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ZigBee Cluster Library Poll Control Cluster (0x0020) Test Specification Version 0.9

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Abstract This document describes the certification tests for devices
which implement the ZCL Poll Control Cluster.

Keywords ZCL, Poll Control, cluster

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Revision history

Revision	Date	Details	Editor
000	April 12 rd , 2017	First draft.	Ezra Hale
001	June 5 th , 2017	Resolves comments received in the 0.9 ballot.	Phil Jamieson

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1 Introduction

This document contains the PICS, test specification and PICS/test case cross reference for the ZCL *Poll Control* cluster.

1.1 Conformance levels

The key words "SHALL", "SHALL NOT", "SHOULD", "SHOULD NOT", "RECOMMENDED" and "MAY" in this document are to be interpreted as described in [R4].

2 References

2.1 ZigBee Alliance documents

[R1] ZigBee Cluster Library Specification, ZigBee Alliance document 07-5123.

[R2] ZCL General Test Specification, ZigBee Alliance document 16-0xxx.

[R3] ZCL Poll Control Cluster XML PICS, ZigBee Alliance document 16-0xxx.

2.2 IETF documents

[R4] S. Bradner, Key words for use in RFCs to Indicate Requirement Levels, IETF RFC 2119, March 1997.

3 PICS

All references are for the ZigBee Cluster Library specification [R1] unless otherwise indicated.
An XML version of these PICS is also available in [R3].

3.1 Usage

Item number	Feature	Reference	Status	Support
POLL.S	Does the device implement the <i>Poll Control</i> cluster as a server?	3.16.4	O	Yes/No
POLL.C	Does the device implement the <i>Poll Control</i> cluster as a client?	3.16.5	O	Yes/No

3.2 Server

3.2.1 Attributes

Item number	Feature	Reference	Status	Support
POLL.S.A0000	Does the device implement the <i>Check-inInterval</i> attribute?	3.16.4.1.1	POLL.S: M	Yes/No
POLL.S.A0001	Does the device implement the <i>LongPollInterval</i> attribute?	3.16.4.1.2	POLL.S: M	Yes/No
POLL.S.A0002	Does the device implement the <i>ShortPollInterval</i> attribute?	3.16.4.1.3	POLL.S: M	Yes/No
POLL.S.A0003	Does the device implement the <i>FastPollTimeout</i> attribute?	3.16.4.1.4	POLL.S: M	Yes/No
POLL.S.A0004	Does the device implement the <i>Check-inIntervaMin</i> attribute?	3.16.4.1.5	POLL.S: O	Yes/No
POLL.S.A0005	Does the device implement the <i>LongPollIntervalMin</i> attribute?	3.16.4.1.6	POLL.S: O	Yes/No
POLL.S.A0006	Does the device implement the <i>FastPollTimeoutMax</i> attribute?	3.16.4.1.7	POLL.S: O	Yes/No
POLL.S.Afffd	Does the device implement the <i>ClusterRevision</i> global attribute?	Table 2-1, 2.3.5.1.1	POLL.S: M	Yes/No
POLL.S.Afffe	Does the device implement the <i>AttributeReportingStatus</i> global attribute?	Table 2-1, 2.3.5.1.2	POLL.S: O	Yes/No

3.2.2 Commands received

Item number	Feature	Reference	Status	Support
POLL.S.C00.Rsp	Does the device implement receiving the <i>Check-inResponse</i> command?	3.16.5.3	POLL.S: M	Yes/No
POLL.S.C01.Rsp	Does the device implement receiving the <i>FastPollStop</i> command?	3.16.5.4	POLL.S: M	Yes/No
POLL.S.C02.Rsp	Does the device implement receiving the <i>SetLongPollInterval</i> command?	3.16.5.5	POLL.S: O	Yes/No
POLL.S.C03.Rsp	Does the device implement receiving the <i>SetShortPollInterval</i> command?	3.16.5.6	POLL.S: O	Yes/No

3.2.3 Commands sent

Item number	Feature	Reference	Status	Support
POLL.S.C00.Tx	Does the device implement sending the <i>Check-in</i> command?	3.16.4.4	POLL.S: M	Yes/No

3.3 Client

3.3.1 Attributes

Item number	Feature	Reference	Status	Support
POLL.C.Afffd	Does the device implement the <i>ClusterRevision</i> global attribute?	Table 2-1, 2.3.5.1.1	POLL.C: M	Yes/No
POLL.C.Afffe	Does the device implement the <i>AttributeReportingStatus</i> global attribute?	Table 2-1, 2.3.5.1.2	POLL.C: O	Yes/No

3.3.2 Commands received

Item number	Feature	Reference	Status	Support
POLL.C.C00.Rsp	Does the device implement receiving the <i>Check-in</i> command?	3.16.4.4	POLL.C: M	Yes/No

112 **3.3.3 Commands sent**

Item number	Feature	Reference	Status	Support
POLL.C.C00.Tx	Does the device implement sending the <i>Check-inResponse</i> command?	3.16.5.3	POLL.C: M	Yes/No
POLL.C.C01.Tx	Does the device implement sending the <i>FastPollStop</i> command?	3.16.5.4	POLL.C: M	Yes/No
POLL.C.C02.Tx	Does the device implement sending the <i>SetLongPollInterval</i> command?	3.16.5.5	POLL.C: O	Yes/No
POLL.C.C03.Tx	Does the device implement sending the <i>SetShortPollInterval</i> command?	3.16.5.6	POLL.C: O	Yes/No

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4 Test specification

4.1 Introduction

4.1.1 Test case overview

The following test cases are available for the *Poll Control* cluster:

Test ID	Description	Reference
Global tests		
POLL-TC-01G	Global attributes	<ref>
Server side tests		
POLL -TC-01S	Attributes with server as DUT	<ref>
POLL -TC-02S	General Functionality with server as DUT	<ref>
Client side tests		
POLL-TC-01C	General Functionality with client as DUT	<ref>

4.1.2 Testing tolerances

In test cases where a change in an attribute value is tested over time, it is permitted for the devices involved in the test to be within a tolerance of $\pm 15\%$ of the expected value. As such, these test cases indicate that the attribute value must be approximately equal to an expected value, to which the $\pm 15\%$ tolerance should then be applied. All other attribute values presented are expected to be exact.

4.1.3 Client DUTs

For client test cases only test steps that pertain to commands that are supported on the DUT are required to be executed. All commands in this cluster for which support is indicated in the PICS shall be exercised, using valid, application achievable values.

Note that for the client attribute test case, it is permissible for the client not to be able to execute any of the test steps.

The client SHALL ensure that an application link, e.g. a binding link, exists between itself and the test harness. This should be configured before starting the test.

4.1.4 Test steps manipulating attributes

In test case steps that require more than one attribute to be manipulated (e.g. read), the tester may decide whether it is appropriate or practical to send a single attribute manipulation command, containing multiple attributes, or multiple attribute manipulation commands, each containing a single attribute. The test case is designed to verify the behavior of the device supporting the attribute rather than verifying the attribute manipulation command in question.

4.2 Generic test cases

4.2.1 POLL-TC-01G: Global attributes

This test case verifies the behavior of the global attributes of the *Poll Control* cluster client and server. In this test, the PICS notation *POLL.S.Agm* and *POLL.C.Agm* represents the list of global attributes that are specified as being mandatory for either the server or client, respectively. Similarly, the PICS notation *POLL.S.Ago* and *POLL.C.Ago* represents the list of global attributes that are specified as being optional for either the server or client, respectively.

4.2.1.1 Scope

General:

- *Read attributes* command (0x00)
- *Read attributes response* command (0x01)
- *Write attributes* command (0x02)
- *Write attributes response* command (0x04)



Poll Control cluster (0x0500):

- All global attributes

PICS:

- *POLL.S*, *POLL.C*
- *POLL.S.Agm*, *POLL.C.Agm*, *POLL.S.Ago*, *POLL.C.Ago*

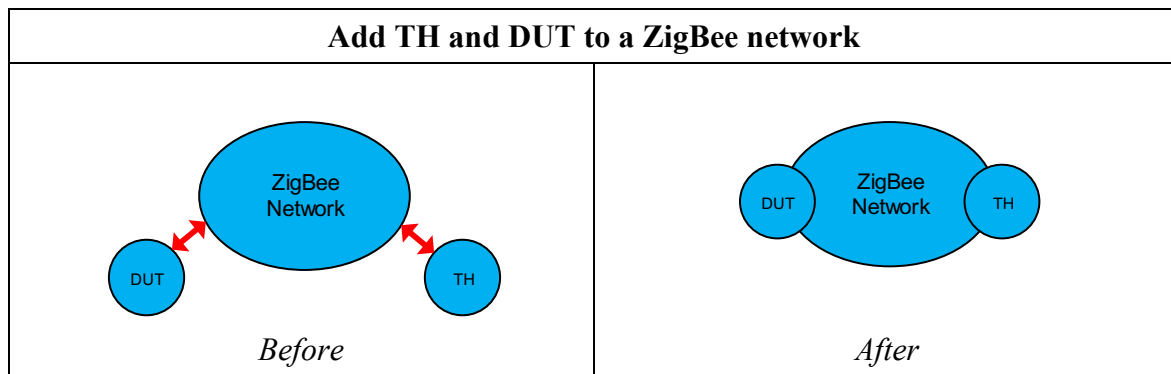
4.2.1.2 Required devices

Designation	Symbol	Description
DUT		Device under test implementing: <ul style="list-style-type: none"> • The <i>Poll Control</i> cluster server or client.
TH		Test harness implementing: <ul style="list-style-type: none"> • The <i>Poll Control</i> cluster client or server, i.e. the opposite cluster instantiation as implemented on the DUT.

4.2.1.3 Initial conditions

Item	Initial Conditions
1	A packet sniffer shall be observing the communication over the air interface.
2	All devices are factory new and powered off until used.

4.2.1.4 Test preparation



POLL-TC-01G: Global attributes		
Item	Preparation Step	Observation
P1	Form a ZigBee network.	Observe appropriate command frame to form the network.
P2	Power on TH and DUT.	TH and DUT are powered on.
P3	Join TH and DUT to a ZigBee network.	Observe appropriate communication between TH, DUT and any other relevant node on the ZigBee network.

--- End of test case POLL-TC-01G preparation ---

165 **4.2.1.5 Test procedure**

POLL-TC-01G: Global attributes			
Item	PICS	Test Harness Step	DUT pass Verification
1	POLL.S.Agm, POLL.C.Agm	TH unicasts a ZCL <i>read attributes</i> command frame to DUT to read each mandatory global attribute of this cluster one at a time.	DUT unicasts a ZCL <i>read attributes response</i> command frame to TH containing each requested attribute. The data type in each command must match the value listed in the specification(s). The data value in each command for the attribute must fall within the valid range described in the specification(s).
2a	POLL.S.Agm, POLL.C.Agm	TH unicasts a ZCL <i>write attributes</i> command frame to DUT to write the respective default value to each mandatory global attribute of this cluster one at a time.	DUT unicasts a ZCL <i>write attributes response</i> command frame to TH for each attribute. If the access control of DUT is set to READ, the DUT response will indicate that the attribute write command was not a SUCCESS. If the access control of DUT is set to READ/WRITE, the DUT response will indicate that the write command was a SUCCESS.
2b	POLL.S.Agm, POLL.C.Agm	TH unicasts a ZCL <i>read attributes</i> command frame to DUT to read back each attribute written in step 2a.	DUT unicasts a ZCL <i>read attributes response</i> command frame to TH containing the requested attribute. If the <i>Status</i> field of the <i>write attributes response</i> command frame was equal to SUCCESS, the updated value is read back. If the <i>Status</i> field of the <i>write attributes response</i> command frame was not equal to SUCCESS the value is not updated when read back.

Continued...

POLL-TC-01G: Global attributes			
Item	PICS	Test Harness Step	DUT pass Verification
3	POLL.S.Ago, POLL.C.Ago	TH unicasts a <i>ZCL read attributes</i> command frame to DUT to read each optional global attribute of this cluster one at a time.	DUT unicasts a <i>ZCL read attributes response</i> command frame to TH containing each attribute. If the DUT implements the attribute, the <i>Status</i> field will be equal to SUCCESS and the command will contain the requested attribute. If the DUT does not implement the attribute, the <i>Status</i> field will not be equal to SUCCESS. The data type in each command must match the value listed in the specification(s). The data value in each command for the attribute must fall within the valid range described in the specification(s).
4a	POLL.S.Ago, POLL.C.Ago	TH unicasts a <i>ZCL write attributes</i> command frame to DUT to write the respective default value to each optional global attribute of this cluster one at a time.	DUT unicasts a <i>ZCL write attributes response</i> command frame to TH for each attribute. If the attribute is not implemented or the access control of DUT is set to READ, the DUT response will indicate that the attribute write command was not a SUCCESS. If the attribute is implemented and the access control of DUT is set to READ/WRITE, the DUT response will indicate that the write command was a SUCCESS.
4b	POLL.S.Ago, POLL.C.Ago	TH unicasts a <i>ZCL read attributes</i> command frame to DUT to read back each attribute written in step 4a.	DUT unicasts a <i>ZCL read attributes response</i> command frame to TH containing the requested attribute. If the <i>Status</i> field of the <i>write attributes response</i> command frame was equal to SUCCESS, the updated value is read back. If the <i>Status</i> field of the <i>write attributes response</i> command frame was not equal to SUCCESS the value is not updated when read back.

--- End of test case POLL-TC-01G ---

4.3 Server test cases

4.3.1 POLL-TC-01S: Attributes with server as DUT

This test case verifies the behavior of the attributes of the *Poll Control* cluster server.

In this test, the PICS notation *POLL.S.Am* represents the list of non-global attributes that are specified as being mandatory. Similarly, the PICS notation *POLL.S.Ao* represents the list of non-global attributes that are specified as being optional.

4.3.1.1 Scope

General:

- *Read attributes* command (0x00)
- *Read attributes response* command (0x01)
- *Write attributes* command (0x02)
- *Write attributes response* command (0x04)



Poll Control cluster (0x0500):

- All non-global attributes

PICS:

- *POLL.S*,
- *POLL.S.Am*, *POLL.S.Ao*

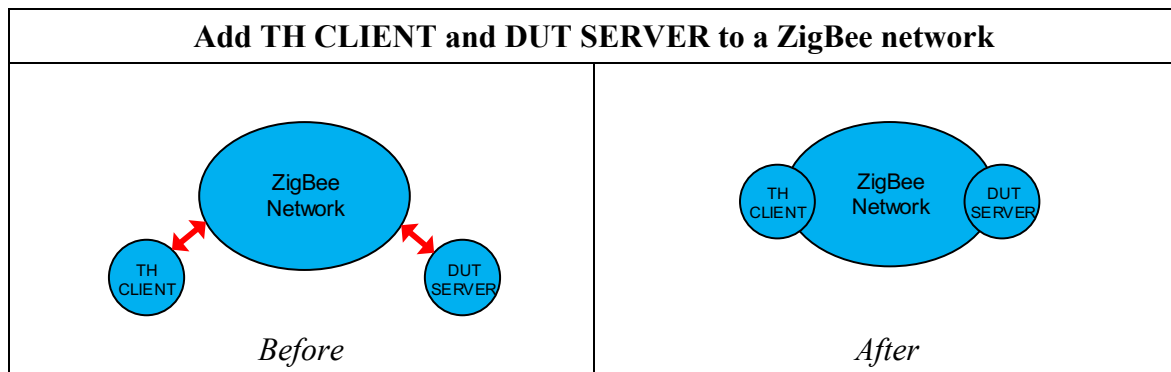
4.3.1.2 Required devices

Designation	Symbol	Description
TH CLIENT		Test harness client implementing: <ul style="list-style-type: none"> • The <i>Poll Control</i> cluster client.
DUT SERVER		Device under test server: <ul style="list-style-type: none"> • The <i>Poll Control</i> cluster server.

4.3.1.3 Initial conditions

Item	Initial Conditions
1	A packet sniffer shall be observing the communication over the air interface.
2	All devices are factory new and powered off until used.

4.3.1.4 Test preparation



POLL-TC-01S: Attributes with server as DUT		
Item	Preparation Step	Observation
P1	Form a ZigBee network.	Observe appropriate command frame to form the network.
P2	Power on TH CLIENT and DUT SERVER.	TH CLIENT and DUT SERVER are powered on.
P3	Join TH CLIENT and DUT SERVER to a ZigBee network.	Observe appropriate communication between TH CLIENT, DUT SERVER and any other relevant node on the ZigBee network.

--- End of test case POLL-TC-01S preparation ---

192 **4.3.1.5 Test procedure**

POLL-TC-01S: Attributes with server as DUT			
Item	PICS	Test Harness Step	DUT pass Verification
1	POLL.S.Am	TH CLIENT unicasts a ZCL <i>read attributes</i> command frame to DUT SERVER to read each mandatory attribute of this cluster one at a time.	DUT SERVER unicasts a ZCL <i>read attributes response</i> command frame to TH CLIENT containing each requested attribute. The data type in each command must match the value listed in the specification(s). The data value in each command for the attribute must fall within the valid range described in the specification(s).
2a	POLL.S.Am	TH CLIENT unicasts a ZCL <i>write attributes</i> command frame to DUT SERVER to write the respective default value to each mandatory attribute of this cluster one at a time.	DUT SERVER unicasts a ZCL <i>write attributes response</i> command frame to TH CLIENT for each attribute. If the access control of DUT SERVER is set to READ, the DUT SERVER response will indicate that the attribute write command was not a SUCCESS. If the access control of DUT SERVER is set to READ/WRITE, the DUT SERVER response will indicate that the write command was a SUCCESS.
2b	POLL.S.Am	TH CLIENT unicasts a ZCL <i>read attributes</i> command frame to DUT SERVER to read back each attribute written in step 2a.	DUT SERVER unicasts a ZCL <i>read attributes response</i> command frame to TH CLIENT containing the requested attribute. If the <i>Status</i> field of the <i>write attributes response</i> command frame was equal to SUCCESS, the updated value is read back. If the <i>Status</i> field of the <i>write attributes response</i> command frame was not equal to SUCCESS the value is not updated when read back.

Continued...

POLL-TC-01S: Attributes with server as DUT			
Item	PICS	Test Harness Step	DUT pass Verification
3	POLL.S.Ao	TH CLIENT unicasts a ZCL <i>read attributes</i> command frame to DUT SERVER to read each optional attribute of this cluster one at a time.	<p>DUT SERVER unicasts a ZCL <i>read attributes response</i> command frame to TH CLIENT containing each attribute.</p> <p>If the DUT SERVER implements the attribute, the <i>Status</i> field will be equal to SUCCESS and the command will contain the requested attribute. If the DUT SERVER does not implement the attribute, the <i>Status</i> field will not be equal to SUCCESS.</p> <p>The data type in each command must match the value listed in the specification(s). The data value in each command for the attribute must fall within the valid range described in the specification(s).</p>
4a	POLL.S.Ao	TH CLIENT unicasts a ZCL <i>write attributes</i> command frame to DUT SERVER to write the respective default value to each optional attribute of this cluster one at a time.	<p>DUT SERVER unicasts a ZCL <i>write attributes response</i> command frame to TH CLIENT for each attribute.</p> <p>If the attribute is not implemented or the access control of DUT SERVER is set to READ, the DUT SERVER response will indicate that the attribute write command was not a SUCCESS. If the attribute is implemented and the access control of DUT SERVER is set to READ/WRITE, the DUT response will indicate that the write command was a SUCCESS.</p>

Continued...

POLL-TC-01S: Attributes with server as DUT			
Item	PICS	Test Harness Step	DUT pass Verification
4b	POLL.S.Ao	TH CLIENT unicasts a ZCL <i>read attributes</i> command frame to DUT SERVER to read back each attribute written in step 4a.	DUT SERVER unicasts a ZCL <i>read attributes response</i> command frame to TH CLIENT containing the requested attribute. If the <i>Status</i> field of the <i>write attributes response</i> command frame was equal to SUCCESS, the updated value is read back. If the <i>Status</i> field of the <i>write attributes response</i> command frame was not equal to SUCCESS the value is not updated when read back.

--- End of test case POLL-TC-01S ---

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4.3.2 POLL-TC-02S: General Functionality with server as a DUT

This test case verifies the Device Enrollment process of the *Poll Control* Cluster with respect to the CIE, which in this case is the Test Harness Client.

4.3.2.1 Scope

General:

- *Read attributes* command (0x00)
- *Read attributes response* command (0x01)
- *Write attributes* command (0x02)
- *Write attributes response* command (0x04)



Poll Control cluster (0x0020):

- Check-inInterval Attribute (0x0000)
- LongPollInterval Attribute (0x0001)
- ShortPollInterval Attribute (0x0002)
- FastPollTimeout Attribute (0x0003)
- Check-inIntervalMin Attribute (0x0004)
- LongPollIntervalMin Attribute (0x0005)
- FastPollTimeoutMax Attribute (0x0006)

PICS:

- POLL.S
- POLL.S.A0000, POLL.S.A0001, POLL.S.A0002, POLL.S.A0003, POLL.S.A0004, POLL.S.A0005, POLL.S.A0006

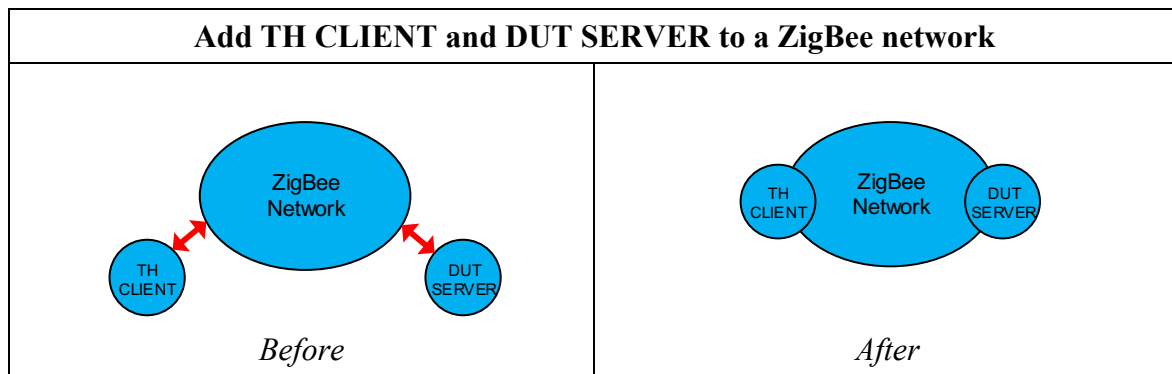
4.3.2.2 Required devices

Designation	Symbol	Description
TH CLIENT		Test harness client implementing: <ul style="list-style-type: none"> • The <i>Poll Control</i> cluster client.
DUT SERVER		Device under test server: <ul style="list-style-type: none"> • The <i>Poll Control</i> cluster server.

4.3.2.3 Initial conditions

Item	Initial Conditions
1	A packet sniffer shall be observing the communication over the air interface.
2	All devices are factory new and powered off until used.

219 4.3.2.4 Test preparation



POLL-TC-02S: General Functionality with server as DUT		
Item	Preparation Step	Observation
P1	Form a ZigBee network.	Observe appropriate command frame to form the network.
P2	Power on TH CLIENT and DUT SERVER.	TH CLIENT and DUT SERVER are powered on.
P3	The DUT SERVER shall be in wireless communication proximity of TH CLIENT.	The TH CLIENT shall be observing the communication over the air interface.

--- End of test case POLL-TC-02S preparation ---

222 **4.3.2.5 Test procedure**

POLL-TC-02S: General Functionality with server as DUT			
Item	PICS	Test Harness Step	DUT pass Verification
1	POLL.S POLL.S.A000 0	TH CLIENT reads mandatory attribute Check-in Interval (0x0000) from DUT SERVER.	DUT SERVER responds to the TH CLIENT with a Read Attributes Response showing a valid Check-in Interval value as listed in [R1].
2	POLL.S POLL.S.A000 0	TH CLIENT writes a value of the default Check-in Interval + 0x0078 (30 seconds) to mandatory attribute Check-in Interval (0x0000) of DUT SERVER. TH CLIENT reads mandatory attribute Check-in Interval (0x0000) from DUT SERVER.	DUT SERVER responds with a Write Attributes Response of status success. DUT SERVER responds to the TH CLIENT with a Read Attributes Response showing the updated value for Check-in Interval.
3	POLL.S POLL.S.A000 1	TH CLIENT reads mandatory attribute Long Poll Interval (0x0001) from DUT SERVER.	DUT SERVER responds to the TH CLIENT with a Read Attributes Response showing a valid Long Poll Interval value as listed in [R1].
4	POLL.S POLL.S.A000 2	TH CLIENT reads mandatory attribute Short Poll Interval (0x0002) from DUT SERVER.	DUT SERVER responds to the TH CLIENT with a Read Attributes Response showing a valid Short Poll Interval value as listed in [R1].
5	POLL.S POLL.S.A000 3	TH CLIENT reads mandatory attribute Fast Poll Timeout (0x0003) from DUT SERVER.	DUT SERVER responds to the TH CLIENT with a Read Attributes Response showing a valid Fast Poll Timeout value as listed in [R1].

POLL-TC-02S: General Functionality with server as DUT			
Item	PICS	Test Harness Step	DUT pass Verification
6	POLL.S POLL.S.A000 6 POLL.S.A000 3	<p>If the optional Fast Poll Timeout Max attribute is supported, TH CLIENT reads the Fast Poll Timeout Max attribute from the DUT to determine the maximum value for the write attribute request for this positive Fast PollTimeout test.</p> <p>TH CLIENT writes a valid value, [suggested 0x50 (20 seconds) if Fast Poll Timeout Max attribute is not supported], to the mandatory attribute Fast Poll Timeout (0x0003) to DUT SERVER.</p> <p>TH CLIENT reads mandatory attribute Fast Poll Timeout (0x0003) from DUT SERVER.</p>	DUT SERVER responds with a Write Attributes Response of status success. DUT SERVER responds to the TH CLIENT with a Read Attributes Response showing the updated value for Fast Poll Timeout.
7	POLL.S POLL.S.A000 4	(Optional) TH CLIENT reads optional attribute Check-in Interval Min (0x0004) from DUT SERVER.	If supported, DUT SERVER responds to the TH CLIENT with a Read Attributes Response showing a valid Check-in Interval Min value that is less than or equal to the Check-in Interval value.
8	POLL.S POLL.S.A000 5	(Optional) TH CLIENT reads optional attribute Long Poll Interval Min (0x0005) from DUT SERVER.	If supported, DUT SERVER responds to the TH CLIENT with a Read Attributes Response showing a valid Long Poll Interval Min value that is less than or equal to the Long Poll Interval value.
9	POLL.S POLL.S.A000 6	TH CLIENT reads optional attribute Fast Poll Time Out Max (0x0006) from DUT SERVER.	If supported, DUT SERVER responds to the TH CLIENT with a Read Attributes Response showing a valid Fast Poll Timeout Max value as listed in [R1].

POLL-TC-02S: General Functionality with server as DUT			
Item	PICS	Test Harness Step	DUT pass Verification
10	POLL.S POLL.S.A000 0 POLL.S.A000 4	<p>(Optional)</p> <p>If the optional Check-in Interval Min attribute is supported, TH CLIENT reads the Check-in Interval Min attribute from the DUT to determine the minimum value for the write attribute request for this Check-in Interval negative test.</p> <p>TH CLIENT writes an invalid value which is lower than the optional Check-in Interval Min value, to the Check-in Interval attribute.</p> <p>TH CLIENT reads mandatory attribute Check-in Interval (0x0000) from DUT SERVER.</p>	<p>If supported: i) DUT SERVER rejects the new value by send back a Write Attribute Response with error status not equal to ZCL_SUCCESS(0x00). It is suggested that it should respond with a error status of ZCL_INVALID_VALUE (0x87). AND ii) From the Read Attribute Response, verify that the Attribute Value is same as before the Write attribute request.</p>
11	POLL.S POLL.S.A000 0 POLL.S.A000 1	<p>(Optional) TH CLIENT writes 0x0004 (4 quarterseconds), which is lower than the Long Poll Interval value, to Check-in Interval (0x0000) from DUT SERVER.</p> <p>TH CLIENT reads mandatory attribute Check-in Interval (0x0000) from DUT SERVER.</p>	<p>DUT SERVER rejects the new value by send back a Write Attribute Response with error status not equal to ZCL_SUCCESS(0x00). It is suggested that it should respond with a error status of ZCL_INVALID_VALUE (0x87). From the Read Attribute Response, verify that the Attribute Value is same as before the Write attribute request.</p>

POLL-TC-02S: General Functionality with server as DUT			
Item	PICS	Test Harness Step	DUT pass Verification
12	POLL.S POLL.S.A000 3 POLL.S.A000 6	(Optional) TH CLIENT writes the optional Fast Poll Timeout Max value + 0x0078 (120 quarterseconds) to the Fast Poll Timeout attribute of DUT SERVER. TH CLIENT reads mandatory attribute Fast Poll Timeout (0x0003) from DUT SERVER.	DUT SERVER rejects the new value by send back a Write Attribute Response with error status not equal to ZCL_SUCCESS(0x00). It is suggested that it should respond with an error status of ZCL_INVALID_VALUE (0x87). From the Read Attribute Response, verify that the Attribute Value is same as before the Write attribute request.

--- End of test case POLL-TC-02S ---

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4.4 Client test cases

4.4.1 POLL-TC-01C: General Functionality with client as DUT

This case test verifies the functionality of the *Poll Control* cluster client.

The DUT client SHALL be on the same network as a suitable server, provided by the user, and this device SHALL be used by the client to exercise its functionality. The test case uses the test harness to prompt the user, based on the declared PICS, to exercise the functionality of the *Poll Control* cluster client and to verify the results. A sniffer tool SHALL be used to log the exercised functionality and to determine its validity.

In this test case, the PICS notation POLL.C.Cd,Tx represents the list of commands that are declared as being transmitted by the DUT.

4.4.1.1 Scope

General:

- *Write attributes* command (0x02)
- *Write attributes response* command (0x04)



Poll Control cluster (0x0020):

- Receives Check-in Command (0x00)
- Sends Check-inResponse Command (0x00)
- Sends FastPollStop Command (0x01)
- Sends SetLongPollInterval Command (0x02)
- Sends SetShortPollInterval Command (0x03)

PICS:

- POLL.C
- POLL.C.C00.Rsp, POLL.C.C00.Tx, POLL.C.C01.Tx, POLL.C.C02.Tx, POLL.C.C03.Tx

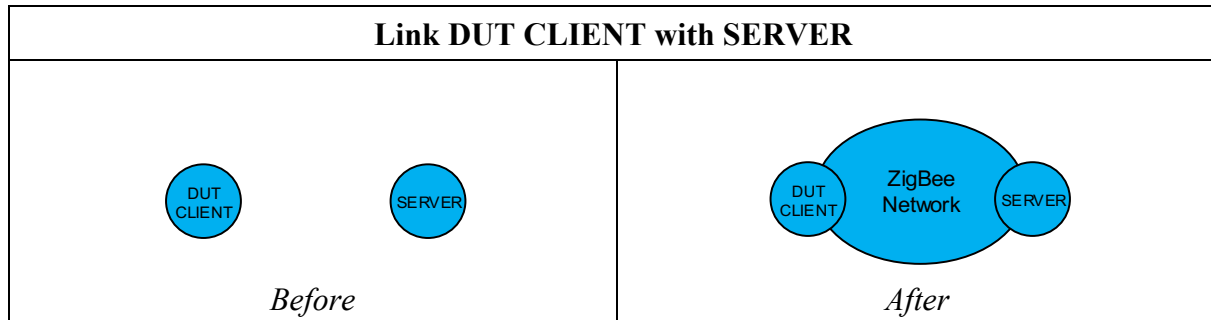
4.4.1.2 Required devices

Designation	Symbol	Description
DUT CLIENT		Device under test client implementing: <ul style="list-style-type: none"> • The <i>Poll Control</i> cluster client.
SERVER		Suitable server device implementing: <ul style="list-style-type: none"> • The <i>Poll Control</i> cluster server.

251 4.4.1.3 Initial conditions

Item	Initial Conditions
1	A packet sniffer shall be observing the communication over the air interface.
2	All devices are factory new and powered off until used.

252 4.4.1.4 Test preparation



POLL-TC-01C: General Functionality with client as DUT		
Item	Preparation Step	Observation
P1	Power on the DUT CLIENT device and the TH SERVER device.	DUT CLIENT and TH SERVER are powered on.
P2	The DUT CLIENT shall be in wireless communication proximity of TH SERVER.	The TH SERVER shall be observing the communication over the air interface.

--- End of test case POLL-TC-01C preparation ---

254 4.4.1.5 Test procedure

POLL-TC-01C: General Functionality with client as DUT			
Item	PICS	Test Harness Step	DUT Pass Verification
1	POLL.C POLL.C.C00. Rsp POLL.C.C00. Tx	TH SERVER sends out a CheckIn command (0x00), direction bit server-to-client. DUT CLIENT responds with a CheckIn Response (0x00), direction bit client-to-server with Start fast polling set to True, and a Fast Poll Timeout as specified from the device.	If supported, DUT CLIENT is able to send out the correctly formatted Check-in Response command to the Test Harness
2	POLL.C POLL.C.C00. Rsp POLL.C.C00. Tx	TH SERVER sends out a Check-in command. Client responds with a Check-in Response with Start fast polling set to false	If supported, DUT CLIENT is able to send out the correctly formatted Check-in Response command to the Test Harness

POLL-TC-01C: General Functionality with client as DUT			
Item	PICS	Test Harness Step	DUT Pass Verification
3	POLL.C POLL.C.C01. Tx	DUT CLIENT sends out a Fast Poll Stop command	If supported, DUT CLIENT is able to send out the correctly formatted Fast Poll Stop command to the Test Harness
4	POLL.C POLL.C.C02. Tx	(Optional) DUT CLIENT sends Set Long Poll Interval with the New Long Poll Interval set to some value.	If supported, DUT CLIENT is able to send out the correctly formatted Set Long Poll Interval command
5	POLL.C POLL.C.C03. Tx	(Optional) DUT CLIENT sends Set Short Poll Interval with the New Short Poll Interval set to some value	If supported, DUT CLIENT is able to send out the correctly formatted Set Short Poll Interval command

--- End of test case POLL-TC-01C ---

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5 Annex A: PICS to test case cross reference

5.1 Server

PICS	Test case		
	POLL-TC-01G	POLL-TC-01S	POLL-TC-02S
POLL.S	X	X	X
POLL.S.A0000			X
POLL.S.A0001			X
POLL.S.A0002			X
POLL.S.A0003			X
POLL.S.A0004			X
POLL.S.A0005			X
POLL.S.A0006			X
POLL.S.Afffd	X		
POLL.S.Afffe	X		

5.2 Client

PICS	Test Case	
	POLL-TC-01G	POLL-TC-01C
POLL.C	X	X
POLL.C.Afffd	X	
POLL.C.Afffe	X	
POLL.C.C00.Rsp		X
POLL.C.C00.Tx		X
POLL.C.C01.Tx		X
POLL.C.C02.Tx		X
POLL.C.C03.Tx		X