Collaboration Index for Security and Privacy Controls

Version 1

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A Joint Publication of the Federal Privacy Council and the Federal Chief Information Officer Council

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Acknowledgements

Abstract

This publication serves as a guide to help Federal information security programs and Federal privacy programs understand the level of collaboration that may be appropriate during the implementation step of the National Institute of Standards and Technology (NIST) Risk Management Framework. For each control and control enhancement listed in NIST Special Publication (SP) 800-53 Revision 5, *Security and Privacy Controls for Information Systems and Organizations*, this publication provides a Collaboration Index value that denotes the level of collaboration that may be appropriate. For ease of use and to allow for increased flexibility, this publication includes both a three-point scale and a five-point scale.

Background

During a preliminary draft of NIST SP 800-53 Rev. 5, OMB and NIST piloted the development of a Collaboration Index for security and privacy controls. The Collaboration Index was designed to provide guidance on the level of collaboration that may be appropriate between Federal information security programs and Federal privacy programs during the implementation step of the NIST Risk Management Framework. However, the Collaboration Index was not completed or incorporated into the final version of NIST SP 800-53 Rev. 5 that was published in September 2020.

In 2021, the Federal Privacy Council established the Privacy Risk Management Working Group to provide a forum for agency privacy professionals to identify and develop best practices for managing privacy risks. The working group, in concert with the leadership of the Federal Privacy Council, recognized that there was a lack of guidance for agencies on the collaboration between information security programs and privacy programs when implementing controls. As a result, the working group decided to complete the Collaboration Index, in concert with partners from OMB, NIST, and the Chief Information Security Officer (CISO) Council.

Over the next year, the working group formed a series of sprint teams led by privacy co-leads that systematically reviewed each of the controls and control enhancements in the NIST SP 800-53 Rev. 5 control catalog. The sprint teams proposed Collaboration Index values using the same basic three-point and five-point scales that OMB and NIST had piloted during the development of NIST SP 800-53 Rev. 5 (*see* Collaboration Index Key). The proposed Collaboration Index values were then reviewed by a team of co-leads from the information security community that were selected through a solicitation from the CISO Council. Finally, the privacy co-leads engaged in a series of collaborative meetings with the information security co-leads to reach consensus on Collaboration Index values for each of the controls and control enhancements in NIST SP 800-53 Rev. 5.

This publication represents a milestone in the partnership between the Federal privacy and Federal information security communities. The yearlong process to develop this publication epitomized the value of collaboration that the publication itself is intended to promote. The Federal Privacy Council and the CISO Council hope that privacy and information security officials find this to be a useful document that elevates the partnership between the two communities and promotes our shared objectives of fostering secure and privacy-protective information systems across the Federal Government.

Should you have questions or comments about this publication, you may contact the Federal Privacy Council at privacy.council@gsa.gov.

References

Office of Management and Budget, Circular No. A-130, *Managing Information as a Strategic Resource*

NIST SP 800-37 Rev. 2, *Risk Management Framework for Information Systems and Organizations*

NIST SP 800-53 Rev. 5, *Security and Privacy Controls for Information Systems and Organizations*

NIST SP 800-53B, *Control Baselines for Information Systems and Organizations*

How to Use the Collaboration Index

This publication may be used as a guide to help Federal information security programs and Federal privacy programs understand the level of collaboration that may be appropriate during the implementation step of the NIST Risk Management Framework. This publication does not establish or modify any requirements in law, regulation, or policy. The Collaboration Index values provided in this document represent a starting point to encourage discussion between information security and privacy officials within each agency. Agencies are expected and encouraged to deviate from the levels of collaboration envisioned in this document when necessary to account for divergent needs, missions, structures, and authorities. Agencies should consult with their leadership, legal counsel, and technical experts to determine the appropriate processes for implementing security and privacy controls.

Collaboration Index Key

Collaboration Color Key				
	S	SP	P	
S	Sp	SP	Ps	P

5-GRADIENT SCALE		3-GRADIENT SCALE	
S	Controls are primarily implemented by security programs – minimal collaboration needed between security and privacy programs.	S	Security programs have primary responsibility for implementation – minimal collaboration needed between security and privacy programs.
Sp	Controls are generally implemented by security programs – moderate collaboration needed between security and privacy programs.		
SP	Controls are implemented by security and privacy programs – full collaboration needed between security and privacy programs.	SP	Security and privacy programs both have responsibilities for implementation – more than minimal collaboration is needed between security and privacy programs.
Ps	Controls are generally implemented by privacy programs – moderate collaboration needed between security and privacy programs.	P	Privacy programs have primary responsibility for implementation – minimal collaboration needed between security and privacy programs.
P	Controls are primarily implemented by privacy programs – minimal collaboration needed between security and privacy programs.		

This publication provides Collaboration Index values for each of the controls and control enhancements in NIST SP 800-53 Rev. 5. The values are provided using two different scales – a 5-gradient scale and a 3-gradient scale. The two scales were created by OMB and NIST during the development of a preliminary draft of NIST SP 800-53 Rev. 5. The only difference between the two scales is the level of resolution and granularity provided. The 5-gradient scale provides additional resolution and granularity, compared to the 3-gradient scale. The values for the 3-gradient scale are derivative of the values selected for the 5-gradient scale. For example, if an "Sp" value was selected for a particular control on the 5-gradient scale, then the selection of an "S" value was required on the 3-gradient scale.

In addition to the Collaboration Index values, this publication also uses a scheme of color coding to serve as a visual cue to illustrate the value for each control. The color coding is only intended to reinforce the underlying Collaboration Index value for each control and not to provide additional guidance.

Collaboration Index for Security and Privacy Controls

Access Control			(AC)	Model Collaboration Index Value	Privacy Control Baseline	Low Control Baseline	Moderate Control Baseline	High Control Baseline
AC-1	Policy and Procedures		3-Gradient Scale	SP	x	x	x	x
			5-Gradient Scale	SP				
AC-2	Account Management		3-Gradient Scale	S		x	x	x
			5-Gradient Scale	Sp				
AC-2(1)	Account Management	Automated System Account Management	3-Gradient Scale	S			x	x
			5-Gradient Scale	S				
AC-2(2)	Account Management	Automated Temporary and Emergency Account	3-Gradient Scale	S			x	x
			5-Gradient Scale	S				
AC-2(3)	Account Management	Disable Accounts	3-Gradient Scale	S			x	x
			5-Gradient Scale	S				
AC-2(4)	Account Management	Automated Audit Actions	3-Gradient Scale	S			x	x
			5-Gradient Scale	S				
AC-2(5)	Account Management	Inactivity Logout	3-Gradient Scale	S			x	x
			5-Gradient Scale	S				
AC-2(6)	Account Management	Dynamic Privilege Management	3-Gradient Scale	S				
			5-Gradient Scale	S				
AC-2(7)	Account Management	Privileged User Accounts	3-Gradient Scale	S				
			5-Gradient Scale	S				
AC-2(8)	Account Management	Dynamic Account Management	3-Gradient Scale	S				
			5-Gradient Scale	S				
AC-2(9)	Account Management	Restrictions on Use of Shared and Group Accts	3-Gradient Scale	S				
			5-Gradient Scale	S				
AC-2(11)	Account Management	Usage Conditions	3-Gradient Scale	S				x
			5-Gradient Scale	S				
AC-2(12)	Account Management	Account Monitoring for Atypical Usage	3-Gradient Scale	S				x
			5-Gradient Scale	Sp				
AC-2(13)	Account Management	Disable Accounts for High-Risk Individuals	3-Gradient Scale	S			x	x
			5-Gradient Scale	Sp				
AC-3	Access Enforcement		3-Gradient Scale	S		x	x	x
			5-Gradient Scale	Sp				
AC-3(2)	Access Enforcement	Dual Authorization	3-Gradient Scale	S				
			5-Gradient Scale	S				
AC-3(3)	Access Enforcement	Mandatory Access Control	3-Gradient Scale	S				
			5-Gradient Scale	S				

ID	Family	Enhancement	Scale	Value					
AC-3(4)	Access Enforcement	Discretionary Access Control	3-Gradient Scale	S					
			5-Gradient Scale	S					
AC-3(5)	Access Enforcement	Security-Relevant Information	3-Gradient Scale	S					
			5-Gradient Scale	S					
AC-3(7)	Access Enforcement	Role-Based Access Control	3-Gradient Scale	S					
			5-Gradient Scale	Sp					
AC-3(8)	Access Enforcement	Revocation of Access Authorizations	3-Gradient Scale	S					
			5-Gradient Scale	S					
AC-3(9)	Access Enforcement	Controlled Release	3-Gradient Scale	SP					
			5-Gradient Scale	SP					
AC-3(10)	Access Enforcement	Audited Override of Access Control Mechanisms	3-Gradient Scale	S					
			5-Gradient Scale	S					
AC-3(11)	Access Enforcement	Restrict Access to Specific Information Types	3-Gradient Scale	SP					
			5-Gradient Scale	SP					
AC-3(12)	Access Enforcement	Assert and Enforce Application Access	3-Gradient Scale	S					
			5-Gradient Scale	S					
AC-3(13)	Access Enforcement	Attribute-Based Access Control	3-Gradient Scale	S					
			5-Gradient Scale	S					
AC-3(14)	Access Enforcement	Individual Access	3-Gradient Scale	SP	X				
			5-Gradient Scale	SP					
AC-3(15)	Access Enforcement	Discretionary and Mandatory Access Control	3-Gradient Scale	S					
			5-Gradient Scale	S					
AC-4	Information Flow Enforcement		3-Gradient Scale	S				X	X
			5-Gradient Scale	Sp					
AC-4(1)	Information Flow Enforcement	Object Security and Privacy Attributes	3-Gradient Scale	S					
			5-Gradient Scale	Sp					
AC-4(2)	Information Flow Enforcement	Processing Domains	3-Gradient Scale	S					
			5-Gradient Scale	Sp					
AC-4(3)	Information Flow Enforcement	Dynamic Information Flow Control	3-Gradient Scale	S					
			5-Gradient Scale	Sp					
AC-4(4)	Information Flow Enforcement	Flow Control of Encrypted Information	3-Gradient Scale	S					X
			5-Gradient Scale	S					
AC-4(5)	Information Flow Enforcement	Embedded Data Types	3-Gradient Scale	S					
			5-Gradient Scale	S					
AC-4(6)	Information Flow Enforcement	Metadata	3-Gradient Scale	S					
			5-Gradient Scale	S					
AC-4(7)	Information Flow Enforcement	One-Way Flow Mechanisms	3-Gradient Scale	S					
			5-Gradient Scale	S					

AC-4(8)	Information Flow Enforcem	Security and Privacy Policy Filters	3-Gradient Scale	S				
			5-Gradient Scale	Sp				
AC-4(9)	Information Flow Enforcem	Human Reviews	3-Gradient Scale	SP				
			5-Gradient Scale	SP				
AC-4(10)	Information Flow Enforcem	Enable and Disable Security or Privacy Policy Filters	3-Gradient Scale	S				
			5-Gradient Scale	Sp				
AC-4(11)	Information Flow Enforcem	Configuration of Security and Privacy Filters	3-Gradient Scale	S				
			5-Gradient Scale	Sp				
AC-4(12)	Information Flow Enforcem	Data Type Identifiers	3-Gradient Scale	S				
			5-Gradient Scale	S				
AC-4(13)	Information Flow Enforcem	Decomposition into Policy-Relevant Subcomponents	3-Gradient Scale	S				
			5-Gradient Scale	S				
AC-4(14)	Information Flow Enforcem	Security or Privacy Policy Filter Constraints	3-Gradient Scale	S				
			5-Gradient Scale	Sp				
AC-4(15)	Information Flow Enforcem	Detection of Unsanctioned Information	3-Gradient Scale	S				
			5-Gradient Scale	S				
AC-4(17)	Information Flow Enforcem	Domain Authentication	3-Gradient Scale	S				
			5-Gradient Scale	S				
AC-4(19)	Information Flow Enforcem	Validation of Metadata	3-Gradient Scale	S				
			5-Gradient Scale	S				
AC-4(20)	Information Flow Enforcem	Approved Solutions	3-Gradient Scale	S				
			5-Gradient Scale	S				
AC-4(21)	Information Flow Enforcem	Physical or Logical Separation of Information Flows	3-Gradient Scale	S				
			5-Gradient Scale	S				
AC-4(22)	Information Flow Enforcem	Access Only	3-Gradient Scale	S				
			5-Gradient Scale	S				
AC-4(23)	Information Flow Enforcem	Modify Non-Releasable Information	3-Gradient Scale	S				
			5-Gradient Scale	S				
AC-4(24)	Information Flow Enforcem	Internal Normalized Format	3-Gradient Scale	S				
			5-Gradient Scale	S				
AC-4(25)	Information Flow Enforcem	Data Sanitization	3-Gradient Scale	S				
			5-Gradient Scale	Sp				
AC-4(26)	Information Flow Enforcem	Audit Filtering Actions	3-Gradient Scale	S				
			5-Gradient Scale	S				
AC-4(27)	Information Flow Enforcem	Redundant/Independent Filtering Mechanisms	3-Gradient Scale	S				
			5-Gradient Scale	S				
AC-4(28)	Information Flow Enforcem	Linear Filter Pipelines	3-Gradient Scale	S				
			5-Gradient Scale	S				

ID	Control	Enhancement	Scale	Value					
AC-4(29)	Information Flow Enforcem	Filter Orchestration Engines	3-Gradient Scale	S					
			5-Gradient Scale	S					
AC-4(30)	Information Flow Enforcem	Filter Mechanisms Using Multiple Processes	3-Gradient Scale	S					
			5-Gradient Scale	S					
AC-4(31)	Information Flow Enforcem	Failed Content Transfer Prevention	3-Gradient Scale	S					
			5-Gradient Scale	S					
AC-4(32)	Information Flow Enforcem	Process Requirements for Information Transfer	3-Gradient Scale	S					
			5-Gradient Scale	S					
AC-5	Separation of Duties		3-Gradient Scale	S					
			5-Gradient Scale	Sp				x	x
AC-6	Least Privilege		3-Gradient Scale	S					
			5-Gradient Scale	S				x	x
AC-6(1)	Least Privilege	Authorize Access to Security Functions	3-Gradient Scale	S					
			5-Gradient Scale	S				x	x
AC-6(2)	Least Privilege	Non-Privileged Access for Nonsecurity Functions	3-Gradient Scale	S					
			5-Gradient Scale	S				x	x
AC-6(3)	Least Privilege	Network Access to Privileged Commands	3-Gradient Scale	S					
			5-Gradient Scale	S					x
AC-6(4)	Least Privilege	Separate Processing Domains	3-Gradient Scale	S					
			5-Gradient Scale	S					
AC-6(5)	Least Privilege	Privileged Accounts	3-Gradient Scale	S					
			5-Gradient Scale	S				x	x
AC-6(6)	Least Privilege	Privileged Access by Non-Organizational users	3-Gradient Scale	S					
			5-Gradient Scale	S					
AC-6(7)	Least Privilege	Review of User Privileges	3-Gradient Scale	S					
			5-Gradient Scale	S				x	x
AC-6(8)	Least Privilege	Privilege Levels for Code Execution	3-Gradient Scale	S					
			5-Gradient Scale	S					
AC-6(9)	Least Privilege	Log Use of Privileged Functions	3-Gradient Scale	S					
			5-Gradient Scale	S				x	x
AC-6(10)	Least Privilege	Prohibit Non-Privileged Users from Executing Privileged Functions	3-Gradient Scale	S					
			5-Gradient Scale	S				x	x
AC-7	Unsuccessful Logon Attempts		3-Gradient Scale	S			x	x	x
			5-Gradient Scale	S			x	x	x
AC-7(2)	Unsuccessful Logon Attem	Purge or Wipe Mobile Device	3-Gradient Scale	S					
			5-Gradient Scale	S					
AC-7(3)	Unsuccessful Logon Attem	Biometric Attempt Limiting	3-Gradient Scale	S					
			5-Gradient Scale	S					

Control ID	Control Name	Enhancement	Scale	Value				
AC-7(4)	Unsuccessful Logon Attempt	Use of Alternate Authentication Factor	3-Gradient Scale	S				
			5-Gradient Scale	S				
AC-8	System Use Notification		3-Gradient Scale	SP		x	x	x
			5-Gradient Scale	SP		x	x	x
AC-9	Previous Logon Notification		3-Gradient Scale	S				
			5-Gradient Scale	S				
AC-9(1)	Previous Logon Notification	Unsuccessful Logons	3-Gradient Scale	S				
			5-Gradient Scale	S				
AC-9(2)	Previous Logon Notification	Successful and Unsuccessful Logons	3-Gradient Scale	S				
			5-Gradient Scale	S				
AC-9(3)	Previous Logon Notification	Notification of Account Changes	3-Gradient Scale	S				
			5-Gradient Scale	S				
AC-9(4)	Previous Logon Notification	Additional Logon Information	3-Gradient Scale	S				
			5-Gradient Scale	S				
AC-10	Concurrent Session Control		3-Gradient Scale	S				x
			5-Gradient Scale	S				x
AC-11	Device Lock		3-Gradient Scale	S			x	x
			5-Gradient Scale	S			x	x
AC-11(1)	Device Lock	Pattern-Hiding Displays	3-Gradient Scale	S			x	x
			5-Gradient Scale	S			x	x
AC-12	Session Terminations		3-Gradient Scale	S			x	x
			5-Gradient Scale	S			x	x
AC-12(1)	Session Terminations	User-Initiated Logouts	3-Gradient Scale	S				
			5-Gradient Scale	S				
AC-12(2)	Session Terminations	Termination Message	3-Gradient Scale	S				
			5-Gradient Scale	S				
AC-12(3)	Session Terminations	Timeout Warning Message	3-Gradient Scale	S				
			5-Gradient Scale	S				
AC-14	Permitted Actions without Identification or Authentication		3-Gradient Scale	S		x	x	x
			5-Gradient Scale	S		x	x	x
AC-16	Security and Privacy Attributes		3-Gradient Scale	SP				
			5-Gradient Scale	SP				
AC-16(1)	Security and Privacy Attributes	Dynamic Attribute Association	3-Gradient Scale	S				
			5-Gradient Scale	Sp				
AC-16(2)	Security and Privacy Attributes	Attribute Value Changes By Authorized Individuals	3-Gradient Scale	SP				
			5-Gradient Scale	SP				
AC-16(3)	Security and Privacy Attributes	Maintenance of Attribute Associations by System	3-Gradient Scale	S				
			5-Gradient Scale	Sp				

ID	Control	Enhancement	Scale	Value				
AC-16(4)	Security and Privacy Attrib	Association of Attributes by Authorized Individuals	3-Gradient Scale	S				
			5-Gradient Scale	Sp				
AC-16(5)	Security and Privacy Attrib	Attribute Displays on Objects to be Output	3-Gradient Scale	S				
			5-Gradient Scale	Sp				
AC-16(6)	Security and Privacy Attrib	Maintenance of Attribute Association	3-Gradient Scale	S				
			5-Gradient Scale	Sp				
AC-16(7)	Security and Privacy Attrib	Consistent Attribute Interpretation	3-Gradient Scale	S				
			5-Gradient Scale	Sp				
AC-16(8)	Security and Privacy Attrib	Association Techniques and Technologies	3-Gradient Scale	S				
			5-Gradient Scale	Sp				
AC-16(9)	Security and Privacy Attrib	Attribute Reassignment - Regrading Mechanisms	3-Gradient Scale	S				
			5-Gradient Scale	Sp				
AC-16(10)	Security and Privacy Attrib	Attribute Configuration by Authorized Individuals	3-Gradient Scale	S				
			5-Gradient Scale	S				
AC-17	Remote Access		3-Gradient Scale	S		x	x	x
			5-Gradient Scale	S		x	x	x
AC-17(1)	Remote Access	Monitoring and Control	3-Gradient Scale	S			x	x
			5-Gradient Scale	S			x	x
AC-17(2)	Remote Access	Protection of Confidentiality and Integrity Using Encryption	3-Gradient Scale	S			x	x
			5-Gradient Scale	S			x	x
AC-17(3)	Remote Access	Managed Access Control Points	3-Gradient Scale	S			x	x
			5-Gradient Scale	S			x	x
AC-17(4)	Remote Access	Privileged Commands and Access	3-Gradient Scale	S			x	x
			5-Gradient Scale	S			x	x
AC-17(6)	Remote Access	Protection of Mechanism Information	3-Gradient Scale	S				
			5-Gradient Scale	S				
AC-17(9)	Remote Access	Disconnect or Disable Access	3-Gradient Scale	S				
			5-Gradient Scale	S				
AC-17(10)	Remote Access	Authenticate Remote Commands	3-Gradient Scale	S				
			5-Gradient Scale	S				
AC-18	Wireless Access		3-Gradient Scale	S		x	x	x
			5-Gradient Scale	S		x	x	x
AC-18(1)	Wireless Access	Authentication and Encryption	3-Gradient Scale	S			x	x
			5-Gradient Scale	S			x	x
AC-18(3)	Wireless Access	Disable Wireless Networking	3-Gradient Scale	S			x	x
			5-Gradient Scale	S			x	x
AC-18(4)	Wireless Access	Restrict Configurations by User	3-Gradient Scale	S				x
			5-Gradient Scale	S				x

ID	Name	Subtitle	Scale	Value				
AC-18(5)	Wireless Access	Antennas and Transmission Power Levels	3-Gradient Scale	S				
			5-Gradient Scale	S				x
AC-19	Access Control for Mobile Devices		3-Gradient Scale	S				
			5-Gradient Scale	S		x	x	x
AC-19(4)	Access Control for Mobile D	Restrictions for Classified Information	3-Gradient Scale	S				
			5-Gradient Scale	S				
AC-19(5)	Access Control for Mobile D	Full Device or Container-Based Encryption	3-Gradient Scale	S				
			5-Gradient Scale	S			x	x
AC-20	Use of External Systems		3-Gradient Scale	SP				
			5-Gradient Scale	SP		x	x	x
AC-20(1)	Use of External Systems	Limits on Authorized Use	3-Gradient Scale	SP				
			5-Gradient Scale	SP			x	x
AC-20(2)	Use of External Systems	Portable Storage Devices - Restricted Use	3-Gradient Scale	S				
			5-Gradient Scale	S			x	x
AC-20(3)	Use of External Systems	Non-Organizationally Owned Systems - Restricted Use	3-Gradient Scale	S				
			5-Gradient Scale	S				
AC-20(4)	Use of External Systems	Network Accessible Storage Devices - Prohibited Use	3-Gradient Scale	S				
			5-Gradient Scale	S				
AC-20(5)	Use of External Systems	Portable Storage Devices - Prohibited Use	3-Gradient Scale	S				
			5-Gradient Scale	S				
AC-21	Information Sharing		3-Gradient Scale	SP				
			5-Gradient Scale	SP			x	x
AC-21(1)	Information Sharing	Automated Decision Support	3-Gradient Scale	S				
			5-Gradient Scale	Sp				
AC-21(2)	Information Sharing	Information Search and Retrieval	3-Gradient Scale	S				
			5-Gradient Scale	Sp				
AC-22	Publicly Accessible Content		3-Gradient Scale	SP				
			5-Gradient Scale	SP		x	x	x
AC-23	Data Mining Protection		3-Gradient Scale	SP				
			5-Gradient Scale	SP				
AC-24	Access Control Decisions		3-Gradient Scale	S				
			5-Gradient Scale	Sp				
AC-24(1)	Access Control Decisions	Transmit Access Authorizations Information	3-Gradient Scale	S				
			5-Gradient Scale	Sp				
AC-24(2)	Access Control Decisions	No User or Process Identity	3-Gradient Scale	S				
			5-Gradient Scale	Sp				
AC-25	Reference Monitor		3-Gradient Scale	S				
			5-Gradient Scale	S				

Awareness and Training			(AT)	Model Collaboration Index Value	Privacy Control Baseline	Low Control Baseline	Moderate Control Baseline	High Control Baseline
AT-1	Policy and Procedures		3-Gradient Scale	SP	x	x	x	x
			5-Gradient Scale	SP				
AT-2	Literacy Training and Awareness		3-Gradient Scale	SP	x	x	x	x
			5-Gradient Scale	SP				
AT-2(1)	Literacy Training and Awareness	Practical Exercises	3-Gradient Scale	SP				
			5-Gradient Scale	SP				
AT-2(2)	Literacy Training and Awareness	Insider Threat	3-Gradient Scale	SP		x	x	x
			5-Gradient Scale	SP				
AT-2(3)	Literacy Training and Awareness	Social Engineering and Mining	3-Gradient Scale	SP			x	x
			5-Gradient Scale	SP				
AT-2(4)	Literacy Training and Awareness	Suspicious Communications and Anomalous System	3-Gradient Scale	S				
			5-Gradient Scale	Sp				
AT-2(5)	Literacy Training and Awareness	Advanced Persistent Threat	3-Gradient Scale	S				
			5-Gradient Scale	Sp				
AT-2(6)	Literacy Training and Awareness	Cyber Threat Environment	3-Gradient Scale	S				
			5-Gradient Scale	Sp				
AT-3	Role Based Training		3-Gradient Scale	SP	x	x	x	x
			5-Gradient Scale	SP				
AT-3(1)	Role Based Training	Environmental Controls	3-Gradient Scale	S				
			5-Gradient Scale	S				
AT-3(2)	Role Based Training	Physical Security Controls	3-Gradient Scale	S				
			5-Gradient Scale	S				
AT-3(3)	Role Based Training	Practical Exercises	3-Gradient Scale	SP				
			5-Gradient Scale	SP				
AT-3(5)	Role Based Training	Processing Personally Identifiable Information	3-Gradient Scale	P	x			
			5-Gradient Scale	P				
AT-4	Training Records		3-Gradient Scale	SP	x	x	x	x
			5-Gradient Scale	SP				
AT-6	Training Feedback		3-Gradient Scale	SP				
			5-Gradient Scale	SP				

Audit and Accountability		(AU)		Model Collaboration Index Value	Privacy Control Baseline	Low Control Baseline	Moderate Control Baseline	High Control Baseline
AU-1	Policy and Procedures		3-Gradient Scale	SP	x	x	x	x
			5-Gradient Scale	SP				
AU-2	Event Logging		3-Gradient Scale	S	x	x	x	x
			5-Gradient Scale	S				
AU-3	Content of Audit Records		3-Gradient Scale	S		x	x	x
			5-Gradient Scale	Sp				
AU-3 (1)	Content of Audit Records	Additional Audit Information	3-Gradient Scale	S			x	x
			5-Gradient Scale	Sp				
AU-3 (3)	Content of Audit Records	Limit Personally Identifiable Information Elements	3-Gradient Scale	SP	x			
			5-Gradient Scale	SP				
AU-4	Audit Log Storage Capacity		3-Gradient Scale	S		x	x	x
			5-Gradient Scale	S				
AU-4 (1)	Audit Log Storage Capacity	Transfer to Alternate Storage	3-Gradient Scale	S				
			5-Gradient Scale	S				
AU-5	Response to Audit Logging Process Failures		3-Gradient Scale	S		x	x	x
			5-Gradient Scale	S				
AU-5(1)	Response to Audit Logging	Storage Capacity Warning	3-Gradient Scale	S				x
			5-Gradient Scale	S				
AU-5(2)	Response to Audit Logging	Real-Time Alerts	3-Gradient Scale	S				x
			5-Gradient Scale	S				
AU-5(3)	Response to Audit Logging	Configurable Traffic Volume Thresholds	3-Gradient Scale	S				
			5-Gradient Scale	S				
AU-5(4)	Response to Audit Logging	Shutdown on Failure	3-Gradient Scale	S				
			5-Gradient Scale	S				
AU-5(5)	Response to Audit Logging	Alternate Audit Logging Capability	3-Gradient Scale	S				
			5-Gradient Scale	S				
AU-6	Audit Record Review, Analysis, and Reporting		3-Gradient Scale	S		x	x	x
			5-Gradient Scale	S				
AU-6 (1)	Audit Record Review, Analy	Automated Process Integration	3-Gradient Scale	S			x	x
			5-Gradient Scale	S				
AU-6 (3)	Audit Record Review, Analy	Correlate Audit Record Repositories	3-Gradient Scale	S			x	x
			5-Gradient Scale	S				
AU-6 (4)	Audit Record Review, Analy	Central Review and Analysis	3-Gradient Scale	S				
			5-Gradient Scale	S				

ID	Control	Enhancement	Scale		Col1	Col2	Col3	Col4
AU-6 (5)	Audit Record Review, Analy	Integrated Analysis of Audit Records	3-Gradient Scale	S				
			5-Gradient Scale	S				x
AU-6 (6)	Audit Record Review, Analy	Correlation with Physical Monitoring	3-Gradient Scale	S				
			5-Gradient Scale	S				x
AU-6 (7)	Audit Record Review, Analy	Permitted Actions	3-Gradient Scale	S				
			5-Gradient Scale	S				
AU-6 (8)	Audit Record Review, Analy	Full Text Analysis of Privileged Commands	3-Gradient Scale	S				
			5-Gradient Scale	S				
AU-6 (9)	Audit Record Review, Analy	Correlation with Information From Nontechnical Sources	3-Gradient Scale	S				
			5-Gradient Scale	Sp				
AU-7	Audit Record Reduction and Report Generation		3-Gradient Scale	S				
			5-Gradient Scale	S			x	x
AU-7 (1)	Audit Record Reduction an	Automatic Processing	3-Gradient Scale	S				
			5-Gradient Scale	S			x	x
AU-8	Time Stamps		3-Gradient Scale	S				
			5-Gradient Scale	S		x	x	x
AU-9	Protection of Audit Information		3-Gradient Scale	S				
			5-Gradient Scale	S		x	x	x
AU-9 (1)	Protection of Audit Informa	Hardware Write-Once Media	3-Gradient Scale	S				
			5-Gradient Scale	S				
AU-9 (2)	Protection of Audit Informa	Store on Separate Physical Systems or Components	3-Gradient Scale	S				
			5-Gradient Scale	S				x
AU-9 (3)	Protection of Audit Informa	Cryptographic Protection	3-Gradient Scale	S				
			5-Gradient Scale	S				x
AU-9 (4)	Protection of Audit Informa	Access by Subset of Privileged Users	3-Gradient Scale	S				
			5-Gradient Scale	S			x	x
AU-9 (5)	Protection of Audit Informa	Dual Authorization	3-Gradient Scale	S				
			5-Gradient Scale	S				
AU-9 (6)	Protection of Audit Informa	Read-Only Access	3-Gradient Scale	S				
			5-Gradient Scale	S				
AU-9 (7)	Protection of Audit Informa	Store on Component With Different Operating	3-Gradient Scale	S				
			5-Gradient Scale	S				
AU-10	Non-Repudiation		3-Gradient Scale	S				
			5-Gradient Scale	S				x
AU-10 (1)	Non-Repudiation	Association of Identities	3-Gradient Scale	S				
			5-Gradient Scale	S				
AU-10 (2)	Non-Repudiation	Validate Binding of Information Producer	3-Gradient Scale	S				
			5-Gradient Scale	S				

ID	Control	Enhancement	Scale	Priority				
AU-10 (3)	Non-Repudiation	Chain of Custody	3-Gradient Scale	S				
			5-Gradient Scale	S				
AU-10 (4)	Non-Repudiation	Validate Binding of Information Reviewer	3-Gradient Scale	S				
			5-Gradient Scale	S				
AU-11	Audit Record Retention		3-Gradient Scale	S	x	x	x	x
			5-Gradient Scale	S				
AU-11 (1)	Audit Record Retention	Long-Term Retrieval Capability	3-Gradient Scale	S				
			5-Gradient Scale	S				
AU-12	Audit Record Generation		3-Gradient Scale	S		x	x	x
			5-Gradient Scale	S				
AU-12 (1)	Audit Record Generation	System-Wide and Time-Correlated Audit Trail	3-Gradient Scale	S				x
			5-Gradient Scale	S				
AU-12 (2)	Audit Record Generation	Standardized Formats	3-Gradient Scale	S				
			5-Gradient Scale	S				
AU-12 (3)	Audit Record Generation	Changes by Authorized Individuals	3-Gradient Scale	S				x
			5-Gradient Scale	S				
AU-12 (4)	Audit Record Generation	Query Parameter Audits of Personally Identifiable	3-Gradient Scale	S				
			5-Gradient Scale	S				
AU-13	Monitoring for Information Disclosure		3-Gradient Scale	S				
			5-Gradient Scale	Sp				
AU-13 (1)	Monitoring for Information	Use of Automated tools	3-Gradient Scale	S				
			5-Gradient Scale	S				
AU-13 (2)	Monitoring for Information	Review of Monitored Sites	3-Gradient Scale	S				
			5-Gradient Scale	S				
AU-13 (3)	Monitoring for Information	Unauthorized Replication of Information	3-Gradient Scale	S				
			5-Gradient Scale	S				
AU-14	Session Audit		3-Gradient Scale	S				
			5-Gradient Scale	S				
AU-14 (1)	Session Audit	System Start-Up	3-Gradient Scale	S				
			5-Gradient Scale	S				
AU-14 (3)	Session Audit	Remote Viewing and Listening	3-Gradient Scale	S				
			5-Gradient Scale	S				
AU-16	Cross-organizational Audit Logging		3-Gradient Scale	S				
			5-Gradient Scale	S				
AU-16 (1)	Cross-organizational Audit	Identity Preservation	3-Gradient Scale	S				
			5-Gradient Scale	Sp				
AU-16 (2)	Cross-organizational Audit	Sharing of Audit Information	3-Gradient Scale	S				
			5-Gradient Scale	Sp				

AU-16 (3)	Cross-organizational Audit	Disassociability	3-Gradient Scale	SP				
			5-Gradient Scale	SP				

Assessment, Authorization, and Monitoring		(CA)		Model Collaboration Index Value	Privacy Control Baseline	Low Control Baseline	Moderate Control Baseline	High Control Baseline
CA-1	Policy and Procedures		3-Gradient Scale	SP	x	x	x	x
			5-Gradient Scale	SP				
CA-2	Control Assessments		3-Gradient Scale	SP	x	x	x	x
			5-Gradient Scale	SP				
CA-2 (1)	Control Assessments	Independent Assessors	3-Gradient Scale	SP			x	x
			5-Gradient Scale	SP				
CA-2 (2)	Control Assessments	Specialized Assessments	3-Gradient Scale	SP				x
			5-Gradient Scale	SP				
CA-2 (3)	Control Assessments	Leveraging Results from External organizations	3-Gradient Scale	SP				
			5-Gradient Scale	SP				
CA-3	Information Exchange		3-Gradient Scale	SP		x	x	x
			5-Gradient Scale	SP				
CA-3 (6)	Information Exchange	Transfer Authorizations	3-Gradient Scale	SP				x
			5-Gradient Scale	SP				
CA-3 (7)	Information Exchange	Transitive Information Exchanges	3-Gradient Scale	SP				
			5-Gradient Scale	SP				
CA-5	Plan of Action and Milestones		3-Gradient Scale	SP	x	x	x	x
			5-Gradient Scale	SP				
CA-5 (1)	Automation Support for Accuracy and Currency		3-Gradient Scale	SP				
			5-Gradient Scale	SP				
CA-6	Authorization		3-Gradient Scale	SP	x	x	x	x
			5-Gradient Scale	SP				
CA-6 (1)	Authorization	Joint Authorization — Intra-organization	3-Gradient Scale	SP				
			5-Gradient Scale	SP				
CA-6 (2)	Authorization	Joint Authorization — Inter-organization	3-Gradient Scale	SP				
			5-Gradient Scale	SP				
CA-7	Continuous Monitoring		3-Gradient Scale	SP	x	x	x	x
			5-Gradient Scale	SP				
CA-7 (1)	Continuous Monitoring	Independent Assessment	3-Gradient Scale	SP			x	x
			5-Gradient Scale	SP				
CA-7 (3)	Continuous Monitoring	Trend Analyses	3-Gradient Scale	SP				
			5-Gradient Scale	SP				
CA-7 (4)	Continuous Monitoring	Risk Monitoring	3-Gradient Scale	SP	x	x	x	x
			5-Gradient Scale	SP				

ID	Control	Enhancement	Scale	Value				
CA-7 (5)	Continuous Monitoring	Consistency Analysis	3-Gradient Scale	SP				
			5-Gradient Scale	SP				
CA-7 (6)	Continuous Monitoring	Automation Support for Monitoring	3-Gradient Scale	SP				
			5-Gradient Scale	SP				
CA-8	Penetration Testing		3-Gradient Scale	S				x
			5-Gradient Scale	S				x
CA-8 (1)	Penetration Testing	Independent Penetration Testing Agent or Team	3-Gradient Scale	S				x
			5-Gradient Scale	S				x
CA-8 (2)	Penetration Testing	Red Team Exercises	3-Gradient Scale	S				
			5-Gradient Scale	S				
CA-8 (3)	Penetration Testing	Facility Penetration Testing	3-Gradient Scale	S				
			5-Gradient Scale	S				
CA-9	Internal System Connections		3-Gradient Scale	S		x	x	x
			5-Gradient Scale	Sp		x	x	x
CA-9 (1)	Internal System Connection	Compliance Checks	3-Gradient Scale	SP				
			5-Gradient Scale	SP				

	Configuration Management	(CM)		Model Collaboration Index Value	Privacy Control Baseline	Low Control Baseline	Moderate Control Baseline	High Control Baseline
CM-1	Policy and Procedures		3-Gradient Scale	SP	x	x	x	x
			5-Gradient Scale	SP				
CM-2	Baseline Configuration		3-Gradient Scale	S		x	x	x
			5-Gradient Scale	Sp				
CM-2(2)	Baseline Configuration	Automation Support for Accuracy and Currency	3-Gradient Scale	S			x	x
			5-Gradient Scale	S				
CM-2(3)	Baseline Configuration	Retention of Previous Configurations	3-Gradient Scale	S			x	x
			5-Gradient Scale	S				
CM-2(6)	Baseline Configuration	Development and Test Environments	3-Gradient Scale	S				
			5-Gradient Scale	S				
CM-2(7)	Baseline Configuration	Configure Systems and Components for High-Risk	3-Gradient Scale	S			x	x
			5-Gradient Scale	S				
CM-3	Configuration Change Control		3-Gradient Scale	SP			x	x
			5-Gradient Scale	SP				
CM-3(1)	Configuration Change Control	Automated Documentation, Notification, and Prohibition	3-Gradient Scale	S				x
			5-Gradient Scale	Sp				
CM-3(2)	Configuration Change Control	Testing, Validation, and Documentation of Changes	3-Gradient Scale	S			x	x
			5-Gradient Scale	Sp				
CM-3(3)	Configuration Change Control	Automated Change Implementation	3-Gradient Scale	S				
			5-Gradient Scale	S				
CM-3(4)	Configuration Change Control	Security and Privacy Representatives	3-Gradient Scale	SP			x	x
			5-Gradient Scale	SP				
CM-3(5)	Configuration Change Control	Automated Security Response	3-Gradient Scale	S				
			5-Gradient Scale	S				
CM-3(6)	Configuration Change Control	Cryptography Management	3-Gradient Scale	S				x
			5-Gradient Scale	S				
CM-3(7)	Configuration Change Control	Review System Changes	3-Gradient Scale	S				
			5-Gradient Scale	Sp				
CM-3(8)	Configuration Change Control	Prevent or Restrict Configuration Changes	3-Gradient Scale	S				
			5-Gradient Scale	Sp				
CM-4	Impact Analyses		3-Gradient Scale	SP	x	x	x	x
			5-Gradient Scale	SP				
CM-4(1)	Impact Analyses	Separate Test Environments	3-Gradient Scale	SP				x
			5-Gradient Scale	SP				

ID	Name	Sub	Scale					
CM-4(2)	Impact Analyses	Verification of Controls	3-Gradient Scale	SP			x	x
			5-Gradient Scale	SP			x	x
CM-5	Access Restrictions For Change		3-Gradient Scale	S		x	x	x
			5-Gradient Scale	S		x	x	x
CM-5(1)	Access Restrictions For Change	Automated Access Enforcement and Audit	3-Gradient Scale	S				x
			5-Gradient Scale	S				x
CM-5(4)	Access Restrictions For Change	Dual Authorization	3-Gradient Scale	S				
			5-Gradient Scale	S				
CM-5(5)	Access Restrictions For Change	Privilege Limitation for Production and Operation	3-Gradient Scale	S				
			5-Gradient Scale	S				
CM-5(6)	Access Restrictions For Change	Limit Library Privileges	3-Gradient Scale	S				
			5-Gradient Scale	S				
CM-6	Configuration Settings		3-Gradient Scale	S		x	x	x
			5-Gradient Scale	S		x	x	x
CM-6(1)	Configuration Settings	Automated Management, Application, and Verification	3-Gradient Scale	S				x
			5-Gradient Scale	S				x
CM-6(2)	Configuration Settings	Respond to Unauthorized Changes	3-Gradient Scale	S				x
			5-Gradient Scale	S				x
CM-7	Least Functionality		3-Gradient Scale	S		x	x	x
			5-Gradient Scale	S		x	x	x
CM-7(1)	Least Functionality	Periodic Review	3-Gradient Scale	S			x	x
			5-Gradient Scale	S			x	x
CM-7(2)	Least Functionality	Prevent Program Execution	3-Gradient Scale	S			x	x
			5-Gradient Scale	S			x	x
CM-7(3)	Least Functionality	Registration Compliance	3-Gradient Scale	S				
			5-Gradient Scale	S				
CM-7(4)	Least Functionality	Unauthorized Software	3-Gradient Scale	S				
			5-Gradient Scale	S				
CM-7(5)	Least Functionality	Authorized Software	3-Gradient Scale	S			x	x
			5-Gradient Scale	S			x	x
CM-7(6)	Least Functionality	Confined Environments with Limited Privileges	3-Gradient Scale	S				
			5-Gradient Scale	S				
CM-7(7)	Least Functionality	Code Execution in Protected Environments	3-Gradient Scale	S				
			5-Gradient Scale	S				
CM-7(8)	Least Functionality	Binary or Machine Executable Code	3-Gradient Scale	S				
			5-Gradient Scale	S				
CM-7(9)	Least Functionality	Prohibiting the Use of Unauthorized Hardware	3-Gradient Scale	S				
			5-Gradient Scale	S				

Control	Name	Enhancement	Scale	Value			Col1	Col2	Col3
CM-8	System Component Inventory		3-Gradient Scale	S			x	x	x
			5-Gradient Scale	S					
CM-8(1)	System Component Inventory	Updates During Installation and Removal	3-Gradient Scale	S				x	x
			5-Gradient Scale	S					
CM-8(2)	System Component Inventory	Automated Maintenance	3-Gradient Scale	S					x
			5-Gradient Scale	S					
CM-8(3)	System Component Inventory	Automated Unauthorized Component Detection	3-Gradient Scale	S				x	x
			5-Gradient Scale	S					
CM-8(4)	System Component Inventory	Accountability Information	3-Gradient Scale	S					x
			5-Gradient Scale	S					
CM-8(6)	System Component Inventory	Assessed Configurations and Approved Deviations	3-Gradient Scale	S					
			5-Gradient Scale	S					
CM-8(7)	System Component Inventory	Centralized Repository	3-Gradient Scale	S					
			5-Gradient Scale	S					
CM-8(8)	System Component Inventory	Automated Location Tracking	3-Gradient Scale	S					
			5-Gradient Scale	Sp					
CM-8(9)	System Component Inventory	Assignment of Components to Systems	3-Gradient Scale	S					
			5-Gradient Scale	S					
CM-9	Configuration Management Plan		3-Gradient Scale	S				x	x
			5-Gradient Scale	S					
CM-9(1)	Configuration Management Plan	Assignment of Responsibility	3-Gradient Scale	S					
			5-Gradient Scale	S					
CM-10	Software Usage Restrictions		3-Gradient Scale	S			x	x	x
			5-Gradient Scale	S					
CM-10(1)	Software Usage Restrictions	Open-Source Software	3-Gradient Scale	S					
			5-Gradient Scale	S					
CM-11	User Installed Software		3-Gradient Scale	S			x	x	x
			5-Gradient Scale	S					
CM-11(2)	Software Usage Restrictions	Software Installation with Privileged Status	3-Gradient Scale	S					
			5-Gradient Scale	S					
CM-11(3)	Software Usage Restrictions	Automated Enforcement and Monitoring	3-Gradient Scale	S					
			5-Gradient Scale	S					
CM-12	Information Location		3-Gradient Scale	SP				x	x
			5-Gradient Scale	SP					
CM-12(1)	Information Location	Automated Tools to Support Information Location	3-Gradient Scale	S				x	x
			5-Gradient Scale	Sp					
CM-13	Data Action Mapping		3-Gradient Scale	SP					
			5-Gradient Scale	SP					

| CM-14 | Signed Components | 3-Gradient Scale | S | | | | |
| | | 5-Gradient Scale | S | | | | |

Contingency Planning			(CP)		Model Collaboration Index Value	Privacy Control Baseline	Low Control Baseline	Moderate Control Baseline	High Control Baseline
CP-1	Policy and Procedures			3-Gradient Scale	SP		x	x	x
				5-Gradient Scale	SP				
CP-2	Contingency Plan			3-Gradient Scale	SP		x	x	x
				5-Gradient Scale	SP				
CP-2(1)	Contingency Plan	Coordinate with Related Plans		3-Gradient Scale	SP			x	x
				5-Gradient Scale	SP				
CP-2(2)	Contingency Plan	Capacity Planning		3-Gradient Scale	S				x
				5-Gradient Scale	S				
CP-2(3)	Contingency Plan	Resume Mission and Business Functions		3-Gradient Scale	S			x	x
				5-Gradient Scale	S				
CP-2(5)	Contingency Plan	Continue Mission and Business Functions		3-Gradient Scale	S				x
				5-Gradient Scale	S				
CP-2(6)	Contingency Plan	Alternate Processing and Storage Sites		3-Gradient Scale	S				
				5-Gradient Scale	S				
CP-2(7)	Contingency Plan	Coordinate with External Service Providers		3-Gradient Scale	SP				
				5-Gradient Scale	SP				
CP-2(8)	Contingency Plan	Identify Critical Assets		3-Gradient Scale	S			x	x
				5-Gradient Scale	S				
CP-3	Contingency Training			3-Gradient Scale	SP		x	x	x
				5-Gradient Scale	SP				
CP-3(1)	Contingency Training	Simulated Events		3-Gradient Scale	S				x
				5-Gradient Scale	S				
CP-3(2)	Contingency Training	Mechanisms Used in Training Environments		3-Gradient Scale	S				
				5-Gradient Scale	S				
CP-4	Contingency Plan Testing			3-Gradient Scale	S		x	x	x
				5-Gradient Scale	Sp				
CP-4(1)	Contingency Plan Testing	Coordinate with Related Plans		3-Gradient Scale	SP			x	x
				5-Gradient Scale	SP				
CP-4(2)	Contingency Plan Testing	Alternate Processing Site		3-Gradient Scale	S				x
				5-Gradient Scale	S				
CP-4(3)	Contingency Plan Testing	Automated Testing		3-Gradient Scale	S				
				5-Gradient Scale	S				
CP-4(4)	Contingency Plan Testing	Full Recovery and Reconstitution		3-Gradient Scale	S				
				5-Gradient Scale	S				

ID	Name	Enhancement	Scale						
CP-4(5)	Contingency Plan Testing	Self Challenge	3-Gradient Scale	S					
			5-Gradient Scale	S					
CP-6	Alternative Storage Site		3-Gradient Scale	S					
			5-Gradient Scale	S				x	x
CP-6(1)	Alternative Storage Site	Separation from Primary Site	3-Gradient Scale	S					
			5-Gradient Scale	S				x	x
CP-6(2)	Alternative Storage Site	Recovery Time and Recovery Point Objectives	3-Gradient Scale	S					
			5-Gradient Scale	S					x
CP-6(3)	Alternative Storage Site	Accessibility	3-Gradient Scale	S					
			5-Gradient Scale	S				x	x
CP-7	Alternate Processing Site		3-Gradient Scale	S					
			5-Gradient Scale	S				x	x
CP-7(1)	Alternate Processing Site	Separation from Primary Site	3-Gradient Scale	S					
			5-Gradient Scale	S				x	x
CP-7(2)	Alternate Processing Site	Accessibility	3-Gradient Scale	S					
			5-Gradient Scale	S				x	x
CP-7(3)	Alternate Processing Site	Priority of Service	3-Gradient Scale	S					
			5-Gradient Scale	S				x	x
CP-7(4)	Alternate Processing Site	Preparation for Use	3-Gradient Scale	S					
			5-Gradient Scale	S					x
CP-7(6)	Alternate Processing Site	Inability to Return to Primary Site	3-Gradient Scale	S					
			5-Gradient Scale	S					
CP-8	Telecommunications Services		3-Gradient Scale	S					
			5-Gradient Scale	S				x	x
CP-8(1)	Telecommunications Services	Priority of Service Provisions	3-Gradient Scale	S					
			5-Gradient Scale	S				x	x
CP-8(2)	Telecommunications Services	Single Points of Failure	3-Gradient Scale	S					
			5-Gradient Scale	S				x	x
CP-8(3)	Telecommunications Services	Separation of Primary and Alternate Providers	3-Gradient Scale	S					
			5-Gradient Scale	S					x
CP-8(4)	Telecommunications Services	Provider Contingency Plan	3-Gradient Scale	S					
			5-Gradient Scale	S					x
CP-8(5)	Telecommunications Services	Alternate Telecommunication Service	3-Gradient Scale	S					
			5-Gradient Scale	S					
CP-9	System Backup		3-Gradient Scale	S					
			5-Gradient Scale	Sp			x	x	x
CP-9(1)	System Backup	Testing for Reliability and Integrity	3-Gradient Scale	S					
			5-Gradient Scale	S				x	x

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Control	Name	Description	Scale					
CP-9(2)	System Backup	Test Restoration using Sampling	3-Gradient Scale	S				
			5-Gradient Scale	S				x
CP-9(3)	System Backup	Separation Storage for Critical Information	3-Gradient Scale	S				
			5-Gradient Scale	S				x
CP-9(5)	System Backup	Transfer to Alternate Storage site	3-Gradient Scale	S				
			5-Gradient Scale	S				x
CP-9(6)	System Backup	Redundant Secondary System	3-Gradient Scale	S				
			5-Gradient Scale	S				
CP-9(7)	System Backup	Dual Authorization for Deletion of Destructions	3-Gradient Scale	S				
			5-Gradient Scale	Sp				
CP-9(8)	System Backup	Cryptographic Protection	3-Gradient Scale	S				
			5-Gradient Scale	S			x	x
CP-10	System Recovery and Reconstitution		3-Gradient Scale	S				
			5-Gradient Scale	S		x	x	x
CP-10(2)	System Recovery and Reco	System Recovery and Reconstitution - Transaction	3-Gradient Scale	S				
			5-Gradient Scale	S			x	x
CP-10(4)	System Recovery and Reco	System Recovery and Reconstitution - Restore	3-Gradient Scale	S				
			5-Gradient Scale	S				x
CP-10(6)	System Recovery and Reco	System Recovery and Reconstitution - Component	3-Gradient Scale	S				
			5-Gradient Scale	S				
CP-11	Alternate Communication Protocols		3-Gradient Scale	S				
			5-Gradient Scale	S				
CP-12	Safe Mode		3-Gradient Scale	S				
			5-Gradient Scale	S				
CP-13	Alternative Security Mechanisms		3-Gradient Scale	S				
			5-Gradient Scale	S				

Identification and Authentication			(IA)	Model Collaboration Index Value	Privacy Control Baseline	Low Control Baseline	Moderate Control Baseline	High Control Baseline
IA-1	Policy and Procedures		3-Gradient Scale	SP		x	x	x
			5-Gradient Scale	SP				
IA-2	Identification and Authentication (Organizational Users)		3-Gradient Scale	S		x	x	x
			5-Gradient Scale	S				
IA-2(1)	Information Location	Multi-Factor Authentication To Privileged Accounts	3-Gradient Scale	S		x	x	x
			5-Gradient Scale	S				
IA-2(2)	Information Location	Multi-Factor Authentication To Non-Privileged Accounts	3-Gradient Scale	S		x	x	x
			5-Gradient Scale	S				
IA-2(5)	Information Location	Individual Authentication with Group Authentication	3-Gradient Scale	S				x
			5-Gradient Scale	S				
IA-2(6)	Information Location	Access to Accounts - Separate Device	3-Gradient Scale	S				
			5-Gradient Scale	S				
IA-2(8)	Information Location	Access to Accounts - Replay Resistant	3-Gradient Scale	S		x	x	x
			5-Gradient Scale	S				
IA-2(10)	Information Location	Single Sign-On	3-Gradient Scale	S				
			5-Gradient Scale	S				
IA-2(12)	Information Location	Acceptance of PIV Credentials	3-Gradient Scale	S		x	x	x
			5-Gradient Scale	S				
IA-2(13)	Information Location	Out-Of-Band Authentication	3-Gradient Scale	S				
			5-Gradient Scale	S				
IA-3	Device Identification and Authentication		3-Gradient Scale	S			x	x
			5-Gradient Scale	S				
IA-3(1)	Device Identification and Authentication	Cryptographic Bidirectional Authentication	3-Gradient Scale	S				
			5-Gradient Scale	S				
IA-3(3)	Device Identification and Authentication	Dynamic Address Allocation	3-Gradient Scale	S				
			5-Gradient Scale	S				
IA-3(4)	Device Identification and Authentication	Device Attestation	3-Gradient Scale	S				
			5-Gradient Scale	S				
IA-4	Identifier Management		3-Gradient Scale	S		x	x	x
			5-Gradient Scale	S				
IA-4(1)	Identifier Management	Prohibit Account Identifiers as Public Identifiers	3-Gradient Scale	S				
			5-Gradient Scale	S				
IA-4(4)	Identifier Management	Identify User Status	3-Gradient Scale	S			x	x
			5-Gradient Scale	S				

ID	Family	Control Name	Scale	S					
IA-4(5)	Identifier Management	Dynamic Management	3-Gradient Scale	S					
			5-Gradient Scale	S					
IA-4(6)	Identifier Management	Cross-Organization Management	3-Gradient Scale	S					
			5-Gradient Scale	S					
IA-4(8)	Identifier Management	Pairwise Pseudonymous Identifiers	3-Gradient Scale	S					
			5-Gradient Scale	S					
IA-4(9)	Identifier Management	Attribute Maintenance and Protection	3-Gradient Scale	S					
			5-Gradient Scale	S					
IA-5	Authenticator Management		3-Gradient Scale	S					
			5-Gradient Scale	S			x	x	x
IA-5(1)	Authenticator Management	Password-Based Authentication	3-Gradient Scale	S					
			5-Gradient Scale	S			x	x	x
IA-5(2)	Authenticator Management	Public Key-Based Authentication	3-Gradient Scale	S					
			5-Gradient Scale	S				x	x
IA-5(5)	Authenticator Management	Change Authenticators Prior to Delivery	3-Gradient Scale	S					
			5-Gradient Scale	S					
IA-5(6)	Authenticator Management	Protection of Authenticators	3-Gradient Scale	S					
			5-Gradient Scale	S				x	x
IA-5(7)	Authenticator Management	No Embedded Unencrypted Static Authenticators	3-Gradient Scale	S					
			5-Gradient Scale	S					
IA-5(8)	Authenticator Management	Multiple System Accounts	3-Gradient Scale	S					
			5-Gradient Scale	S					
IA-5(9)	Authenticator Management	Federated Credential Management	3-Gradient Scale	S					
			5-Gradient Scale	S					
IA-5(10)	Authenticator Management	Dynamic Credential Binding	3-Gradient Scale	S					
			5-Gradient Scale	S					
IA-5(12)	Authenticator Management	Biometric Authentication Performance	3-Gradient Scale	S					
			5-Gradient Scale	S					
IA-5(13)	Authenticator Management	Expiration of Cached Authenticators	3-Gradient Scale	S					
			5-Gradient Scale	S					
IA-5(14)	Authenticator Management	Managing Content of PKI Trust Stores	3-Gradient Scale	S					
			5-Gradient Scale	S					
IA-5(15)	Authenticator Management	GSA-Approved Products and Services	3-Gradient Scale	S					
			5-Gradient Scale	S					
IA-5(16)	Authenticator Management	In-Person or Trusted External Party Authenticator Issuance	3-Gradient Scale	S					
			5-Gradient Scale	S					
IA-5(17)	Authenticator Management	Presentation Attack Detection for Biometric	3-Gradient Scale	S					
			5-Gradient Scale	S					

ID	Control	Enhancement	Scale	Value					
IA-5(18)	Authenticator Management	Password Managers	3-Gradient Scale	S					
			5-Gradient Scale	S					
IA-6	Authentication Feedback		3-Gradient Scale	S					
			5-Gradient Scale	S			x	x	x
IA-7	Cryptographic Module Authentication		3-Gradient Scale	S					
			5-Gradient Scale	S			x	x	x
IA-8	Identification and Authentication (Non-Organizational Users)		3-Gradient Scale	S					
			5-Gradient Scale	S			x	x	x
IA-8(1)	Identification and Authentication (Non-	Acceptance of PIV Credentials from Other	3-Gradient Scale	S					
			5-Gradient Scale	S			x	x	x
IA-8(2)	Identification and Authentication (Non-	Acceptance of External Authenticators	3-Gradient Scale	S					
			5-Gradient Scale	S			x	x	x
IA-8(4)	Identification and Authentication (Non-	Use of Defined Profiles	3-Gradient Scale	S					
			5-Gradient Scale	S			x	x	x
IA-8(5)	Identification and Authentication (Non-	Acceptance of PIV-I Credentials	3-Gradient Scale	S					
			5-Gradient Scale	S					
IA-8(6)	Identification and Authentication (Non-	Disassociability	3-Gradient Scale	SP					
			5-Gradient Scale	SP					
IA-9	Service Identification and Authentication		3-Gradient Scale	S					
			5-Gradient Scale	S					
IA-10	Adaptive Authentication		3-Gradient Scale	S					
			5-Gradient Scale	S					
IA-11	Re-Authentication		3-Gradient Scale	S					
			5-Gradient Scale	S			x	x	x
IA-12	Identity Proofing		3-Gradient Scale	SP					
			5-Gradient Scale	SP				x	x
IA-12(1)	Identity Proofing	Supervisor Authorization	3-Gradient Scale	S					
			5-Gradient Scale	S					
IA-12(2)	Identity Proofing	Identity Evidence	3-Gradient Scale	S					
			5-Gradient Scale	Sp				x	x
IA-12(3)	Identity Proofing	Identity Evidence Validation and Verification	3-Gradient Scale	S					
			5-Gradient Scale	S				x	x
IA-12(4)	Identity Proofing	In-Person Validation and Verification	3-Gradient Scale	S					
			5-Gradient Scale	S					x
IA-12(5)	Identity Proofing	Address Confirmation	3-Gradient Scale	S					
			5-Gradient Scale	Sp				x	x
IA-12(6)	Identity Proofing	Accept Externally-Proofed Identities	3-Gradient Scale	S					
			5-Gradient Scale	S					

Incident Response		(IR)		Model Collaboration Index Value	Privacy Control Baseline	Low Control Baseline	Moderate Control Baseline	High Control Baseline
IR-1	Policy and Procedures		3-Gradient Scale	SP	x	x	x	x
			5-Gradient Scale	SP				
IR-2	Incident Response Training		3-Gradient Scale	SP	x	x	x	x
			5-Gradient Scale	SP				
IR-2 (1)	Incident Response Training	Simulated Events	3-Gradient Scale	SP				x
			5-Gradient Scale	SP				
IR-2 (2)	Incident Response Training	Automated Training Environments	3-Gradient Scale	S				x
			5-Gradient Scale	Sp				
IR-2 (3)	Incident Response Training	Breach	3-Gradient Scale	P	x			
			5-Gradient Scale	Ps				
IR-3	Incident Response Testing		3-Gradient Scale	SP	x		x	x
			5-Gradient Scale	SP				
IR-3 (1)	Incident Response Testing	Automated Testing	3-Gradient Scale	S				
			5-Gradient Scale	Sp				
IR-3 (2)	Incident Response Testing	Coordination with Related Plans	3-Gradient Scale	S			x	x
			5-Gradient Scale	Sp				
IR-3 (3)	Incident Response Testing	Continuous Improvement	3-Gradient Scale	SP				
			5-Gradient Scale	SP				
IR-4	Incident Handling		3-Gradient Scale	SP	x	x	x	x
			5-Gradient Scale	SP				
IR-4 (1)	Incident Handling	Automated Incident Handling Processes	3-Gradient Scale	S			x	x
			5-Gradient Scale	Sp				
IR-4 (2)	Incident Handling	Dynamic Reconfiguration	3-Gradient Scale	S				
			5-Gradient Scale	S				
IR-4 (3)	Incident Handling	Continuity of Operations	3-Gradient Scale	S				
			5-Gradient Scale	S				
IR-4 (4)	Incident Handling	Information Correlation	3-Gradient Scale	S				x
			5-Gradient Scale	Sp				
IR-4 (5)	Incident Handling	Automatic Disabling of System	3-Gradient Scale	S				
			5-Gradient Scale	S				
IR-4 (6)	Incident Handling	Insider Threats	3-Gradient Scale	SP				
			5-Gradient Scale	SP				
IR-4 (7)	Incident Handling	Insider Threats – Intra Organization Coordination	3-Gradient Scale	SP				
			5-Gradient Scale	SP				

IR-4 (8)	Incident Handling	Correlation with External Organizations	3-Gradient Scale	SP					
			5-Gradient Scale	SP					
IR-4 (9)	Incident Handling	Dynamic Response Capability	3-Gradient Scale	S					
			5-Gradient Scale	S					
IR-4 (10)	Incident Handling	Supply Chain Coordination	3-Gradient Scale	SP					
			5-Gradient Scale	SP					
IR-4 (11)	Incident Handling	Integrated Incident Response Team	3-Gradient Scale	SP					x
			5-Gradient Scale	SP					
IR-4 (12)	Incident Handling	Malicious Code and Forensic Analysis	3-Gradient Scale	S					
			5-Gradient Scale	S					
IR-4 (13)	Incident Handling	Behavior Analysis	3-Gradient Scale	S					
			5-Gradient Scale	S					
IR-4 (14)	Incident Handling	Security Operations Center	3-Gradient Scale	S					
			5-Gradient Scale	S					
IR-4 (15)	Incident Handling	Public Relations and Reputation Repair	3-Gradient Scale	SP					
			5-Gradient Scale	SP					
IR-5	Incident Monitoring		3-Gradient Scale	SP	x	x	x	x
			5-Gradient Scale	SP					
IR-5(1)	Incident Monitoring	Automated Tracking, Data Collection, and Analysis	3-Gradient Scale	S					x
			5-Gradient Scale	Sp					
IR-6	Incident Reporting		3-Gradient Scale	SP	x	x	x	x
			5-Gradient Scale	SP					
IR-6 (1)	Incident Reporting	Automated Reporting	3-Gradient Scale	S				x	x
			5-Gradient Scale	Sp					
IR-6 (2)	Incident Reporting	Vulnerabilities Related to Incidents	3-Gradient Scale	S					
			5-Gradient Scale	Sp					
IR-6 (3)	Incident Reporting	Supply Chain Coordination	3-Gradient Scale	S				x	x
			5-Gradient Scale	Sp					
IR-7	Incident Response Assistance		3-Gradient Scale	S	x	x	x	x
			5-Gradient Scale	Sp					
IR-7(1)	Incident Response Assistan	Automation Support for Availability of Information	3-Gradient Scale	S				x	x
			5-Gradient Scale	Sp					
IR-7(2)	Incident Response Assistan	Coordination with External Providers	3-Gradient Scale	S					
			5-Gradient Scale	Sp					
IR-8	Incident Response Plan		3-Gradient Scale	SP	x	x	x	x
			5-Gradient Scale	SP					
IR-8 (1)	Incident Response Plan	Breaches	3-Gradient Scale	P	x				
			5-Gradient Scale	Ps					

IR-9	Information Spillage Response		3-Gradient Scale	S					
			5-Gradient Scale	Sp					

IR-9 (2)	Information Spillage Respo	Training	3-Gradient Scale	SP					
			5-Gradient Scale	SP					

IR-9 (3)	Information Spillage Respo	Post-Spill Operations	3-Gradient Scale	SP					
			5-Gradient Scale	SP					

IR-9 (4)	Information Spillage Respo	Exposure to Unauthorized Personnel	3-Gradient Scale	SP					
			5-Gradient Scale	SP					

Maintenance		(MA)		Model Collaboration Index Value	Privacy Control Baseline	Low Control Baseline	Moderate Control Baseline	High Control Baseline
MA-1	Policy and Procedures		3-Gradient Scale	SP		x	x	x
			5-Gradient Scale	SP				
MA-2	Controlled Maintenance		3-Gradient Scale	S		x	x	x
			5-Gradient Scale	S				
MA-2(2)	Controlled Maintenance	Automated Maintenance Activities	3-Gradient Scale	S				x
			5-Gradient Scale	S				
MA-3	Maintenance Tools		3-Gradient Scale	S			x	x
			5-Gradient Scale	S				
MA-3(1)	Maintenance Tools	Inspect Tools	3-Gradient Scale	S			x	x
			5-Gradient Scale	S				
MA-3(2)	Maintenance Tools	Inspect Media	3-Gradient Scale	S			x	x
			5-Gradient Scale	S				
MA-3(3)	Maintenance Tools	Prevent Unauthorized Removal	3-Gradient Scale	S			x	x
			5-Gradient Scale	S				
MA-3(4)	Maintenance Tools	Restricted Tool Use	3-Gradient Scale	S				
			5-Gradient Scale	S				
MA-3(5)	Maintenance Tools	Execution with Privilege	3-Gradient Scale	S				
			5-Gradient Scale	S				
MA-3(6)	Maintenance Tools	Software Updates and Patches	3-Gradient Scale	S				
			5-Gradient Scale	S				
MA-4	Nonlocal Maintenance		3-Gradient Scale	S		x	x	x
			5-Gradient Scale	S				
MA-4(1)	Nonlocal Maintenance	Logging and Review	3-Gradient Scale	S				
			5-Gradient Scale	S				
MA-4(3)	Nonlocal Maintenance	Comparable Security and Sanitization	3-Gradient Scale	S				x
			5-Gradient Scale	S				
MA-4(4)	Nonlocal Maintenance	Authentication and Separation of Maintenance	3-Gradient Scale	S				
			5-Gradient Scale	S				
MA-4(5)	Nonlocal Maintenance	Approvals and Notifications	3-Gradient Scale	S				
			5-Gradient Scale	S				
MA-4(6)	Nonlocal Maintenance	Cryptographic Protection	3-Gradient Scale	S				
			5-Gradient Scale	S				
MA-4(7)	Nonlocal Maintenance	Disconnect Verification	3-Gradient Scale	S				
			5-Gradient Scale	S				

Control	Name	Enhancement	Scale					
MA-5	Maintenance Personnel		3-Gradient Scale	S		x	x	x
			5-Gradient Scale	S				
MA-5(1)	Maintenance Personnel	Individuals Without Appropriate Access	3-Gradient Scale	S				x
			5-Gradient Scale	S				
MA-5(2)	Maintenance Personnel	Security Clearances for Classified Systems	3-Gradient Scale	S				
			5-Gradient Scale	S				
MA-5(3)	Maintenance Personnel	Citizenship Requirements for Classified Systems	3-Gradient Scale	S				
			5-Gradient Scale	S				
MA-5(4)	Maintenance Personnel	Foreign Nationals	3-Gradient Scale	S				
			5-Gradient Scale	S				
MA-5(5)	Maintenance Personnel	Non-System Maintenance	3-Gradient Scale	S				
			5-Gradient Scale	S				
MA-6	Timely Maintenance		3-Gradient Scale	S			x	x
			5-Gradient Scale	S				
MA-6(1)	Timely Maintenance	Preventative Maintenance	3-Gradient Scale	S				
			5-Gradient Scale	S				
MA-6(2)	Timely Maintenance	Predictive Maintenance	3-Gradient Scale	S				
			5-Gradient Scale	S				
MA-6(3)	Timely Maintenance	Automated Support for Predictive Maintenance	3-Gradient Scale	S				
			5-Gradient Scale	S				
MA-7	Field Maintenance		3-Gradient Scale	S				
			5-Gradient Scale	S				

Media Protection		(MP)		Model Collaboration Index Value	Privacy Control Baseline	Low Control Baseline	Moderate Control Baseline	High Control Baseline
MP-1	Policy and Procedures		3-Gradient Scale	SP	x	x	x	x
			5-Gradient Scale	SP				
MP-2	Media Access		3-Gradient Scale	S		x	x	x
			5-Gradient Scale	S				
MP-3	Media Marking		3-Gradient Scale	S			x	x
			5-Gradient Scale	Sp				
MP-4	Media Storage		3-Gradient Scale	S			x	x
			5-Gradient Scale	S				
MP-4(2)	Media Storage	Automated Restricted Access	3-Gradient Scale	S				
			5-Gradient Scale	S				
MP-5	Media Transport		3-Gradient Scale	S			x	x
			5-Gradient Scale	S				
MP-5(3)	Media Transport	Custodians	3-Gradient Scale	S				
			5-Gradient Scale	S				
MP-6	Media Sanitization		3-Gradient Scale	S	x	x	x	x
			5-Gradient Scale	Sp				
MP-6(1)	Media Sanitization	Review, Approve, Track, Document, and Verify	3-Gradient Scale	S				x
			5-Gradient Scale	Sp				
MP-6(2)	Media Sanitization	Equipment Testing	3-Gradient Scale	S				x
			5-Gradient Scale	S				
MP-6(3)	Media Sanitization	Nondestructive Techniques	3-Gradient Scale	S				x
			5-Gradient Scale	S				
MP-6(7)	Media Sanitization	Dual Authorization	3-Gradient Scale	S				
			5-Gradient Scale	S				
MP-6(8)	Media Sanitization	Remote Purging or Wiping or Information	3-Gradient Scale	S				
			5-Gradient Scale	S				
MP-7	Media Use		3-Gradient Scale	S		x	x	x
			5-Gradient Scale	Sp				
MP-7(2)	Media Use	Prohibit Use of Sanitization-Resistant Media	3-Gradient Scale	S				
			5-Gradient Scale	S				
MP-8	Media Downgrading		3-Gradient Scale	S				
			5-Gradient Scale	S				
MP-8(1)	Media Downgrading	Documentation of Process	3-Gradient Scale	S				
			5-Gradient Scale	S				

| MP-8(2) | Media Downgrading | Equipment Testing | 3-Gradient Scale | S | | | | | |
| | | | 5-Gradient Scale | S | | | | | |

| MP-8(3) | Media Downgrading | Controlled Unclassified Information | 3-Gradient Scale | S | | | | | |
| | | | 5-Gradient Scale | S | | | | | |

| MP-8(4) | Media Downgrading | Classified Information | 3-Gradient Scale | S | | | | | |
| | | | 5-Gradient Scale | S | | | | | |

Physical and Environmental Protection		(PE)		Model Collaboration Index Value	Privacy Control Baseline	Low Control Baseline	Moderate Control Baseline	High Control Baseline
PE-1	Policy and Procedures		3-Gradient Scale	SP		x	x	x
			5-Gradient Scale	SP				
PE-2	Physical Access Authorizations		3-Gradient Scale	S		x	x	x
			5-Gradient Scale	S				
PE-2(1)	Physical Access Authorizations	Access by Position or Role	3-Gradient Scale	S				
			5-Gradient Scale	S				
PE-2(2)	Physical Access Authorizations	Two Forms of Identification	3-Gradient Scale	S				
			5-Gradient Scale	S				
PE-2(3)	Physical Access Authorizations	Restricted Unescorted Access	3-Gradient Scale	S				
			5-Gradient Scale	S				
PE-3	Physical Access Control		3-Gradient Scale	S		x	x	x
			5-Gradient Scale	S				
PE-3(1)	Physical Access Control	System Access	3-Gradient Scale	S				x
			5-Gradient Scale	S				
PE-3(2)	Physical Access Control	Facility and Systems	3-Gradient Scale	S				
			5-Gradient Scale	S				
PE-3(3)	Physical Access Control	Continuous Guards	3-Gradient Scale	S				
			5-Gradient Scale	S				
PE-3(4)	Physical Access Control	Lockable Casings	3-Gradient Scale	S				
			5-Gradient Scale	S				
PE-3(5)	Physical Access Control	Tamper Protection	3-Gradient Scale	S				
			5-Gradient Scale	S				
PE-3(7)	Physical Access Control	Physical Barriers	3-Gradient Scale	S				
			5-Gradient Scale	S				
PE-3(8)	Physical Access Control	Access Control Vestibules	3-Gradient Scale	S				
			5-Gradient Scale	SP				
PE-4	Access Control for Transmission		3-Gradient Scale	S			x	x
			5-Gradient Scale	S				
PE-5	Access Control for Output Devices		3-Gradient Scale	S			x	x
			5-Gradient Scale	S				
PE-5(2)	Access Control for Output Devices	Link to Individual Identity	3-Gradient Scale	S				
			5-Gradient Scale	S				
PE-6	Monitoring Physical Access		3-Gradient Scale	S		x	x	x
			5-Gradient Scale	S				

ID	Control	Enhancement	Scale	Value				
PE-6(1)	Monitoring Physical Access	Intrusion Alarms and Surveillance Equipment	3-Gradient Scale	S			x	x
			5-Gradient Scale	S				
PE-6(2)	Monitoring Physical Access	Automated Intrusion Recognition and Responses	3-Gradient Scale	S				
			5-Gradient Scale	S				
PE-6(3)	Monitoring Physical Access	Video Surveillance	3-Gradient Scale	SP				
			5-Gradient Scale	SP				
PE-6(4)	Monitoring Physical Access	Monitoring Physical Access to Systems	3-Gradient Scale	S				x
			5-Gradient Scale	S				
PE-8	Visitor Access Records		3-Gradient Scale	SP		x	x	x
			5-Gradient Scale	SP				
PE-8(1)	Visitor Access Records	Automated Records Maintenance and Review	3-Gradient Scale	S				x
			5-Gradient Scale	Sp				
PE-8(3)	Visitor Access Records	Limit Personally Identifiable Information Elements	3-Gradient Scale	SP	x			
			5-Gradient Scale	SP				
PE-9	Power Equipment and Cabling		3-Gradient Scale	S			x	x
			5-Gradient Scale	S				
PE-9(1)	Power Equipment and Cabling	Redundant Cabling	3-Gradient Scale	S				
			5-Gradient Scale	S				
PE-9(2)	Power Equipment and Cabling	Automatic Voltage Controls	3-Gradient Scale	S				
			5-Gradient Scale	S				
PE-10	Emergency Shutoff		3-Gradient Scale	S			x	x
			5-Gradient Scale	S				
PE-11	Emergency Power		3-Gradient Scale	S			x	x
			5-Gradient Scale	S				
PE-11(1)	Emergency Power	Alternate Power Supply - Minimal Operational	3-Gradient Scale	S				x
			5-Gradient Scale	S				
PE-11(2)	Emergency Power	Alternate Power Supply - Self Contained	3-Gradient Scale	S				
			5-Gradient Scale	S				
PE-12	Emergency Lighting		3-Gradient Scale	S		x	x	x
			5-Gradient Scale	S				
PE-12(1)	Emergency Lighting	Essential Mission and Business Functions	3-Gradient Scale	S				
			5-Gradient Scale	S				
PE-13	Fire Protection		3-Gradient Scale	S		x	x	x
			5-Gradient Scale	S				
PE-12(1)	Fire Protection	Detection Systems - Automatic Activation and	3-Gradient Scale	S			x	x
			5-Gradient Scale	S				
PE-12(2)	Fire Protection	Suppression Systems - Automatic Activation and	3-Gradient Scale	S				x
			5-Gradient Scale	S				

ID	Control	Enhancement	Scale	Value				
PE-12(4)	Fire Protection	Inspections	3-Gradient Scale	S				
			5-Gradient Scale	S				
PE-14	Environmental Controls		3-Gradient Scale	S				
			5-Gradient Scale	S		x	x	x
PE-14(1)	Environmental Controls	Automatic Controls	3-Gradient Scale	S				
			5-Gradient Scale	S				
PE-14(2)	Environmental Controls	Monitoring with Alarms and Notifications	3-Gradient Scale	S				
			5-Gradient Scale	S				
PE-15	Water Damage Protection		3-Gradient Scale	S				
			5-Gradient Scale	S		x	x	x
PE-15(1)	Water Damage Protection	Automatic Support	3-Gradient Scale	S				
			5-Gradient Scale	S				x
PE-16	Delivery and Removal		3-Gradient Scale	S				
			5-Gradient Scale	S		x	x	x
PE-17	Alternate Work Site		3-Gradient Scale	S				
			5-Gradient Scale	Sp			x	x
PE-18	Location of System Components		3-Gradient Scale	S				
			5-Gradient Scale	S				x
PE-19	Information Leakage		3-Gradient Scale	S				
			5-Gradient Scale	S				
PE-19(1)	Information Leakage	National Emissions and Tempest Policies and	3-Gradient Scale	S				
			5-Gradient Scale	S				
PE-20	Asset Monitoring and Tracking		3-Gradient Scale	S				
			5-Gradient Scale	S				
PE-21	Electromagnetic Pulse Protection		3-Gradient Scale	S				
			5-Gradient Scale	S				
PE-22	Component Marking		3-Gradient Scale	S				
			5-Gradient Scale	S				
PE-23	Facility Location		3-Gradient Scale	S				
			5-Gradient Scale	S				

Planning		(PL)	Model Collaboration Index Value	Privacy Control Baseline	Low Control Baseline	Moderate Control Baseline	High Control Baseline
PL-1	Policy and Procedures	3-Gradient Scale	SP	x	x	x	x
		5-Gradient Scale	SP				
PL-2	System Security and Privacy Plans	3-Gradient Scale	SP	x	x	x	x
		5-Gradient Scale	SP				
PL-4	Rules of Behavior	3-Gradient Scale	SP	x	x	x	x
		5-Gradient Scale	SP				
PL-4(1)	Rules of Behavior — Social Media and External Site/Application Usage	3-Gradient Scale	SP	x	x	x	x
		5-Gradient Scale	SP				
PL-7	Concept of Operations	3-Gradient Scale	SP				
		5-Gradient Scale	SP				
PL-8	Security and Privacy Architectures	3-Gradient Scale	SP	x		x	x
		5-Gradient Scale	SP				
PL-8(1)	Security and Privacy Archit Defense in Depth	3-Gradient Scale	S				
		5-Gradient Scale	Sp				
PL-8(2)	Security and Privacy Archit Supplier Diversity	3-Gradient Scale	S				
		5-Gradient Scale	Sp				
PL-9	Central Management	3-Gradient Scale	SP	x			
		5-Gradient Scale	SP				
PL-10	Baseline Selection	3-Gradient Scale	SP		x	x	x
		5-Gradient Scale	SP				
PL-11	Baseline Tailoring	3-Gradient Scale	SP		x	x	x
		5-Gradient Scale	SP				

Program Management			(PM)	Model Collaboration Index Value	Privacy Control Baseline	Low Control Baseline	Moderate Control Baseline	High Control Baseline
PM-1	Information Security Program Plan		3-Gradient Scale	S				
			5-Gradient Scale	S				
PM-2	Information Security Program Leadership Role		3-Gradient Scale	S				
			5-Gradient Scale	S				
PM-3	Information Security and Privacy Resources		3-Gradient Scale	SP	x			
			5-Gradient Scale	SP				
PM-4	Plan of Action and Milestones Process		3-Gradient Scale	SP	x			
			5-Gradient Scale	SP				
PM-5	System Inventory		3-Gradient Scale	S				
			5-Gradient Scale	Sp				
PM-5(1)	System Inventory	Inventory of Personally Identifiable Information	3-Gradient Scale	P	x			
			5-Gradient Scale	Ps				
PM-6	Measures of Performance		3-Gradient Scale	SP	x			
			5-Gradient Scale	SP				
PM-7	Enterprise Architecture		3-Gradient Scale	SP	x			
			5-Gradient Scale	SP				
PM-7(1)	Enterprise Architecture	Offloading	3-Gradient Scale	S				
			5-Gradient Scale	Sp				
PM-8	Critical Infrastructure Plan		3-Gradient Scale	SP	x			
			5-Gradient Scale	SP				
PM-9	Risk Management Strategy		3-Gradient Scale	SP	x			
			5-Gradient Scale	SP				
PM-10	Authorization Process		3-Gradient Scale	SP	x			
			5-Gradient Scale	SP				
PM-11	Mission and Business Process Definition		3-Gradient Scale	SP	x			
			5-Gradient Scale	SP				
PM-12	Insider Threat Program		3-Gradient Scale	SP				
			5-Gradient Scale	SP				
PM-13	Security and Privacy Workforce		3-Gradient Scale	SP	x			
			5-Gradient Scale	SP				
PM-14	Testing, Training, and Monitoring		3-Gradient Scale	SP	x			
			5-Gradient Scale	SP				
PM-15	Security and Privacy Groups and Associations		3-Gradient Scale	SP		Deployed organization-wide.		
			5-Gradient Scale	SP				

Control	Name	Enhancement	Scale	Value	X	Notes
PM-16	Threat Awareness Program		3-Gradient Scale	S		Supports information security program.
			5-Gradient Scale	Sp		
PM-16(1)	Threat Awareness Program	Automate Means of Sharing Threat Intelligence	3-Gradient Scale	S		
			5-Gradient Scale	S		Not associated with security control baselines.
PM-17	Protecting CUI on External Systems		3-Gradient Scale	SP	x	
			5-Gradient Scale	SP		
PM-18	Privacy Program Plan		3-Gradient Scale	P	x	Independent of any system impact level.
			5-Gradient Scale	P		
PM-19	Privacy Program Leadership Role		3-Gradient Scale	P	x	
			5-Gradient Scale	P		
PM-20	Dissemination of Privacy Program Information		3-Gradient Scale	P	x	
			5-Gradient Scale	P		
PM-20(1)	Dissemination of Privacy Pr	Privacy Policies on Websites, Application, and Digital	3-Gradient Scale	P	x	
			5-Gradient Scale	P		
PM-21	Accounting of Disclosures		3-Gradient Scale	P	x	
			5-Gradient Scale	P		
PM-22	Personally Identifiable Information Quality Management		3-Gradient Scale	P	x	
			5-Gradient Scale	Ps		
PM-23	Data Governance Body		3-Gradient Scale	SP		
			5-Gradient Scale	SP		
PM-24	Data Integrity Board		3-Gradient Scale	P	x	
			5-Gradient Scale	P		
PM-25	Minimization of PII Used in Testing Training, and Research		3-Gradient Scale	P	x	
			5-Gradient Scale	Ps		
PM-26	Complaint Management		3-Gradient Scale	SP	x	
			5-Gradient Scale	SP		
PM-27	Privacy Reporting		3-Gradient Scale	P	x	
			5-Gradient Scale	P		
PM-28	Risk Framing		3-Gradient Scale	SP	x	
			5-Gradient Scale	SP		
PM-29	Risk Management Program Leadership Roles		3-Gradient Scale	SP		
			5-Gradient Scale	SP		
PM-30	Supply Chain Risk Management Strategy		3-Gradient Scale	S		
			5-Gradient Scale	Sp		
PM-30(1)	Supply Chain Risk Manager	Suppliers of Critical or Mission-essential Items	3-Gradient Scale	S		
			5-Gradient Scale	Sp		
PM-31	Continuous Monitoring Strategy		3-Gradient Scale	SP	x	
			5-Gradient Scale	SP		

| PM-32 | Purposing | 3-Gradient Scale | S | |
| | | 5-Gradient Scale | Sp | |

Personnel Security			(PS)	Model Collaboration Index Value	Privacy Control Baseline	Low Control Baseline	Moderate Control Baseline	High Control Baseline
PS-1	Policy and Procedures		3-Gradient Scale	SP		x	x	x
			5-Gradient Scale	SP				
PS-2	Position Risk Designation		3-Gradient Scale	S		x	x	x
			5-Gradient Scale	S				
PS-3	Personnel Screening		3-Gradient Scale	S		x	x	x
			5-Gradient Scale	S				
PS-3(1)	Personnel Screening	Classified Information	3-Gradient Scale	S				
			5-Gradient Scale	S				
PS-3(2)	Personnel Screening	Formal Indoctrination	3-Gradient Scale	S				
			5-Gradient Scale	S				
PS-3(3)	Personnel Screening	Information with Special Protective Measures	3-Gradient Scale	S				
			5-Gradient Scale	S				
PS-3(4)	Personnel Screening	Citizenship Requirements	3-Gradient Scale	S				
			5-Gradient Scale	S				
PS-4	Personnel Termination		3-Gradient Scale	S		x	x	x
			5-Gradient Scale	S				
PS-4(1)	Personnel Termination	Post-Employment Requirements	3-Gradient Scale	S				
			5-Gradient Scale	S				
PS-4(2)	Personnel Termination	Automated Actions	3-Gradient Scale	S				x
			5-Gradient Scale	S				
PS-5	Personnel Transfer		3-Gradient Scale	S		x	x	x
			5-Gradient Scale	S				
PS-6	Access Agreements		3-Gradient Scale	S	x	x	x	x
			5-Gradient Scale	Sp				
PS-6(2)	Access Agreements	Classified Information Requiring Special Protection	3-Gradient Scale	S				
			5-Gradient Scale	S				
PS-6(3)	Access Agreements	Post-Employment Requirements	3-Gradient Scale	S				
			5-Gradient Scale	Sp				
PS-7	External Personnel Security		3-Gradient Scale	S		x	x	x
			5-Gradient Scale	Sp				
PS-8	Personnel Sanctions		3-Gradient Scale	SP		x	x	x
			5-Gradient Scale	SP				
PS-9	Position Descriptions		3-Gradient Scale	SP		x	x	x
			5-Gradient Scale	SP				

	Personally Identifiable Information Processing and Transparency		(PT)	Model Collaboration Index Value	Privacy Control Baseline	Low Control Baseline	Moderate Control Baseline	High Control Baseline
PT-1	Policy and Procedures		3-Gradient Scale	P	x			
			5-Gradient Scale	Ps				
PT-2	Authority to Process PII		3-Gradient Scale	P	x			
			5-Gradient Scale	P				
PT-2(1)	Authority to Process PII	Data Tagging	3-Gradient Scale	SP				
			5-Gradient Scale	SP				
PT-2(2)	Authority to Process PII	Automation	3-Gradient Scale	S				
			5-Gradient Scale	Sp				
PT-3	PII Processing Purposes		3-Gradient Scale	P	x			
			5-Gradient Scale	P				
PT-3(1)	PII Processing Purposes	PII Processing Purposes - Data Tagging	3-Gradient Scale	SP				
			5-Gradient Scale	SP				
PT-3(2)	PII Processing Purposes	PII Processing Purposes - Automation	3-Gradient Scale	S				
			5-Gradient Scale	Sp				
PT-4	Consent		3-Gradient Scale	P	x			
			5-Gradient Scale	Ps				
PT-4(1)	Consent	Consent -Tailored Consent	3-Gradient Scale	P				
			5-Gradient Scale	Ps				
PT-4(2)	Consent	Consent -Just-in-time Consent	3-Gradient Scale	P				
			5-Gradient Scale	Ps				
PT-4(3)	Consent	Consent -Revocation	3-Gradient Scale	P				
			5-Gradient Scale	Ps				
Pt-5	Privacy Notice		3-Gradient Scale	P	x			
			5-Gradient Scale	P				
PT-5(1)	Privacy Notice	Privacy Notice - Just in Time	3-Gradient Scale	P	x			
			5-Gradient Scale	P				
PT-5(2)	Privacy Notice	Privacy Notice - Privacy Act Statements	3-Gradient Scale	P	x			
			5-Gradient Scale	P				
PT-6	System of Records Notice		3-Gradient Scale	P	x			
			5-Gradient Scale	P				
PT-6(1)	System of Records Notice	SORN- Routine Uses	3-Gradient Scale	P	x			
			5-Gradient Scale	P				
PT-6(2)	System of Records Notice	SORN - Exemption Rules	3-Gradient Scale	P	x			
			5-Gradient Scale	P				

Personally Identifiable Information Processing and Transparency controls are not allocated to the security control baselines.

Privacy baseline controls are selected based on the selection criteria defined in Section 2.2 of NIST SP 800-53B

PT-7	Specific Categories of PII		3-Gradient Scale	P		x	
			5-Gradient Scale	P			
PT-7(1)	Specific Categories of PII	SSNs	3-Gradient Scale	P		x	
			5-Gradient Scale	P			
PT-7(2)	Specific Categories of PII	First Amendment Information	3-Gradient Scale	P		x	
			5-Gradient Scale	P			
PT-8	Computer Matching Requirements		3-Gradient Scale	P		x	
			5-Gradient Scale	P			

	Risk Assessment		(RA)	Model Collaboration Index Value	Privacy Control Baseline	Low Control Baseline	Moderate Control Baseline	High Control Baseline
RA-1	Policy and Procedures		3-Gradient Scale	SP	x	x	x	x
			5-Gradient Scale	SP				
RA-2	Security Categorization		3-Gradient Scale	SP		x	x	x
			5-Gradient Scale	SP				
RA-2(1)	Security Categorization	Impact-Level Prioritization	3-Gradient Scale	S				
			5-Gradient Scale	Sp				
RA-3	Risk Assessment		3-Gradient Scale	SP	x	x	x	x
			5-Gradient Scale	SP				
RA-3(1)	Risk Assessment	Supply Chain Risk Assessment	3-Gradient Scale	S		x	x	x
			5-Gradient Scale	S				
RA-3(2)	Risk Assessment	Use of All-Source Intelligence	3-Gradient Scale	S				
			5-Gradient Scale	S				
RA-3(3)	Risk Assessment	Dynamic Threat Awareness	3-Gradient Scale	S				
			5-Gradient Scale	S				
RA-3(4)	Risk Assessment	Predictive Cyber Analytics	3-Gradient Scale	S				
			5-Gradient Scale	S				
RA-5	Vulnerability Monitoring & Scanning		3-Gradient Scale	S		x	x	x
			5-Gradient Scale	S				
RA-5(2)	Vulnerability Monitoring & Scanning	Update Vulnerabilities to be Scanned	3-Gradient Scale	S		x	x	x
			5-Gradient Scale	S				
RA-5(3)	Vulnerability Monitoring & Scanning	Breadth and Depth of Coverage	3-Gradient Scale	S				
			5-Gradient Scale	S				
RA-5(4)	Vulnerability Monitoring & Scanning	Discoverable Information	3-Gradient Scale	S				x
			5-Gradient Scale	S				
RA-5(5)	Vulnerability Monitoring & Scanning	Privileged Access	3-Gradient Scale	S			x	x
			5-Gradient Scale	S				
RA-5(6)	Vulnerability Monitoring & Scanning	Automated Trend Analyses	3-Gradient Scale	S				
			5-Gradient Scale	S				
RA-5(8)	Vulnerability Monitoring & Scanning	Review Historic Audit Logs	3-Gradient Scale	S				
			5-Gradient Scale	S				
RA-5(10)	Vulnerability Monitoring & Scanning	Correlate Scanning Information	3-Gradient Scale	S				
			5-Gradient Scale	S				
RA-5(11)	Vulnerability Monitoring & Scanning	Public Disclosure Program	3-Gradient Scale	S		x	x	x
			5-Gradient Scale	S				

			3-Gradient Scale	S				
RA-6	Technical Surveillance Countermeasures Survey		5-Gradient Scale	S				

			3-Gradient Scale	SP				
RA-7	Risk Response		5-Gradient Scale	SP	x	x	x	x

			3-Gradient Scale	P				
RA-8	Privacy Impact Assessments		5-Gradient Scale	Ps	x			

			3-Gradient Scale	S				
RA-9	Criticality Analysis		5-Gradient Scale	S			x	x

			3-Gradient Scale	S				
RA-10	Threat Hunting		5-Gradient Scale	S				

System and Services Acquisition			(SA)	Model Collaboration Index Value	Privacy Control Baseline	Low Control Baseline	Moderate Control Baseline	High Control Baseline
SA-1	Policy and Procedures		3-Gradient Scale	SP	x	x	x	x
			5-Gradient Scale	SP				
SA-2	Allocation of Resources		3-Gradient Scale	SP	x	x	x	x
			5-Gradient Scale	SP				
SA-3	System Development Life Cycle		3-Gradient Scale	SP	x	x	x	x
			5-Gradient Scale	SP				
SA-3(1)	System Development Life C	Manage Preproduction Environment	3-Gradient Scale	S				
			5-Gradient Scale	S				
SA-3(2)	System Development Life C	Use of Live or Operational Data	3-Gradient Scale	SP				
			5-Gradient Scale	SP				
SA-3(3)	System Development Life C	Technology Refresh	3-Gradient Scale	S				
			5-Gradient Scale	S				
SA-4	Acquisition Process		3-Gradient Scale	SP	x	x	x	x
			5-Gradient Scale	SP				
SA-4(1)	Acquisition Process	Functional Properties of Controls	3-Gradient Scale	S			x	x
			5-Gradient Scale	Sp				
SA-4(2)	Acquisition Process	Design and Implementation Information for Controls	3-Gradient Scale	S			x	x
			5-Gradient Scale	S				
SA-4(3)	Acquisition Process	Development Methods, Techniques, and Practices	3-Gradient Scale	S				
			5-Gradient Scale	Sp				
SA-4(5)	Acquisition Process	System, Component, and Service Configurations	3-Gradient Scale	S				x
			5-Gradient Scale	S				
SA-4(6)	Acquisition Process	Use of Information Assurance Products	3-Gradient Scale	S				
			5-Gradient Scale	S				
SA-4(7)	Acquisition Process	NIAP-approved Protection Profiles	3-Gradient Scale	S				
			5-Gradient Scale	S				
SA-4(8)	Acquisition Process	Continuous Monitoring Plan for Controls	3-Gradient Scale	S				
			5-Gradient Scale	S				
SA-4(9)	Acquisition Process	Functions, Ports, Protocols, and Services in Use	3-Gradient Scale	S			x	x
			5-Gradient Scale	S				
SA-4(10)	Acquisition Process	Use of Approved PIV Products	3-Gradient Scale	S		x	x	x
			5-Gradient Scale	S				
SA-4(11)	Acquisition Process	System of Records	3-Gradient Scale	P				
			5-Gradient Scale	Ps				

ID	Control	Enhancement	Scale	Value					
SA-4(12)	Acquisition Process	Data Ownership	3-Gradient Scale	S					
			5-Gradient Scale	Sp					
SA-5	System Documentation		3-Gradient Scale	SP					
			5-Gradient Scale	SP			x	x	x
SA-8	Security and Privacy Engineering Principles		3-Gradient Scale	SP					
			5-Gradient Scale	SP			x	x	x
SA-8(1)	Security and Privacy Engine	Clear Abstractions	3-Gradient Scale	S					
			5-Gradient Scale	S					
SA-8(2)	Security and Privacy Engine	Least Common Mechanism	3-Gradient Scale	S					
			5-Gradient Scale	S					
SA-8(3)	Security and Privacy Engine	Modularity and Layering	3-Gradient Scale	S					
			5-Gradient Scale	S					
SA-8(4)	Security and Privacy Engine	Partially Ordered Dependencies	3-Gradient Scale	S					
			5-Gradient Scale	S					
SA-8(5)	Security and Privacy Engine	Efficiently Mediated Access	3-Gradient Scale	S					
			5-Gradient Scale	S					
SA-8(6)	Security and Privacy Engine	Minimized Sharing	3-Gradient Scale	S					
			5-Gradient Scale	S					
SA-8(7)	Security and Privacy Engine	Reduced Complexity	3-Gradient Scale	S					
			5-Gradient Scale	S					
SA-8(8)	Security and Privacy Engine	Secure Evolvability	3-Gradient Scale	S					
			5-Gradient Scale	S					
SA-8(9)	Security and Privacy Engine	Trusted Components	3-Gradient Scale	S					
			5-Gradient Scale	S					
SA-8(10)	Security and Privacy Engine	Hierarchical Trust	3-Gradient Scale	S					
			5-Gradient Scale	S					
SA-8(11)	Security and Privacy Engine	Inverse Modification Threshold	3-Gradient Scale	S					
			5-Gradient Scale	S					
SA-8(12)	Security and Privacy Engine	Hierarchical Protection	3-Gradient Scale	S					
			5-Gradient Scale	S					
SA-8(13)	Security and Privacy Engine	Minimized Security Elements	3-Gradient Scale	S					
			5-Gradient Scale	S					
SA-8(14)	Security and Privacy Engine	Least Privilege	3-Gradient Scale	S					
			5-Gradient Scale	S					
SA-8(15)	Security and Privacy Engine	Predicate Permission	3-Gradient Scale	S					
			5-Gradient Scale	S					
SA-8(16)	Security and Privacy Engine	Self-reliant Trustworthiness	3-Gradient Scale	S					
			5-Gradient Scale	S					

ID	Category	Name	Scale					
SA-8(17)	Security and Privacy Engine	Secure Distributed Composition	3-Gradient Scale	S				
			5-Gradient Scale	S				
SA-8(18)	Security and Privacy Engine	Trusted Communications Channels	3-Gradient Scale	S				
			5-Gradient Scale	S				
SA-8(19)	Security and Privacy Engine	Continuous Protection	3-Gradient Scale	S				
			5-Gradient Scale	S				
SA-8(20)	Security and Privacy Engine	Secure Metadata Management	3-Gradient Scale	S				
			5-Gradient Scale	S				
SA-8(21)	Security and Privacy Engine	Self-analysis	3-Gradient Scale	S				
			5-Gradient Scale	S				
SA-8(22)	Security and Privacy Engine	Accountability and Traceability	3-Gradient Scale	S				
			5-Gradient Scale	S				
SA-8(23)	Security and Privacy Engine	Secure Defaults	3-Gradient Scale	S				
			5-Gradient Scale	S				
SA-8(24)	Security and Privacy Engine	Secure Failure and Recovery	3-Gradient Scale	S				
			5-Gradient Scale	S				
SA-8(25)	Security and Privacy Engine	Economic Security	3-Gradient Scale	S				
			5-Gradient Scale	S				
SA-8(26)	Security and Privacy Engine	Performance Security	3-Gradient Scale	S				
			5-Gradient Scale	S				
SA-8(27)	Security and Privacy Engine	Human Factored Security	3-Gradient Scale	S				
			5-Gradient Scale	S				
SA-8(28)	Security and Privacy Engine	Acceptable Security	3-Gradient Scale	SP				
			5-Gradient Scale	SP				
SA-8(29)	Security and Privacy Engine	Repeatable and Documented Procedures	3-Gradient Scale	S				
			5-Gradient Scale	S				
SA-8(30)	Security and Privacy Engine	Procedural Rigor	3-Gradient Scale	S				
			5-Gradient Scale	S				
SA-8(31)	Security and Privacy Engine	Secure System Modification	3-Gradient Scale	S				
			5-Gradient Scale	S				
SA-8(32)	Security and Privacy Engine	Sufficient Documentation	3-Gradient Scale	S				
			5-Gradient Scale	S				
SA-8(33)	Security and Privacy Engine	Minimization	3-Gradient Scale	P	x			
			5-Gradient Scale	Ps				
SA-9	External System Services		3-Gradient Scale	S	x	x	x	x
			5-Gradient Scale	Sp				
SA-9(1)	External System Services	Risk Assessments and Organizational Approvals	3-Gradient Scale	S				
			5-Gradient Scale	Sp				

Control	Name	Enhancement	Gradient Scale	Value				
SA-9(2)	External System Services	Identification of Functions, Ports, Protocols, and	3-Gradient Scale	S			x	x
			5-Gradient Scale	S				
SA-9(3)	External System Services	Establish and Maintain Trust Relationship with Providers	3-Gradient Scale	S				
			5-Gradient Scale	Sp				
SA-9(4)	External System Services	Consistent Interests of Consumers and Providers	3-Gradient Scale	S				
			5-Gradient Scale	S				
SA-9(5)	External System Services	Processing, Storage, and Service Location	3-Gradient Scale	S				
			5-Gradient Scale	S				
SA-9(6)	External System Services	Organization-controlled Cryptographic Keys	3-Gradient Scale	S				
			5-Gradient Scale	S				
SA-9(7)	External System Services	Organization-controlled Integrity Checking	3-Gradient Scale	S				
			5-Gradient Scale	S				
SA-9(8)	External System Services	Processing and Storage Location — U.S. Jurisdiction	3-Gradient Scale	S				
			5-Gradient Scale	S				
SA-10	Developer Configuration Management		3-Gradient Scale	S			x	x
			5-Gradient Scale	S				
SA-10(1)	Developer Configuration M	Software and Firmware Integrity Verification	3-Gradient Scale	S				
			5-Gradient Scale	S				
SA-10(2)	Developer Configuration M	Alternative Configuration Management Processes	3-Gradient Scale	S				
			5-Gradient Scale	S				
SA-10(3)	Developer Configuration M	Hardware Integrity Verification	3-Gradient Scale	S				
			5-Gradient Scale	S				
SA-10(4)	Developer Configuration M	Trusted Generation	3-Gradient Scale	S				
			5-Gradient Scale	S				
SA-10(5)	Developer Configuration M	Mapping Integrity for Version Control	3-Gradient Scale	S				
			5-Gradient Scale	S				
SA-10(6)	Developer Configuration M	Trusted Distribution	3-Gradient Scale	S				
			5-Gradient Scale	S				
SA-10(7)	Developer Configuration M	Security and Privacy Representatives	3-Gradient Scale	S				
			5-Gradient Scale	Sp				
SA-11	Developer Testing and Evaluation		3-Gradient Scale	SP	x		x	x
			5-Gradient Scale	SP				
SA-11(1)	Developer Testing and Evaluation	Static Code Analysis	3-Gradient Scale	S				
			5-Gradient Scale	S				
SA-11(2)	Developer Testing and Evaluation	Threat Modeling and Vulnerability Analyses	3-Gradient Scale	S				
			5-Gradient Scale	S				
SA-11(3)	Developer Testing and Evaluation	Independent Verification of Assessment Plans and	3-Gradient Scale	SP				
			5-Gradient Scale	SP				

SA-11(4)	Developer Testing and Evaluation	Manual Code Reviews	3-Gradient Scale	S				
			5-Gradient Scale	S				
SA-11(5)	Developer Testing and Evaluation	Penetration Testing	3-Gradient Scale	S				
			5-Gradient Scale	S				
SA-11(6)	Developer Testing and Evaluation	Attack Surface Reviews	3-Gradient Scale	S				
			5-Gradient Scale	S				
SA-11(7)	Developer Testing and Evaluation	Verify Scope of Testing and Evaluation	3-Gradient Scale	S				
			5-Gradient Scale	S				
SA-11(8)	Developer Testing and Evaluation	Dynamic Code Analysis	3-Gradient Scale	S				
			5-Gradient Scale	S				
SA-11(9)	Developer Testing and Evaluation	Interactive Application Security Testing	3-Gradient Scale	S				
			5-Gradient Scale	S				
SA-15	Development Process, Standards, and Tools		3-Gradient Scale	SP			x	x
			5-Gradient Scale	SP			x	x
SA-15(1)	Development Process, Standards, and Tools	Quality Metrics	3-Gradient Scale	S				
			5-Gradient Scale	Sp				
SA-15(2)	Development Process, Standards, and Tools	Security and Privacy Tracking Tools	3-Gradient Scale	SP				
			5-Gradient Scale	SP				
SA-15(3)	Development Process, Standards, and Tools	Criticality Analysis	3-Gradient Scale	S			x	x
			5-Gradient Scale	S			x	x
SA-15(5)	Development Process, Standards, and Tools	Attack Surface Reduction	3-Gradient Scale	S				
			5-Gradient Scale	S				
SA-15(6)	Development Process, Standards, and Tools	Continuous Improvement	3-Gradient Scale	S				
			5-Gradient Scale	S				
SA-15(7)	Development Process, Standards, and Tools	Automated Vulnerability Analysis	3-Gradient Scale	S				
			5-Gradient Scale	S				
SA-15(8)	Development Process, Standards, and Tools	Reuse of Threat and Vulnerability Information	3-Gradient Scale	S				
			5-Gradient Scale	S				
SA-15(10)	Development Process, Standards, and Tools	Incident Response Plan	3-Gradient Scale	SP				
			5-Gradient Scale	SP				
SA-15(11)	Development Process, Standards, and Tools	Archive System or Component	3-Gradient Scale	S				
			5-Gradient Scale	Sp				
SA-15(12)	Development Process, Standards, and Tools	Minimize Personally Identifiable Information	3-Gradient Scale	P				
			5-Gradient Scale	Ps				
SA-16	Developer-provided Training		3-Gradient Scale	SP				x
			5-Gradient Scale	SP				x
SA-17	Developer Security and Privacy Architecture and Design		3-Gradient Scale	SP				x
			5-Gradient Scale	SP				x

ID	Control	Enhancement	Scale	Status				
SA-17(1)	Developer Security and Priv	Formal Policy Model	3-Gradient Scale	SP				
			5-Gradient Scale	SP				
SA-17(2)	Developer Security and Priv	Security-relevant Components	3-Gradient Scale	S				
			5-Gradient Scale	S				
SA-17(3)	Developer Security and Priv	Formal Correspondence	3-Gradient Scale	S				
			5-Gradient Scale	S				
SA-17(4)	Developer Security and Priv	Informal Correspondence	3-Gradient Scale	S				
			5-Gradient Scale	S				
SA-17(5)	Developer Security and Priv	Conceptually Simple Design	3-Gradient Scale	S				
			5-Gradient Scale	S				
SA-17(6)	Developer Security and Priv	Structure for Testing	3-Gradient Scale	S				
			5-Gradient Scale	S				
SA-17(7)	Developer Security and Priv	Structure for Least Privilege	3-Gradient Scale	S				
			5-Gradient Scale	S				
SA-17(8)	Developer Security and Priv	Orchestration	3-Gradient Scale	S				
			5-Gradient Scale	S				
SA-17(9)	Developer Security and Priv	Design Diversity	3-Gradient Scale	S				
			5-Gradient Scale	S				
SA-20	Customized Development of Critical Components		3-Gradient Scale	S				
			5-Gradient Scale	S				
SA-21	Developer Screening		3-Gradient Scale	S				x
			5-Gradient Scale	S				
SA-22	Unsupported System Components		3-Gradient Scale	S				
			5-Gradient Scale	S		x	x	x
SA-23	Specialization		3-Gradient Scale	S				
			5-Gradient Scale	S				

System and Communications Protection		(SC)		Model Collaboration Index Value	Privacy Control Baseline	Low Control Baseline	Moderate Control Baseline	High Control Baseline
SC-1	Policy and Procedures		3-Gradient Scale	SP		x	x	x
			5-Gradient Scale	SP				
SC-2	Separation of System and User Functionality		3-Gradient Scale	S			x	x
			5-Gradient Scale	S				
SC-2(1)	on of System and User Func	Interfaces for Non-Privileged Users	3-Gradient Scale	S				
			5-Gradient Scale	S				
SC-2(2)	on of System and User Func	Disassociability	3-Gradient Scale	S				
			5-Gradient Scale	S				
SC-3	Security Function Isolation		3-Gradient Scale	S				x
			5-Gradient Scale	S				
SC-3(1)	Security Function Isolation	Hardware Separation	3-Gradient Scale	S				
			5-Gradient Scale	S				
SC-3(2)	Security Function Isolation	Access and Flow Control Function	3-Gradient Scale	S				
			5-Gradient Scale	S				
SC-3(3)	Security Function Isolation	Minimize Nonsecurity Functionality	3-Gradient Scale	S				
			5-Gradient Scale	S				
SC-3(4)	Security Function Isolation	Module Coupling and Cohesiveness	3-Gradient Scale	S				
			5-Gradient Scale	S				
SC-3(5)	Security Function Isolation	Layered Structures	3-Gradient Scale	S				
			5-Gradient Scale	S				
SC-4	Information in Shared System Resources		3-Gradient Scale	S			x	x
			5-Gradient Scale	Sp				
SC-4(2)	Information in Shared Syst	Multilevel or Periods Processing	3-Gradient Scale	S				
			5-Gradient Scale	S				
SC-5	Denial-of-Service Protection		3-Gradient Scale	S				
			5-Gradient Scale	S				
SC-5(1)	Denial-of-Service Protectio	Restrict Ability to Attack Other Systems	3-Gradient Scale	S				
			5-Gradient Scale	S				
SC-5(2)	Denial-of-Service Protectio	Capacity, Bandwidth, and Redundancy	3-Gradient Scale	S				
			5-Gradient Scale	S				
SC-5(3)	Denial-of-Service Protectio	Detection and Monitoring	3-Gradient Scale	S				
			5-Gradient Scale	S				
SC-6	Resource Availability		3-Gradient Scale	S				
			5-Gradient Scale	S				

Control	Name	Enhancement	Scale	Value					
SC-7	Boundary Protection		3-Gradient Scale	S					
			5-Gradient Scale	S			x	x	x
SC-7(3)	Boundary Protection	Access Points	3-Gradient Scale	S					
			5-Gradient Scale	S				x	x
SC-7(4)	Boundary Protection	External Telecommunication Services	3-Gradient Scale	S					
			5-Gradient Scale	Sp				x	x
SC-7(5)	Boundary Protection	Deny by Default - Allow by Exception	3-Gradient Scale	S					
			5-Gradient Scale	S				x	x
SC-7(7)	Boundary Protection	Split Tunneling for Remote Devices	3-Gradient Scale	S					
			5-Gradient Scale	S				x	x
SC-7(8)	Boundary Protection	Route Traffic to Authenticated Proxy Servers	3-Gradient Scale	S					
			5-Gradient Scale	S				x	x
SC-7(9)	Boundary Protection	Restrict Threatening Outgoing Communications	3-Gradient Scale	S					
			5-Gradient Scale	S					
SC-7(10)	Boundary Protection	Prevent Exfiltration	3-Gradient Scale	S					
			5-Gradient Scale	Sp					
SC-7(11)	Boundary Protection	Restrict Incoming Communications Traffic	3-Gradient Scale	S					
			5-Gradient Scale	S					
SC-7(12)	Boundary Protection	Host-Based Protection	3-Gradient Scale	S					
			5-Gradient Scale	S					
SC-7(13)	Boundary Protection	Isolation of Security Tools, Mechanisms, and Support	3-Gradient Scale	S					
			5-Gradient Scale	S					
SC-7(14)	Boundary Protection	Protect Against Unauthorized Physical	3-Gradient Scale	S					
			5-Gradient Scale	S					
SC-7(15)	Boundary Protection	Networked Privileged Access	3-Gradient Scale	S					
			5-Gradient Scale	S					
SC-7(16)	Boundary Protection	Prevent Discovery of System Components	3-Gradient Scale	S					
			5-Gradient Scale	S					
SC-7(17)	Boundary Protection	Automated Enforcement of Protocol Formats	3-Gradient Scale	S					
			5-Gradient Scale	S					
SC-7(18)	Boundary Protection	Fail Secure	3-Gradient Scale	S					
			5-Gradient Scale	S					x
SC-7(19)	Boundary Protection	Block Communication From Non-Organizationally	3-Gradient Scale	S					
			5-Gradient Scale	S					
SC-7(20)	Boundary Protection	Dynamic Isolation and Segregation	3-Gradient Scale	S					
			5-Gradient Scale	S					
SC-7(21)	Boundary Protection	Isolation of System Components	3-Gradient Scale	S					
			5-Gradient Scale	S					x

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

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

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

SC-30(2)	Concealment and Misdirec	Randomness	3-Gradient Scale	S					
			5-Gradient Scale	S					
SC-30(3)	Concealment and Misdirec	Change Processing and Storage Locations	3-Gradient Scale	S					
			5-Gradient Scale	S					
SC-30(4)	Concealment and Misdirec	Misleading Information	3-Gradient Scale	S					
			5-Gradient Scale	S					
SC-30(5)	Concealment and Misdirec	Concealment of System Components	3-Gradient Scale	S					
			5-Gradient Scale	S					
SC-31	Covert Channel Analysis		3-Gradient Scale	S					
			5-Gradient Scale	S					
SC-31(1)	Covert Channel Analysis	Test Covert Channels for Exploitability	3-Gradient Scale	S					
			5-Gradient Scale	S					
SC-31(2)	Covert Channel Analysis	Maximum Bandwidth	3-Gradient Scale	S					
			5-Gradient Scale	S					
SC-31(3)	Covert Channel Analysis	Measure Bandwidth in Operational Environments	3-Gradient Scale	S					
			5-Gradient Scale	S					
SC-32	System Partitioning		3-Gradient Scale	S					
			5-Gradient Scale	S					
SC-32(1)	System Partitioning	Separate Physical Domains for Privileged Functions	3-Gradient Scale	S					
			5-Gradient Scale	S					
SC-34	Non-Modifiable Executable Programs		3-Gradient Scale	S					
			5-Gradient Scale	S					
SC-34(1)	Non-Modifiable Executable	No Writable Storage	3-Gradient Scale	S					
			5-Gradient Scale	S					
SC-34(2)	Non-Modifiable Executable	Integrity Protection and Read-Only Media	3-Gradient Scale	S					
			5-Gradient Scale	Sp					
SC-35	External Malicious Code Identification		3-Gradient Scale	S					
			5-Gradient Scale	S					
SC-36	Distributed Processing and Storage		3-Gradient Scale	S					
			5-Gradient Scale	S					
SC-36(1)	Distributed Processing and	Polling Techniques	3-Gradient Scale	S					
			5-Gradient Scale	S					
SC-36(2)	Distributed Processing and	Synchronization	3-Gradient Scale	S					
			5-Gradient Scale	S					
SC-37	Out-of-Band Channels		3-Gradient Scale	S					
			5-Gradient Scale	S					
SC-37(1)	Out-of-Band Channels	Ensure Delivery and Transmission	3-Gradient Scale	S					
			5-Gradient Scale	S					

Control	Name	Enhancement	Scale	Value				
SC-38	Operations Security		3-Gradient Scale	S				
			5-Gradient Scale	Sp				
SC-39	Process Isolation		3-Gradient Scale	S				
			5-Gradient Scale	S		x	x	x
SC-39(1)	Process Isolation	Hardware Separation	3-Gradient Scale	S				
			5-Gradient Scale	S				
SC-39(2)	Process Isolation	Separate Execution Domain Per Thread	3-Gradient Scale	S				
			5-Gradient Scale	S				
SC-40	Wireless Link Protection		3-Gradient Scale	S				
			5-Gradient Scale	S				
SC-40(1)	Wireless Link Protection	Electromagnetic Interference	3-Gradient Scale	S				
			5-Gradient Scale	S				
SC-40(2)	Wireless Link Protection	Reduce Detection Potential	3-Gradient Scale	S				
			5-Gradient Scale	S				
SC-40(3)	Wireless Link Protection	Imitative or Manipulative Communications Deception	3-Gradient Scale	S				
			5-Gradient Scale	S				
SC-40(4)	Wireless Link Protection	Signal Parameter Identification	3-Gradient Scale	S				
			5-Gradient Scale	S				
SC-41	Port and I/O Device Access		3-Gradient Scale	S				
			5-Gradient Scale	S				
SC-42	Sensor Capability and Data		3-Gradient Scale	S				
			5-Gradient Scale	Sp				
SC-42(1)	Sensor Capability and Data	Reporting to Authorized Individuals or Roles	3-Gradient Scale	S				
			5-Gradient Scale	Sp				
SC-42(2)	Sensor Capability and Data	Authorized Use	3-Gradient Scale	S				
			5-Gradient Scale	Sp				
SC-42(4)	Sensor Capability and Data	Notice of Collection	3-Gradient Scale	P				
			5-Gradient Scale	Ps				
SC-42(5)	Sensor Capability and Data	Collection Minimization	3-Gradient Scale	P				
			5-Gradient Scale	Ps				
SC-43	Usage Restrictions		3-Gradient Scale	S				
			5-Gradient Scale	Sp				
SC-44	Detonation Chambers		3-Gradient Scale	S				
			5-Gradient Scale	S				
SC-45	System Time Synchronization		3-Gradient Scale	S				
			5-Gradient Scale	S				
SC-45(1)	System Time Synchronization	Synchronization with Authoritative Time Source	3-Gradient Scale	S				
			5-Gradient Scale	S				

SC-45(2)	System Time Synchronization	Secondary Authoritative Time Source	3-Gradient Scale	S				
			5-Gradient Scale	S				
SC-46	Cross Domain Policy Enforcement		3-Gradient Scale	S				
			5-Gradient Scale	S				
SC-47	Alternate Communications Paths		3-Gradient Scale	S				
			5-Gradient Scale	S				
SC-48	Sensor Relocation		3-Gradient Scale	S				
			5-Gradient Scale	S				
SC-48(1)	Sensor Relocation	Dynamic Relocation of Sensors or Monitoring	3-Gradient Scale	S				
			5-Gradient Scale	S				
SC-49	Hardware-Enforced Separation and Policy Enforcement		3-Gradient Scale	S				
			5-Gradient Scale	S				
SC-50	Software-Enforced Separation and Policy Enforcement		3-Gradient Scale	S				
			5-Gradient Scale	S				
SC-51	Hardware-Based Protection		3-Gradient Scale	S				
			5-Gradient Scale	S				

System and Information Integrity			(SI)	Model Collaboration Index Value	Privacy Control Baseline	Low Control Baseline	Moderate Control Baseline	High Control Baseline
SI-1	Policy and Procedures		3-Gradient Scale	SP	x	x	x	x
			5-Gradient Scale	SP				
SI-2	Flaw Redemption		3-Gradient Scale	S		x	x	x
			5-Gradient Scale	S				
SI-2(2)	Flaw Redemption	Automated Flaw Remediation Status	3-Gradient Scale	S			x	x
			5-Gradient Scale	S				
SI-2(3)	Flaw Redemption	Time to Remediate Flaws and Benchmarks for	3-Gradient Scale	S				
			5-Gradient Scale	S				
SI-2(4)	Flaw Redemption	Automated Patch Management	3-Gradient Scale	S				
			5-Gradient Scale	S				
SI-2(5)	Flaw Redemption	Automatic Software and Firmware Updates	3-Gradient Scale	S				
			5-Gradient Scale	S				
SI-2(6)	Flaw Redemption	Removal of Previous Versions of Software and	3-Gradient Scale	S				
			5-Gradient Scale	S				
SI-3	Malicious Code Protection		3-Gradient Scale	S		x	x	x
			5-Gradient Scale	S				
SI-3(4)	Malicious Code Protection	Updates only by Privileged Users	3-Gradient Scale	S				
			5-Gradient Scale	S				
SI-3(6)	Malicious Code Protection	Testing and Verification	3-Gradient Scale	S				
			5-Gradient Scale	S				
SI-3(8)	Malicious Code Protection	Detect Unauthorized Commands	3-Gradient Scale	S				
			5-Gradient Scale	S				
SI-3(10)	Malicious Code Protection	Malicious Code Analysis	3-Gradient Scale	S				
			5-Gradient Scale	S				
SI-4	System Monitoring		3-Gradient Scale	S		x	x	x
			5-Gradient Scale	Sp				
SI-4(1)	System Monitoring	System-Wide Intrusion Detection System	3-Gradient Scale	S				
			5-Gradient Scale	S				
SI-4(2)	System Monitoring	Automated Tools and Mechanisms for Real-Time	3-Gradient Scale	S			x	x
			5-Gradient Scale	Sp				
SI-4(3)	System Monitoring	Automated Tool and Mechanism Integration	3-Gradient Scale	S				
			5-Gradient Scale	S				
SI-4(4)	System Monitoring	Inbound and Outbound Communications Traffic	3-Gradient Scale	S			x	x
			5-Gradient Scale	Sp				

ID	Category	Name	Scale	Value				
SI-4(5)	System Monitoring	System-Generated Alerts	3-Gradient Scale	S				
			5-Gradient Scale	Sp			x	x
SI-4(7)	System Monitoring	Automated Response to Suspicious Events	3-Gradient Scale	S				
			5-Gradient Scale	S				
SI-4(9)	System Monitoring	Testing of Monitoring Tools and Mechanisms	3-Gradient Scale	S				
			5-Gradient Scale	S				
SI-4(10)	System Monitoring	Visibility of Encrypted Communications	3-Gradient Scale	SP				
			5-Gradient Scale	SP				x
SI-4(11)	System Monitoring	Analyze Communications Traffic Anomalies	3-Gradient Scale	S				
			5-Gradient Scale	S				
SI-4(12)	System Monitoring	Automated Organization-Generated Alerts	3-Gradient Scale	S				
			5-Gradient Scale	Sp				x
SI-4(13)	System Monitoring	Analyze Traffic and Event Patterns	3-Gradient Scale	S				
			5-Gradient Scale	Sp				
SI-4(14)	System Monitoring	Wireless Intrusion Detection	3-Gradient Scale	S				
			5-Gradient Scale	S				x
SI-4(15)	System Monitoring	Wireless to Wireline Communications	3-Gradient Scale	S				
			5-Gradient Scale	S				
SI-4(16)	System Monitoring	Correlate Monitoring Information	3-Gradient Scale	S				
			5-Gradient Scale	Sp				
SI-4(17)	System Monitoring	Integrate Situational Awareness	3-Gradient Scale	S				
			5-Gradient Scale	Sp				
SI-4(18)	System Monitoring	Analyze Traffic and Covert Exfiltration	3-Gradient Scale	S				
			5-Gradient Scale	S				
SI-4(19)	System Monitoring	Risk for Individuals	3-Gradient Scale	SP				
			5-Gradient Scale	SP				
SI-4(20)	System Monitoring	Privileged User	3-Gradient Scale	SP				
			5-Gradient Scale	SP				x
SI-4(21)	System Monitoring	Probationary Periods	3-Gradient Scale	SP				
			5-Gradient Scale	SP				
SI-4(22)	System Monitoring	Unauthorized Network Services	3-Gradient Scale	S				
			5-Gradient Scale	S				x
SI-4(23)	System Monitoring	Host-Based Devices	3-Gradient Scale	S				
			5-Gradient Scale	Sp				
SI-4(24)	System Monitoring	Indicators of Compromise	3-Gradient Scale	S				
			5-Gradient Scale	Sp				
SI-4(25)	System Monitoring	Optimize Network Traffic Analysis	3-Gradient Scale	S				
			5-Gradient Scale	S				

ID	Name	Enhancement	Scale	Value					
SI-5	Security Alerts, Advisories, and Directives		3-Gradient Scale	S					
			5-Gradient Scale	Sp			x	x	x
SI-5(1)	Security Alerts, Advisories,	Automated Alerts and Advisories	3-Gradient Scale	S					
			5-Gradient Scale	S					x
SI-6	Security and Privacy Function Verification		3-Gradient Scale	SP					
			5-Gradient Scale	SP					x
SI-6(2)	Security and Privacy Functi	Automation Support for Distributed Testing	3-Gradient Scale	SP					
			5-Gradient Scale	SP					
SI-6(3)	Security and Privacy Functi	Report Verification Results	3-Gradient Scale	SP					
			5-Gradient Scale	SP					
SI-7	Software, Firmware, and Information Integrity		3-Gradient Scale	S					
			5-Gradient Scale	Sp				x	x
SI-7(1)	Software, Firmware, and In	Integrity Checks	3-Gradient Scale	S					
			5-Gradient Scale	S				x	x
SI-7(2)	Software, Firmware, and In	Automated Notifications of Integrity Violations	3-Gradient Scale	S					
			5-Gradient Scale	Sp					x
SI-7(3)	Software, Firmware, and In	Centrally Managed Integrity Tools	3-Gradient Scale	S					
			5-Gradient Scale	S					
SI-7(5)	Software, Firmware, and In	Automated Response to Integrity Violations	3-Gradient Scale	S					
			5-Gradient Scale	Sp					x
SI-7(6)	Software, Firmware, and In	Cryptographic Protection	3-Gradient Scale	S					
			5-Gradient Scale	S					
SI-7(7)	Software, Firmware, and In	Integrity of Detection and Response	3-Gradient Scale	S					
			5-Gradient Scale	S				x	x
SI-7(8)	Software, Firmware, and In	Auditing Capability for Significant Events	3-Gradient Scale	S					
			5-Gradient Scale	Sp					
SI-7(9)	Software, Firmware, and In	Verify Boot Process	3-Gradient Scale	S					
			5-Gradient Scale	S					
SI-7(10)	Software, Firmware, and In	Protection of Boot Firmware	3-Gradient Scale	S					
			5-Gradient Scale	S					
SI-7(12)	Software, Firmware, and In	Integrity Verification	3-Gradient Scale	S					
			5-Gradient Scale	S					
SI-7(15)	Software, Firmware, and In	Code Authentication	3-Gradient Scale	S					
			5-Gradient Scale	S					x
SI-7(16)	Software, Firmware, and In	Time Limit on Process Execution without	3-Gradient Scale	S					
			5-Gradient Scale	S					
SI-7(17)	Software, Firmware, and In	Runtime Application Self-Protection	3-Gradient Scale	S					
			5-Gradient Scale	S					

ID	Control Name	Enhancement	Scale					
SI-8	Spam Protection		3-Gradient Scale	S				
			5-Gradient Scale	S			x	x
SI-8(2)	Spam Protection	Automatic Updates	3-Gradient Scale	S				
			5-Gradient Scale	S			x	x
SI-8(3)	Spam Protection	Continuous Learning Capability	3-Gradient Scale	S				
			5-Gradient Scale	S				
SI-10	Information Input Validation		3-Gradient Scale	S				
			5-Gradient Scale	S			x	x
SI-10(1)	Information Input Validatio	Manual Override Capability	3-Gradient Scale	S				
			5-Gradient Scale	S				
SI-10(2)	Information Input Validatio	Review and Resolve Errors	3-Gradient Scale	S				
			5-Gradient Scale	S				
SI-10(3)	Information Input Validatio	Predictable Behavior	3-Gradient Scale	S				
			5-Gradient Scale	S				
SI-10(4)	Information Input Validatio	Timing Interactions	3-Gradient Scale	S				
			5-Gradient Scale	S				
SI-10(5)	Information Input Validatio	Restrict Inputs to Trusted Sources and Approved	3-Gradient Scale	S				
			5-Gradient Scale	S				
SI-10(6)	Information Input Validatio	Injection Prevention	3-Gradient Scale	S				
			5-Gradient Scale	S				
SI-11	Error Handling		3-Gradient Scale	S				
			5-Gradient Scale	Sp			x	x
SI-12	Information Management and Retention		3-Gradient Scale	SP				
			5-Gradient Scale	SP	x	x	x	x
SI-12(1)	Information Management a	Limit Personally Identifiable Information Elements	3-Gradient Scale	SP				
			5-Gradient Scale	SP	x			
SI-12(2)	Information Management a	Minimize Personally Identifiable Information in	3-Gradient Scale	SP				
			5-Gradient Scale	SP	x			
SI-12(3)	Information Management a	Information Disposal	3-Gradient Scale	SP				
			5-Gradient Scale	SP	x			
SI-13	Predictable Failure Prevention		3-Gradient Scale	S				
			5-Gradient Scale	S				
SI-13(1)	Predictable Failure Prevent	Transferring Component Responsibilities	3-Gradient Scale	S				
			5-Gradient Scale	S				
SI-13(3)	Predictable Failure Prevent	Manual Transfer Between Components	3-Gradient Scale	S				
			5-Gradient Scale	S				
SI-13(4)	Predictable Failure Prevent	Standby Component Installation and Notification	3-Gradient Scale	S				
			5-Gradient Scale	S				

ID	Control	Enhancement	Scale	Value					
SI-13(5)	Predictable Failure Prevent	Failover Capability	3-Gradient Scale	S					
			5-Gradient Scale	S					
SI-14	Non-Persistence		3-Gradient Scale	S					
			5-Gradient Scale	S					
SI-14(1)	Non-Persistence	Refresh from Trusted Sources	3-Gradient Scale	S					
			5-Gradient Scale	S					
SI-14(2)	Non-Persistence	Non-Persistent Information	3-Gradient Scale	S					
			5-Gradient Scale	S					
SI-14(3)	Non-Persistence	Non-Persistent Connectivity	3-Gradient Scale	S					
			5-Gradient Scale	S					
SI-15	Information Output Filtering		3-Gradient Scale	S					
			5-Gradient Scale	S					
SI-16	Memory Protection		3-Gradient Scale	S					
			5-Gradient Scale	S				x	x
SI-17	Fail-Safe Procedures		3-Gradient Scale	S					
			5-Gradient Scale	S					
SI-18	Personally Identifiable Information Quality Operations		3-Gradient Scale	P					
			5-Gradient Scale	Ps	x				
SI-18(1)	Personally Identifiable Info	Automation Support	3-Gradient Scale	SP					
			5-Gradient Scale	SP					
SI-18(2)	Personally Identifiable Info	Data Tags	3-Gradient Scale	P					
			5-Gradient Scale	Ps					
SI-18(3)	Personally Identifiable Info	Collection	3-Gradient Scale	P					
			5-Gradient Scale	Ps					
SI-18(4)	Personally Identifiable Info	Individual Requests	3-Gradient Scale	P					
			5-Gradient Scale	Ps	x				
SI-18(5)	Personally Identifiable Info	Notice of Correction or Deletion	3-Gradient Scale	P					
			5-Gradient Scale	Ps					
SI-19	De-Identification		3-Gradient Scale	P					
			5-Gradient Scale	Ps	x				
SI-19(1)	De-Identification	Collection	3-Gradient Scale	P					
			5-Gradient Scale	Ps					
SI-19(2)	De-Identification	Archiving	3-Gradient Scale	SP					
			5-Gradient Scale	SP					
SI-19(3)	De-Identification	Release	3-Gradient Scale	P					
			5-Gradient Scale	Ps					
SI-19(4)	De-Identification	Removal, Masking, Encryption, Hashing, or	3-Gradient Scale	SP					
			5-Gradient Scale	SP					

SI-19(5)	De-Identification	Statistical Disclosure Control	3-Gradient Scale	P					
			5-Gradient Scale	Ps					
SI-19(6)	De-Identification	Differential Privacy	3-Gradient Scale	P					
			5-Gradient Scale	P					
SI-19(7)	De-Identification	Validated Algorithms and Software	3-Gradient Scale	SP					
			5-Gradient Scale	SP					
SI-19(8)	De-Identification	Motivated Intruder	3-Gradient Scale	SP					
			5-Gradient Scale	SP					
SI-20	Tainting		3-Gradient Scale	S					
			5-Gradient Scale	Sp					
SI-21	Information Refresh		3-Gradient Scale	S					
			5-Gradient Scale	Sp					
SI-22	Information Diversity		3-Gradient Scale	S					
			5-Gradient Scale	Sp					
SI-23	Information Fragmentation		3-Gradient Scale	S					
			5-Gradient Scale	Sp					

Supply Chain Risk Management			(SR)	Model Collaboration Index Value	Privacy Control Baseline	Low Control Baseline	Moderate Control Baseline	High Control Baseline
SR-1	Policy and Procedures		3-Gradient Scale	SP		x	x	x
			5-Gradient Scale	SP				
SR-2	Supply Chain Risk Management Plan		3-Gradient Scale	SP		x	x	x
			5-Gradient Scale	SP				
SR-2(1)	Supply Chain Risk Manager	Establish SCRM Team	3-Gradient Scale	SP		x	x	x
			5-Gradient Scale	SP				
SR-3	Supply Chain Controls and Processes		3-Gradient Scale	S		x	x	x
			5-Gradient Scale	Sp				
SR-3(1)	Supply Chain Controls and	Diverse Supply Base	3-Gradient Scale	S				
			5-Gradient Scale	S				
SR-3(2)	Supply Chain Controls and	Limitation of Harm	3-Gradient Scale	S				
			5-Gradient Scale	Sp				
SR-3(3)	Supply Chain Controls and	Sub-tier Flow Down	3-Gradient Scale	S				
			5-Gradient Scale	Sp				
SR-4	Provenance		3-Gradient Scale	S				
			5-Gradient Scale	S				
SR-4(1)	Provenance	Identity	3-Gradient Scale	S				
			5-Gradient Scale	S				
SR-4(2)	Provenance	Track and Trace	3-Gradient Scale	S				
			5-Gradient Scale	S				
SR-4(3)	Provenance	Validate as Genuine and Not Altered	3-Gradient Scale	S				
			5-Gradient Scale	S				
SR-4(4)	Provenance	Supply Chain Integrity - Pedigree	3-Gradient Scale	S				
			5-Gradient Scale	S				
SR-5	Acquisition Strategies, Tools, and Methods		3-Gradient Scale	S		x	x	x
			5-Gradient Scale	Sp				
SR-5(1)	Acquisition Strategies, Tool	Adequate Supply	3-Gradient Scale	S				
			5-Gradient Scale	S				
SR-5(2)	Acquisition Strategies, Tool	Assessment Prior to Selection, Acceptance,	3-Gradient Scale	S				
			5-Gradient Scale	S				
SR-6	Supplier Assessments and Reviews		3-Gradient Scale	S			x	x
			5-Gradient Scale	Sp				
SR-6(1)	Supplier Assessments and	Testing and Analysis	3-Gradient Scale	S				
			5-Gradient Scale	S				

ID	Control	Enhancement	Scale	Value				
SR-7	Supply Chain Operations Security		3-Gradient Scale	S				
			5-Gradient Scale	Sp				
SR-8	Notification Agreements		3-Gradient Scale	SP		x	x	x
			5-Gradient Scale	SP		x	x	x
SR-9	Tamper Resistance and Detection		3-Gradient Scale	S				x
			5-Gradient Scale	S				x
SR-9(1)	Tamper Resistance and Det	Multiple Stages of SDLC	3-Gradient Scale	S				x
			5-Gradient Scale	S				x
SR-10	Inspection of Systems or Components		3-Gradient Scale	S		x	x	x
			5-Gradient Scale	S		x	x	x
SR-11	Component Authenticity		3-Gradient Scale	S		x	x	x
			5-Gradient Scale	S		x	x	x
SR-11(1)	Component Authenticity	Anti-counterfeit Training	3-Gradient Scale	S		x	x	x
			5-Gradient Scale	S		x	x	x
SR-11(2)	Component Authenticity	Configuration Control for Component Service and	3-Gradient Scale	S		x	x	x
			5-Gradient Scale	S		x	x	x
SR-11(3)	Component Authenticity	Anti-counterfeit Scanning	3-Gradient Scale	S				
			5-Gradient Scale	S				
SR-12	Component Disposal		3-Gradient Scale	S		x	x	x
			5-Gradient Scale	Sp		x	x	x