).	5	
		Functional	intersects	Cloud Services	CLD-01	Mechanisms exist to facilitate the implementation of cloud management controls to ensure cloud instances are secure and in-line with industry practices.	5	
		Functional	intersects	Hosted Systems, Applications & Services	CLD-13	Mechanisms exist to specify applicable cybersecurity & data protection controls that must be implemented on external systems, consistent with the contractual obligations established with the External Service Providers (ESP) owning, operating and/or maintaining external systems, applications and/or services.	5	
		Functional	intersects	Data Protection	DCH-01	Mechanisms exist to facilitate the implementation of data protection controls.	5	
		Functional	intersects	Data & Asset Classification	DCH-02	Mechanisms exist to ensure data and assets are categorized in accordance with applicable statutory, regulatory and contractual requirements.	5	
		Functional	intersects	Sensitive Data Inventories	DCH-06.2	Mechanisms exist to maintain inventory logs of all sensitive media and conduct sensitive media inventories at least annually.	5	
		Functional	intersects	Non-Organizationally Owned Systems / Components / Devices	DCH-13.4	Mechanisms exist to restrict the use of non-organizationally owned information systems, system components or devices to process, store or transmit organizational information.	5	
		Functional	intersects	Information Location	DCH-24	Mechanisms exist to identify and document the location of information and the specific system components on which the information resides.	5	
		Functional	intersects	Centralized Management Of Mobile Devices	MDM-01	Mechanisms exist to implement and govern Mobile Device Management (MDM) controls.	5	
		Functional	intersects	Access Control For Mobile Devices	MDM-02	Mechanisms exist to enforce access control requirements for the connection of mobile devices to organizational systems.	5	
		Functional	intersects	Personally-Owned Mobile Devices	MDM-06	Mechanisms exist to restrict the connection of personally-owned, mobile devices to organizational systems and networks.	5	
		Functional	intersects	Organization-Owned Mobile Devices	MDM-07	Mechanisms exist to prohibit the installation of non-approved applications or approved applications not obtained through the organization-approved application store.	5	
		Functional	intersects	Inventory of Personal Data	PRI-05.5	Mechanisms exist to establish, maintain and update an inventory that contains a listing of all programs and systems identified as collecting, using, maintaining, or sharing Personal Data (PD).	5	
		Functional	intersects	Third-Party Inventories	TPM-01.1	Mechanisms exist to maintain a current, accurate and complete list of External Service Providers (ESPs) that can potentially impact the Confidentiality, Integrity, Availability and/or Safety (CIAS) of the organization's systems, applications, services and data.	5	
NIST Tenet 2	All communication is secured regardless of network location.	Functional	intersects	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	
		Functional	intersects	Transmission Confidentiality	CRY-03	Cryptographic mechanisms exist to protect the confidentiality of data being transmitted.	5	
		Functional	intersects	Transmission Integrity	CRY-04	Cryptographic mechanisms exist to protect the integrity of data being transmitted.	5	
		Functional	intersects	Wireless Access Authentication & Encryption	CRY-07	Mechanisms exist to protect wireless access via secure authentication and encryption.	5	
		Functional	intersects	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	
		Functional	intersects	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	
		Functional	intersects	Identification & Authentication for Devices	IAC-04	Mechanisms exist to uniquely identify and centrally Authenticate, Authorize and Audit (AAA) devices before establishing a connection using bidirectional authentication that is cryptographically- based and replay resistant.	5	
		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	
		Functional	intersects	Protection of Confidentiality / Integrity Using Encryption	NET-14.2	Cryptographic mechanisms exist to protect the confidentiality and integrity of remote access sessions (e.g., VPN).	5	
		Functional	intersects	Work From Anywhere (WFA) - Telecommuting Security	NET-14.5	Mechanisms exist to define secure telecommuting practices and govern remote access to systems and data for remote workers.	5	
		Functional	intersects	Wireless Networking	NET-15	Mechanisms exist to control authorized wireless usage and monitor for unauthorized wireless access.	5	
NIST Tenet 3	Access to individual enterprise resources is granted on a per-session basis.	Functional	intersects	Defining Access Authorizations for Sensitive/Regulated Data	DCH-01.4	Mechanisms exist to explicitly define authorizations for specific individuals and/or roles for logical and /or physical access to sensitive/regulated data.	5	
		Functional	intersects	Protecting Sensitive Data on External Systems	DCH-13.3	Mechanisms exist to ensure that the requirements for the protection of sensitive information processed, stored or transmitted on external systems, are implemented in accordance with applicable statutory, regulatory and contractual obligations.	5	
		Functional	intersects	Transfer Authorizations	DCH-14.2	Mechanisms exist to verify that individuals or systems transferring data between interconnecting systems have the requisite authorizations (e.g., write permissions or privileges) prior to transferring said data.	5	
		Functional	intersects	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	
		Functional	intersects	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.	5	
		Functional	intersects	Identification & Authentication for Non-Organizational Users	IAC-03	Mechanisms exist to uniquely identify and centrally Authenticate, Authorize and Audit (AAA) third-party users and processes that provide services to the organization.	5	
		Functional	intersects	Identification & Authentication for Devices	IAC-04	Mechanisms exist to uniquely identify and centrally Authenticate, Authorize and Audit (AAA) devices before establishing a connection using bidirectional authentication that is cryptographically- based and replay resistant.	5	
		Functional	intersects	Identification & Authentication for Third Party Systems & Services	IAC-05	Mechanisms exist to identify and authenticate third-party systems and services.	5	
		Functional	intersects	Role-Based Access Control (RBAC)	IAC-08	Mechanisms exist to enforce a Role-Based Access Control (RBAC) policy over users and resources that applies need-to-know and fine-grained access control for sensitive/regulated data access.	5	
		Functional	intersects	Automated System Account Management (Directory Services)	IAC-15.1	Automated mechanisms exist to support the management of system accounts (e.g., directory services).	5	

FDE #	Focal Document Element (FDE) Description	STRM Rationale	STRM Relationship	SCF Control	SCF #	Secure Controls Framework (SCF) Control Description	Strength of Relationship (optional)	Notes (optional)
		Functional	intersects	Access To Sensitive / Regulated Data	IAC-20.1	Mechanisms exist to limit access to sensitive/regulated data to only those individuals whose job requires such access.	5	
		Functional	intersects	Least Privilege	IAC-21	Mechanisms exist to utilize the concept of least privilege, allowing only authorized access to processes necessary to accomplish assigned tasks in accordance with organizational business functions.	5	
		Functional	intersects	Non-Privileged Access for Non-Security Functions	IAC-21.2	Mechanisms exist to prohibit privileged users from using privileged accounts, while performing non-security functions.	5	
		Functional	intersects	Zero Trust Architecture (ZTA)	NET-01.1	Mechanisms exist to treat all users and devices as potential threats and prevent access to data and resources until the users can be properly authenticated and their access authorized.	5	
NIST Tenet 4	Access to resources is determined by dynamic policy—including the observable state of client identity, application/service, and the requesting asset—and may include other behavioral and environmental attributes.	Functional	intersects	Sensitive / Regulated Data Access Enforcement	CFG-08	Mechanisms exist to configure systems, applications and processes to restrict access to sensitive/regulated data.	5	
		Functional	intersects	Sensitive / Regulated Data Protection	DCH-01.2	Mechanisms exist to protect sensitive/regulated data wherever it is stored.	5	
		Functional	intersects	Defining Access Authorizations for Sensitive/Regulated Data	DCH-01.4	Mechanisms exist to explicitly define authorizations for specific individuals and/or roles for logical and /or physical access to sensitive/regulated data.	5	
		Functional	intersects	Protecting Sensitive Data on External Systems	DCH-13.3	Mechanisms exist to ensure that the requirements for the protection of sensitive information processed, stored or transmitted on external systems, are implemented in accordance with applicable statutory, regulatory and contractual obligations.	5	
		Functional	intersects	Transfer Authorizations	DCH-14.2	Mechanisms exist to verify that individuals or systems transferring data between interconnecting systems have the requisite authorizations (e.g., write permissions or privileges) prior to transferring said data.	5	
		Functional	intersects	Automated Tools to Support Information Location	DCH-24.1	Automated mechanisms exist to identify by data classification type to ensure adequate cybersecurity & data privacy controls are in place to protect organizational information and individual data privacy.	5	
		Functional	intersects	Transfer of Sensitive and/or Regulated Data	DCH-25	Mechanisms exist to restrict and govern the transfer of sensitive and/or regulated data to third-countries or international organizations.	5	
		Functional	intersects	Transfer Activity Limits	DCH-25.1	Mechanisms exist to establish organization-defined "normal business activities" to identify anomalous transaction activities that can reduce the opportunity for sending (outbound) and/or receiving (inbound) fraudulent actions.	5	
		Functional	intersects	Endpoint Security	END-01	Mechanisms exist to facilitate the implementation of endpoint security controls.	5	
		Functional	intersects	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	
		Functional	intersects	Identification & Authentication for Non-Organizational Users	IAC-03	Mechanisms exist to uniquely identify and centrally Authenticate, Authorize and Audit (AAA) third-party users and processes that provide services to the organization.	5	
		Functional	intersects	Identification & Authentication for Devices	IAC-04	Mechanisms exist to uniquely identify and centrally Authenticate, Authorize and Audit (AAA) devices before establishing a connection using bidirectional authentication that is cryptographically- based and replay resistant.	5	
		Functional	intersects	Identification & Authentication for Third Party Systems & Services	IAC-05	Mechanisms exist to identify and authenticate third-party systems and services.	5	
		Functional	intersects	Privileged Access by Non-Organizational Users	IAC-05.2	Mechanisms exist to prohibit privileged access by non-organizational users.	5	
		Functional	intersects	Role-Based Access Control (RBAC)	IAC-08	Mechanisms exist to enforce a Role-Based Access Control (RBAC) policy over users and resources that applies need-to-know and fine-grained access control for sensitive/regulated data access.	5	
		Functional	intersects	Identifier Management (User Names)	IAC-09	Mechanisms exist to govern naming standards for usernames and systems.	5	
		Functional	intersects	Federated Credential Management	IAC-13.2	Mechanisms exist to federate credentials to allow cross-organization authentication of individuals and devices.	5	
		Functional	intersects	Automated System Account Management (Directory Services)	IAC-15.1	Automated mechanisms exist to support the management of system accounts (e.g., directory services).	5	
		Functional	intersects	Mobile Device Geofencing	MDM-09	Mechanisms exist to restrict the functionality of mobile devices based on geographic location.	5	
		Functional	intersects	Integration of Scanning & Other Monitoring Information	MON-02.3	Automated mechanisms exist to integrate the analysis of audit records with analysis of vulnerability scanners, network performance, system monitoring and other sources to further enhance the ability to identify inappropriate or unusual activity.	5	
		Functional	intersects	Correlation with Physical Monitoring	MON-02.4	Automated mechanisms exist to correlate information from audit records with information obtained from monitoring physical access to further enhance the ability to identify suspicious, inappropriate, unusual or malevolent activity.	5	
		Functional	intersects	Anomalous Behavior	MON-16	Mechanisms exist to detect and respond to anomalous behavior that could indicate account compromise or other malicious activities.	5	
		Functional	intersects	Cross Domain Solution (CDS)	NET-02.3	Mechanisms exist to implement a Cross Domain Solution (CDS) to mitigate the specific security risks of accessing or transferring information between security domains.	5	
		Functional	intersects	Data Flow Enforcement – Access Control Lists (ACLs)	NET-04	Mechanisms exist to design, implement and review firewall and router configurations to restrict connections between untrusted networks and internal systems.	5	
		Functional	intersects	Deny Traffic by Default & Allow Traffic by Exception	NET-04.1	Mechanisms exist to configure firewall and router configurations to deny network traffic by default and allow network traffic by exception (e.g., deny all, permit by exception).	5	
		Functional	intersects	Cross Domain Authentication	NET-04.12	Automated mechanisms exist to uniquely identify and authenticate source and destination points for information transfer.	5	
		Functional	intersects	Policy Decision Point (PDP)	NET-04.7	Automated mechanisms exist to evaluate access requests against established criteria to dynamically and uniformly enforce access rights and permissions.	5	
		Functional	intersects	Host Containment	NET-08.3	Automated mechanisms exist to enforce host containment protections that revoke or quarantine a host's access to the network.	5	
		Functional	intersects	Resource Containment	NET-08.4	Automated mechanisms exist to enforce resource containment protections that remove or quarantine a resource's access to other resources.	5	
		Functional	intersects	Endpoint Security Validation	NET-14.7	Automated mechanisms exist to validate the security posture of the endpoint devices (e.g., software versions, patch levels, etc.) prior to allowing devices to connect to organizational technology assets.	5	
		Functional	intersects	Asset Governance	AST-01	Mechanisms exist to facilitate an IT Asset Management (ITAM) program to implement and manage asset management controls.	5	
		Functional	intersects	Automated Unauthorized Component Detection	AST-02.2	Automated mechanisms exist to detect and alert upon the detection of unauthorized hardware, software and firmware components.	5	
		Functional	intersects	Configuration Management Program	CFG-01	Mechanisms exist to facilitate the implementation of configuration management controls.	5	
		Functional	intersects	System Hardening Through Baseline Configurations	CFG-02	Mechanisms exist to develop, document and maintain secure baseline configurations for technology platforms that are consistent with industry-accepted system hardening standards.	5	
		Functional	intersects	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	
		Functional	intersects	Automated Central Management & Verification	CFG-02.2	Automated mechanisms exist to govern and report on baseline configurations of systems through Continuous Diagnostics and Mitigation (CDM), or similar technologies.	5	
		Functional	intersects	Approved Configuration Deviations	CFG-02.7	Mechanisms exist to document, assess risk and approve or deny deviations to standardized configurations.	5	
		Functional	intersects	Respond To Unauthorized Changes	CFG-02.8	Mechanisms exist to respond to unauthorized changes to configuration settings as security incidents.	5	
		Functional	intersects	Configuration Enforcement	CFG-06	Automated mechanisms exist to monitor, enforce and report on configurations for endpoint devices.	5	
		Functional	intersects	Integrity Assurance & Enforcement (IAE)	CFG-06.1	Automated mechanisms exist to identify unauthorized deviations from an approved baseline and implement automated resiliency actions to remediate the unauthorized change.	5	
		Functional	intersects	Change Management Program	CHG-01	Mechanisms exist to facilitate the implementation of a change management program.	5	

FDE #	Focal Document Element (FDE) Description	STRM Rationale	STRM Relationship	SCF Control	SCF #	Secure Controls Framework (SCF) Control Description	Strength of Relationship (optional)	Notes (optional)
NIST Tenet 5	The enterprise monitors and measures the integrity and security posture of all owned and associated assets.	Functional	intersects	Configuration Change Control	CHG-02	Mechanisms exist to govern the technical configuration change control processes.	5	
		Functional	intersects	Prohibition Of Changes	CHG-02.1	Mechanisms exist to prohibit unauthorized changes, unless organization-approved change requests are received.	5	
		Functional	intersects	Automated Security Response	CHG-02.4	Automated mechanisms exist to implement remediation actions upon the detection of unauthorized baseline configurations change(s).	5	
		Functional	intersects	Limits of Authorized Use	DCH-13.1	Mechanisms exist to prohibit external parties, systems and services from storing, processing and transmitting data unless authorized individuals first: (1) Verifying the implementation of required security controls; or (2) Retaining a processing agreement with the entity hosting the external systems or service.	5	
		Functional	subset of	Continuous Monitoring	MON-01	Mechanisms exist to facilitate the implementation of enterprise-wide monitoring controls.	10	
		Functional	intersects	Automated Tools for Real-Time Analysis	MON-01.2	Mechanisms exist to utilize a Security Incident Event Manager (SIEM), or similar automated tool, to support near real-time analysis and incident escalation.	5	
		Functional	intersects	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	
		Functional	intersects	Correlate Monitoring Information	MON-02.1	Automated mechanisms exist to correlate both technical and non-technical information from across the enterprise by a Security Incident Event Manager (SIEM) or similar automated tool, to enhance organization-wide situational awareness.	5	
		Functional	intersects	Central Review & Analysis	MON-02.2	Automated mechanisms exist to centrally collect, review and analyze audit records from multiple sources.	5	
		Functional	intersects	Integration of Scanning & Other Monitoring Information	MON-02.3	Automated mechanisms exist to integrate the analysis of audit records with analysis of vulnerability scanners, network performance, system monitoring and other sources to further enhance the ability to identify inappropriate or unusual activity.	5	
		Functional	intersects	Zero Trust Architecture (ZTA)	NET-01.1	Mechanisms exist to treat all users and devices as potential threats and prevent access to data and resources until the users can be properly authenticated and their access authorized.	5	
		Functional	intersects	Host Containment	NET-08.3	Automated mechanisms exist to enforce host containment protections that revoke or quarantine a host's access to the network.	5	
		Functional	intersects	Resource Containment	NET-08.4	Automated mechanisms exist to enforce resource containment protections that remove or quarantine a resource's access to other resources.	5	
		Functional	intersects	Automated Monitoring & Control	NET-14.1	Automated mechanisms exist to monitor and control remote access sessions.	5	
		Functional	intersects	Endpoint Security Validation	NET-14.7	Automated mechanisms exist to validate the security posture of the endpoint devices (e.g., software versions, patch levels, etc.) prior to allowing devices to connect to organizational technology assets.	5	
NIST Tenet 6	All resource authentication and authorization are dynamic and strictly enforced before access is allowed.	Functional	intersects	Automated Unauthorized Component Detection	AST-02.2	Automated mechanisms exist to detect and alert upon the detection of unauthorized hardware, software and firmware components.	5	
		Functional	intersects	Network Access Control (NAC)	AST-02.5	Automated mechanisms exist to employ Network Access Control (NAC), or a similar technology, which is capable of detecting unauthorized devices and disable network access to those unauthorized devices.	5	
		Functional	intersects	Configuration Management Database (CMDB)	AST-02.9	Mechanisms exist to implement and manage a Configuration Management Database (CMDB), or similar technology, to monitor and govern technology asset-specific information.	5	
		Functional	subset of	Identity & Access Management (IAM)	IAC-01	Mechanisms exist to facilitate the implementation of identification and access management controls.	10	
		Functional	intersects	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	
		Functional	intersects	Multi-Factor Authentication (MFA)	IAC-06	Automated mechanisms exist to enforce Multi-Factor Authentication (MFA) for: (1) Remote network access; (2) Third-party systems, applications and/or services; and/ or (3) Non-console access to critical systems or systems that store, transmit and/or process sensitive/regulated data.	5	
		Functional	intersects	Continuous Monitoring	MON-01	Mechanisms exist to facilitate the implementation of enterprise-wide monitoring controls.	5	
		Functional	intersects	Zero Trust Architecture (ZTA)	NET-01.1	Mechanisms exist to treat all users and devices as potential threats and prevent access to data and resources until the users can be properly authenticated and their access authorized.	5	
NIST Tenet 7	The enterprise collects as much information as possible about the current state of assets, network infrastructure and communications and uses it to improve its security posture.	Functional	intersects	Dynamic Host Configuration Protocol (DHCP) Server Logging	AST-02.6	Mechanisms exist to enable Dynamic Host Configuration Protocol (DHCP) server logging to improve asset inventories and assist in detecting unknown systems.	5	
		Functional	intersects	Data Action Mapping	AST-02.8	Mechanisms exist to create and maintain a map of technology assets where sensitive/regulated data is stored, transmitted or processed.	5	
		Functional	intersects	Configuration Management Database (CMDB)	AST-02.9	Mechanisms exist to implement and manage a Configuration Management Database (CMDB), or similar technology, to monitor and govern technology asset-specific information.	5	
		Functional	intersects	Automated Tools to Support Information Location	DCH-24.1	Automated mechanisms exist to identify by data classification type to ensure adequate cybersecurity & data privacy controls are in place to protect organizational information and individual data privacy.	5	
		Functional	intersects	Measures of Performance	GOV-05	Mechanisms exist to develop, report and monitor cybersecurity & data privacy program measures of performance.	5	
		Functional	subset of	Continuous Monitoring	MON-01	Mechanisms exist to facilitate the implementation of enterprise-wide monitoring controls.	10	
		Functional	intersects	Automated Tools for Real-Time Analysis	MON-01.2	Mechanisms exist to utilize a Security Incident Event Manager (SIEM), or similar automated tool, to support near real-time analysis and incident escalation.	5	
		Functional	intersects	System Generated Alerts	MON-01.4	Mechanisms exist to generate, monitor, correlate and respond to alerts from physical, cybersecurity, data privacy and supply chain activities to achieve integrated situational awareness.	5	
		Functional	intersects	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	
		Functional	intersects	Correlate Monitoring Information	MON-02.1	Automated mechanisms exist to correlate both technical and non-technical information from across the enterprise by a Security Incident Event Manager (SIEM) or similar automated tool, to enhance organization-wide situational awareness.	5	
		Functional	intersects	Central Review & Analysis	MON-02.2	Automated mechanisms exist to centrally collect, review and analyze audit records from multiple sources.	5	
		Functional	intersects	Integration of Scanning & Other Monitoring Information	MON-02.3	Automated mechanisms exist to integrate the analysis of audit records with analysis of vulnerability scanners, network performance, system monitoring and other sources to further enhance the ability to identify inappropriate or unusual activity.	5	
		Functional	intersects	Endpoint Security Validation	NET-14.7	Automated mechanisms exist to validate the security posture of the endpoint devices (e.g., software versions, patch levels, etc.) prior to allowing devices to connect to organizational technology assets.	5	
		Functional	intersects	Threat Intelligence Feeds Program	THR-01	Mechanisms exist to implement a threat intelligence program that includes a cross-organization information-sharing capability that can influence the development of the system and security architectures, selection of security solutions, monitoring, threat hunting, response and recovery activities.	5	
		Functional	intersects	Threat Intelligence Feeds 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	