

Standard Development Timeline

This section is maintained by the drafting team during the development of the standard and will be removed when the standard is adopted by the NERC Board of Trustees (Board).

Description of Current Draft

This is the initial draft of proposed standard.

Completed Actions	Date
Standards Committee (SC) approved Standard Authorization Request (SAR) for posting	March 9, 2016
SAR posted for comment	March 23–April 21, 2016
SAR posted for comment	June 1–June 30, 2016
SC Accepted the SAR	July 20, 2016
45-day formal comment period with ballot	January 21–February 8, 2021

Anticipated Actions	Date
45-day formal comment period with ballot	May 11–June 24, 2021
45-day formal comment period with ballot	August 3–September 16, 2021
Final Ballot	October 19–28, 2021
Board adoption	November 4, 2021

A. Introduction

1. **Title:** Cyber Security — Security Management Controls
2. **Number:** CIP-003-9
3. **Purpose:** To specify consistent and sustainable security management controls that establish responsibility and accountability to protect BES Cyber Systems (BCS) against compromise that could lead to misoperation or instability in the Bulk Electric System (BES).
4. **Applicability:**
 - 4.1. **Functional Entities:** For the purpose of the requirements contained herein, the following list of functional entities will be collectively referred to as “Responsible Entities.” For requirements in this standard where a specific functional entity or subset of functional entities are the applicable entity or entities, the functional entity or entities are specified explicitly.
 - 4.1.1. **Balancing Authority**
 - 4.1.2. **Distribution Provider** that owns one or more of the following Facilities, systems, and equipment for the protection or restoration of the BES:
 - 4.1.2.1. Each underfrequency Load shedding (UFLS) or undervoltage Load shedding (UVLS) system that:
 - 4.1.2.1.1. is part of a Load shedding program that is subject to one or more requirements in a NERC or Regional Reliability Standard; and
 - 4.1.2.1.2. performs automatic Load shedding under a common control system owned by the Responsible Entity, without human operator initiation, of 300 MW or more.
 - 4.1.2.2. Each Remedial Action Scheme (RAS) where the RAS is subject to one or more requirements in a NERC or Regional Reliability Standard.
 - 4.1.2.3. Each Protection System (excluding UFLS and UVLS) that applies to Transmission where the Protection System is subject to one or more requirements in a NERC or Regional Reliability Standard.
 - 4.1.2.4. Each Cranking Path and group of Elements meeting the initial switching requirements from a Blackstart Resource up to and including the first interconnection point of the starting station service of the next generation unit(s) to be started.
 - 4.1.3. **Generator Operator**
 - 4.1.4. **Generator Owner**
 - 4.1.5. **Reliability Coordinator**
 - 4.1.6. **Transmission Operator**

4.1.7. Transmission Owner

4.2. Facilities: For the purpose of the requirements contained herein, the following Facilities, systems, and equipment owned by each Responsible Entity in Section 4.1 above are those to which these requirements are applicable. For requirements in this standard where a specific type of Facilities, system, or equipment or subset of Facilities, systems, and equipment are applicable, these are specified explicitly.

4.2.1. Distribution Provider: One or more of the following Facilities, systems and equipment owned by the Distribution Provider for the protection or restoration of the BES:

4.2.1.1. Each UFLS or UVLS System that:

4.2.1.1.1. is part of a Load shedding program that is subject to one or more requirements in a NERC or Regional Reliability Standard; and

4.2.1.1.2. performs automatic Load shedding under a common control system owned by the Responsible Entity, without human operator initiation, of 300 MW or more.

4.2.1.2. Each RAS where the RAS is subject to one or more requirements in a NERC or Regional Reliability Standard.

4.2.1.3. Each Protection System (excluding UFLS and UVLS) that applies to Transmission where the Protection System is subject to one or more requirements in a NERC or Regional Reliability Standard.

4.2.1.4. Each Cranking Path and group of Elements meeting the initial switching requirements from a Blackstart Resource up to and including the first interconnection point of the starting station service of the next generation unit(s) to be started.

4.2.2. Responsible Entities listed in 4.1 other than Distribution Providers:
All BES Facilities.

4.2.3. Exemptions: The following are exempt from Standard CIP-003-9:

4.2.3.1. Cyber systems at Facilities regulated by the Canadian Nuclear Safety Commission.

4.2.3.2. Cyber systems associated with communication links logically isolated from, but not providing logical isolation for, BCS or Shared Cyber Infrastructure (SCI).

4.2.3.3. Cyber systems associated with communication links between Cyber Assets, Virtual Cyber Assets (VCA), or SCI performing logical isolation that extends to one or more geographic locations.

4.2.3.4. The systems, structures, and components that are regulated by the Nuclear Regulatory Commission under a cyber security plan pursuant to 10 C.F.R. Section 73.54.

4.2.3.5. For Distribution Providers, the systems and equipment that are not included in section 4.2.1 above.

5. Effective Dates: See “Project 2016-02 Virtualization Implementation Plan.”

B. Requirements and Measures

- R1.** Each Responsible Entity shall review and obtain CIP Senior Manager approval at least once every 15 calendar months for one or more documented cyber security policies that collectively address the following topics: *[Violation Risk Factor: Medium] [Time Horizon: Operations Planning]*
- 1.1.** For its high impact and medium impact BCS and associated SCI, if any:
 - 1.1.1.** Personnel and training (CIP-004);
 - 1.1.2.** Electronic Security Perimeters (CIP-005) including Interactive Remote Access;
 - 1.1.3.** Physical security of BCS (CIP-006);
 - 1.1.4.** System security management (CIP-007);
 - 1.1.5.** Incident reporting and response planning (CIP-008);
 - 1.1.6.** Recovery plans for BCS (CIP-009);
 - 1.1.7.** Configuration change management and vulnerability assessments (CIP-010);
 - 1.1.8.** Information protection (CIP-011); and
 - 1.1.9.** Declaring and responding to CIP Exceptional Circumstances.
 - 1.2.** For its assets identified in CIP-002 containing low impact BCS and associated SCI, if any:
 - 1.2.1.** Cyber security awareness;
 - 1.2.2.** Physical security controls;
 - 1.2.3.** Electronic access controls;
 - 1.2.4.** Cyber Security Incident response;
 - 1.2.5.** Transient Cyber Assets (TCA) and Removable Media malicious code risk mitigation; and
 - 1.2.6.** Declaring and responding to CIP Exceptional Circumstances.
- M1.** Examples of evidence may include, but are not limited to, policy documents; revision history, records of review, or workflow evidence from a document management system that indicate review of each cyber security policy at least once every 15 calendar months; and documented approval by the CIP Senior Manager for each cyber security policy.
- R2.** Each Responsible Entity with at least one asset identified in CIP-002 containing low impact BCS shall implement one or more documented cyber security plan(s) for its low impact BCS and their associated SCI that include the sections in Attachment 1. *[Violation Risk Factor: Lower] [Time Horizon: Operations Planning]*

Note: An inventory, list, or discrete identification of low impact BCS or their associated SCI is not required. Lists of authorized users are not required.

- M2.** Evidence shall include each of the documented cyber security plan(s) that collectively include each of the sections in Attachment 1 and additional evidence to demonstrate implementation of the cyber security plan(s). Additional examples of evidence per section are located in Attachment 2.
- R3.** Each Responsible Entity shall identify a CIP Senior Manager by name and document any change within 30 calendar days of the change. *[Violation Risk Factor: Medium]*
[Time Horizon: Operations Planning]
- M3.** An example of evidence may include, but is not limited to, a dated and approved document from a high level official designating the name of the individual identified as the CIP Senior Manager.
- R4.** The Responsible Entity shall implement a documented process to delegate authority, unless no delegations are used. Where allowed by the CIP Standards, the CIP Senior Manager may delegate authority for specific actions to a delegate or delegates. These delegations shall be documented, including the name or title of the delegate, the specific actions delegated, and the date of the delegation; approved by the CIP Senior Manager; and updated within 30 days of any change to the delegation. Delegation changes do not need to be reinstated with a change to the delegator. *[Violation Risk Factor: Lower]* *[Time Horizon: Operations Planning]*
- M4.** An example of evidence may include, but is not limited to, a dated document, approved by the CIP Senior Manager, listing individuals (by name or title) who are delegated the authority to approve or authorize specifically identified items.

C. Compliance

1. Compliance Monitoring Process

1.1. Compliance Enforcement Authority:

As defined in the NERC Rules of Procedure, “Compliance Enforcement Authority” (CEA) means NERC or the Regional Entity in their respective roles of monitoring and enforcing compliance with the NERC Reliability Standards.

1.2. Evidence Retention:

The following evidence retention periods identify the period of time an entity is required to retain specific evidence to demonstrate compliance. For instances where the evidence retention period specified below is shorter than the time since the last audit, the CEA may ask an entity to provide other evidence to show that it was compliant for the full time period since the last audit.

The Responsible Entity shall keep data or evidence to show compliance as identified below unless directed by its CEA to retain specific evidence for a longer period of time as part of an investigation:

- Each Responsible Entity shall retain evidence of each requirement in this standard for three calendar years.
- If a Responsible Entity is found non-compliant, it shall keep information related to the non-compliance until mitigation is complete and approved or for the time specified above, whichever is longer.
- The CEA shall keep the last audit records and all requested and submitted subsequent audit records.

1.3. Compliance Monitoring and Enforcement Program

As defined in the NERC Rules of Procedure, “Compliance Monitoring and Enforcement Program” refers to the identification of the processes that will be used to evaluate data or information for the purpose of assessing performance or outcomes with the associated Reliability Standard.

Violation Severity Levels

R #	Time Horizon	VRF	Violation Severity Levels (CIP-003-9)			
			Lower VSL	Moderate VSL	High VSL	Severe VSL
R1	Operations Planning	Medium	<p>The Responsible Entity documented and implemented one or more cyber security policies for its high impact and medium impact BCS and associated SCI but did not address one of the nine topics required by Requirement R1. (Requirement R1 Part 1.1)</p> <p>OR</p> <p>The Responsible Entity did not complete its review of the one or more documented cyber security policies for its high impact and medium impact BCS and associated SCI as required by</p>	<p>The Responsible Entity documented and implemented one or more cyber security policies for its high impact and medium impact BCS and associated SCI but did not address two of the nine topics required by Requirement R1. (Requirement R1 Part R1.1)</p> <p>OR</p> <p>The Responsible Entity did not complete its review of the one or more documented cyber security policies for its high impact and medium impact BCS and associated SCI as required by</p>	<p>The Responsible Entity documented and implemented one or more cyber security policies for its high impact and medium impact BCS and associated SCI but did not address three of the nine topics required by Requirement R1. (Requirement R1 Part 1.1)</p> <p>OR</p> <p>The Responsible Entity did not complete its review of the one or more documented cyber security policies for its high impact and medium impact BCS and associated SCI as required by Requirement R1 within 17 calendar months but did</p>	<p>The Responsible Entity documented and implemented one or more cyber security policies for its high impact and medium impact BCS and associated SCI but did not address four or more of the nine topics required by Requirement R1. (Requirement R1 Part 1.1)</p> <p>OR</p> <p>The Responsible Entity did not have any documented cyber security policies for its high impact and medium impact BCS and associated SCI as required by Requirement R1.</p>

R #	Time Horizon	VRF	Violation Severity Levels (CIP-003-9)			
			Lower VSL	Moderate VSL	High VSL	Severe VSL
			<p>Requirement R1 within 15 calendar months but did not complete this review in less than or equal to 16 calendar months of the previous review. (Requirement R1 Part 1.1)</p> <p>OR</p> <p>The Responsible Entity did not complete its approval of the one or more documented cyber security policies for its high impact and medium impact BCS and associated SCI as required by Requirement R1 by the CIP Senior Manager within 15 calendar months but did complete this</p>	<p>Requirement R1 within 16 calendar months but did not complete this review in less than or equal to 17 calendar months of the previous review. (Requirement R1 Part 1.1)</p> <p>OR</p> <p>The Responsible Entity did not complete its approval of the one or more documented cyber security policies for its high impact and medium impact BES Cyber Systems BCS and associated SCI as required by Requirement R1 by the CIP Senior Manager within 16 calendar months but</p>	<p>complete this review in less than or equal to 18 calendar months of the previous review. (Requirement R1 Part 1.1)</p> <p>OR</p> <p>The Responsible Entity did not complete its approval of the one or more documented cyber security policies for its high impact and medium impact BCS and associated SCI as required by Requirement R1 by the CIP Senior Manager within 17 calendar months but did not complete this approval in less than or equal to 18 calendar months of the previous approval. (Requirement R1)</p> <p>OR</p>	<p>(Requirement R1 Part 1.1)</p> <p>OR</p> <p>The Responsible Entity did not complete its review of the one or more documented cyber security policies as required by Requirement R1 within 18 calendar months of the previous review. (Requirement R1)</p> <p>OR</p> <p>The Responsible Entity did not complete its approval of the one or more documented cyber security policies for its high impact and medium impact BCS and associated SCI as</p>

R #	Time Horizon	VRF	Violation Severity Levels (CIP-003-9)			
			Lower VSL	Moderate VSL	High VSL	Severe VSL
			approval in less than or equal to 16 calendar months of the previous approval. (Requirement R1 Part 1.1) OR The Responsible Entity documented one or more cyber security policies for its assets identified in CIP-002 containing low impact BCS and associated SCI but did not address one of the six topics required by Requirement R1. (Requirement R1 Part 1.2) OR The Responsible Entity did not complete its review	did complete this approval in less than or equal to 17 calendar months of the previous approval. (Requirement R1 Part 1.1) OR The Responsible Entity documented one or more cyber security policies for its assets identified in CIP-002 containing low impact BCS and associated SCI but did not address two of the six topics required by Requirement R1. (Requirement R1 Part 1.2) OR The Responsible Entity did not	The Responsible Entity documented one or more cyber security policies for its assets identified in CIP-002 containing low impact BCS and associated SCI, but did not address three of the six topics required by Requirement R1. (Requirement R1 Part 1.2) OR The Responsible Entity did not complete its review of the one or more documented cyber security policies for its assets identified in CIP-002 containing low impact BCS and associated SCI as required by Requirement R1 within 17 calendar months but did not complete this review in less than or equal to 18	required by Requirement R1 by the CIP Senior Manager within 18 calendar months of the previous approval. (Requirement R1 Part 1.1) OR The Responsible Entity documented one or more cyber security policies for its assets identified in CIP-002 containing low impact BCS and associated SCI but did not address four or more of the six topics required by Requirement R1. (Requirement R1 Part 1.2) OR

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			<p>of the one or more documented cyber security policies for its assets identified in CIP-002 containing low impact BCS and associated SCI as required by Requirement R1 within 15 calendar months but did not complete this review in less than or equal to 16 calendar months of the previous review. (Requirement R1 Part 1.2)</p> <p>OR</p> <p>The Responsible Entity did not complete its approval of the one or more documented cyber security policies for its assets identified in CIP-002</p>	<p>complete its review of the one or more documented cyber security policies for its assets identified in CIP-002 containing low impact BCS and associated SCI as required by Requirement R1 within 16 calendar months but did not complete this review in less than or equal to 17 calendar months of the previous review. (Requirement R 1 Part 1.2)</p> <p>OR</p> <p>The Responsible Entity did not complete its approval of the one or more documented cyber security policies for</p>	<p>calendar months of the previous review. (Requirement R1 Part 1.2)</p> <p>OR</p> <p>The Responsible Entity did not complete its approval of the one or more documented cyber security policies for its assets identified in CIP-002 containing low impact BCS and associated SCI as required by Requirement R1 by the CIP Senior Manager within 17 calendar months but did not complete this approval in less than or equal to 18 calendar months of the previous approval. (Requirement R1 Part 1.2)</p>	<p>The Responsible Entity did not have any documented cyber security policies for its assets identified in CIP-002 containing low impact BCS and associated SCI as required by Requirement R1. (Requirement R1 Part 1.2)</p> <p>OR</p> <p>The Responsible Entity did not complete its approval of the one or more documented cyber security policies for its assets identified in CIP-002 containing low impact BCS and associated SCI as required by Requirement R1 by</p>

R #	Time Horizon	VRF	Violation Severity Levels (CIP-003-9)			
			Lower VSL	Moderate VSL	High VSL	Severe VSL
			containing low impact BCS and associated SCI as required by Requirement R1 by the CIP Senior Manager within 15 calendar months but did complete this approval in less than or equal to 16 calendar months of the previous approval. (Requirement R1 Part 1.2)	its assets identified in CIP-002 containing low impact BCS and associated SCI as required by Requirement R1 by the CIP Senior Manager within 16 calendar months but did complete this approval in less than or equal to 17 calendar months of the previous approval. (Requirement R1 Part 1.2)		the CIP Senior Manager within 18 calendar months of the previous approval. (Requirement R1 Part 1.2)
R2	Operations Planning	Lower	The Responsible Entity documented its cyber security plan(s) for its assets containing low impact BCS and associated SCI but failed to document cyber security awareness according	The Responsible Entity documented its cyber security plan(s) for its assets containing low impact BCS and associated SCI but failed to reinforce cyber security practices at least	The Responsible Entity documented the physical access controls for its assets containing low impact BCS and associated SCI but failed to implement the physical security controls according to Requirement R2,	The Responsible Entity failed to document and implement one or more cyber security plan(s) for its assets containing low impact BCS and associated SCI according to

R #	Time Horizon	VRF	Violation Severity Levels (CIP-003-9)			
			Lower VSL	Moderate VSL	High VSL	Severe VSL
			to Requirement R2, Attachment 1, Section 1. (Requirement R2) OR The Responsible Entity implemented electronic access controls but failed to document its cyber security plan(s) for electronic access controls according to Requirement R2, Attachment 1, Section 3. (Requirement R2) OR The Responsible Entity documented its cyber security plan(s) for its assets containing low impact BCS and associated SCI but failed to document	once every 15 calendar months according to Requirement R2, Attachment 1, Section 1. (Requirement R2) OR The Responsible Entity documented its cyber security plan(s) for its assets containing low impact BCS and associated SCI but failed to document physical security controls according to Requirement R2, Attachment 1, Section 2. (Requirement R2) OR The Responsible Entity documented its cyber security	Attachment 1, Section 2. (Requirement R2) OR The Responsible Entity documented its cyber security plan(s) for electronic access controls for its assets containing low impact BCS and associated SCI but failed to permit only necessary inbound and outbound electronic access controls according to Requirement R2, Attachment 1, Section 3.1. (Requirement R2) OR The Responsible Entity documented one or more Cyber Security Incident response plan(s) within its cyber security plan(s) for its assets containing low impact	Requirement R2, Attachment 1. (Requirement R2)

R #	Time Horizon	VRF	Violation Severity Levels (CIP-003-9)			
			Lower VSL	Moderate VSL	High VSL	Severe VSL
			<p>one or more Cyber Security Incident response plan(s) according to Requirement R2, Attachment 1, Section 4. (Requirement R2)</p> <p>OR</p> <p>The Responsible Entity documented one or more Cyber Security Incident response plan(s) within its cyber security plan(s) for its assets containing low impact BCS and associated SCI but failed to update each Cyber Security Incident response plan(s) within 180 days according to Requirement R2, Attachment 1,</p>	<p>plan(s) for its assets containing low impact BCS and associated SCI but failed to document electronic access controls according to Requirement R2, Attachment 1, Section 3. (Requirement R2)</p> <p>OR</p> <p>The Responsible Entity documented its cyber security plan(s) for electronic access controls but failed to implement authentication for all Dial-up Connectivity that provides access to low impact BCS, per Cyber Asset capability according to Requirement R2, Attachment 1,</p>	<p>BCS and associated SCI but failed to test each Cyber Security Incident response plan(s) at least once every 36 calendar months according to Requirement R2, Attachment 1, Section 4. (Requirement R2)</p> <p>OR</p> <p>The Responsible Entity documented the determination of whether an identified Cyber Security Incident is a Reportable Cyber Security Incident, but failed to notify the Electricity Information Sharing and Analysis Center (E-ISAC) according to Requirement R2, Attachment 1, Section 4. (Requirement R2)</p> <p>OR</p>	

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			<p>Section 4. (Requirement R2)</p> <p>OR</p> <p>The Responsible Entity documented its plan(s) for TCA and Removable Media, but failed to manage its TCA according to Requirement R2, Attachment 1, Section 5.1. (Requirement R2)</p> <p>OR</p> <p>The Responsible Entity documented its plan(s) for TCA, but failed to document the Removable Media section(s) according to Requirement R2, Attachment 1, Section 5.3. (Requirement R2)</p>	<p>Section 3.2 (Requirement R2)</p> <p>OR</p> <p>The Responsible Entity documented one or more incident response plan(s) within its cyber security plan(s) for its assets containing low impact BCS and associated SCI, but failed to include the process for identification, classification, and response to Cyber Security Incidents according to Requirement R2, Attachment 1, Section 4. (Requirement R2)</p> <p>OR</p> <p>The Responsible Entity documented</p>	<p>The Responsible Entity documented its plan(s) for TCA and Removable Media, but failed to implement mitigation for the introduction of malicious code for TCA managed by the Responsible Entity according to Requirement R2, Attachment 1, Section 5.1. (Requirement R2)</p> <p>OR</p> <p>The Responsible Entity documented its plan(s) for TCA and Removable Media, but failed to implement mitigation for the introduction of malicious code for TCA managed by a party other than the Responsible Entity according to Requirement R2,</p>	

R #	Time Horizon	VRF	Violation Severity Levels (CIP-003-9)			
			Lower VSL	Moderate VSL	High VSL	Severe VSL
				its cyber security plan(s) for its assets containing low impact BCS and associated SCI but failed to document the determination of whether an identified Cyber Security Incident is a Reportable Cyber Security Incident and subsequent notification to the Electricity Information Sharing and Analysis Center (E-ISAC) according to Requirement R2, Attachment 1, Section 4. (Requirement R2) OR The Responsible Entity documented its plan(s) for TCA and Removable	Attachment 1, Section 5.2. (Requirement R2) OR The Responsible Entity documented its plan(s) for TCA and Removable Media, but failed to implement mitigation for the threat of detected malicious code on the Removable Media prior to connecting Removable Media to a low impact BCS according to Requirement R2, Attachment 1, Section 5.3. (Requirement R2)	

R #	Time Horizon	VRF	Violation Severity Levels (CIP-003-9)			
			Lower VSL	Moderate VSL	High VSL	Severe VSL
				<p>Media, but failed to document mitigation for the introduction of malicious code for TCA managed by the Responsible Entity according to Requirement R2, Attachment 1, Sections 5.1 and 5.3. (Requirement R2)</p> <p>OR</p> <p>The Responsible Entity documented its plan(s) for TCA and Removable Media, but failed to document mitigation for the introduction of malicious code for TCA managed by a party other than the Responsible Entity according to Requirement R2, Attachment 1,</p>		

R #	Time Horizon	VRF	Violation Severity Levels (CIP-003-9)			
			Lower VSL	Moderate VSL	High VSL	Severe VSL
				Section 5.2. (Requirement R2) OR The Responsible Entity documented its plan(s) for TCA and Removable Media, but failed to implement the Removable Media section(s) according to Requirement R2, Attachment 1, Section 5.3. (Requirement R2)		
R3	Operations Planning	Medium	The Responsible Entity has identified by name a CIP Senior Manager, but did not document changes to the CIP Senior Manager within 30 calendar days but did document this change in less than 40 calendar days of	The Responsible Entity has identified by name a CIP Senior Manager, but did not document changes to the CIP Senior Manager within 40 calendar days but did document this change in less than	The Responsible Entity has identified by name a CIP Senior Manager, but did not document changes to the CIP Senior Manager within 50 calendar days but did document this change in less than 60 calendar days of the change. (Requirement R3)	The Responsible Entity has not identified, by name, a CIP Senior Manager. OR The Responsible Entity has identified by name a CIP Senior Manager, but did

R #	Time Horizon	VRF	Violation Severity Levels (CIP-003-9)			
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			the change. (Requirement R3)	50 calendar days of the change. (Requirement R3)		not document changes to the CIP Senior Manager within 60 calendar days of the change. (Requirement R3)
R4	Operations Planning	Lower	The Responsible Entity has identified a delegate by name, title, date of delegation, and specific actions delegated, but did not document changes to the delegate within 30 calendar days but did document this change in less than 40 calendar days of the change. (Requirement R4)	The Responsible Entity has identified a delegate by name, title, date of delegation, and specific actions delegated, but did not document changes to the delegate within 40 calendar days but did document this change in less than 50 calendar days of the change. (Requirement R4)	The Responsible Entity has identified a delegate by name, title, date of delegation, and specific actions delegated, but did not document changes to the delegate within 50 calendar days but did document this change in less than 60 calendar days of the change. (Requirement R4)	The Responsible Entity has used delegated authority for actions where allowed by the CIP Standards, but does not have a process to delegate actions from the CIP Senior Manager. (Requirement R4) OR The Responsible Entity has identified a delegate by name, title, date of delegation, and specific actions delegated, but did not document

R #	Time Horizon	VRF	Violation Severity Levels (CIP-003-9)			
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						changes to the delegate within 60 calendar days of the change. (Requirement R4)

D. Regional Variances

None.

E. Interpretations

None.

F. Associated Documents

See “Project 2016-02 Virtualization Implementation Plan.”

Version History

Version	Date	Action	Change Tracking
1	1/16/06	R3.2 — Change “Control Center” to “control center.”	3/24/06
2	9/30/09	Modifications to clarify the requirements and to bring the compliance elements into conformance with the latest guidelines for developing compliance elements of standards. Removal of reasonable business judgment. Replaced the RRO with the RE as a responsible entity. Rewording of Effective Date. Changed compliance monitor to Compliance Enforcement Authority.	
3	12/16/09	Updated Version Number from -2 to -3 In Requirement 1.6, deleted the sentence pertaining to removing component or system from service in order to perform testing, in response to FERC order issued September 30, 2009.	
3	12/16/09	Approved by the NERC Board of Trustees.	
3	3/31/10	Approved by FERC.	
4	1/24/11	Approved by the NERC Board of Trustees.	
5	11/26/12	Adopted by the NERC Board of Trustees.	Modified to coordinate with other CIP standards and to revise format to use RBS Template.
5	11/22/13	FERC Order issued approving CIP-003-5.	
6	11/13/14	Adopted by the NERC Board of Trustees.	Addressed two FERC directives from Order No.

Version	Date	Action	Change Tracking
			791 related to identify, assess, and correct language and communication networks.
6	2/12/15	Adopted by the NERC Board of Trustees.	Replaces the version adopted by the Board on 11/13/2014. Revised version addresses remaining directives from Order No. 791 related to transient devices and low impact BCS.
6	1/21/16	FERC Order issued approving CIP-003-6. Docket No. RM15-14-000	
7	2/9/17	Adopted by the NERC Board of Trustees.	Revised to address FERC Order No. 822 directives regarding (1) the definition of LERC and (2) transient devices.
7	4/19/18	FERC Order issued approving CIP-003-7. Docket No. RM17-11-000	
8	5/9/19	Adopted by the NERC Board of Trustees.	Removed SPS references. Revised to address FERC Order No. 843 regarding

Version	Date	Action	Change Tracking
			mitigating the risk of malicious code.
8	7/31/2019	FERC Order issued approving CIP-003-8. Docket No. RD19-5-000.	
9	TBD	Virtualization conforming changes	

Attachment 1

Required Sections for Cyber Security Plan(s) for Assets Containing Low Impact BCS or their associated SCI

Responsible Entities shall include each of the sections provided below in the cyber security plan(s) required under Requirement R2.

Responsible Entities with multiple-impact BCS ratings can utilize policies, procedures, and processes for their high or medium impact BCS to fulfill the sections for the development of low impact cyber security plan(s). Each Responsible Entity can develop a cyber security plan(s) either by individual asset or groups of assets.

Section 1. Cyber Security Awareness: Each Responsible Entity shall reinforce, at least once every 15 calendar months, cyber security practices (which may include associated physical security practices).

Section 2. Physical Security Controls: Each Responsible Entity shall control physical access, based on need as determined by the Responsible Entity, to (1) the asset or the locations of the low impact BCS within the asset, (2) the asset or the locations of the SCI hosting low impact BES Cyber Assets within the asset, and (3) the Cyber Asset(s) or VCA, as specified by the Responsible Entity, that provide electronic access control(s) implemented for Section 3.1, if any.

Section 3. Electronic Access Controls: For each asset containing low impact BCS or its associated SCI identified pursuant to CIP-002, the Responsible Entity shall implement electronic access controls to:

- 3.1** Permit only necessary inbound and outbound electronic access as determined by the Responsible Entity for any communications that are:
 - i. between a low impact BCS and a system(s) outside the asset containing low impact BCS;
 - ii. between SCI hosting a low impact BCS and a system(s) outside the asset(s) containing the SCI hosting a low impact BCS;
 - iii. using a routable protocol when entering or leaving the asset containing the low impact BCS or their associated SCI; and
 - iv. not used for time-sensitive protection or control functions between intelligent electronic devices (e.g., communications using protocol IEC TR-61850-90-5 R-GOOSE).
- 3.2** Authenticate all Dial-up Connectivity, if any, that provides access to low impact BCS or their associated SCI, per Cyber Asset or VCA capability.

Section 4. Cyber Security Incident Response: Each Responsible Entity shall have one or more Cyber Security Incident response plan(s), either by asset or group of assets, which shall include:

- 4.1 Identification, classification, and response to Cyber Security Incidents;
- 4.2 Determination of whether an identified Cyber Security Incident is a Reportable Cyber Security Incident and subsequent notification to the Electricity Information Sharing and Analysis Center (E-ISAC), unless prohibited by law;
- 4.3 Identification of the roles and responsibilities for Cyber Security Incident response by groups or individuals;
- 4.4 Incident handling for Cyber Security Incidents;
- 4.5 Testing the Cyber Security Incident response plan(s) at least once every 36 calendar months by: (1) responding to an actual Reportable Cyber Security Incident; (2) using a drill or tabletop exercise of a Reportable Cyber Security Incident; or (3) using an operational exercise of a Reportable Cyber Security Incident; and
- 4.6 Updating the Cyber Security Incident response plan(s), if needed, within 180 calendar days after completion of a Cyber Security Incident response plan(s) test or actual Reportable Cyber Security Incident.

Section 5. TCA and Removable Media Malicious Code Risk Mitigation: Each Responsible Entity shall implement, except under CIP Exceptional Circumstances, one or more plan(s) to achieve the objective of mitigating the risk of the introduction of malicious code to low impact BCS or its associated SCI, through the use of TCA or Removable Media. The plan(s) shall include:

- 5.1 For TCA managed by the Responsible Entity, if any, the use of one or a combination of the following in an ongoing or on-demand manner (per TCA capability):
 - Antivirus software, including manual or managed updates of signatures or patterns;
 - Application whitelisting; or
 - Other method(s) to mitigate the introduction of malicious code.
- 5.2 For TCA managed by a party other than the Responsible Entity, if any:
 - 5.2.1 Use one or a combination of the following prior to connecting the TCA to a low impact BCS or its associated SCI (per TCA capability):
 - Review of antivirus update level;
 - Review of antivirus update process used by the party;
 - Review of application whitelisting used by the party;
 - Review use of live operating system and software executable only from read-only media;

- Review of system hardening used by the party; or
- Other method(s) to mitigate the introduction of malicious code.

5.2.2 For any method used pursuant to 5.2.1, Responsible Entities shall determine whether any additional mitigation actions are necessary and implement such actions prior to connecting the TCA.

5.3 For Removable Media, the use of each of the following:

5.3.1 Method(s) to detect malicious code on Removable Media using a Cyber Asset or VCA other than a BCS or its associated SCI; and

5.3.2 Mitigation of the threat of detected malicious code on the Removable Media prior to connecting Removable Media to a low impact BCS or its associated SCI.

Attachment 2

Examples of Evidence for Cyber Security Plan(s) for Assets Containing Low Impact BCS or their associated SCI

Section 1. Cyber Security Awareness: An example of evidence for Section 1 may include, but is not limited to, documentation that the reinforcement of cyber security practices occurred at least once every 15 calendar months. The evidence could be documentation through one or more of the following methods:

- Direct communications (for example, e-mails, memos, or computer-based training);
- Indirect communications (for example, posters, intranet, or brochures); or
- Management support and reinforcement (for example, presentations or meetings).

Section 2. Physical Security Controls: Examples of evidence for Section 2 may include, but are not limited to:

- Documentation of the selected access control(s) (e.g., card key, locks, perimeter controls), monitoring controls (e.g., alarm systems, human observation), or other operational, procedural, or technical physical security controls that control physical access to both:
 - a. The asset, if any, or the locations of the low impact BCS or their associated SCI within the asset; and
 - b. The Cyber Asset(s), VCA, or SCI specified by the Responsible Entity that provide(s) electronic access controls implemented for Attachment 1, Section 3.1, if any.

Section 3. Electronic Access Controls: Examples of evidence for Section 3 may include, but are not limited to:

1. Documentation showing that at each asset or group of assets containing low impact BCS, routable communication between a low impact BCS and systems outside the asset is restricted by electronic access controls to permit only inbound and outbound electronic access that the Responsible Entity deems necessary, except where an entity provides rationale that communication is used for time-sensitive protection or control functions between intelligent electronic devices. Examples of such documentation may include, but are not limited to representative diagrams that illustrate control of inbound and outbound communication(s) between the low impact BCS and systems outside the asset containing low impact BCS or lists of implemented electronic access controls (e.g., access control lists restricting IP addresses, ports, or services; implementing unidirectional gateways).

2. Documentation of authentication for Dial-up Connectivity (e.g., dial out only to a preprogrammed number to deliver data, dial-back modems, modems that must be remotely controlled by the control center or control room, or access control on the BCS).

Section 4. Cyber Security Incident Response: An example of evidence for Section 4 may include, but is not limited to, dated documentation, such as policies, procedures, or process documents of one or more Cyber Security Incident response plan(s) developed either by asset or group of assets that include the following processes:

1. to identify, classify, and respond to Cyber Security Incidents; to determine whether an identified Cyber Security Incident is a Reportable Cyber Security Incident and for notifying the Electricity Information Sharing and Analysis Center (E-ISAC);
2. to identify and document the roles and responsibilities for Cyber Security Incident response by groups or individuals (e.g., initiating, documenting, monitoring, reporting, etc.);
3. for incident handling of a Cyber Security Incident (e.g., containment, eradication, or recovery/incident resolution);
4. for testing the plan(s) along with the dated documentation that a test has been completed at least once every 36 calendar months; and
5. to update, as needed, Cyber Security Incident response plan(s) within 180 calendar days after completion of a test or actual Reportable Cyber Security Incident.

Section 5. TCA and Removable Media Malicious Code Risk Mitigation:

1. Examples of evidence for Section 5.1 may include, but are not limited to, documentation of the method(s) used to mitigate the introduction of malicious code such as antivirus software and processes for managing signature or pattern updates, application whitelisting practices, processes to restrict communication, or other method(s) to mitigate the introduction of malicious code. If a TCA does not have the capability to use method(s) that mitigate the introduction of malicious code, evidence may include documentation by the vendor or Responsible Entity that identifies that the TCA does not have the capability.
2. Examples of evidence for Section 5.2.1 may include, but are not limited to, documentation from change management systems, electronic mail or procedures that document a review of the installed antivirus update level; memoranda, electronic mail, system documentation, policies or contracts from the party other than the Responsible Entity that identify the antivirus update process, the use of application whitelisting, use of live operating systems or system hardening performed by the party other than the Responsible Entity; evidence from change management systems, electronic mail or contracts that identifies the Responsible Entity's acceptance that the practices of the party

other than the Responsible Entity are acceptable; or documentation of other method(s) to mitigate malicious code for TCA managed by a party other than the Responsible Entity. If a TCA does not have the capability to use method(s) that mitigate the introduction of malicious code, evidence may include documentation by the Responsible Entity or the party other than the Responsible Entity that identifies that the TCA does not have the capability.

Examples of evidence for Attachment 1, Section 5.2.2 may include, but are not limited to, documentation from change management systems, electronic mail, or contracts that identifies a review to determine whether additional mitigation is necessary and has been implemented prior to connecting the TCA managed by a party other than the Responsible Entity.

3. Examples of evidence for Section 5.3.1 may include, but are not limited to, documented process(es) of the method(s) used to detect malicious code such as results of scan settings for Removable Media, or implementation of on-demand scanning. Examples of evidence for Section 5.3.2 may include, but are not limited to, documented process(es) for the method(s) used for mitigating the threat of detected malicious code on Removable Media, such as logs from the method(s) used to detect malicious code that show the results of scanning and the mitigation of detected malicious code on Removable Media or documented confirmation by the entity that the Removable Media was deemed to be free of malicious code.