

Clarification Request

References: ASHRAE 135.1-2023, ASHRAE 135-2024, Test Package 26.0.

Date of BTL-WG Response: August 21, 2025

Background:

7.3.2.46.3.X.2 GENERATE_CSR_FILE Command Failure Test

Reason for Change: New test per Addendum 135-2020cc-1.

Purpose: To verify that Network Port objects respond to the GENERATE_CSR_FILE command with the correct error codes when the command is not supported / enabled.

Test Concept: With a Network Port object for a network which does not support GENERATE_CSR_FILE. Verify that the correct error code is returned.

Configuration Requirements: property Changes Pending = FALSE.

Test Steps:

1. TRANSMIT WriteProperty-Request,
 'Object Identifier' = (the Network Port object),
 'Property Identifier' = Command,
 'Property Value' = GENERATE_CSR_FILE
2. RECEIVE BACnet-Error-PDU
 'Error Class' = PROPERTY,
 'Error Code' = OPTIONAL_FUNCTIONALITY_NOT_SUPPORTED

7.3.2.46.3.X.4 VALIDATE_CHANGES Command Failure Test

Reason for Change: New test per Addendum 135-2020cc-1.

Purpose: To verify that Network Port objects respond to the VALIDATE_CHANGES command with the correct error codes when the command is not supported / enabled.

Test Concept: With a Network Port object for a network which does not support VALIDATE_CHANGES. Verify that the correct error code is returned.

Test Steps:

1. TRANSMIT WriteProperty-Request,
 'Object Identifier' = (the Network Port object),
 'Property Identifier' = Command,
 'Property Value' = VALIDATE_CHANGES
2. RECEIVE BACnet-Error-PDU
 'Error Class' = PROPERTY,
 'Error Code' = OPTIONAL_FUNCTIONALITY_NOT_SUPPORTED

12.56.16 Command

...

Writing a value of IDLE to this property shall result in the return of a Result(-) with an 'Error Class' of PROPERTY and an 'Error Code' of VALUE_OUT_OF_RANGE.

...

If the Network Port object does not support a command written to this property, the device shall return a Result(-) with an 'Error Class' of PROPERTY and an 'Error Code' of OPTIONAL_FUNCTIONALITY_NOT_SUPPORTED.

...

GENERATE_CSR_FILE	<p>If this port supports this command, this command shall generate a new certificate signing request file. The new certificate signing request file shall be referenced from the Certificate_Signing_Request_File property. See Clause 12.56.100. The new certificate signing request file shall contain a new public key from a newly generated public/private key pair.</p> <p>The Command shall remain unchanged until the certificate signing request file has been generated at which point the Command shall be set to IDLE. This Command shall not affect the Changes_Pending property.</p> <p>If this port does not support this command, writing this value shall result in the return of a Result(-) with an 'Error Class' of PROPERTY and an 'Error Code' of OPTIONAL_FUNCTIONALITY_NOT_SUPPORTED.</p>
VALIDATE_CHANGES	<p>If this port supports this command, this command shall initiate a validation of the values of the properties of this port as specified in each property. If a property is present but not used, based on the Network_Type, it shall not be validated. The value of the Command_Validation_Result property shall be updated to indicate the validation result. See Clause 12.56.18.</p> <p>The Command shall remain unchanged until the validation has been completed at which point the Command shall be set to IDLE. This Command shall not affect the Changes_Pending property.</p> <p>If the device supports pending changes then the port shall support this command.</p> <p>If the device does not support this command, writing this command shall return Result(-) with an 'Error Class' of PROPERTY and an 'Error Code' of OPTIONAL_FUNCTIONALITY_NOT_SUPPORTED.</p>

...

This enumerated value is extensible. Writing an unknown value to this property shall result in the return of a Result(-) with an 'Error Class' of PROPERTY and an 'Error Code' of VALUE_OUT_OF_RANGE.

BACnetNetworkPortCommand::= ENUMERATED {

...

}

-- Enumerated values 0-127 are reserved for definition by ASHRAE. Enumerated values

-- 128-255 may be used by others subject to the procedures and constraints described

-- in Clause 23.

Problem:

If a device is a Protocol_Revision < 24, are the GENERATE_CSR_FILE and VALIDATE_CHANGES Commands unknown or unsupported?

The standard does not directly define what ‘unsupported’ or ‘unknown’ means.

Question:

For tests 7.3.2.46.3.X.2 and 7.3.2.46.3.X.4, can the IUT at Protocol_Revision < 24, respond with PROPERTY, OPTIONAL_FUNCTIONALITY_NOT_SUPPORTED or PROPERTY, VALUE_OUT_OF_RANGE?

Response:

Yes.