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WHITE PAPER

Migration from EDE to ARC-AMPE System and Communications Protection (SC) controls

CMS requirements for Direct Enrollment Entities

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Purpose

This white paper provides a guide for Direct Enrollment Entities (DEEs) to upgrade their Enhanced Direct Enrollment (EDE) System Security and Privacy Plans (SSPPs) to the Acceptable Risk Controls for ACA, Medicaid, and Provider Entities (ARC-AMPE).

Due to the substantial number of controls, and to facilitate ease of use, this white paper is one of a series of 20 which divides the ARC-AMPE by control family. This white paper addresses the System and Communication Protection controls.

ARC-AMPE Control Families	
Control Family	**Number of Controls**
Access Control (This Document)	46
Awareness and Training	9
Audit and Accountability	18
Assessment, Authorization, and Monitoring	12
Configuration Management	25
Contingency Planning	16
Identification and Authentication	21
Incident Response	15
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Background

Affordable Care Act

The Affordable Care Act (ACA) revolutionized access to healthcare in the United States by establishing Health Insurance Marketplaces (HIMs). Enhanced Direct Enrollment (EDE) is an ACA innovation that allows third-party entities, such as insurers and web-brokers, to offer consumers a seamless application and enrollment experience directly through their platforms. This approach improves accessibility to the marketplace while maintaining compliance with federal regulations.

Enhanced Direct Enrollment

> *Direct Enrollment (DE) is a service that allows approved Qualified Health Plan (QHP) issuers and third-party web-brokers (online insurance sellers) to enroll consumers in Exchange coverage, with or without the assistance of an agent/broker, directly from their websites.*
>
> *The Enhanced Direct Enrollment (EDE) user experience goes well beyond the plan shopping and enrollment experience that is available via Classic DE. EDE is a service that allows approved EDE entities (e.g., QHP issuers and web-brokers approved to participate in EDE) to provide a comprehensive consumer experience including the eligibility application, Exchange enrollment, and post-enrollment year-round customer service capabilities for consumers and agents/brokers working on behalf of consumers, directly on issuer and web-broker websites. Through EDE, approved EDE Entities build and host a version of the HealthCare.gov eligibility application directly on their websites that securely integrates with a back-end suite of Federally Facilitated Exchanges (FFEs) application programing interfaces (APIs) to support application, enrollment and more.*
>
> Source: cms.gov

CMS oversight

The Centers for Medicare & Medicaid Services (CMS) exercises oversight of DEEs, which are responsible for overseeing and managing marketplace operations to ensure compliance with federal regulations, safeguard consumer data, and maintain the integrity of the HIM. Key aspects of CMS's oversight include:

- Requiring DEEs to undergo rigorous audit processes, including demonstrating compliance with security and privacy control requirements.
- Enforcing strict data protection measures in the DE environment to ensure the confidentiality, integrity, and availability of consumer data and requiring entities to implement cybersecurity controls, conduct regular risk assessments, and submit independent security audits.
- Requiring DEEs to adhere to operational policies and procedures, such as providing accurate plan information, maintaining transparent consumer interactions, and facilitating HIM enrollment without bias.
- Requiring DEEs to report any data breaches or system incidents promptly and to take corrective actions as directed by CMS and the U.S. Department of Health and Human Services (HHS) Office for Civil Rights (OCR).
- Requiring DEEs to renew their Authority to Connect (ATC) annually, providing updated documentation and evidence of continued compliance with all requirements.

Through these oversight mechanisms, CMS ensures that DEEs in the healthcare.gov environment deliver secure, compliant, and user-friendly services, aligning with the ACA's mission to expand access to quality health coverage.

ARC-AMPE

CMS published the ARC-AMPE for Direct Enrollment Entities (DEEs) Version 1.0 dated July 7th, 2025. This framework replaces the EDE security and privacy guidelines:

- ARC-AMPE Volume 1 contains high-level guidance, and Volume 2 has the minimum-level security and privacy controls.
- ARC-AMPE Volume 2 is the new format for the SSPP for DEEs.
- The compliance date for DEEs is June 2026.

The minimum control baseline for ARC-AMPE DEE compliance consists of 308 controls which have been derived from the National Institute of Standards and Technology (NIST) Special Publication (SP) 800-53 Revision 5, “Security and Privacy Controls for Information Systems and Organizations.”

The number of controls required for the mandatory baseline represents a significant increase from the EDE baseline (295 controls), and DEEs should be prepared for an increased level of effort for developing the SSPP and submitting more artifacts during audits.

Another major change is the format of the SSPP template. EDE used a Microsoft Word format whereas ARC-AMPE is an Excel spreadsheet.

Control mapping

The mapping of the controls found in the EDE audit baseline (based on NIST SP 800-53 Revision 4) to their new locations in ARC-AMPE (based on NIST SP 800-53 Revision 5) are included in the table below. The table lists the EDE control directly compared with the ARC-AMPE equivalent control name, as applicable. The table also documents any new ARC-AMPE controls that do not have EDE equivalents, as well as those controls that have been combined or withdrawn for ARC-AMPE.

Note also that all references to NIST SP 800-53 Revision 5 included below are based on version 5.1.1, which was issued on November 7, 2023.

System and Communications Protection (SC)

The set of controls in this family focus on how the Exchange shall: (1) monitor, control, and protect Exchange communications (i.e., information transmitted or received by Exchange IT systems) at the external boundaries and key internal boundaries of the IT systems; and (2) employ architectural designs, software development techniques, and systems engineering principles that promote effective IS within Exchange IT systems.

EDE		ARC-AMPE	
Control	**System and Communications Protection Policy and Procedures**	**Control**	**Policy and Procedures**
SC-1: System and Communications Protection Policy and Procedures The organization: **a.** Develops, documents, and disseminates to applicable personnel: **1.** A system and communications protection policy that addresses purpose, scope, roles, responsibilities, management commitment, coordination among organizational entities, and compliance; and **2.** Procedures to facilitate the implementation of the system and communications protection policy and associated system and communications protection controls; and **b.** Reviews and updates (as necessary) the current: **1.** System and communications protection policy within every three (3) years; and **2.** System and communications protection procedures within every three (3) years.		**SC-01: Policy and Procedures** **a.** Develop, document, and disseminate to organization-defined personnel and roles: **1.** Organization-level system and communications protection policy that: **(a)** Addresses purpose, scope, roles, responsibilities, management commitment, coordination among organizational entities, and compliance; and **(b)** Is consistent with applicable laws, Executive Orders, directives, regulations, policies, standards, and guidelines, and **2.** Procedures to facilitate the implementation of the system and communications protection policy and associated system and communications protection controls; **b.** Designate an organization-defined official to manage the deployment, documentation, and dissemination of the system and communications protection policy and procedures; and **c.** Review and update (as necessary) the current system and communications protection: **1.** Policy at least every one (1) year and following organization-defined events; and **2.** Procedures at least every (1) year and following organization-defined events.	
Control	**Application Partitioning**	**Control**	**Separation of System and User Functionality**
SC-2: Application Partitioning **a.** The information system separates user functionality (including user interface services) from information system management functionality. **b.** In any situation where personally identifiable information (PII) is present, PII must be stored on a logical or physical partition separate from the applications and software partition.		**SC-02: Separation of System and User Functionality** Separate user functionality, including user interface services, from system management functionality.	
Control	**Information in Shared Resources**	**Control**	**Information in Shared System Resources**
SC-4: Information in Shared Resources The information system prevents unauthorized and unintended information transfer via shared system resources. **Implementation Standards**		**SC-04: Information in Shared System Resources** Prevent unauthorized and unintended information transfer via shared system resources.	

EDE		ARC-AMPE	
1. Ensure that users of shared system resources cannot intentionally or unintentionally access information remnants, including encrypted representations of information, produced by the actions of a prior user or system process acting on behalf of a prior user. **2.** Ensure that system resources shared between two (2) or more users are released back to the information system and are protected from accidental or purposeful disclosure.			
Control	**Denial of Service Protection**	**Control**	**Denial-of-Service Protection**
SC-5: Denial of Service Protection The information system protects against or limits the effects of the types of denial of service attacks defined in NIST SP 800-61, Computer Security Incident Handling Guide, and the following websites by employing defined security safeguards (defined in the applicable system security plan): • SANS Organization: www.sans.org/dosstep; • SANS Organization's Roadmap to Defeating DDoS: www.sans.org/dosstep; and • NIST National Vulnerability Database: http://nvd.nist.gov/cvss.cfm. **Implementation Standards** The organization defines a list of types of denial of service attacks (including but not limited to flooding attacks and software/logic attacks) or provides a reference to source for current list.		**SC-05: Denial-of-Service Protection** **a.** Protect against the effects of the following denial-of-service event types: at a minimum, Internet Control Message Protocol (ICMP) flood, SYN flood, slowloris, buffer overflow attack, and volume attack; and **b.** Employ the following controls to achieve the denial-of-service objective: organization-defined controls by type of denial-of-service event.		
Control	**Resource Availability**	**Control**	**N/A**
SC-6: Resource Availability The information system protects the availability of resources by allocating resources by priority and/or quota.		Withdrawn from the minimum baseline.	
Control	**Boundary Protection**	**Control**	**Boundary Protection**
SC-7: Boundary Protection The information system: **a.** Monitors and controls communications at the external boundary, both physically and logically, of the system and at key internal boundaries within the system; **b.** Implements subnetworks for publicly accessible system components that are logically separated from internal organizational networks; and **c.** Connects to external networks or information systems only through managed interfaces consisting of boundary protection devices arranged in accordance with an organizational security architecture. **Implementation Standards** **1.** Ensure that access to all proxies is denied, except for those hosts, ports, and services that are explicitly required.		**SC-07: Boundary Protection** **a.** Monitor and control communications at the external managed interfaces to the system and at key internal managed interfaces within the system; **b.** Implement subnetworks for publicly accessible system components that are logically separated from internal organizational networks; and **c.** Connect to external networks or systems only through managed interfaces consisting of boundary protection devices arranged in accordance with an organizational security and privacy architecture.	

EDE	ARC-AMPE
2. Utilize stateful inspection/application firewall hardware and software. **3.** Utilize firewalls from at least two (2) or more different vendors at the various levels within the network to reduce the possibility of compromising the entire network. **4.** If the system has an outward facing Web or email presence to the public internet, the organization must implement and support a technical capability to detect malware in web traffic traversing the organization's boundary by: a. Monitoring assets without the need to deploy software agents (zero client footprint); b. Dynamically generating actionable malware intelligence; c. Detecting and stopping web-based and email attacks; and d. Sending alert data to the organization's security information event management (SIEM) system. **5.** Aggregated boundary protection device information must be searchable by the organization: a. Information is provided to the organization in a format compliant with organization (e.g., Continuous Diagnostics and Mitigation) requirements; b. Information sources include boundary protection systems, appliances, devices, services, and applications; and c. Organization directed aggregated boundary protection device information collection rules/requests (e.g., sources, queries, data calls) must be implemented/provided within the timeframe specified in the request. **6.** As required by the organization, raw boundary protection device information from relevant automated tools must be available in an unaltered format to the organization.	
Control **Access Points**	**Control** **Access Points**
SC-7 (3): Access Points The organization limits the number of external network connections to the information system.	**SC-07(03): Access Points** Limit the number of external network connections to the system.
Control **External Telecommunications Services**	**Control** **External Telecommunications Services**
SC-7 (4): External Telecommunications Services The organization: **a.** Implements a managed interface for each external telecommunication service; **b.** Establishes a traffic flow policy for each managed interface; **c.** Protects the confidentiality and integrity of the information transmitted across each interface; **d.** Documents each exception to the traffic flow policy with a supporting mission/business need and duration of that need; and **e.** Reviews exceptions to the traffic flow policy within every three hundred sixty-five (365) days or implementation of a major new system, and removes exceptions that are no longer supported by an explicit mission/business need.	**SC-07(04): External Telecommunications Services** **a.** Implement a managed interface for each external telecommunication service; **b.** Establish a traffic flow policy for each managed interface; **c.** Protect the confidentiality and integrity of the information being transmitted across each interface; **d.** Document each exception to the traffic flow policy with a supporting mission or business need and duration of that need; **e.** Review exceptions to the traffic flow policy within every one (1) year or whenever there is a change in the threat environment that warrants a review of the exceptions and remove exceptions that are no longer supported by an explicit mission or business need;

EDE		ARC-AMPE	
		f. Prevent unauthorized exchange of control plane traffic with external networks; **g.** Publish information to enable remote networks to detect unauthorized control plane traffic from internal networks; and **h.** Filter unauthorized control plane traffic from external networks.	
Control	**Deny by Default/Allow by Exception**	**Control**	**Deny By Default — Allow By Exception**
SC-7 (5): Deny by Default/Allow by Exception The information system at managed interfaces denies network communications traffic by default and allows network communications traffic by exception (i.e., deny all, permit by exception).		**SC-07(05): Deny By Default — Allow By Exception** Deny network communications traffic by default and allow network communications traffic by exception: at managed interfaces as documented in the applicable System Security and Privacy Plan (SSPP).	
Control	**Prevent Split Tunneling for Remove Drivers**	**Control**	**Split Tunneling for Remote Devices**
SC-7 (7): Prevent Split Tunneling for Remove Drivers The information system, in conjunction with a remote device, prevents the device from simultaneously establishing non-remote connections with the system and communicating via some other connection to resources in external networks.		**SC-07(07): Split Tunneling for Remote Devices** Prevent split tunneling for remote devices connecting to organizational systems unless the split tunnel is securely provisioned using organization-defined security safeguards.	
Control	**Route Traffic to Authenticated Proxy Servers**	**Control**	**Route Traffic to Authenticated Proxy Servers**
SC-7 (8): Route Traffic to Authenticated Proxy Servers The information system routes all user-initiated internal communications traffic to untrusted external networks through authenticated proxy servers at managed interfaces. **Implementation Standard** The organization defines the internal communications traffic to be routed by the information system through authenticated proxy servers and the external networks that are the prospective destination of such traffic routing.		**SC-07(08): Route Traffic to Authenticated Proxy Servers** Route organization-defined internal communications traffic to organization-defined external networks through authenticated proxy servers at managed interfaces.	
Control	**Host-Based Protection**	**Control**	**Host-Based Protection**
SC-7 (12): Host-Based Protection The organization implements defined, host-based boundary protection mechanisms at defined information system components, including servers, workstations, and mobile devices.		**SC-07(12): Host-Based Protection** Implement Host Intrusion Prevention System (HIPS), Host Intrusion Detection System (HIDS), or at a minimum a host-based firewall at organization-defined system components.	
Control	**Isolation of Security Tools**	**Control**	**N/A**
SC-7 (13): Isolation of Security Tools The organization defines key information security tools, mechanisms, and support components associated with system and security administration; and isolates those tools, mechanisms, and support components from other internal information system components via physically or logically separate subnets		Withdrawn from the minimum baseline.	

EDE		ARC-AMPE	
Control	**Fail Secure**	**Control**	**Fail Secure**
SC-7 (18): Fail Secure The information system fails securely in the event of an operational failure of a boundary protection device.		**SC-07(18): Fail Secure** Prevent systems from entering unsecure states in the event of an operational failure of a boundary protection device.	
Control	**N/A**	**Control**	**Boundary Protection | Personally Identifiable Information**
New NIST SP 800-53 Rev. 5 Control and applicable to ARC-AMPE		**SC-07(24): Boundary Protection | Personally Identifiable Information** For systems that process Personally Identifiable Information (PII): **a.** Apply the following processing rules to data elements of PII: processing rules for compliance with ACA, Privacy Act, and other applicable PII processing laws and regulations. **b.** Monitor for permitted processing at the external interfaces to the system and at key internal boundaries within the system; **c.** Document each processing exception; and **d.** Review and remove exceptions that are no longer supported.	
Control	**N/A**	**Control**	**Boundary Protection | Separate Subnets to Isolate Functions**
New NIST SP 800-53 Rev. 5 Control and applicable to ARC-AMPE		**SC-07(29): Boundary Protection | Separate Subnets to Isolate Functions** Implement physically or logically separate subnetworks to isolate organization-defined critical system components and functions.	
Control	**Transmission Confidentiality and Integrity**	**Control**	**Transmission Confidentiality and Integrity**
SC-8: Transmission Confidentiality and Integrity The information system protects the confidentiality and integrity of transmitted information. Any transmitted data containing sensitive information must be encrypted using a FIPS 140-2 validated module (see SC-13).		**SC-08: Transmission Confidentiality and Integrity** Protect the confidentiality and integrity of transmitted information.	
Control	**Cryptographic or Alternate Physical Protection**	**Control**	**Cryptographic Protection**
SC-8 (1): Cryptographic or Alternate Physical Protection The information system implements cryptographic mechanisms to prevent unauthorized disclosure of information and detect changes to information during transmission unless otherwise protected by approved alternative safeguards and defined in the applicable system security plan and Information System Risk Assessment.		**SC-08(01): Cryptographic Protection** Implement cryptographic mechanisms to prevent unauthorized disclosure of information and detect changes to information during transmission.	

<table>
<tr><th colspan="2">EDE</th><th colspan="2">ARC-AMPE</th></tr>
<tr><td colspan="2">FIPS-validated encryption or protected distribution systems are used to protect PII to ensure the information's confidentiality and integrity during transmission.</td><td colspan="2"></td></tr>
<tr><td>Control</td><td>Pre/Post Transmission Handling</td><td>Control</td><td>Pre- and Post-Transmission Handling</td></tr>
<tr><td colspan="2">SC-8 (2): Pre/Post Transmission Handling
The information system maintains the confidentiality and integrity of information during preparation for transmission and during reception.</td><td colspan="2">SC-08(02): Pre- and Post-Transmission Handling
Maintain the confidentiality and integrity of information during preparation for transmission and during reception.</td></tr>
<tr><td>Control</td><td>Network Disconnect</td><td>Control</td><td>Network Disconnect</td></tr>
<tr><td colspan="2">SC-10: Network Disconnect
The information system:
a. Terminates the network connection associated with a communications session at the end of the session, or:
1. Forcibly de-allocates communications session Dynamic Host Configuration Protocol (DHCP) leases after seven (7) days; and
2. Forcibly disconnects inactive VPN connections after thirty (30) minutes or less of inactivity; and
b. Terminates or suspends network connections (i.e., a system-to-system interconnection) upon issuance of an order by the organization's Chief Information Officer (CIO), Chief Information Security Officer (CISO), or Senior Official for Privacy (SOP).

Implementation Standards
1. The information system terminates the network connection associated with a communications session at the end of the session, or after thirty (30) minutes for all RAS-based sessions and thirty (30) to sixty (60) minutes for non-interactive users, of inactivity.
2. Long running batch jobs and other operations are not subject to this time limit.</td><td colspan="2">SC-10: Network Disconnect
a. Terminate the network connection associated with a communications session at the end of the session or after thirty (30) minutes for privileged sessions and no longer than sixty (60) minutes for general user sessions of inactivity.</td></tr>
<tr><td>Control</td><td>Cryptographic Key Establishment and Management</td><td>Control</td><td>Cryptographic Key Establishment and Management</td></tr>
<tr><td colspan="2">SC-12: Cryptographic Key Establishment and Management
When cryptography is required and used within the information system, the organization establishes and manages cryptographic keys for required cryptography employed within the information system in accordance with defined organizational requirements (defined in, or referenced by, the applicable security plan) for key generation, distribution, storage, access, and destruction.</td><td colspan="2">SC-12: Cryptographic Key Establishment and Management
Establish and manage cryptographic keys when cryptography is employed within the system in accordance with the following key management requirements: organization-defined requirements for key generation, distribution, storage, access, and destruction.</td></tr>
<tr><td>Control</td><td>Symmetric Keys</td><td>Control</td><td>N/A</td></tr>
<tr><td colspan="2">SC-12 (2): Symmetric Keys
The organization produces, controls, and distributes symmetric cryptographic keys using NIST FIPS-compliant key management technology and processes.</td><td colspan="2">Withdrawn from the minimum baseline.</td></tr>
</table>

EDE		ARC-AMPE	
Control	**Cryptographic Protection**	**Control**	**Cryptographic Protection**
SC-13: Cryptographic Protection The information system implements cryptographic mechanisms, in transit and at rest, validated under the Cryptographic Module Validation Program (see http://csrc.nist.gov/groups/STM/cmvp/validation.html) and in accordance with applicable federal laws, directives, policies, regulations, and standards.		**SC-13: Cryptographic Protection** **a.** Determine the organization-defined cryptographic uses; and **b.** Implement the following types of cryptography required for each specified cryptographic use: at a minimum, the most current FIPS 140-compliant cryptography.	
Control	**Public Key Infrastructure Certificates**	**Control**	**Public Key Infrastructure Certificates**
SC-17: Public Key Infrastructure Certificates The organization issues public key certificates under an appropriate certificate policy or obtains public key certificates from an approved service provider.		**SC-17: Public Key Infrastructure Certificates** **a.** Issue public key certificates under an appropriate certificate policy or obtain public key certificates from an approved service provider; and **b.** Include only approved trust anchors in trust stores or certificate stores managed by the organization.	
Control	**Mobile Code**	**Control**	**Mobile Code**
SC-18: Mobile Code The organization: **a.** Defines acceptable and unacceptable mobile code and mobile code technologies; **b.** Establishes usage restrictions and implementation guidance for acceptable mobile code and mobile code technologies; and **c.** Authorizes, monitors, and controls the use of mobile code within the information system.		**SC-18: Mobile Code** **a.** Define acceptable and unacceptable mobile code and mobile code technologies; and **b.** Authorize, monitor, and control the use of mobile code within the system.	
Control	**Voice Over Internet Protocol**	**Control**	**N/A**
SC-19: Voice Over Internet Protocol The organization prohibits the use of VoIP technologies, unless explicitly authorized, in writing, by the CIO or his/her designated representative. If VoIP is authorized, the organization: **a.** Establishes usage restrictions and implementation guidance for VoIP technologies based on the potential to cause damage to the information system if used maliciously; **b.** Authorizes, monitors, and controls the use of VoIP within the information system; and **c.** Ensures VoIP equipment used to transmit or discuss sensitive information is protected with organization's (FIPS 140-2 validated module) encryption requirements.		Withdrawn control.	
Control	**Secure Name/Address Resolution Service**	**Control**	**Secure Name/Address Resolution Service (Authoritative Source)**
SC-20: Secure Name/Address Resolution Service The information system: **a.** Provides additional data origin authentication and integrity verification artifacts along with the authoritative name resolution data the system returns in response to external name/address resolution queries; and		**SC-20: Secure Name/Address Resolution Service (Authoritative Source)** **a.** Provide additional data origin authentication and integrity verification artifacts along with the authoritative name resolution data the system returns in response to external name/address resolution queries; and	

EDE		ARC-AMPE	
b. Provides the means to indicate the security status of child zones and (if the child supports secure resolution services) to enable verification of a chain of trust among parent and child domains when operating as part of a distributed, hierarchical namespace.		**b.** Provide the means to indicate the security status of child zones and (if the child supports secure resolution services) to enable verification of a chain of trust among parent and child domains, when operating as part of a distributed, hierarchical namespace.	
Control	**Secure Name/Address Resolution Service**	**Control**	**Secure Name/Address Resolution Service (Recursive or Caching Resolver)**
SC-21: Secure Name/Address Resolution Service The information system requests and performs data origin authentication and data integrity verification on the name/address resolution responses the system receives from authoritative sources.		**SC-21: Secure Name/Address Resolution Service (Recursive or Caching Resolver)** Request and perform data origin authentication and data integrity verification on the name/address resolution responses the system receives from authoritative sources.	
Control	**Architecture and Provisioning for Name/Address Resolution Service**	**Control**	**Architecture and Provisioning for Name/Address Resolution Service**
SC-22: Architecture and Provisioning for Name/Address Resolution Service The information systems that collectively provide name/address resolution service for an organization are fault tolerant and implement internal/external role separation.		**SC-22: Architecture and Provisioning for Name/Address Resolution Service** Ensure the systems that collectively provide name/address resolution service for an organization are fault-tolerant and implement internal and external role separation.	
Control	**Session Authenticity**	**Control**	**Session Authenticity**
SC-23: Session Authenticity The information system protects the authenticity of communications sessions.		**SC-23: Session Authenticity** Protect the authenticity of communications sessions.	
Control	**Fail in Known State**	**Control**	**N/A**
SC-24: Fail in Known State The information system fails to a known secure state for all failures preserving the maximum amount of state information in failure.		Moved to CP-10 System Recovery and Reconstitution	
Control	**Protection of Information at Rest**	**Control**	**Protection of Information At Rest**
SC-28: Protection of Information at Rest The information system protects the confidentiality and integrity of information at rest. **a.** The information system enforces encryption of the instance (container) image files under the hypervisor: **b.** Instance (container) image files from virtual server and client deployments must be encrypted in a manner that meets FIPS 140-2 validated requirements. **Implementation Standard** The information system supports the capability to use cryptographic mechanisms to protect information at rest.		**SC-28: Protection of Information At Rest** Protect the confidentiality and integrity of all information at rest.	

EDE		ARC-AMPE	
Control	**N/A**	**Control**	**Cryptographic Protection**
Existing NIST SP 800-53 Rev.4 control and new to ARC-AMPE.		**SC-28(01): Cryptographic Protection** Implement cryptographic mechanisms to prevent unauthorized disclosure and modification of all organization-defined information at rest.	
Control	**Electronic Mail**	**Control**	**N/A**
SC-CMS-1: Electronic Mail Controls shall be implemented to protect sensitive information that is sent via email. **Implementation Standards** **1.** Email and any attachment that contains sensitive information when transmitted inside and outside of the organization premises shall be encrypted using a FIPS 140-2 validated encryption solution: **2.** Password protection of files is recommended to add an additional layer of data protection but shall not be used in lieu of encryption solutions. **3.** Password and/or encryption key shall not be included in the same email that contains sensitive information or in separate email. Password/encryption key shall be provided to the recipient separately via text message, verbally, or other out-of-band solution. **4.** Multifactor authentication is recommended before being granted access to the organization email.		Withdrawn from the minimum baseline but should still be considered a best practice.	

References

NIST SP 800-53 Revision 5.1.1

NIST SP 800-53 Revision 4

CMS Standards

Legal disclaimer

About the authors

Ian Walters, Principal

Ian is a seasoned cybersecurity professional with a wealth of experience across a spectrum of frameworks and standards, including NIST SP 800-53, HIPAA, ISO 27001, ISO 20000, and ISO 9001.

With a meticulous eye for detail and a strategic mindset, Ian excels in developing tailored solutions to ensure compliance and mitigate risks within complex organizational environments. His expertise extends to leading audits and risk assessments, as well as providing advisory for driving continuous improvement initiatives to enhance cybersecurity posture and operational resilience.

Jessica Payne, Consultant

Jessica joined Coalfire in 2024 with five prior years of cybersecurity consulting experience. She supports our clients as a Consultant for the GRC Healthcare team where she specializes in cybersecurity risk management, cybersecurity program advisory, and compliance for the healthcare industry.

Her extensive experience in cybersecurity consulting allows her to provide customized solutions and guidance on industry best practices, greatly improving client security postures and ensuring compliance with regulatory standards. She is dedicated to ongoing improvement and to staying abreast of the latest cybersecurity trends and technologies to offer innovative solutions to her clients.

About Coalfire

The world's leading technology infrastructure providers, SaaS companies, and enterprises – including the top 5 cloud service providers and 8 of the top 10 SaaS businesses – rely on Coalfire to strengthen their security posture and secure their digital transformations. As the largest firm dedicated to cybersecurity, Coalfire delivers a comprehensive suite of advisory and managed services, spanning cyber strategy and risk, cloud security, threat and vulnerability management, application security, privacy, and compliance management. A proven leader in cybersecurity for the past 20 years, Coalfire combines extensive cloud expertise, advanced technology, and innovative approaches that fuel success. For more information, visit **Coalfire.com**.

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