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SERIES H: AUDIOVISUAL AND MULTIMEDIA SYSTEMS

E-health multimedia services and applications – Interoperability compliance testing of personal health systems (HRN, PAN, LAN, TAN and WAN)

Conformance of ITU-T H.810 personal health system: Personal Health Devices interface Part 2: Optimized Exchange Protocol: Personal Health Gateway

Recommendation ITU-T H.842

International Telecommunication Union

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Recommendation ITU-T H.842

Conformance of ITU-T H.810 personal health system: Personal Health Devices interface Part 2: Optimized Exchange Protocol: Personal Health Gateway

Summary

Recommendation ITU-T H.842 provides a test suite structure (TSS) and the test purposes (TPs) for personal health gateways (PHGs) using the IEEE 11073-20601 optimized exchange protocol in the Personal Health Devices (PHD) interface, based on the requirements defined in the Recommendations of the ITU-T H.810 sub-series, of which Recommendation ITU-T H.810 (2017) is the base Recommendation. The objective of this test specification is to provide a high probability of interoperability at this interface.

Recommendation ITU-T H.842 is a transposition of Continua Test Tool DG2016, Test Suite Structure & Test Purposes, Personal Health Devices Interface; Part 2: Optimized Exchange Protocol: Personal Health Gateway (Version 1.8, 2017-03-14), that was developed by the Personal Connected Health Alliance. A number of versions of this specification existed before transposition.

This Recommendation includes an electronic attachment with the protocol implementation conformance statements (PICS) and the protocol implementation extra information for testing (PIXIT) required for the implementation of Annex A.

History

Edition	Recommendation	Approval	Study Group	Unique ID*
1.0	ITU-T H.842	2015-01-13	16	11.1002/1000/12259
2.0	ITU-T H.842	2016-07-14	16	11.1002/1000/12935
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Keywords

Conformance testing, Continua Design Guidelines, e-health, IEEE 11073-20601 optimized exchange protocol, ITU-T H.810, personal area network, personal connected health devices, Personal Health Devices interface, personal Health Gateway, touch area network

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* To access the Recommendation, type the URL http://handle.itu.int/ in the address field of your web browser, followed by the Recommendation's unique ID. For example, http://handle.itu.int/11.1002/1000/11830-en.

FOREWORD

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The World Telecommunication Standardization Assembly (WTSA), which meets every four years, establishes the topics for study by the ITU-T study groups which, in turn, produce Recommendations on these topics.

The approval of ITU-T Recommendations is covered by the procedure laid down in WTSA Resolution 1.

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As of the date of approval of this Recommendation, ITU had not received notice of intellectual property, protected by patents, which may be required to implement this Recommendation. However, implementers are cautioned that this may not represent the latest information and are therefore strongly urged to consult the TSB patent database at http://www.itu.int/ITU-T/ipr/.

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Electronic attachment: This Recommendation includes an electronic attachment with the protocol implementation conformance statements (PICS) and the protocol implementation extra information for testing (PIXIT) required for the implementation of Annex A.

Introduction

This Recommendation is a transposition of Continua Test Tool DG2016, Test Suite Structure & Test Purposes, Personal Health Devices Interface; Part 2: Optimized Exchange Protocol: Personal Health Gateway (Version 1.8, 2017-03-14), that was developed by the Personal Connected Health Alliance. The table below shows the revision history of this test specification; it may contain versions that existed before transposition.

Version	Date	Revision history
1.2	2012-10-05	Initial release for Test Tool DG2011. This is the same version as "TSS&TP_1.5_PAN-LAN_PART_2_v1.2.doc" because new features included in [b-CDG 2011] do not affect the test procedures specified in this document.
1.3	2013-05-24	Initial release for Test Tool DG2012. This uses "TSS&TP_DG2011_PAN-LAN_PART_2_v1.2.doc" as a baseline and adds new features included in [b-CDG 2012]: • Adds glucose meter new spec version • Adds body composition analyser device specialization • Adds basic electrocardiograph device specialization
1.4	2014-01-24	Initial release for Test Tool DG2013. This uses "TSS&TP_DG2012_PAN-LAN_PART_2_v1.3.doc" as a baseline and adds new features included in [b-ITU-T H.810 (2013)]/[b-CDG 2013]: • Adds glucose meter BLE • Adds BLE SSP support • Adds NFC new transport • Adds INR Device Specialization
1.5	2014-04-24	TM Lite & Doc Enhancements (Test Tool v4.0 Maintenance Release 1). It uses "TSS&TP_DG2013_PLT_PART_2_v1.4.doc" as a baseline and adds new features included in Documentation Enhancements: • "Other PICS" row has been added
1.6	2015-07-01	Initial Release for Test Tool DG2015. It uses "TSS&TP_DG2013_PHT_PART_2_v1.5.doc" as a baseline and adds new features included in [ITU-T H.810 (2015)]/[b-CDG 2015]
1.7	2016-09-20	Initial release for Test Tool DG2016. It uses "TSS&TP_DG2015_PHT_PART_2_v1.6.doc" as a baseline and adds new features included in [ITU-T H.810 (2016)]/[b-CDG 2016]
1.8	2017-03-14	Updates the baseline in "TSS&TP_DG2016_PHD_PART_2_v1.7.doc" as part of the Maintenance 2016 activity: • Update the applicability row for TP/PLT/PHG/OXP/DIM/BV-046
1.9	2018-02-27	Updates related to the inclusion of the power status monitor of Personal Health Devices device specialization [ISO/IEEE 11073-10427] Updates related to the changes included in the glucose meter device specialization [ISO/IEEE 11073-10417]

Recommendation ITU-T H.842

Conformance of ITU-T H.810 personal health system: Personal Health Devices interface Part 2: Optimized Exchange Protocol: Personal Health Gateway

1 Scope

The scope of this Recommendation[1] is to provide a test suite structure (TSS) and the test purposes (TP) for the Personal Health Devices (PHD) interface based on the requirements defined in the Continua Design Guidelines (CDG) [ITU-T H.810 (2017)]. The objective of this test specification is to provide a high probability of interoperability at this interface.

The TSS and TP for the Personal Health Devices interface have been divided into the parts specified below. This Recommendation covers Part 2.

– Part 1: Optimized exchange protocol. Personal Health Device

– **Part 2: Optimized exchange protocol. Personal Health Gateway**

– Part 3: Continua design guidelines. Personal Health Device

– Part 4: Continua design guidelines. Personal Health Gateway

– Part 5: Device specializations. Personal Health Device. This document is divided into the following subparts:
  - Part 5A: Weighing scales
  - Part 5B: Glucose meter
  - Part 5C: Pulse oximeter
  - Part 5D: Blood pressure monitor
  - Part 5E: Thermometer
  - Part 5F: Cardiovascular fitness and activity monitor
  - Part 5G: Strength fitness equipment
  - Part 5H: Independent living activity hub
  - Part 5I: Adherence monitor
  - Part 5J: Insulin pump
  - Part 5K: Peak expiratory flow monitor
  - Part 5L: Body composition analyser
  - Part 5M: Basic electrocardiograph
  - Part 5N: International normalized ratio monitor
  - Part 5O: Sleep apnoea breathing therapy equipment (SABTE)
  - Part 5P: Continuous glucose monitor (CGM)
  - Part 5Q: Power status monitor (PSM)

– Part 6: Device specializations. Personal Health Gateway

– Part 7: Continua Design Guidelines. Personal Health Device BLE

– Part 8: Continua Design Guidelines. Personal Health Gateway BLE

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[1] This Recommendation includes an electronic attachment with the protocol implementation conformance statements (PICS) and the protocol implementation extra information for testing (PIXIT) required for the implementation Annex A.

– Part 9: Personal Health Devices Transcoding Whitepaper. Personal Health Device

– Part 10: Personal Health Devices Transcoding Whitepaper. Personal Health Gateway

2 References

The following ITU-T Recommendations and other references contain provisions which, through reference in this text, constitute provisions of this Recommendation. At the time of publication, the editions indicated were valid. All Recommendations and other references are subject to revision; users of this Recommendation are therefore encouraged to investigate the possibility of applying the most recent edition of the Recommendations and other references listed below. A list of the currently valid ITU-T Recommendations is regularly published. The reference to a document within this Recommendation does not give it, as a stand-alone document, the status of a Recommendation.

[ITU-T H.810 (2017)] Recommendation ITU-T H.810 (2017), *Interoperability design guidelines for personal health systems*.

[ISO/IEEE 11073-20601-2015A] ISO/IEEE 11073-20601:2010, *Health informatics – Personal health device communication – Part 20601: Application profile – Optimized exchange protocol*, including ISO/IEEE 11073-20601:2010 Amd 1:2015.
https://www.iso.org/standard/54331.html with
https://www.iso.org/standard/63972.html

[ISO/IEEE 11073-20601-2016C] ISO/IEEE 11073-20601:2016, *Health informatics – Personal health device communication – Part 20601: Application profile – Optimized exchange protocol*, including ISO/IEEE 11073-20601:2016/Cor.1:2016.
https://www.iso.org/standard/66717.html with
https://www.iso.org/standard/71886.html

[ISO/IEEE 11073-104xx] ISO/IEEE 11073-104xx (in force), *Health informatics – Personal health device communication – Device specialization.*
NOTE – This is shorthand used to refer to the collection of device specialization standards that utilize [ISO/IEEE 11073-20601-2015A], where xx can be any number from 01 to 99, inclusive.

[ISO/IEEE 11073-10404] ISO/IEEE 11073-10404:2010, *Health informatics – Personal health device communication – Part 10404: Device specialization – Pulse oximeter.*
https://www.iso.org/standard/54572.html

[ISO/IEEE 11073-10406] ISO/IEEE 11073-10406-2012, *Health informatics – Personal health device communication – Part 10406: Device specialization – Basic electrocardiograph (ECG) (1- to 3-lead ECG).*
https://www.iso.org/standard/61876.html

[ISO/IEEE 11073-10407] ISO/IEEE 11073-10407:2010, *Health informatics – Personal health device communication – Part 10407: Device specialization – Blood pressure monitor.*
https://www.iso.org/standard/54573.html

[ISO/IEEE 11073-10408] ISO/IEEE 11073-10408:2010, *Health informatics – Personal health device communication – Part 10408: Device specialization – Thermometer.*
https://www.iso.org/standard/54310.html

[ISO/IEEE 11073-10415] ISO/IEEE 11073-10415:2010, *Health informatics – Personal health device communication – Part 10415: Device specialization – Weighing scale.*
https://www.iso.org/standard/54310.html

[ISO/IEEE 11073-10417] ISO/IEEE 11073-10417:2017, *Health informatics – Personal health device communication – Part 10417: Device specialization – Glucose meter*.
https://www.iso.org/standard/70739.html

[ISO/IEEE 11073-10418C] ISO/IEEE 11073-10418-2014, *Health informatics – Personal health device communication – Part 10418: Device specialization – International Normalized Ratio (INR) monitor*, including ISO/IEEE 11073-10418:2014/Cor 1:2016.
https://www.iso.org/standard/61897.html with
https://www.iso.org/standard/70740.html

[ISO/IEEE 11073-10419] ISO/IEEE 11073-10419:2016, *Health informatics – Personal health device communication – Part 10419: Device specialization – Insulin pump*.
https://www.iso.org/standard/69528.html

[ISO/IEEE 11073-10420] ISO/IEEE 11073-10420-2012, *Health informatics – Personal health device communication – Part 10420: Device specialization – Body composition analyzer*.
https://www.iso.org/standard/61055.html

[ISO/IEEE 11073-10421] ISO/IEEE 11073-10421:2012, *Health informatics – Personal health device communication – Part 10421: Device specialization – Peak expiratory flow monitor (peak flow).*
https://www.iso.org/standard/61056.html

[ISO/IEEE 11073-10424] ISO/IEEE 11073-10424:2016, *Health informatics – Personal health device communication – Part 10424: Device specialization – Sleep apnoea breathing therapy equipment (SABTE).*
https://www.iso.org/standard/68906.html
NOTE – equivalent to IEEE 11073-10424-2014, Health informatics – Personal health device communication – Part 10424: Device Specialization – Sleep Apnoea Breathing Therapy Equipment (SABTE)
http://dx.doi.org/10.1109/IEEESTD.2014.6911927

[ISO/IEEE 11073-10425] ISO/IEEE 11073-10425:2016, *Health informatics – Personal health device communication – Part 10425: Device specialization – Continuous glucose monitor (CGM).*
https://www.iso.org/standard/67821.html

[ISO/IEEE 11073-10427] ISO/IEEE 11073-10427:2018, *Health informatics – Personal health device communication – Part 10427: Device specialization – Power Status Monitor of Personal Health Devices.*
https://www.iso.org/standard/73759.html. Same publication as
https://standards.ieee.org/findstds/standard/11073-10427-2016.html.

[ISO/IEEE 11073-10441] ISO/IEEE 11073-10441-2015, *Health informatics – Personal Health Device Communication – Part 10441: Device Specialization – Cardiovascular fitness and activity monitor*, (Revision of IEEE Std 11073-10441-2008).
https://www.iso.org/standard/64868.html

[ISO/IEEE 11073-10442] ISO/IEEE 11073-10442:2015, *Health informatics – Personal health device communication – Part 10442: Device specialization – Strength fitness equipment.* http://standards.ieee.org/findstds/standard/11073-10442-2008.html

[ISO/IEEE 11073-10471] ISO/IEEE 11073-10471:2010, *Health informatics – Personal health device communication – Part 10471: Device specialization – Independent living activity hub.* https://www.iso.org/standard/54328.html

[ISO/IEEE 11073-10472] ISO/IEEE 11073-10472-2012, *Health informatics – Personal health device communication – Part 10472: Device specialization – Medication monitor.* https://www.iso.org/standard/54364.html

3 Definitions

3.1 Terms defined elsewhere

This Recommendation uses the following terms defined elsewhere:

3.1.1 agent [ISO/IEEE 11073-20601-2016C]: A node that collects and transmits personal health data to an associated manager.

3.1.2 manager [ISO/IEEE 11073-20601-2016C]: A node receiving data from one or more agent systems. Some examples of managers include a cellular phone, health appliance, set top box, or a computer system.

3.2 Terms defined in this Recommendation

None.

4 Abbreviations and acronyms

This Recommendation uses the following abbreviations and acronyms:

ATS Abstract Test Suite

DUT Device Under Test

CDG Continua Design Guidelines

CGM Continuous Glucose Monitor

GUI Graphical User Interface

INR International Normalized Ratio

IP Insulin Pump

MDS Medical Device System

NFC Near Field Communication

PAN Personal Area Network

PCT Protocol Conformance Testing

PHD Personal Health Device

PHDC Personal Healthcare Device Class

PHG Personal Health Gateway

PICS Protocol Implementation Conformance Statement

PIXIT Protocol Implementation extra Information for Testing

PSM Power Status Monitor

SABTE Sleep Apnoea Breathing Therapy Equipment

SCR Static Conformance Review

SDP Service Discovery Protocol

SOAP Simple Object Access Protocol

TCRL Test Case Reference List

TP Test Purpose

TSS Test Suite Structure

USB Universal Serial Bus

WDM Windows Driver Model

5 Conventions

The key words "SHALL", "SHALL NOT", "SHOULD", "SHOULD NOT", "MAY", "MAY NOT" in this Recommendation are to be interpreted as in [b-ETSI SR 001 262].

– SHALL is equivalent to 'must' or 'it is required to'.

– SHALL NOT is equivalent to 'must not' or 'it is not allowed'.

– SHOULD is equivalent to 'it is recommended to'.

– SHOULD NOT is equivalent to 'it is not recommended to'.

– MAY is equivalent to 'is permitted'.

– MAY NOT is equivalent to 'it is not required that'.

NOTE – The above-mentioned key words are capitalized for illustrative purposes only and they do not appear capitalized within this Recommendation.

Reference is made in the ITU-T H.800-series of Recommendations to different versions of the Continua Design Guidelines (CDG) by a specific designation. The list of terms that may be used in this Recommendation is provided in Table 1.

Table 1 – List of designations associated with the various versions of the CDG

CDG release	Transposed as	Version	Description	Designation
2017	–	7.0	Release 2017 of the CDG including maintenance updates of the CDG 2016 and additional guidelines that cover new functionalities.	–
2016 plus errata	[ITU-T H.810 (2016)]	6.1	Release 2016 plus errata noting all ratified bugs [b-CDG 2016].	–
2016	–	6.0	Release 2016 of the CDG including maintenance updates of the CDG 2015 and additional guidelines that cover new functionalities.	Iris
2015 plus errata	[b-ITU-T H.810 (2015)]	5.1	Release 2015 plus errata noting all ratified bugs [b-CDG 2015]. The 2013 edition of H.810 is split into eight parts in the H.810-series.	–
2015	–	5.0	Release 2015 of the CDG including maintenance updates of the CDG 2013 and additional guidelines that cover new functionalities.	Genome
2013 plus errata	[b-ITU-T H.810 (2013)]	4.1	Release 2013 plus errata noting all ratified bugs [b-CDG 2013].	–
2013	–	4.0	Release 2013 of the CDG including maintenance updates of the CDG 2012 and additional guidelines that cover new functionalities.	Endorphin
2012 plus errata	–	3.1	Release 2012 plus errata noting all ratified bugs [b-CDG 2012].	–
2012	–	3.0	Release 2012 of the CDG including maintenance updates of the CDG 2011 and additional guidelines that cover new functionalities.	Catalyst
2011 plus errata	–	2.1	CDG 2011 integrated with identified errata.	–
2011	–	2.0	Release 2011 of the CDG including maintenance updates of the CDG 2010 and additional guidelines that cover new functionalities [b-CDG 2011].	Adrenaline
2010 plus errata	–	1.6	CDG 2010 integrated with identified errata	–
2010	–	1.5	Release 2010 of the CDG with maintenance updates of the CDG Version 1 and additional guidelines that cover new functionalities [b-CDG 2010].	1.5
1.0	–	1.0	First released version of the CDG [b-CDG 1.0].	–

6 Test suite structure (TSS)

The test purposes (TPs) for the Personal Health Devices interface have been divided into the main subgroups specified below. Annex A describes the TPs for subgroups 2.2.1, 2.2.2, 2.2.3 and 2.2.4 (shown in bold).

– Group 1: Personal Health Device (PHD)
  - Group 1.1: Transport (TR)
    - Subgroup 1.1.1: Design guidelines: Common (DGC)
    - Subgroup 1.1.2: USB design guidelines (UDG)
    - Subgroup 1.1.3: Bluetooth design guidelines (BDG)
    - Subgroup 1.1.4: Pulse oximeter design guidelines (PODG)
    - Subgroup 1.1.5: Cardiovascular design guidelines (CVDG)
    - Subgroup 1.1.6: Activity hub design guidelines (HUBDG)
    - Subgroup 1.1.7: ZigBee design guidelines (ZDG)
    - Subgroup 1.1.8: Glucose meter design guidelines (GLDG)
    - Subgroup 1.1.9: Bluetooth low energy design guidelines (BLEDG)
    - Subgroup 1.1.10: Basic electrocardiograph design guidelines (ECGDG)
    - Subgroup 1.1.11: NFC design guidelines (NDG)
  - Group 1.2: IEEE 20601 Optimized exchange protocol (OXP)
    - Subgroup 1.2.1: PHD domain information model (DIM)
    - Subgroup 1.2.2: PHD service model (SER)
    - Subgroup 1.2.3: PHD communication model (COM)
  - Group 1.3: Devices class specializations (CLASS)
    - Subgroup 1.3.1: Weighing scales (WEG)
    - Subgroup 1.3.2: Glucose meter (GL)
    - Subgroup 1.3.3: Pulse oximeter (PO)
    - Subgroup 1.3.4: Blood pressure monitor (BPM)
    - Subgroup 1.3.5: Thermometer (TH)
    - Subgroup 1.3.6: Cardiovascular (CV)
    - Subgroup 1.3.7: Strength (ST)
    - Subgroup 1.3.8: Activity hub (HUB)
    - Subgroup 1.3.9: Adherence monitor (AM)
    - Subgroup 1.3.10: Insulin pump (IP)
    - Subgroup 1.3.11: Peak flow (PF)
    - Subgroup 1.3.12: Body composition analyser (BCA)
    - Subgroup 1.3.13: Basic electrocardiograph (ECG)
    - Subgroup 1.3.14: International normalized ratio (INR)
    - Subgroup 1.3.15: Sleep apnoea breathing therapy equipment (SABTE)
    - Subgroup 1.3.16: Continuous glucose monitor (CGM)
    - Subgroup 1.3.17: Power status monitor (PSM)
  - Group 1.4: Personal health device transcoding whitepaper (PHDTW)
    - Subgroup 1.4.1: Whitepaper general requirements (GEN)

- Subgroup 1.4.2: Whitepaper thermometer requirements (TH)
- Subgroup 1.4.3: Whitepaper blood pressure requirements (BPM)
- Subgroup 1.4.4: Whitepaper heart rate requirements (HR)
- Subgroup 1.4.5: Whitepaper glucose meter requirements (GL)
- Subgroup 1.4.6: Whitepaper weight scale requirements (WS)
- Subgroup 1.4.7: Whitepaper pulse oximeter requirements (PLX)
- Subgroup 1.4.8: Whitepaper continuous glucose monitoring requirements (CGM)

– Group 2: Personal Health Gateway (PHG)

- Group 2.1: Transport (TR)
  - Subgroup 2.1.1: Design guidelines: Common (DGC)
  - Subgroup 2.1.2: USB design guidelines (UDG)
  - Subgroup 2.1.3: Bluetooth design guidelines (BDG)
  - Subgroup 2.1.4: Cardiovascular design guidelines (CVDG)
  - Subgroup 2.1.5: Activity hub design guidelines (HUBDG)
  - Subgroup 2.1.6: ZigBee design guidelines (ZDG)
  - Subgroup 2.1.7: Bluetooth low energy design guidelines (BLEDG)
  - Subgroup 2.1.8: NFC design guidelines (NDG)
- Group 2.2: IEEE 20601: Optimized exchange protocol (OXP)
  - **Subgroup 2.2.1**: **General (GEN)**
  - **Subgroup 2.2.2**: **PHD domain information model (DIM)**
  - **Subgroup 2.2.3**: **PHD service model (SER)**
  - **Subgroup 2.2.4**: **PHD communication model (COM)**
- Group 2.3: Devices class specializations (CLASS)
  - Subgroup 2.3.1: Weighing scales (WEG)
  - Subgroup 2.3.2: Glucose meter (GL)
  - Subgroup 2.3.3: Pulse oximeter (PO)
  - Subgroup 2.3.4: Blood pressure monitor (BPM)
  - Subgroup 2.3.5: Thermometer (TH)
  - Subgroup 2.3.6: Cardiovascular (CV)
  - Subgroup 2.3.7: Strength (ST)
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- Subgroup 2.4.7: Whitepaper pulse oximeter requirements (PLX)
- Subgroup 2.4.8: Whitepaper continuous glucose monitoring requirements (CGM)

7 Electronic attachment

The protocol implementation conformance statements (PICS) and the protocol implementation extra information for testing (PIXIT) required for the implementation of Annex A can be downloaded from http://handle.itu.int/11.1002/2000/12067. See [b-PHD PICS & PIXIT] and [b-PHG PICS & PIXIT] and [b-TI].

In the electronic attachment, letters "C" and "I" in the column labelled "Mandatory" are used to distinguish between "PICS" and "PIXIT" respectively during testing. If the cell is empty, the corresponding PICS is "independent". If the field contains a "C", the corresponding PICS is dependent on other PICS and the logical expression is detailed in the "SCR_Expression" field. The static conformance review (SCR) is used in the test tool to assert whether the PICS selection is consistent.

Annex A

Test purposes

(This annex forms an integral part of this Recommendation.)

A.1 TP definition conventions

The test purposes (TPs) are defined according to the following rules:

- **TP Id**: This is a unique identifier (TP/<TT>/<DUT>/<GR>/<SGR>/<XX> – <NNN>). It is specified according to the naming convention defined below:
  - Each test purpose identifier is introduced by the prefix "TP".
  - <TT>: This is the test tool that will be used in the test case:
    - PAN: Personal area network (Bluetooth or USB)
    - LAN: Local area network (ZigBee)
    - PAN-LAN: Personal area network (Bluetooth or USB) - Local area network (ZigBee)
    - LP-PAN: Low power personal area network (Bluetooth low energy)
    - TAN: Touch area network (NFC)
    - PLT: Personal area network (Bluetooth or USB) – Local area network (ZigBee) – Touch area network (NFC)
  - <DUT>: This is the device under test:
    - PHD: Personal Health Device
    - PHG: Personal Health Gateway
  - <GR>: This identifies a group of test cases.
  - <SGR>: This identifies a subgroup of test cases.
  - <XX>: This identifies the type of testing:
    - BV: Valid behaviour test
    - BI: Invalid behaviour test
  - <NNN>: This is a sequential number that identifies the test purpose.
- **TP label**: This is the TP's title.
- **Coverage**: This contains the specification reference and clause to be checked by the TP:
  - Spec: This indicates the earliest version of the specification from which the testable items to be checked by the TP were included.
  - Testable item: This contains the testable items to be checked by the TP.
- **Test purpose**: This is a description of the requirements to be tested.
- **Applicability**: This contains the PICS items that define if the test case is applicable or not for a specific device. When a TP contains an "ALL" in this field it means that it applies to the device under test (DUT) within that scope of the test (specialization, transport used, etc.).
- **Other PICS**: This contains additional PICS items (apart from the PICS specified in the Applicability row) which are used within the test case implementation and can modify the final verdict. When this row is empty, it means that only the PICS specified in the Applicability row are used within the test case implementation.
- **Initial condition**: This indicates the state to which the DUT needs to be moved at the beginning of TC execution.

- **Test procedure**: This describes the steps to be followed in order to execute the test case.
- **Pass/Fail criteria**: This provides criteria to decide whether the DUT passes or fails the test case.

A.2 Subgroup 2.2.1: General (GEN)

There are no test cases defined in this subgroup.

A.3 Subgroup 2.2.2: PHD domain information model (DIM)

TP Id		TP/PLT/PHG/OXP/DIM/BV-000_A		
TP label		Episodic Scanner object not supported		
Coverage	**Spec**	[ISO/IEEE 11073-20601-2015A] and [ISO/IEEE 11073-20601-2016C]		
	Testable items			
Test purpose		Check that: Episodic Scanner object, declared by the vendor as "not supported", is really not supported by the Personal Health Gateway (PHG) under test.		
Applicability		C_MAN_OXP_000 AND NOT(C_MAN_OXP_001)		
Other PICS		C_MAN_OXP_083, C_MAN_OXP_084, C_MAN_OXP_085		
Initial condition		The simulated Personal Health Device (PHD) and the PHG under test are in the unassociated state.		
Test procedure		1. The simulated PHD sends an Association Request to the PHG. 2. IF the PHG under test responds with an Association Response (rejected-*) or an Abort, THEN the PHG shall not move to the Operating state and the test procedure ends. 3. IF the PHG under test responds with an Association Response (accepted-unknown-config) THEN the simulated PHD sends a configuration event report with the config-report-id set to an extended Config-Id, including an episodic scanner object. a. IF the PHG under test responds with rors-cmip-confirmed-event-report (unsupported-config) or Release Request or Abort THEN: ❑ IF C_MAN_OXP_083 OR C_MAN_OXP_084 THEN the PHG shall not move to Operating state and the Test Procedure ends. ❑ IF C_MAN_OXP_085 THEN the PHG shall not move to Configuring/Sending GetMDS substate and the Test Procedure ends. b. IF the PHG under test responds with rors-cmip-confirmed-event-report (accepted-config) THEN: ❑ IF C_MAN_OXP_083 OR C_MAN_OXP_084 THEN the PHG moves to Operating state and PHG is forced to enable the scanner object. ❑ IF C_MAN_OXP_085 THEN: i. The PHG under test moves to Configuring/Sending GetMDS substate and issues roiv-cmip-command with handle set to 0 (request for MDS object) and attribute-id-list set to 0 to indicate all attributes. ii. The simulated PHD responds with a rors-cmip-get service message in which the attribute-list contains a list of all implemented attributes of the MDS object and the mds-time-mgr-set-time bit is not set. iii. Once in Operating state PHG is forced to enable the scanner object. 4. IF the PHG under test responds with an Association Response (accepted) THEN: a. IF C_MAN_OXP_083 OR C_MAN_OXP_084 THEN the PHG moves to Operating state, PHG is forced to enable the scanner object. b. IF C_MAN_OXP_085 THEN: ❑ The PHG under test moves to Configuring/Sending GetMDS substate and issues roiv-cmip-command with handle set to 0 (request for MDS object) and attribute-id-list set to 0 to indicate all attributes.		

	❑ The simulated PHD responds with a rors-cmip-get service message in which the attribute-list contains a list of all implemented attributes of the MDS object and the mds-time-mgr-set-time bit is not set. ❑ Once in operating PHG is forced to enable the scanner object.
Pass/Fail criteria	• In step 2 or step 3.a, the PHG does not move to the operating or Configuring/Setting GetMDS state. • In step 3.b or step 4, the PHG does not send the Set action to enable the scanner object.
Notes	

TP Id		TP/PLT/PHG/OXP/DIM/BV-000_B		
TP label		Periodic Scanner object not supported		
Coverage	**Spec**	[ISO/IEEE 11073-20601-2015A] and [ISO/IEEE 11073-20601-2016C]		
	Testable items			
Test purpose		Check that: Periodic Scanner object, declared by the vendor as "not supported", is really not supported by the PHG under test.		
Applicability		C_MAN_OXP_000 AND NOT(C_MAN_OXP_006)		
Other PICS		C_MAN_OXP_083, C_MAN_OXP_084, C_MAN_OXP_085		
Initial condition		The simulated PHD and the PHG under test are in the Unassociated state.		
Test procedure		1. The simulated PHD sends an Association Request to the PHG. 2. IF the PHG under test responds with an Association Response (rejected-*) or an Abort, THEN the PHG shall not move to Operating state and the test procedure ends. 3. IF the PHG under test responds with an Association Response (accepted-unknown-config) THEN the simulated PHD sends a configuration event report with the config-report-id set to an extended Config-Id, including a periodic scanner object. a. IF the PHG under test responds with a rors-cmip-confirmed-event-report (unsupported-config) or a Release Request or an Abort THEN: ❑ IF C_MAN_OXP_083 OR C_MAN_OXP_084 THEN the PHG shall not move to Operating state and the Test Procedure ends. ❑ IF C_MAN_OXP_085 THEN the PHG shall not move to Configuring/Sending GetMDS substate and the Test Procedure ends. b. IF the PHG under test responds with a rors-cmip-confirmed-event-report (accepted-config) THEN: ❑ IF C_MAN_OXP_083 OR C_MAN_OXP_084 THEN the PHG moves to Operating state and PHG is forced to enable the scanner object. ❑ IF C_MAN_OXP_085 THEN: i. The PHG under test moves to Configuring/Sending GetMDS substate and issues roiv-cmip-command with handle set to 0 (request for MDS object) and attribute-id-list set to 0 to indicate all attributes. ii. The simulated PHD responds with a rors-cmip-get service message in which the attribute-list contains a list of all implemented attributes of the MDS object and the mds-time-mgr-set-time bit is not set. iii. Once in Operating state PHG is forced to enable the scanner object. 4. IF the PHG under test responds with an Association Response (accepted) THEN: a. IF C_MAN_OXP_083 OR C_MAN_OXP_084 THEN the PHG moves to Operating state, PHG is forced to enable the scanner object. b. IF C_MAN_OXP_085 THEN: ❑ The PHG under test moves to Configuring/Sending GetMDS substate and issues roiv-cmip-command with handle set to 0 (request for MDS		

	object) and attribute-id-list set to 0 to indicate all attributes. ❑ The simulated PHD responds with a rors-cmip-get service message in which the attribute-list contains a list of all implemented attributes of the MDS object and the mds-time-mgr-set-time bit is not set. ❑ Once in Operating state PHG is forced to enable the scanner object.
Pass/Fail criteria	• In step 2 or step 3.a, the PHG does not move to the operating or Configuring/Setting GetMDS state • In step 3.b or step 4, the PHG does not send the Set action to enable the scanner object
Notes	

TP Id		TP/PLT/PHG/OXP/DIM/BV-000_C		
TP label		PM-Store object not supported		
Coverage	**Spec**	[ISO/IEEE 11073-20601-2015A] and [ISO/IEEE 11073-20601-2016C]		
	Testable items			
Test purpose		Check that: PM-Store object, declared by the vendor as "not supported", is really not supported by the PHG under test.		
Applicability		C_MAN_OXP_000 AND NOT(C_MAN_OXP_003)		
Other PICS		C_MAN_OXP_083, C_MAN_OXP_084, C_MAN_OXP_085		
Initial condition		The simulated PHD and the PHG under test are in the Unassociated state.		
Test procedure		1. The simulated PHD sends an Association Request to the PHG. 2. IF the PHG under test responds with an Association Response (rejected-*) or an Abort, THEN the PHG shall not move to Operating state and the test procedure ends. 3. IF the PHG under test responds with an Association Response (accepted-unknown-config) THEN the simulated PHD sends a configuration event report with the config-report-id set to an extended Config-Id, including a PM-Store object. a. IF the PHG under test responds with a rors-cmip-confirmed-event-report (unsupported-config) or a Release Request or an Abort THEN: ❑ IF C_MAN_OXP_083 OR C_MAN_OXP_084 THEN the PHG shall not move to Operating state and the Test Procedure ends. ❑ IF C_MAN_OXP_085 THEN the PHG shall not move to Configuring/Sending GetMDS substate and the Test Procedure ends. b. IF the PHG under test responds with a rors-cmip-confirmed-event-report (accepted-config) THEN: ❑ IF C_MAN_OXP_083 OR C_MAN_OXP_084 THEN the PHG moves to Operating state and PHG is forced to enable the scanner object. ❑ IF C_MAN_OXP_085 THEN: i. The PHG under test moves to Configuring/Sending GetMDS substate and issues roiv-cmip-command with handle set to 0 (request for MDS object) and attribute-id-list set to 0 to indicate all attributes. ii. The simulated PHD responds with a rors-cmip-get service message in which the attribute-list contains a list of all implemented attributes of the MDS object and the mds-time-mgr-set-time bit is not set. iii. Once in Operating state PHG is forced to trigger (Trig-Segment-Data-Xfer) the PM-Store. 4. IF the PHG under test responds with an Association Response (accepted) THEN: a. IF C_MAN_OXP_083 OR C_MAN_OXP_084 THEN the PHG moves to Operating state, PHG is forced to trigger (Trig-Segment-Data-Xfer) the PM-Store. b. IF C_MAN_OXP_085 THEN:		

	❑ The PHG under test moves to Configuring/Sending GetMDS substate and issues roiv-cmip-command with handle set to 0 (request for MDS object) and attribute-id-list set to 0 to indicate all attributes. ❑ The simulated PHD responds with a rors-cmip-get service message in which the attribute-list contains a list of all implemented attributes of the MDS object and the mds-time-mgr-set-time bit is not set. ❑ Once in Operating state PHG is forced to trigger (Trig-Segment-Data-Xfer) the PM-Store.
Pass/Fail criteria	• In step 2 or step 3.a, the PHG does not move to the operating or Configuring/Sending GetMDS state • In step 3.b or step 4, the PHG does not send the Trig-Segment-Data-Xfer action • Once in the Operating state, the PHG does send actions for the PM-Store (Get-Segment-Info, Clear-Segment or GET for PM-Store object)
Notes	

TP Id		TP/PLT/PHG/OXP/DIM/BV-001		
TP label		PHG configuring a real-time clock		
Coverage	**Spec**	[ISO/IEEE 11073-20601-2015A] and [ISO/IEEE 11073-20601-2016C]		
	Testable items	MDSMethod 3;M	AbsTime 6; C	AbsTime 18; M
	Spec	[b-ITU-T H.810 (2015)]		
	Testable items	Communication 14;M		
Test purpose		Check that: The PHG when invoking the Set-Time method shall do so using a roiv-cmip-confirmed-action request. [AND] If the PHD has the mds-time-mgr-set-time bit set, the PHG shall invoke the Set-Time action command to set the absolute time on the PHD [AND] The Set-Time shall be sent within a TO_{config} time period after receiving the attribute from an MDS Get message		
Applicability		C_MAN_OXP_000		
Other PICS		C_MAN_OXP_083, C_MAN_OXP_084, C_MAN_OXP_085		
Initial condition		The simulated PHD and the PHG under test are in the Unassociated state. The PHD has the MDSTimeInfo attribute with the mds-time-mgr-set-time and mds-time-capab-set-clock bits set.		
Test procedure		1. The simulated PHD sends an Association Request to the PHG under test. 2. IF C_MAN_OXP_083 OR C_MAN_OXP_084 THEN: a. IF the PHG under test sends a GET request while it is in the Configuring state, within TOconfig seconds the PHG shall set the time of the simulated PHD, ELSE wait until the Operating state is reached. b. If the PHG under test did not send a GET request, then force the PHG under test to request MDS attributes. c. The simulated PHD sends a rors-cmip-get with MDS attributes (with the mds-time-mgr-set-time bit set). 3. IF C_MAN_OXP_085 THEN: a. PHG under test sends a GET request while it is in Configuring/Sending GetMDS substate. b. The simulated PHD sends rors-cmip-get with MDS attributes (with the mds-time-mgr-set-time bit set).		

	4. After receiving MDS attributes within TO_{config} seconds, the PHG under test shall set the time of the simulated PHD: a. Data APDU ❑ Type = Remote Operation Invoke | Confirmed Action ❑ Handle = 0 (MDS object) ❑ Action = 0x0C 0x17 (MDC_ACT_SET_TIME) ❑ SetTimeInvoke = SEQUENCE: ▪ date-time.length = 8 bytes ▪ date-time.value = <Record for comparison> ▪ Accuracy = 0
Pass/Fail criteria	• The format of the received message must be the one specified • Verify that the time is set to the time of the PHG under test • Verify that Set-Time is sent within the TOconfig time period after receiving the rors-cmip-get with MDS attributes, in the Configuring state (step 2a or 3b) or the Operating state (step 2c)
Notes	

TP Id		TP/PLT/PHG/OXP/DIM/BV-001_A		
TP label		PHG configuring a Base-Offset-Time clock		
Coverage	**Spec**	[ISO/IEEE 11073-20601-2015A] and [ISO/IEEE 11073-20601-2016C]		
	Testable items	MDSMethod 5;M	AbsTime 18; M	
Test purpose		Check that: The PHG when invoking the Set-Base-Offset-Time method shall do so using a roiv-cmip-confirmed-action request. [AND] The Set-Base-Offset-Time shall be sent within a TO_{config} time period after receiving the attribute from an MDS Get message		
Applicability		C_MAN_OXP_000 AND (C_MAN_OXP_029 OR C_MAN_OXP_030)		
Other PICS		C_MAN_OXP_083, C_MAN_OXP_084, C_MAN_OXP_085		
Initial condition		The simulated PHD and the PHG under test are in the Unassociated state. The PHD has the MDSTimeInfo attribute with the mds-time-capab-set-clock(1), mds-time-capab-bo-time(7) and mds-time-mgr-set-time(11) bits set.		
Test procedure		1. The simulated PHD sends an Association Request to the PHG under test. 2. IF C_MAN_OXP_083 OR C_MAN_OXP_084 THEN: a. If the PHG under test sends a GET request while it is in the Configuring state, within TO_{config} seconds the PHG shall set the time of the simulated PHD, ELSE wait until the Operating state is reached. b. If the PHG under test did not send a GET request, then force the PHG under test to request MDS attributes. c. The simulated PHD sends a rors-cmip-get with MDS attributes (the bits mds-time-capab-bo-time(7) and mds-time-mgr-set-time(11) are set). 3. IF C_MAN_OXP_085 THEN: a. PHG under test sends a GET request while it is in Configuring/Sending GetMDS substate. b. The simulated PHD sends rors-cmip-get with MDS attributes (the bits mds-time-capab-bo-time(7) are mds-time-mgr-set-time(11) are set). 4. After receiving MDS attributes within TOconfig seconds, the PHG under test shall set the time of the simulated PHD:		

	a. Data APDU ❑ Type = Remote Operation Invoke | Confirmed Action ❑ Handle = 0 (MDS object) ❑ Action = 0x0C 0x1D (MDC_ACT_SET_BO_TIME) ❑ SetBOTimeInvoke = SEQUENCE: ▪ date-time.length = 8 bytes ▪ date-time.value = <Record for comparison>
Pass/Fail criteria	• The format of the received message must be the one specified • Verify that the time is set to the time of the PHG under test • Verify that a Set-Base-Offset-Time is sent within the TOconfig time period after receiving the rors-cmip-get with MDS attributes, in the Configuring state (step 2a or 3b) or the Operating state (step 4)
Notes	

TP Id		TP/PLT/PHG/OXP/DIM/BV-002		
TP label		MDS services. PHG requesting MDS object attributes		
Coverage	**Spec**	[ISO/IEEE 11073-20601-2015A] and [ISO/IEEE 11073-20601-2016C]		
	Testable items	MDSService 3;O	MDSService 5; R	ConfEventRep 5; O
Test purpose		Check that: The PHG may request the MDS object attributes of the PHD in which case the PHG shall send the "Remote Operation Invoke | Get" command (see roiv-cmip-get in B.10.2) with the reserved handle value of 0 [AND] Due to the nature of the attributes reported in the MDS Object, the PHG should send the Get MDS Object request right after sending the Association Response.[AND] Even if PHG knows the PHD's device configuration, the PHG may ask to enter the Configuring state in order to check attributes from the MDS object before deciding to accept the association.		
Applicability		C_MAN_OXP_000		
Other PICS		C_MAN_OXP_083, C_MAN_OXP_084, C_MAN_OXP_085		
Initial condition		The simulated PHD and the PHG under test are in the Unassociated state.		
Test procedure		1. The simulated PHD sends and Association Request to the PHG under test with an extended dev-config-id previously unknown to the PHG. 2. The PHG under test sends an AARE with an "accepted-unknown-config". 3. Check that the PHG under test has sent the GET request while it is in the Configuring state. 4. The simulated PHD sends a configuration event report . 5. The PHG responds to the configuration event report. 6. IF C_MAN_OXP_083 OR C_MAN_OXP_084 THEN the PHG under test reaches the Operating state. 7. IF C_MAN_OXP_085 THEN: a. PHG under test sends a GET request while it is in Configuring/Sending GetMDS substate. b. The simulated PHD sends rors-cmip-get with MDS attributes (the bits mds-time-capab-bo-time(7) are mds-time-mgr-set-time(11) are set). 8. If the PHG under test did not automatically send a GET request for the MDS object or if it has not sent the GET request while in the Configuring state, force the PHG under test to send a GET to the MDS.		

	9. Whether the above Get request was sent via automatic behavior or was forced, the received message from the PHD shall be: a. APDU Type ❑ field-length = 2 bytes ❑ field-value = 0xE7 0x00 (PrstApdu) b. invoke-id ❑ field-type = InvokeIDType ❑ field-length = 2 bytes ❑ field-value= <Not relevant for this Test> c. CHOICE ❑ field-value = 0x01 0x03 (Remote Operation Invoke | Get) d. obj-handle ❑ field-type = HANDLE ❑ field-length = 2 bytes ❑ field-value = 0 e. attribute-id-list ❑ count = 0x00 0x00 ❑ length = 0x00 0x00
Pass/Fail criteria	• The format of the received message shall be the one specified • It is recommended that the GET MDS is received while PHG under test is in the Configuring state. NOTE: If the GET request for the MDS object is received from the PHG under test while in the Configuring state, it is checked in accordance step 9 above.
Notes	

TP Id		TP/PLT/PHG/OXP/DIM/BV-004_A		
TP label		PM-Store object methods. Clear-Segments method 1 (all-segment).		
Coverage	**Spec**	[ISO/IEEE 11073-20601-2015A] and [ISO/IEEE 11073-20601-2016C]		
	Testable items	PM-StoreMeth 9; O	PM-StoreMeth 18; O	PM-StoreMeth 24; C
Test purpose		Check that: Support for the Clear-Segments method is optional. [AND] If a PHG invokes the Clear-Segments method, it shall use operation type roiv-cmip-confirmed-action. If a PHG invokes the Clear-Segments method, it shall use the Action-type MDC_ACT_SEG_CLR If a PHG invokes the Clear-Segments method, it shall use the action-info-args SegmSelection structure (all-segments) [AND] The PHG shall support at least the all segments choice in the SegmSelection action-info-args of the Clear-Segments method		
Applicability		C_MAN_OXP_000 AND C_MAN_OXP_003 AND (C_MAN_OXP_040 OR C_MAN_OXP_041 OR C_MAN_OXP_042)		
Other PICS				
Initial condition		The simulated PHD and the PHG under test are in the Operating state. The simulated PHD has at least one segment with data stored and PMStoreCapab bits 4 and 10 set.		

Test procedure	IF a UI feature exists such that the PHG can clear the segments: 1. Make the PHG under test perform a Clear Segment with parameter all-segments. IF the PHG under test can clear the segments automatically after a transfer, then perform the action to clear the segments. Either way: 2. The simulated PHD receives the message: a. APDU Type ❑ field-length = 2 bytes ❑ field-value = 0xE7 0x00 (PrstApdu) b. invoke-id ❑ field-type = InvokeIDType ❑ field-length = 2 bytes ❑ field-value= This value identifies the message; the confirmed response that will be sent by the simulated PHD shall have the same invoke-id. c. CHOICE ❑ value = 0x01 0x07 (roiv-cmip-confirmed-action) d. obj-handle ❑ field-type = HANDLE ❑ field-length = 2 bytes ❑ field-value = <Handle of an existing PM-Store> e. action-type ❑ field-type = OID-Type ❑ field-length = 2 bytes ❑ field-value = 0x0C 0x0C (MDC_ACT_SEG_CLR) f. action-info-args ❑ SegmSelection = ▪ all-segments (0)
Pass/Fail criteria	The format of the received message must be the one specified above.
Notes	

TP Id		TP/PLT/PHG/OXP/DIM/BV-004_B		
TP label		PM-Store Class methods. Clear-Segments method 2 (Time Range).		
Coverage	**Spec**	[ISO/IEEE 11073-20601-2015A] and [ISO/IEEE 11073-20601-2016C]		
	Testable items	PM-StoreMeth 9; O	PM-StoreMeth 18; O	
Test purpose		Check that: Support for the Clear-Segments method is optional. [AND] If a PHG invokes the Clear-Segments method, it shall use operation type roiv-cmip-confirmed-action. If a PHG invokes the Clear-Segments method, it shall use the Action-type MDC_ACT_SEG_CLR If a PHG invokes the Clear-Segments method, it shall use the action-info-args SegmSelection structure (AbsTimeRange)		
Applicability		C_MAN_OXP_000 AND C_MAN_OXP_003 AND C_MAN_OXP_041		
Other PICS				

Initial condition	The simulated PHD and the PHG under test are in the Operating state. The simulated PHD has at least one segment with data stored and PMStoreCapab bits 4, 8 and 10 set.
Test procedure	IF a UI feature exists such that the PHG can clear the segments: 1. Make the PHG under test perform a Segment Clear with parameter SegmSelection = AbsTimeRange IF the PHG under test can clear the segments automatically after a transfer, perform the action. Either way: 2. Make the PHG under test perform a Segment Clear by time range. 3. The simulated PHD receives the message: a. APDU Type ❑ field-length = 2 bytes ❑ field-value = 0xE7 0x00 (PrstApdu) b. invoke-id ❑ field-type = InvokeIDType ❑ field-length = 2 bytes ❑ field-value= This value identifies the message; the confirmed response that will be sent by the simulated PHD shall have the same invoke-id. c. CHOICE ❑ value = 0x01 0x07 (roiv-cmip-confirmed-action) d. obj-handle ❑ field-type = HANDLE ❑ field-length = 2 bytes ❑ field-value = <Handle of an existing PM-Store> e. action-type ❑ field-type = OID-Type ❑ field-length = 2 bytes ❑ field-value = 0x0C 0x0C (MDC_ACT_SEG_CLR) f. action-info-args ❑ SegmSelection = AbsTimeRange ▪ from-time = AbsTime ▪ to-time = AbsTime
Pass/Fail criteria	The format of the received message must be the one specified above.
Notes	

TP Id		TP/PLT/PHG/OXP/DIM/BV-004_C		
TP label		PM-Store Class methods. Clear-Segments method 3 (segm-id-list)		
Coverage	**Spec**	[ISO/IEEE 11073-20601-2015A] and [ISO/IEEE 11073-20601-2016C]		
	Testable items	PM-StoreMeth 9; O	PM-StoreMeth 18; O	
Test purpose		Check that: Support for the Clear-Segments method is optional. [AND] If a PHG invokes the Clear-Segments method, it shall use operation type roiv-cmip-confirmed-action. If a PHG invokes the Clear-Segments method, it shall use the Action-type		

	MDC_ACT_SEG_CLR If a PHG invokes the Clear-Segments method, it shall use the action-info-args SegmSelection structure (segm-id-list)
Applicability	C_MAN_OXP_000 AND C_MAN_OXP_003 AND C_MAN_OXP_042
Other PICS	
Initial condition	The simulated PHD and the PHG under test are in the Operating state. The simulated PHD has at least one segment with data stored and PMStoreCapab bits 4, 7 and 10 set.
Test procedure	IF a UI feature exists such that the PHG can clear the segments: 1. Make the PHG under test perform a Segment Clear with parameter SegmSelection = segm-id-list. IF the PHG under test can clear the segments automatically after a transfer, perform the action. Either way: 2. Make the PHG under test perform a Segment Clear of a specific Segment. 3. The simulated PHD receives the message: a. APDU Type ❑ field-length = 2 bytes ❑ field-value = 0xE7 0x00 (PrstApdu) b. invoke-id ❑ field-type = InvokeIDType ❑ field-length = 2 bytes ❑ field-value= This value identifies the message; the confirmed response that will be sent by the simulated PHD shall have the same invoke-id. c. CHOICE ❑ value = 0x01 0x07 (roiv-cmip-confirmed-action) d. obj-handle ❑ field-type = HANDLE ❑ field-length = 2 bytes ❑ field-value = <Handle of an existing PM-Store> e. action-type ❑ field-type = OID-Type ❑ field-length = 2 bytes ❑ field-value = 0x0C 0x0C (MDC_ACT_SEG_CLR) f. action-info-args ❑ SegmSelection = segm-id-list (must contain the instance number of the selected Segment)
Pass/Fail criteria	The format of the received message must be the one specified above.
Notes	

TP Id		TP/PLT/PHG/OXP/DIM/BV-004_D		
TP label		PM-Store Class methods. Clear-Segments method 4 (Base-Offset-Time Range)		
Coverage	**Spec**	[ISO/IEEE 11073-20601-2015A] and [ISO/IEEE 11073-20601-2016C]		
	Testable items	PM-StoreMeth 9; O	PM-StoreMeth 18; O	
Test purpose		Check that: Support for the Clear-Segments method is optional. [AND]		

	If a PHG invokes the Clear-Segments method, it shall use operation type roiv-cmip-confirmed-action. If a PHG invokes the Clear-Segments method, it shall use the Action-type MDC_ACT_SEG_CLR If a PHG invokes the Clear-Segments method, it shall use the action-info-args SegmSelection structure (BOTimeRange)
Applicability	C_MAN_OXP_000 AND C_MAN_OXP_003 AND C_MAN_OXP_080 AND (C_MAN_OXP_029 OR C_MAN_OXP_030)
Other PICS	
Initial condition	The simulated PHD and the PHG under test are in the Operating state. The simulated PHD has at least one segment with data stored and PMStoreCapab bits 4, 8 and 10 set.
Test procedure	IF a UI feature exists such that the PHG can clear the segments: 1. Make the PHG under test perform a Segment Clear with parameter SegmSelection = BOTimeRange. IF the PHG under test can clear the segments automatically after a transfer, perform the action. Either way: 2. Make the PHG under test perform a Segment Clear by time range. 3. The simulated PHD receives the message: a. APDU Type ❑ field-length = 2 bytes ❑ field-value = 0xE7 0x00 (PrstApdu) b. invoke-id ❑ field-type = InvokeIDType ❑ field-length = 2 bytes ❑ field-value = This value identifies the message; the confirmed response that will be sent by the simulated PHD shall have the same invoke-id. c. CHOICE ❑ value = 0x01 0x07 (roiv-cmip-confirmed-action) d. obj-handle ❑ field-type = HANDLE ❑ field-length = 2 bytes ❑ field-value = <Handle of an existing PM-Store> e. action-type ❑ field-type = OID-Type ❑ field-length = 2 bytes ❑ field-value = 0x0C 0x0C (MDC_ACT_SEG_CLR) f. action-info-args ❑ SegmSelection = BOTimeRange ▪ from-time = BaseOffsetTime ▪ to-time = BaseOffsetTime
Pass/Fail criteria	The format of the received message must be the one specified above.
Notes	

TP Id		TP/PLT/PHG/OXP/DIM/BV-005_A
TP label		PM-Store Class methods. Get-Segment-info method (all-Segments)
Coverage	**Spec**	[ISO/IEEE 11073-20601-2015A] and [ISO/IEEE 11073-20601-2016C]

	Testable items	PM-StoreMeth 12; O	PM-StoreMeth 17; M	PM-StoreMeth 28; M
		PersStoreMtrDatTransf 26; O		
Test purpose		Check that: If a PHG invokes the Get-Segment-Info method, it shall use operation type roiv-cmip-confirmed-action. If a PHG invokes the Get-Segment-Info method, it shall use the Action-type MDC_ACT_SEG_GET_INFO If a PHG invokes the Get-Segment-Info method, it shall use the action-info-args SegmSelection (all-segments) [AND] If a PHG supports the PM-store class, the support of the Get-Segment-Info and Trig-Segment-Data-Xfer methods is mandatory [AND] If the PHG supports sending the Get-Segment-Info method, the PHG shall support at least the choice all-segments in the SegmSelection action-info-args of the Get-Segment-Info method. The PHG may support additional choices.		
Applicability		C_MAN_OXP_000 AND C_MAN_OXP_003		
Other PICS				
Initial condition		The simulated PHD and the PHG under test are in the Operating state. The simulated PHD has at least one segment with data stored and PMStoreCapab indicates that it supports all the possible actions.		
Test procedure		1. Make the PHG under test perform a GetSegmentInfo action to recover the information of all the segments. 2. The simulated PHD receives the message: a. APDU Type ❑ field-length = 2 bytes ❑ field-value = 0xE7 0x00 (PrstApdu) b. invoke-id ❑ field-type = InvokeIDType ❑ field-length = 2 bytes ❑ field-value = This value identifies the message; the confirmed response that will be sent by the simulated PHD shall have the same invoke-id. c. obj-handle ❑ field-type = HANDLE ❑ field-length = 2 bytes ❑ field-value = <Handle of an existing PM-Store> d. action-type (roiv-cmip-confirmed-action) ❑ field-type = OID-Type ❑ field-length =2 bytes ❑ field-value = 0x0C 0x0D (MDC_ACT_SEG_GET_INFO) e. action-info-args ❑ SegmSelection = all-segments (0)		
Pass/Fail criteria		The PHG shall perform a Get Segment Action (all-segments) and the format of the received message must be the one specified.		
Notes				

TP Id	TP/PLT/PHG/OXP/DIM/BV-005_B
TP label	PM-Store Class methods. Get-Segment-info method (segment-id-list)

Coverage	**Spec**	[ISO/IEEE 11073-20601-2015A] and [ISO/IEEE 11073-20601-2016C]		
	Testable items	PM-StoreMeth 12; O		
Test purpose		Check that: A PHG may invoke the Get-Segment-Info method If a PHG invokes the Get-Segment-Info method, it shall use operation type roiv-cmip-confirmed-action. If a PHG invokes the Get-Segment-Info method, it shall use the Action-type MDC_ACT_SEG_GET_INFO If a PHG invokes the Get-Segment-Info method, it shall use the action-info-args SegmSelection (segm-id-list)		
Applicability		C_MAN_OXP_000 AND C_MAN_OXP_003 AND C_MAN_OXP_045		
Other PICS				
Initial condition		The simulated PHD and the PHG under test are in the Operating state. The simulated PHD has at least one segment with data stored and PMStoreCapab indicates that it supports all the possible actions.		
Test procedure		1. Make the PHG under test perform a GetSegmentinfo action to recover only the information of one segment: 2. The simulated PHD receives the message: a. APDU Type ❑ field-length = 2 bytes ❑ field-value = 0xE7 0x00 (PrstApdu) b. invoke-id ❑ field-type = InvokeIDType ❑ field-length = 2 bytes ❑ field-value = This value identifies the message; the confirmed response that will be sent by the simulated PHD shall have the same invoke-id. c. obj-handle ❑ field-type = HANDLE ❑ field-length = 2 bytes ❑ field-value = <Handle of an existing PM-Store> d. action-type (roiv-cmip-confirmed-action) ❑ field-type = OID-Type ❑ field-length = 2 bytes ❑ field-value = 0x0C 0x0D (MDC_ACT_SEG_GET_INFO) e. action-info-args ❑ SegmSelection = segm-id-list ▪ SegmIdList = <List of the selected segments´ instance numbers>		
Pass/Fail criteria		The format of the received message must be the one specified.		
Notes				

TP Id		TP/PLT/PHG/OXP/DIM/BV-005_C		
TP label		PM-Store Class methods. Get-Segment-info method (time range)		
Coverage	**Spec**	[ISO/IEEE 11073-20601-2015A] and [ISO/IEEE 11073-20601-2016C]		
	Testable items	PM-StoreMeth 12; O		
Test purpose		Check that:		

	A PHG may invoke the Get-Segment-Info method If a PHG invokes the Get-Segment-Info method, it shall use operation type roiv-cmip-confirmed-action. If a PHG invokes the Get-Segment-Info method, it shall use the Action-type MDC_ACT_SEG_GET_INFO If a PHG invokes the Get-Segment-Info method, it shall use the action-info-args SegmSelection (abs-time-range)
Applicability	C_MAN_OXP_000 AND C_MAN_OXP_003 AND C_MAN_AG_OXP_044
Other PICS	
Initial condition	The simulated PHD and the PHG under test are in the Operating state. The simulated PHD has at least one segment with data stored and PMStoreCapab indicates that it supports all the possible actions.
Test procedure	1. Make the PHG under test perform a GetSegmentinfo action to recover the information of a time range. 2. The simulated PHD receives the message: a. APDU Type ❑ field-length = 2 bytes ❑ field-value = 0xE7 0x00 (PrstApdu) b. invoke-id ❑ field-type = InvokeIDType ❑ field-length = 2 bytes ❑ field-value = This value identifies the message; the confirmed response that will be sent by the simulated PHD shall have the same invoke-id. c. obj-handle ❑ field-type = HANDLE ❑ field-length = 2 bytes ❑ field-value = <Handle of an existing PM-Store> d. action-type (roiv-cmip-confirmed-action) ❑ field-type = OID-Type ❑ field-length = 2 bytes ❑ field-value = 0x0C 0x0D (MDC_ACT_SEG_GET_INFO) e. action-info-args ❑ SegmentSelectiont = abs-time-range ▪ AbsTimeRange.from-time = <Selected date of beginning> ▪ AbsTimeRange.to-time = <Selected date of ending>
Pass/Fail criteria	The format of the received message must be the one specified.
Notes	

TP Id		TP/PLT/PHG/OXP/DIM/BV-005_D		
TP label		PM-Store Class methods. Get-Segment-info method 4 (Base-Offset-Time range)		
Coverage	**Spec**	[ISO/IEEE 11073-20601-2015A] and [ISO/IEEE 11073-20601-2016C]		
	Testable items	PM-StoreMeth 12; O		
Test purpose		Check that: A PHG may invoke the Get-Segment-Info method If a PHG invokes the Get-Segment-Info method, it shall use operation type roiv-cmip-confirmed-action.		

	If a PHG invokes the Get-Segment-Info method, it shall use the Action-type MDC_ACT_SEG_GET_INFO If a PHG invokes the Get-Segment-Info method, it shall use the action-info-args SegmSelection (bo-time-range)
Applicability	C_MAN_OXP_000 AND C_MAN_OXP_003 AND C_MAN_OXP_081 AND (C_MAN_OXP_029 OR C_MAN_OXP_030)
Other PICS	
Initial condition	The simulated PHD and the PHG under test are in the Operating state. The simulated PHD has at least one segment with data stored and PMStoreCapab indicates that it supports all the possible actions.
Test procedure	1. Make the PHG under test perform a GetSegmentinfo action to recover the information of a time range. 2. The simulated PHD receives the message: a. APDU Type ❑ field-length = 2 bytes ❑ field-value = 0xE7 0x00 (PrstApdu) b. invoke-id ❑ field-type = InvokeIDType ❑ field-length = 2 bytes ❑ field-value = This value identifies the message; the confirmed response that will be sent by the simulated PHD shall have the same invoke-id. c. obj-handle ❑ field-type = HANDLE ❑ field-length = 2 bytes ❑ field-value = <Handle of an existing PM-Store> d. action-type (roiv-cmip-confirmed-action) ❑ field-type = OID-Type ❑ field-length =2 bytes ❑ field-value = 0x0C 0x0D (MDC_ACT_SEG_GET_INFO) e. action-info-args ❑ SegmentSelectiont = bo-time-range ▪ BOTimeRange.from-time = <Selected date of beginning> ▪ BOTimeRange.to-time = <Selected date of ending>
Pass/Fail criteria	The format of the received message must be the one specified.
Notes	

TP Id		TP/PLT/PHG/OXP/DIM/BV-006		
TP label		PM-Store Class methods. Trig-Segment-Data-Xfer method		
Coverage	**Spec**	[ISO/IEEE 11073-20601-2015A] and [ISO/IEEE 11073-20601-2016C]		
	Testable items	PM-StoreMeth 15; O	PM-StoreMeth 17; M	PersStoreMtrDatTransf 5; M
Test purpose		Check that: If a PHG invokes the Trig-Segment-Data-Xfer method, it shall use operation type roiv-cmip-confirmed-action. If a PHG invokes the Trig-Segment-Data-Xfer method, it shall use the Action-type MDC_ACT_SEG_TRIG_XFER If a PHG invokes the Trig-Segment-Data-Xfer method, it shall use the action-info-args TrigSegmDataXferReq		

	[AND] If a PHG supports the PM-store class, the support of the Get-Segment-Info and Trig-Segment-Data-Xfer methods is mandatory. [AND] The PHG sends the ACTION method to the PHD with the handle of the PM-store object to access. The argument to this ACTION method is the instance number of the segment to transfer [AND] If Protocol Version 3, the PHG must send Get-Segment-Info or Get-Segment-Id-List at the beginning of accessing any PM-Store object
Applicability	C_MAN_OXP_000 AND C_MAN_OXP_003
Other PICS	
Initial condition	The simulated PHD and the PHG under test are in the Operating state. The simulated PHD has at least one segment with data stored and PMStoreCapab indicates that it supports all the possible actions.
Test procedure	1. Make the PHG under test perform a Trig-Segment-Data-Xfer. 2. The simulated PHD receives the message: a. APDU Type ❑ field-length = 2 bytes ❑ field-value = 0xE7 0x00 (PrstApdu) b. invoke-id ❑ field-type = InvokeIDType ❑ field-length = 2 bytes ❑ field-value = This value identifies the message; the confirmed response that will be sent by the simulated PHD shall have the same invoke-id. c. obj-handle ❑ field-type = HANDLE ❑ field-length = 2 bytes ❑ field-value = <Handle of an existing PM-Store> d. action-type (roiv-cmip-confirmed-action) ❑ field-type = OID-Type ❑ field-length = 2 bytes ❑ field-value = 0x0C 0x1C (MDC_ACT_SEG_TRIG_XFER) e. action-info-args ❑ TrigSegmDataXferReq.seg-inst-no = <One of the existing PM-Segments´ instance number>
Pass/Fail criteria	The PHG shall perform a Trig-Segment-Data-Xfer Action and the format of the received message must be the one specified.
Notes	

TP Id		TP/PLT/PHG/OXP/DIM/BV-007_A		
TP label		PM-Store Class methods. Segment-Data-Event 1		
Coverage	**Spec**	[ISO/IEEE 11073-20601-2015A] and [ISO/IEEE 11073-20601-2016C]		
	Testable items	PM-StoreEvent 3; M		
Test purpose		Check that: PHGs must respond to Segment-Data-Event events when received		

	When responding to a Segment-Data-Event event the event-reply-info parameter shall be SegmentDataResult.
Applicability	C_MAN_OXP_000 AND C_MAN_OXP_003
Other PICS	
Initial condition	The simulated PHD and the PHG under test are in the Operating state. The simulated PHD has at least one segment with data stored and PMStoreCapab indicates that it supports all the possible actions.
Test procedure	1. Make the PHG under test perform a Trig-Segment-Data-Xfer. 2. The simulated PHD responds to the message with a "TrigSegmDataXferRsp". 3. The simulated PHD sends a Confirmed event report: a. Data APDU ❑ Type = Remote Operation Invoke | Confirmed Event ReportAction ❑ HANDLE = PM-Store obj-handle ❑ Action = 0x0D 0x21 (MDC_NOTI_SEGMENT_DATA) ❑ SegmentDataEvent.SegmDataEventDescr = SEQUENCE: ▪ segm-instance ▪ segmt-evt-entry-index ▪ segmt-evt-entry-count ▪ segmt-evt-status = Bit 0 must be set 4. The PHG under test sends a response to the previous message: a. Data APDU ❑ Type = Remote Operation Invoke | Confirmed ActionEvent Report ❑ HANDLE = obj-handle ❑ Action = 0x0D 0x21 (MDC_NOTI_SEGMENT_DATA) ❑ SegmentDataResult = SEQUENCE: ▪ segm-instance = <The one previously sent by the simulated PHD> ▪ segmt-evt-entry-index = <The one previously sent by the simulated PHD> ▪ segmt-evt-entry-count = <The one previously sent by the simulated PHD> ▪ segmt-evt-status = Bits 0, 1 must be the same as those previously recorded. Bit 4 must NOT be set. One of bits 8 or 12 must be set.
Pass/Fail criteria	The format of the received message must be the one specified.
Notes	

TP Id		TP/PLT/PHG/OXP/DIM/BV-007_B		
TP label		PM-Store Class methods. Segment-Data-Event 2		
Coverage	**Spec**	[ISO/IEEE 11073-20601-2015A] and [ISO/IEEE 11073-20601-2016C]		
	Testable items	PM-StoreEvent 3; M		
Test purpose		Check that: PHGs must respond to Segment-Data-Event events when received When responding to a Segment-Data-Event event the event-reply-info parameter shall be SegmentDataResult.		
Applicability		C_MAN_OXP_000 AND C_MAN_OXP_003		
Other PICS				
Initial condition		The simulated PHD and the PHG under test are in the Operating state. The simulated PHD has at least one segment with data stored and PMStoreCapab indicates that it supports all the possible actions.		

Test procedure	1. Make the PHG under test perform a Trig-Segment-Data-Xfer. 2. The simulated PHD responds to the message with a "TrigSegmDataXferRsp". 3. The simulated PHD sends a Confirmed event report: a. Data APDU ❑ Type = Invoke | Confirmed Event Report ❑ HANDLE = PM-Store obj-handle ❑ Action = 0x0D 0x21 (MDC_NOTI_SEGMENT_DATA) ❑ SegmentDataEvent.SegmDataEventDescr = SEQUENCE: ▪ segm-instance ▪ segm-evt-entry-index ▪ segm-evt-entry-count ▪ segm-evt-status = Bit 4 (sevtsta-agent-abort) must be set 4. The PHG under test sends a response to the previous message: a. Data APDU ❑ Type = Invoke | Confirmed Event Report ❑ HANDLE = PM-Store obj-handle ❑ Action = 0x0D 0x21 (MDC_NOTI_SEGMENT_DATA) ❑ SegmentDataResult = SEQUENCE: ▪ segm-instance = <The one previously sent by the simulated PHD> ▪ segm-evt-entry-index = <The one previously sent by the simulated PHD> ▪ segm-evt-entry-count = <The one previously sent by the simulated PHD> ▪ segm-evt-status = Bits 4 and 8 must be set
Pass/Fail criteria	The format of the received message must be the one specified.
Notes	

TP Id		TP/PLT/PHG/OXP/DIM/BV-013		
TP label		EpiCfgScanner Class events. Unbuf-Scan-Report-Grouped		
Coverage	**Spec**	[ISO/IEEE 11073-20601-2015A] and [ISO/IEEE 11073-20601-2016C]		
	Testable items	EpiCfgScanEvent 12;C	ObjAccessServ 2;M	EpiCfgScanEvent 34; C
		ScanClassAttr 3; M		
Test purpose		Check that: If an Episodic Scanner uses Unbuf-Scan-Report-Grouped Events to report updated data; and it reports data in confirmed mode, a PHG shall use a rors-cmip-confirmed-event-report operation to acknowledge the operation. [AND] The PHG shall use the SET action to request a change in the value of this attribute (Operational State) [AND] If a PHG supports episodic scanners, it shall support all the events identified in Table 16 (Episodic configurable scanner object events).		
Applicability		C_MAN_OXP_000 AND C_MAN_OXP_001		
Other PICS				
Initial condition		The simulated PHD and the PHG under test are in the Operating state.		
Test procedure		1. Make the PHG under test set the OperationalState attribute of an episodic scanner of the simulated PHD to 1:		

	a. APDU Type ❑ field-length = 2 bytes ❑ field-value = 0xE7 0x00 (PrstApdu) b. invoke-id ❑ field-type = InvokeIDType ❑ field-length = 2 bytes ❑ field-value = It is not relevant c. CHOICE ❑ value = 0x01 0x05 (roiv-cmip-confirmed-set) d. obj-handle ❑ field-type = Scanner HANDLE ❑ field-length = 2 bytes ❑ field-value = 21 <Handle of the Episodic scanner> e. Modification-list ❑ modify-operator.count = 1 ❑ modify-operator.length = 2 bytes ❑ modify-operator.value = 0 (replace) ❑ attribute.type = 0x09 0x53 (MDC_ATTR_OP_STAT) ❑ attribute.value = 1 2. The simulated PHD responds to the message with a "rors-cmip-confirmed-set". 3. The simulated PHD sends a confirmed event report of the episodic scanner (MDC_NOTI_UNBUF_SCAN_REPORT_GROUPED) to the PHG under test: 4. The PHG under test responds with a "rors-confirmed-event-report": a. APDU Type ❑ field-length = 2 bytes ❑ field-value = 0xE7 0x00 (PrstApdu) b. invoke-id ❑ field-type = InvokeIDType ❑ field-length = 2 bytes ❑ field-value = The same as the one sent by the simulated PHD. c. obj-handle ❑ field-type = HANDLE ❑ field-length = 2 bytes ❑ field-value = 21 <Handle of the Episodic scanner> d. event-type (rors-confirmed-event-report) ❑ field-type = OID-Type ❑ field-length = 2 bytes ❑ field-value = 0x0D 0x24 (MDC_NOTI_UNBUF_SCAN_REPORT_GROUPED)
Pass/Fail criteria	The format of the received messages in steps 1 and 4 must be the one specified.
Notes	

TP Id		TP/PLT/PHG/OXP/DIM/BV-016
TP label		EpiCfgScanner Class events. Unbuf-Scan-Report-MP-Grouped
Coverage	**Spec**	[ISO/IEEE 11073-20601-2015A] and [ISO/IEEE 11073-20601-2016C]

	Testable items	EpiCfgScanEvent 24;C	ObjAccessServ 2;M	EpiCfgScanEvent 34; C
Test purpose		Check that: If an Episodic Scanner uses Unbuf-Scan-Report-MP-Grouped Events to report updated data; and it reports data in confirmed mode, a PHG shall use a rors-cmip-confirmed-event-report operation to acknowledge the operation. [AND] If a PHG supports episodic scanners, it shall support all the events identified in Table 16 (Episodic configurable scanner object events).		
Applicability		C_MAN_OXP_000 AND C_MAN_OXP_001 AND C_MAN_OXP_037		
Other PICS				
Initial condition		The simulated PHD and the PHG under test are in the Operating state.		
Test procedure		1. Make the PHG under test set the OperationalState attribute of an episodic scanner of the simulated PHD to 1. 2. The simulated PHD responds to the message with a "rors-cmip-confirmed-set". 3. The simulated PHD sends a confirmed event report of the episodic scanner (MDC_NOTI_UNBUF_SCAN_REPORT_MP_GROUPED) to the PHG under test: 4. The PHG under test responds with a "rors-confirmed-event-report": a. APDU Type ❑ field-length = 2 bytes ❑ field-value = 0xE7 0x00 (PrstApdu) b. invoke-id ❑ field-type = InvokeIDType ❑ field-length = 2 bytes ❑ field-value = The same as the one sent by the simulated PHD. c. obj-handle ❑ field-type = HANDLE ❑ field-length = 2 bytes ❑ field-value = 21 <Handle of the Episodic scanner> d. event-type (rors-confirmed-event-report) ❑ field-type = OID-Type ❑ field-length = 2 bytes ❑ field-value = 0x0D 0x27 (MDC_NOTI_UNBUF_SCAN_REPORT_MP_GROUPED)		
Pass/Fail criteria		The format of the received message must be the one specified.		
Notes				

TP Id		TP/PLT/PHG/OXP/DIM/BV-019		
TP label		PeriCfgScanner Class events. Buf-Scan-Report-Grouped		
Coverage	**Spec**	[ISO/IEEE 11073-20601-2015A] and [ISO/IEEE 11073-20601-2016C]		
	Testable items	PeriCfgScanEvent 12;C	ObjAccessServ 2;M	PeriCfgScanEvent 27; C
Test purpose		Check that: If a Periodic Configurable Scanner uses Buf-Scan-Report-Grouped Events to report updated data; and it reports data in confirmed mode, a PHG shall use a rors-cmip-confirmed-event-report operation to acknowledge the operation. [AND]		

	If a PHG supports periodic scanners, it shall support all the events identified in Table 18 (Periodic configurable scanner object events).
Applicability	C_MAN_OXP_000 AND C_MAN_OXP_006
Other PICS	
Initial condition	The simulated PHD and the PHG under test are in the Operating state.
Test procedure	1. Make the PHG under test set the OperationalState attribute of a periodic scanner of the simulated PHD to 1: a. APDU Type ❑ field-length = 2 bytes ❑ field-value = 0xE7 0x00 (PrstApdu) b. invoke-id ❑ field-type = InvokeIDType ❑ field-length = 2 bytes ❑ field-value = The same as the one sent by the simulated PHD. c. CHOICE ❑ value = 0x01 0x05 (roiv-cmip-confirmed-set) d. obj-handle ❑ field-type = Scanner HANDLE ❑ field-length = 2 bytes ❑ field-value = 20 <Handle of the Periodic scanner> e. Modification-list ❑ modify-operator.count = 1 ❑ modify-operator.length = 2 bytes ❑ modify-operator.value = 0 (replace) ❑ attribute.type = 0x09 0x53 (MDC_ATTR_OP_STAT) ❑ attribute.value = 1 2. The simulated PHD responds to the message with a "rors-cmip-confirmed-set". 3. The simulated PHD sends a confirmed event report of the periodic scanner (MDC_NOTI_BUF_SCAN_REPORT_GROUPED) to the PHG under test: 4. The PHG under test responds with a "rors-confirmed-event-report": a. APDU Type ❑ field-length = 2 bytes ❑ field-value = 0xE7 0x00 (PrstApdu) b. invoke-id ❑ field-type = InvokeIDType ❑ field-length = 2 bytes ❑ field-value = The same as the one sent by the simulated PHD. c. obj-handle ❑ field-type = HANDLE ❑ field-length = 2 bytes ❑ field-value = 20<Handle of the Periodic scanner> d. event-type (rors-confirmed-event-report) ❑ field-type = OID-Type ❑ field-length =2 bytes ❑ field-value = 0x0D 0x2A (MDC_NOTI_BUF_SCAN_REPORT_GROUPED)

Pass/Fail criteria	The format of the received message must be the one specified.
Notes	

TP Id		TP/PLT/PHG/OXP/DIM/BV-022		
TP label		PeriCfgScanner Class events. Buf-Scan-Report-MP-Grouped		
Coverage	**Spec**	[ISO/IEEE 11073-20601-2015A] and [ISO/IEEE 11073-20601-2016C]		
	Testable items	PeriCfgScanEvent 24;C	ObjAccessServ 2;M	PeriCfgScanEvent 27; C
Test purpose		Check that: If a Periodic Configurable Scanner uses Buf-Scan-Report-MP-Grouped Events to report updated data; and it reports data in confirmed mode, a PHG shall use a rors-cmip-confirmed-event-report operation to acknowledge the operation. [AND] If a PHG supports periodic scanners, it shall support all the events identified in Table 18 (Periodic configurable scanner object events).		
Applicability		C_MAN_OXP_000 AND C_MAN_OXP_006 AND C_MAN_OXP_037		
Other PICS				
Initial condition		The simulated PHD and the PHG under test are in the Operating state.		
Test procedure		1. Make the PHG under test set the OperationalState attribute of an episodic scanner of the simulated PHD to 1. 2. The simulated PHD responds to the message with a "rors-cmip-confirmed-set". 3. The simulated PHD sends a confirmed event report of the periodic scanner (MDC_NOTI_BUF_SCAN_REPORT_MP_GROUPED) to the PHG under test: 4. The PHG under test responds with a "rors-confirmed-event-report": a. APDU Type ❑ field-length = 2 bytes ❑ field-value = 0xE7 0x00 (PrstApdu) b. invoke-id ❑ field-type = InvokeIDType ❑ field-length = 2 bytes ❑ field-value= The same as the one sent by the simulated PHD. c. obj-handle ❑ field-type = HANDLE ❑ field-length = 2 bytes ❑ field-value = 20 <Handle of the Periodic scanner> d. event-type (rors-confirmed-event-report) ❑ field-type = OID-Type ❑ field-length = 2 bytes ❑ field-value = 0x0D 0x2D (MDC_NOTI_BUF_SCAN_REPORT_MP_GROUPED)		
Pass/Fail criteria		The format of the received message must be the one specified.		
Notes				

TP Id		TP/PLT/PHG/OXP/DIM/BV-024
TP label		Information Model Extensibility rules 2
Coverage	**Spec**	[ISO/IEEE 11073-20601-2015A] and [ISO/IEEE 11073-20601-2016C]

	Testable items	InfoExt 2;M		
Test purpose		Check that: An implementation of a PHG system shall process a message fully by skipping any unknown attributes (e.g., vendor specified attributes) and ignoring the assigned data values of such attributes, without protocol errors. The implementation may log the occurrence of such attributes as appropriate.		
Applicability		C_MAN_OXP_000		
Other PICS				
Initial condition		The simulated PHD and the PHG under test are in the Unassociated state.		
Test procedure		1. The simulated PHD sends an AARQ with an extended dev-config-id previously unknown to the PHG under test. 2. The PHG under test sends an AARE with an "accepted-unknown-config". 3. The simulated PHD sends a configuration event report whose first object has a unknown vendor attribute defined (attribute id 0xF0 0x01): a. 0xF0 0x01 ❑ value.length = 2 ❑ value = 0xFF 0xFF b. The rest of the configuration is the same as one of the PHG supported standard configurations. 4. The PHG answers the configuration event report and reaches the Operating state. 5. The simulated PHD sends a confirmed fixed event report (sending a known attribute). 6. The PHG sends a rors-cmip-confirmed-event-report for data sent in step 5. 7. The simulated PHD sends a confirmed Variable event report updating the value of the unknown attribute: a. obj-handle = 1 b. 0xF0 0x01 ❑ value.length = 2 ❑ value = 0xFF 0xFE 8. The PHG sends a rors-cmip-confirmed-event-report message for data sent in step 7. 9. The simulated PHD sends a confirmed fixed event report (sending a known attribute). 10. The PHG sends a rors-cmip-confirmed-event-report for data sent in step 9.		
Pass/Fail criteria		• The PHG shall ignore the private nomenclature code and moves to Operating state • In step 5 the response cannot be an abort message • The PHG shall ignore the data received Var Event Report, but without protocol violations, so it has to send a confirmation response for data sent in step 6 • In step 10 the response cannot be an abort message		
Notes				

TP Id		TP/PLT/PHG/OXP/DIM/BV-025		
TP label		Manager State Machine: Association Response Format		
Coverage	**Spec**	[ISO/IEEE 11073-20601-2015A] and [ISO/IEEE 11073-20601-2016C]		
	Testable items	ManagerStateMach 65; M	AssocResp 2;M	AssocResp 8; M
		AssocResp 9; M	AssocResp 10; M	AssocResp 11; M
	Spec	[b-ITU-T H.810 (2015)]		
	Testable items	General 4; M		

Test purpose	Check that: If aarq received while in Unassociated state, a PHG shall move to connected associating state [AND] The encoding-rules field contains the one and only one, DataApdu encoding rule shall be chosen by the PHG, if the result field is equal to accepted or accepted-unknown-config [AND] The dev-config-id field shall be manager-config-response in the response. [AND] The data-req-mode-capab field shall be zero in the response. [AND] The option-list field is not currently used by this standard. This field should be an empty list. [AND] The protocol-version field contains the version of the common data protocol chosen by the PHG if the result field is equal to accepted or accepted-unknown-config The nomenclature-version field contains the version of the nomenclature chosen by the PHG if the result field is equal to accepted or accepted-unknown-config. The functional-units field indicates the common functional units and optional features chosen by the PHG if the result field is equal to accepted or accepted-unknown-config. The system-type field contains the system type. The system-id field has the unique system ID of the PHG [AND] Continua client components shall support associations with Continua LAN service components where only the version 1 bit of the protocol-version is set in the PHDAssociationInformation structure in the AARQ. In that case, the Continua client components shall respond with the version 1 bit of the protocol version set in the PHDAssociationInformation structure in the AARE and shall follow the ISO/IEEE Std 11073-20601-2008 specification along with all corrections and clarifications included in the [ISO/IEEE Std 11073-20601-2015A]
Applicability	C_MAN_OXP_000
Other PICS	
Initial condition	The simulated PHD and the PHG under test are in the Unassociated state.
Test procedure	1. The simulated PHD sends an Association Request to the PHG under test: ❑ dev-config-id ▪ IF (C_MAN_OXP_016 OR C_MAN_OXP_018 OR C_MAN_OXP_019 OR C_MAN_OXP_020 OR C_MAN_OXP_024 OR C_MAN_OXP_025 OR C_MAN_OXP_026 OR C_MAN_OXP_027 OR C_MAN_OXP_029) THEN dev-config-id set to one of the supported standard configurations ▪ IF (C_MAN_OXP_021 OR C_MAN_OXP_022 OR C_MAN_OXP_023 OR C_MAN_OXP_030) THEN dev-config-id set to an extended dev-config-id. ❑ encoding rules=0xE0 0x00 ❑ protocol-version ▪ IF the PHG applies for Basic ECG certification only THEN protocol-version = 0x40 0x00 0x00 0x00 ▪ ELSE protocol-version = 0x80 0x00 0x00 0x00 ❑ nomenclature-version = 0x80 0x00 0x00 0x00 ❑ functional-units = 0x00 0x00 0x00 0x00 ❑ system-type = 0x00 0x80 0x00 0x00 ❑ data-req-mode-capab =

- data-req-mode-flags = 0x00 0x01
- data-req-init-agent-count = 1
- data-req-init-manager-count = 0

❑ option-list = <absent>

2. The PHG under test responds with an Association Response:

a. APDU Type

- field-length = 2 bytes
- field-value = 0xE3 0x00 (AareAdpu)

b. Result

- field-length = 2 bytes
- field-value = one of :
  - 0x00 0x00 (accepted-config)
  - 0x00 0x03 (accepted-unknown-config)

c. Data-Proto-Id

- field.type = DataProtoId
- field.length = 2 bytes
- field.value = <The one sent in the AARQ>

d. The DataProto.Info field must contain two bytes indicating the data-proto-info.length

e. protocol-version

- field-type = Protocol Version
- field-length = BITS-32
- IF the PHG applies for Basic ECG certification only THEN
  - field-value = 0x40 0x00 0x00 0x00
  - This value shows that version 2 of the data exchange protocol is supported (protocol-version2(1)=1)

  ELSE
  - field-value = 0x80 0x00 0x00 0x00
  - This value shows that version 1 of the data exchange protocol is supported (assoc-version1(0)=1,).

f. encoding rules

- field-type = EncodingRules
- field-length = BITS-16
- field-value = One of the following must be set.
  - Bit 0 (mder)
  - Bit 1 (xer)
  - Bit 2 (per)

g. nomenclature version

- field-type = NomenclatureVersion
- field-length = BITS-32
- field-value = 0x80 0x00 0x00 0x00 (nom-version1)

h. functional–units

- field-type = FunctionalUnits
- field-length = BITS-32

	• filed-value = ▪ Bit 0 must be 0 ▪ Bits 1 and 2 may be set ▪ The rest of the bits must not be set i. system type • field-type = SystemType • field-length = BITS-32 • field-value = 0x80 0x00 0x00 0x00 (sys-type-manager) j. system-id • field-type = OCTET STRING • field-length = 0x00 0x08 • field-value = <Check with PIXITs> k. dev-config-id • field-type = ConfigId • field-length = INT-U16 • field-value = 0x00 0x00 (manager-config-response) l. Data-Req-Mode-Capab: • field-type = DataReqModeCapab • field-length = INT-U16 • field-value = 0x00 0x00 m. option-list should be: • field-type: AttributeList • list.count = 0 • list.length = 0
Pass/Fail criteria	The format of the received message must be the one specified.
Notes	

TP Id		TP/PLT/PHG/OXP/DIM/BV-036		
TP label		BCD time format - fixed format event report		
Coverage	**Spec**	[ISO/IEEE 11073-10415]		
	Testable items	WeightNumClass 30;C		
	Spec	[ISO/IEEE 11073-10417]		
	Testable items	BloodGL 12;C		
	Spec	[ISO/IEEE 11073-10407]		
	Testable items	SystDiast_31;C	PulsRat_30;C	
	Spec	[ISO/IEEE 11073-10408]		
	Testable items	Num Objec Temp19;C		
	Spec	[ISO/IEEE 11073-10472]		
	Testable items	VarDosage16; C	UserFeedback16; C	StatReporter16; C
	Spec	[ISO/IEEE 11073-10421]		

	Testable items	PEF16; C	PersBest16; C	FEV1S16; C
		ReadStatus16; C		
	Spec	[ISO/IEEE 11073-10420]		
	Testable items	BodyFat31; C	BodyHeight30; C	WeightNumClass 29; C
Test purpose		Check that: For Standard-Configuration, the Attribute-Value-Map attribute shall be present The value of the Attribute-Value-Map attribute shall be MDC_ATTR_NU_VAL_OBS_SIMP, then MDC_ATTR_TIME_STAMP_ABS		
Applicability		C_MAN_OXP_000 AND (C_MAN_OXP_019 OR C_MAN_OXP_020 OR C_MAN_OXP_024 OR C_MAN_OXP_025 OR C_MAN_OXP_016 OR C_MAN_OXP_018 OR C_MAN_OXP_027)		
Other PICS				
Initial condition		The simulated PHD and the PHG under test are in the Operating state using the standard configuration.		
Test procedure		IF C_MAN_OXP_019 (the PHG supports glucose meter specialization) 1. The simulated PHD sends a confirmed fixed event report for handle 1 (Blood Glucose object) containing an observation and a time stamp with century = 0x19, year = 0x99, month = 0x12, day = 0x25, hour = 0x23, minute = 0x59, second = 0x30, sec-fractions = 0x75. 2. The simulated PHD waits until it receives a confirmation from the PHG under test. IF C_MAN_OXP_020 (the PHG supports blood pressure monitor specialization) 1. The simulated PHD sends a confirmed fixed event report for handle 1 (Systolic/Diastolic/MAP object) and handle 2 (Pulse Rate object) containing an observation and a time stamp with century = 0x19, year = 0x99, month = 0x12, day = 0x25, hour = 0x23, minute = 0x59, second = 0x30, sec-fractions = 0x75. 2. The simulated PHD waits until it receives a confirmation from the PHG under test. IF C_MAN_OXP_024 (the PHG supports weighing scales specialization) 1. The simulated PHD sends a confirmed fixed event report for handle 1 (Body Weight object) containing an observation and a time stamp with century = 0x19, year = 0x99, month = 0x12, day = 0x25, hour = 0x23, minute = 0x59, second = 0x30, sec-fractions = 0x75. 2. The simulated PHD waits until it receives a confirmation from the PHG under test. IF C_MAN_OXP_025 (the PHG supports thermometer specialization) 1. The simulated PHD sends a confirmed fixed event report for handle 1 (Body Temperature object) containing an observation and a time stamp with century = 0x19, year = 0x99, month = 0x12, day = 0x25, hour = 0x23, minute = 0x59, second = 0x30, sec-fractions = 0x75. 2. The simulated PHD waits until it receives a confirmation from the PHG under test. IF C_MAN_OXP_016 (the PHG supports adherence monitor specialization) 1. The simulated PHD sends a confirmed fixed event report for handle 2 (Variable Dosage Medication object), handle 3 (Status Reporter) and handle 4 (User Feedback) containing an observation and a time stamp with century = 0x19, year = 0x99, month = 0x12, day = 0x25, hour = 0x23, minute = 0x59, second = 0x30, sec-fractions = 0x75. 2. The simulated PHD waits until it receives a confirmation from the PHG under test. IF C_MAN_OXP_018 (the PHG supports peak flow specialization) 1. The simulated PHD sends a confirmed fixed event report for handle 1 (PEF), handle 2 (Personal Best), handle 3 (FEV1) and handle 5 (Reading Status) containing an observation and a time stamp with century = 0x19, year = 0x99, month = 0x12, day = 0x25, hour = 0x23, minute = 0x59, second = 0x30, sec-fractions = 0x75. 2. The simulated PHD waits until it receives a confirmation from the PHG under test. IF C_MAN_OXP_027 (the PHG supports body composition analyser specialization)		

	1. The simulated PHD sends a confirmed fixed event report for handle 1 (Body Weight), handle 2 (Body Height) and handle 3 (Body Fat) containing an observation and a time stamp with century = 0x19, year = 0x99, month = 0x12, day = 0x25, hour = 0x23, minute = 0x59, second = 0x30, sec-fractions = 0x75 2. The simulated PHD waits until it receives a confirmation from the PHG under test.
Pass/Fail criteria	Verify that the PHG under test is able to accept the data and time stamps and applies the date properly as 12/25/1999 23:59:30.75 (e.g., if there is a UI verify the date is displayed in some form that indicates the correct date and time as transmitted).
Notes	

TP Id		TP/PLT/PHG/OXP/DIM/BV-037		
TP label		BCD time format - variable format event report		
Coverage	**Spec**	[ISO/IEEE 11073-10415]		
	Testable items	WeightNumClass 30;C		
	Spec	[ISO/IEEE 11073-10407]		
	Testable items	SystDiast_31;C	PulsRat_30;C	
	Spec	[ISO/IEEE 11073-10404]		
	Testable items	PulseRateNumObjAttr 30;C	SpO2NumObjAttr 13;C	
	Spec	[ISO/IEEE 11073-10408]		
	Testable items	Num Objec Temp19;C		
Test purpose		Check that: For [Standard-Configuration], If fixed format is used and the standard configuration is not adjusted, the Absolute-Time-Stamp attribute is mandatory; otherwise, the conditions from ISO/IEEE P11073-20601 apply.		
Applicability		C_MAN_OXP_000 AND (C_MAN_OXP_020 OR C_MAN_OXP_024 OR C_MAN_OXP_025 OR C_MAN_OXP_026)		
Other PICS				
Initial condition		The simulated PHD and the PHG under test are in the Operating state using the standard configuration.		
Test procedure		IF C_MAN_OXP_020 (the PHG supports blood pressure monitor specialization) 1. The simulated PHD sends a confirmed variable event report for handle 1 (Systolic/Diastolic/MAP object) and handle 2 (Pulse Rate object) containing a time stamp with century = 0x19, year = 0x20, month = 0x11, day = 0x18, hour = 0x21, minute = 0x22, second = 0x23, sec-fractions = 0x90 and an observation (in that order). 2. The simulated PHD waits until it receives a confirmation from the PHG under test. IF C_MAN_OXP_024 (the PHG supports weighing scales specialization) 1. The simulated PHD sends a confirmed variable event report for handle 1 (Body Weight object) containing a time stamp with century = 0x19, year = 0x20, month = 0x11, day = 0x18, hour = 0x21, minute = 0x22, second = 0x23, sec-fractions = 0x90 and observation (in that order). 2. The simulated PHD waits until it receives a confirmation from the PHG under test. IF C_MAN_OXP_025 (the PHG supports thermometer specialization) 1. The simulated PHD sends a confirmed variable event report for handle 1 (Body Temperature object) containing a time stamp with century = 0x19, year = 0x20, month = 0x11, day = 0x18, hour = 0x21, minute = 0x22, second = 0x23, sec-fractions = 0x90 and an observation (in that order). 2. The simulated PHD waits until it receives a confirmation from the PHG under test. IF C_MAN_OXP_026 (the PHG supports pulse oximeter specialization)		

	1. The simulated PHD sends a confirmed variable event report for handle 1 (SpO_2 object) and handle 10 (Pulse Rate object) containing a time stamp with century = 0x19, year = 0x20, month = 0x11, day = 0x18, hour = 0x21, minute = 0x22, second = 0x23, sec-fractions = 0x90 and an observation (in that order). 2. The simulated PHD waits until it receives a confirmation from the PHG under test.
Pass/Fail criteria	Verify that the PHG under test is able to accept the data and time stamps and applies the date properly as 11/18/1920 21:22:23.90 (e.g., if there is a UI verify the date is displayed in some form that indicates the correct date and time as transmitted).
Notes	

TP Id		TP/PLT/PHG/OXP/DIM/BV-038		
TP label		EpiCfgScanner Class events. Unbuf-Scan-Report-Var		
Coverage	**Spec**	[ISO/IEEE 11073-20601-2015A] and [ISO/IEEE 11073-20601-2016C]		
	Testable items	EpiCfgScanEvent 4; C	EpiCfgScanEvent 34; C	
Test purpose		Check that: If an Episodic Scanner uses Unbuf-Scan-Report-Var Events to report updated data; and it reports data in confirmed mode, a PHG shall use a rors-cmip-confirmed-event-report operation to acknowledge the operation. [AND] If a PHG supports episodic scanners, it shall support all the events identified in Table 16 (Episodic configurable scanner object events).		
Applicability		C_MAN_OXP_000 AND C_MAN_OXP_001		
Other PICS				
Initial condition		The simulated PHD and the PHG under test are in the Operating state.		
Test procedure		1. Make the PHG under test set the OperationalState attribute of an episodic scanner of the simulated PHD to 1. 2. The simulated PHD responds to the message with a "rors-cmip-confirmed-set". 3. The simulated PHD sends a confirmed event report of the episodic scanner (MDC_NOTI_UNBUF_SCAN_REPORT_VAR) to the PHG under test: 4. The PHG under test responds with a "rors-confirmed-event-report": a. APDU Type ❑ field-length = 2 bytes ❑ field-value = 0xE7 0x00 (PrstApdu) b. invoke-id ❑ field-type = InvokeIDType ❑ field-length = 2 bytes ❑ field-value = The same as the one sent by the simulated PHD. c. obj-handle ❑ field-type = HANDLE ❑ field-length = 2 bytes ❑ field-value = 21 <Handle of the Episodic scanner> d. event-type (rors-confirmed-event-report) ❑ field-type = OID-Type ❑ field-length = 2 bytes ❑ field-value = 0x0D 0x24 (MDC_NOTI_UNBUF_SCAN_REPORT_VAR)		
Pass/Fail criteria		The format of the received messages in steps 1 and 4 must be the one specified.		
Notes				

TP Id		TP/PLT/PHG/OXP/DIM/BV-039		
TP label		EpiCfgScanner Class events. Unbuf-Scan-Report-MP-Var		
Coverage	**Spec**	[ISO/IEEE 11073-20601-2015A] and [ISO/IEEE 11073-20601-2016C]		
	Testable items	EpiCfgScanEvent 16;C	EpiCfgScanEvent 34; C	
Test purpose		Check that: If an Episodic Scanner uses Unbuf-Scan-Report-MP-Var Events to report updated data; and it reports data in confirmed mode, a PHG shall use a rors-cmip-confirmed-event-report operation to acknowledge the operation. [AND] If a PHG supports episodic scanners, it shall support all the events identified in Table 16 (Episodic configurable scanner object events).		
Applicability		C_MAN_OXP_000 AND C_MAN_OXP_001 AND C_MAN_OXP_037		
Other PICS				
Initial condition		The simulated PHD and the PHG under test are in the Operating state.		
Test procedure		1. Make the PHG under test set the OperationalState attribute of an Episodic Scanner of the simulated PHD to 1. 2. The simulated PHD responds to the message with a "rors-cmip-confirmed-set". 3. The simulated PHD sends a confirmed event report of the episodic scanner (MDC_NOTI_UNBUF_SCAN_REPORT_MP_VAR) to the PHG under test: 4. The PHG under test responds with a "rors-confirmed-event-report": a. APDU Type ❑ field-length = 2 bytes ❑ field-value = 0xE7 0x00 (PrstApdu) b. invoke-id ❑ field-type = InvokeIDType ❑ field-length = 2 bytes ❑ field-value = The same as the one sent by the simulated PHD. c. obj-handle ❑ field-type = HANDLE ❑ field-length = 2 bytes ❑ field-value = 21 <Handle of the Episodic scanner> d. event-type (rors-confirmed-event-report) ❑ field-type = OID-Type ❑ field-length = 2 bytes ❑ field-value = 0x0D 0x27 (MDC_NOTI_UNBUF_SCAN_REPORT_MP_VAR)		
Pass/Fail criteria		The format of the received message must be the one specified.		
Notes				

TP Id		TP/PLT/PHG/OXP/DIM/BV-040		
TP label		PeriCfgScanner Class events. Buf-Scan-Report-Var		
Coverage	**Spec**	[ISO/IEEE 11073-20601-2015A] and [ISO/IEEE 11073-20601-2016C]		
	Testable items	PeriCfgScanEvent 4;C	PeriCfgScanEvent 27; C	
Test purpose		Check that:		

	If an Periodic Configurable Scanner uses Buf-Scan-Report-Var Events to report updated data; and it reports data in confirmed mode, a PHG shall use a rors-cmip-confirmed-event-report operation to acknowledge the operation. [AND] If a PHG supports periodic scanners, it shall support all the events identified in Table 18 (Periodic configurable scanner object events).
Applicability	C_MAN_OXP_000 AND C_MAN_OXP_006
Other PICS	
Initial condition	The simulated PHD and the PHG under test are in the Operating state.
Test procedure	1. Make the PHG under test set the OperationalState attribute of a periodic scanner of the simulated PHD to 1. 2. The simulated PHD responds to the message with a "rors-cmip-confirmed-set". 3. The simulated PHD sends a confirmed event report of the periodic scanner (MDC_NOTI_BUF_SCAN_REPORT_VAR) to the PHG under test: 4. The PHG under test responds with a "rors-confirmed-event-report": a. APDU Type ❑ field-length = 2 bytes ❑ field-value = 0xE7 0x00 (PrstApdu) b. invoke-id ❑ field-type = InvokeIDType ❑ field-length = 2 bytes ❑ field-value = The same as the one sent by the simulated PHD. c. obj-handle ❑ field-type = HANDLE ❑ field-length = 2 bytes ❑ field-value = 20<Handle of the Periodic scanner> d. event-type (rors-confirmed-event-report) ❑ field-type = OID-Type ❑ field-length = 2 bytes ❑ field-value = 0x0D 0x2A (MDC_NOTI_BUF_SCAN_REPORT_VAR)
Pass/Fail criteria	The format of the received message must be the one specified.
Notes	

TP Id		TP/PLT/PHG/OXP/DIM/BV-041		
TP label		PeriCfgScanner Class events. Buf-Scan-Report-MP-Var		
Coverage	**Spec**	[ISO/IEEE 11073-20601-2015A] and [ISO/IEEE 11073-20601-2016C]		
	Testable items	PeriCfgScanEvent 16;C	PeriCfgScanEvent 27; C	
Test purpose		Check that: If a Periodic Configurable Scanner uses Buf-Scan-Report-MP-Var Events to report updated data; and it reports data in confirmed mode, a PHG shall use a rors-cmip-confirmed-event-report operation to acknowledge the operation. [AND] If a PHG supports periodic scanners, it shall support all the events identified in Table 18 (Periodic configurable scanner object events).		
Applicability		C_MAN_OXP_000 AND C_MAN_OXP_006 AND C_MAN_OXP_037		
Other PICS				

Initial condition	The simulated PHD and the PHG under test are in the Operating state.
Test procedure	1. Make the PHG under test set the OperationalState attribute of an episodic scanner of the simulated PHD to 1. 2. The simulated PHD responds to the message with a "rors-cmip-confirmed-set". 3. The simulated PHD sends a confirmed event report of the periodic scanner (MDC_NOTI_BUF_SCAN_REPORT_MP_VAR) to the PHG under test: 4. The PHG under test responds with a "rors-confirmed-event-report": a. APDU Type ❑ field-length = 2 bytes ❑ field-value = 0xE7 0x00 (PrstApdu) b. invoke-id ❑ field-type = InvokeIDType ❑ field-length = 2 bytes ❑ field-value = The same as the one sent by the simulated PHD. c. obj-handle ❑ field-type = HANDLE ❑ field-length = 2 bytes ❑ field-value = 20 <Handle of the Periodic scanner> d. event-type (rors-confirmed-event-report) ❑ field-type = OID-Type ❑ field-length = 2 bytes ❑ field-value = 0x0D 0x2D (MDC_NOTI_BUF_SCAN_REPORT_MP_VAR)
Pass/Fail criteria	The format of the received message must be the one specified.
Notes	

TP Id		TP/PLT/PHG/OXP/DIM/BV-042		
TP label		EpiCfgScanner Class events. Unbuf-Scan-Report-Fixed		
Coverage	**Spec**	[ISO/IEEE 11073-20601-2015A] and [ISO/IEEE 11073-20601-2016C]		
	Testable items	EpiCfgScanEvent 8; C	EpiCfgScanEvent 34; C	
Test purpose		Check that: If an Episodic Scanner uses Unbuf-Scan-Report-Fixed Events to report updated data; and it reports data in confirmed mode, a PHG shall use a rors-cmip-confirmed-event-report operation to acknowledge the operation. [AND] If a PHG supports episodic scanners, it shall support all the events identified in Table 16 (Episodic configurable scanner object events).		
Applicability		C_MAN_OXP_000 AND C_MAN_OXP_001		
Other PICS				
Initial condition		The simulated PHD and the PHG under test are in the Operating state.		
Test procedure		1. Make the PHG under test set the OperationalState attribute of an episodic scanner of the simulated PHD to 1. 2. The simulated PHD responds to the message with a "rors-cmip-confirmed-set". 3. The simulated PHD sends a confirmed event report of the episodic scanner (MDC_NOTI_UNBUF_SCAN_REPORT_FIXED) to the PHG under test: 4. The PHG under test responds with a "rors-confirmed-event-report": a. APDU Type		

	❑ field-length = 2 bytes ❑ field-value = 0xE7 0x00 (PrstApdu) b. invoke-id ❑ field-type = InvokeIDType ❑ field-length = 2 bytes ❑ field-value = The same as the one sent by the simulated PHD. c. obj-handle ❑ field-type = HANDLE ❑ field-length = 2 bytes ❑ field-value = 21 <Handle of the Episodic scanner> d. event-type (rors-confirmed-event-report) ❑ field-type = OID-Type ❑ field-length = 2 bytes ❑ field-value = 0x0D 0x24 (MDC_NOTI_UNBUF_SCAN_REPORT_FIXED)
Pass/Fail criteria	The format of the received messages in steps 1 and 4 must be the one specified.
Notes	

TP Id		TP/PLT/PHG/OXP/DIM/BV-043		
TP label		EpiCfgScanner Class events. Unbuf-Scan-Report-MP-Fixed		
Coverage	**Spec**	[ISO/IEEE 11073-20601-2015A] and [ISO/IEEE 11073-20601-2016C]		
	Testable items	EpiCfgScanEvent 20;C	EpiCfgScanEvent 34; C	
Test purpose		Check that: If an Episodic Scanner uses Unbuf-Scan-Report-MP-Fixed Events to report updated data; and it reports data in confirmed mode, a PHG shall use a rors-cmip-confirmed-event-report operation to acknowledge the operation. [AND] If a PHG supports episodic scanners, it shall support all the events identified in Table 16 (Episodic configurable scanner object events).		
Applicability		C_MAN_OXP_000 AND C_MAN_OXP_001 AND C_MAN_OXP_037		
Other PICS				
Initial condition		The simulated PHD and the PHG under test are in the Operating state.		
Test procedure		1. Make the PHG under test set the OperationalState attribute of an episodic scanner of the simulated PHD to 1. 2. The simulated PHD responds to the message with a "rors-cmip-confirmed-set". 3. The simulated PHD sends a confirmed event report of the episodic scanner (MDC_NOTI_UNBUF_SCAN_REPORT_MP_FIXED) to the PHG under test: 4. The PHG under test responds with a "rors-confirmed-event-report": a. APDU Type ❑ field-length = 2 bytes ❑ field-value = 0xE7 0x00 (PrstApdu) b. invoke-id ❑ field-type = InvokeIDType ❑ field-length = 2 bytes ❑ field-value= The same as the one sent by the simulated PHD. c. obj-handle		

	❑ field-type = HANDLE ❑ field-length = 2 bytes ❑ field-value = 21 <Handle of the Episodic scanner> d. event-type (rors-confirmed-event-report) ❑ field-type = OID-Type ❑ field-length = 2 bytes ❑ field-value = 0x0D 0x27 (MDC_NOTI_UNBUF_SCAN_REPORT_MP_FIXED)
Pass/Fail criteria	The format of the received message must be the one specified.
Notes	

TP Id		TP/PLT/PHG/OXP/DIM/BV-044		
TP label		PeriCfgScanner Class events. Buf-Scan-Report-Fixed		
Coverage	**Spec**	[ISO/IEEE 11073-20601-2015A] and [ISO/IEEE 11073-20601-2016C]		
	Testable items	PeriCfgScanEvent 8;C	PeriCfgScanEvent 27; C	
Test purpose		Check that: If an Periodic Configurable Scanner uses Buf-Scan-Report-Fixed Events to report updated data; and it reports data in confirmed mode, a PHG shall use a rors-cmip-confirmed-event-report operation to acknowledge the operation. [AND] If a PHG supports periodic scanners, it shall support all the events identified in Table 18 (Periodic configurable scanner object events).		
Applicability		C_MAN_OXP_000 AND C_MAN_OXP_006		
Other PICS				
Initial condition		The simulated PHD and the PHG under test are in the Operating state.		
Test procedure		1. Make the PHG under test set the OperationalState attribute of a periodic scanner of the simulated PHD to 1. 2. The simulated PHD responds to the message with a "rors-cmip-confirmed-set". 3. The simulated PHD sends a confirmed event report of the periodic scanner (MDC_NOTI_BUF_SCAN_REPORT_FIXED) to the PHG under test: 4. The PHG under test responds with a "rors-confirmed-event-report": a. APDU Type ❑ field-length = 2 bytes ❑ field-value = 0xE7 0x00 (PrstApdu) b. invoke-id ❑ field-type = InvokeIDType ❑ field-length = 2 bytes ❑ field-value = The same as the one sent by the simulated PHD. c. obj-handle ❑ field-type = HANDLE ❑ field-length = 2 bytes ❑ field-value = 20<Handle of the Periodic scanner> d. event-type (rors-confirmed-event-report) ❑ field-type = OID-Type ❑ field-length = 2 bytes ❑ field-value = 0x0D 0x2A (MDC_NOTI_BUF_SCAN_REPORT_FIXED)		

Pass/Fail criteria	The format of the received message must be the one specified.
Notes	

TP Id		TP/PLT/PHG/OXP/DIM/BV-045		
TP label		PeriCfgScanner Class events. Buf-Scan-Report-MP-Fixed		
Coverage	**Spec**	[ISO/IEEE 11073-20601-2015A] and [ISO/IEEE 11073-20601-2016C]		
	Testable items	PeriCfgScanEvent 20;C	PeriCfgScanEvent 27; C	
Test purpose		Check that: If an Periodic Configurable Scanner uses Buf-Scan-Report-MP-Fixed Events to report updated data; and it reports data in confirmed mode, a PHG shall use a rors-cmip-confirmed-event-report operation to acknowledge the operation. [AND] If a PHG supports periodic scanners, it shall support all the events identified in Table 18 (Periodic configurable scanner object events).		
Applicability		C_MAN_OXP_000 AND C_MAN_OXP_006 AND C_MAN_OXP_037		
Other PICS				
Initial condition		The simulated PHD and the PHG under test are in the Operating state.		
Test procedure		1. Make the PHG under test set the OperationalState attribute of an episodic scanner of the simulated PHD to 1. 2. The simulated PHD responds to the message with a "rors-cmip-confirmed-set". 3. The simulated PHD sends a confirmed event report of the periodic scanner (MDC_NOTI_BUF_SCAN_REPORT_MP_FIXED) to the PHG under test: 4. The PHG under test responds with a "rors-confirmed-event-report": a. APDU Type ❑ field-length = 2 bytes ❑ field-value = 0xE7 0x00 (PrstApdu) b. invoke-id ❑ field-type = InvokeIDType ❑ field-length = 2 bytes ❑ field-value = The same as the one sent by the simulated PHD. c. obj-handle ❑ field-type = HANDLE ❑ field-length = 2 bytes ❑ field-value = 20 <Handle of the Periodic scanner> d. event-type (rors-confirmed-event-report) ❑ field-type = OID-Type ❑ field-length = 2 bytes ❑ field-value = 0x0D 0x2D (MDC_NOTI_BUF_SCAN_REPORT_MP_FIXED)		
Pass/Fail criteria		The format of the received message must be the one specified.		
Notes				

TP Id		TP/PLT/PHG/OXP/DIM/BV-046		
TP label		Scan Handle List - Fixed & Variable format event report		
Coverage	**Spec**	[ISO/IEEE 11073-20601-2015A] and [ISO/IEEE 11073-20601-2016C]		
	Testable	ScanClassAttr 5;M		

	items			
Test purpose		Check that: If the Scan-Handle-List attribute is included in the [Scanner object], the PHG shall not assume the order of the objects contained in the event reports is the same as the order of the Scan-Handle-List.		
Applicability		C_MAN_OXP_000 AND (C_MAN_OXP_001 OR C_MAN_OXP_006) AND (C_MAN_OXP_016 OR C_MAN_OXP_018 OR C_MAN_OXP_019 OR C_MAN_OXP_020 OR C_MAN_OXP_026 OR C_MAN_OXP_027 OR C_MAN_OXP_030 OR C_MAN_OXP_067 OR C_MAN_OXP_071 OR (C_MAN_OXP_022 AND (C_MAN_ST_001 OR C_MAN_ST_002 OR C_MAN_ST_003 OR C_MAN_ST_004 OR C_MAN_ST_005 OR C_MAN_ST_006 OR C_MAN_ST_007)) OR (MAN_OXP_023 AND (C_MAN_CV_001 OR C_MAN_CV_002 OR C_MAN_CV_003 OR C_MAN_CV_004 OR C_MAN_CV_005 OR C_MAN_CV_006 OR C_MAN_CV_007 OR C_MAN_CV_008 OR C_MAN_CV_009 OR C_MAN_CV_010 OR C_MAN_CV_011 OR C_MAN_CV_012 OR C_MAN_CV_013 OR C_MAN_CV_014 OR C_MAN_CV_015 OR C_MAN_CV_016 OR C_MAN_CV_017 OR C_MAN_CV_018 OR C_MAN_CV_019 OR C_MAN_CV_020 OR C_MAN_CV_021 OR C_MAN_CV_022 OR C_MAN_CV_023 OR C_MAN_CV_024 OR C_MAN_CV_025 OR C_MAN_CV_026 OR C_MAN_CV_027 OR C_MAN_CV_028 OR C_MAN_CV_029))		
Other PICS				
Initial condition		The simulated PHD and the PHG under test are in the Operating state using the extended configuration that contains at least two metric objects and one scanner object.		
Test procedure		1. Make the PHG under test set the OperationalState attribute of a periodic scanner or episodic scanner, whichever is supported by the PHG, of the simulated PHD to 1. 2. The simulated PHD responds to the message with a "rors-cmip-confirmed-set". 3. The simulated PHD sends a Confirmed Variable Scanner object report of the periodic/episodic scanner (MDC_NOTI_BUF_SCAN_REPORT_VAR/ MDC_NOTI_UNBUF_SCAN_REPORT_VAR) to the PHG under test. The order of the objects in the Variable Scanner Object Event is different from the order established in Scan-Handle-List attribute. 4. The PHG under test responds with a "rors-confirmed-event-report". 5. The simulated PHD sends a Confirmed Fixed Scanner object of the periodic/episodic scanner (MDC_NOTI_BUF_SCAN_REPORT_FIXED/ MDC_NOTI_UNBUF_SCAN_REPORT_FIXED) to the PHG under test. The order of the objects in the Fixed Scanner Event report is different from the order established in the Scan-Handle-List attribute. 6. The PHG under test responds with a "rors-confirmed-event-report":		
Pass/Fail criteria		Verify that the PHG under test is able to accept the data and assign the measurements correctly to every object when it receives the Scanner Object Event Report in step 4 and step 6.		
Notes				

TP Id		TP/PLT/PHG/OXP/DIM/BV-047		
TP label		Not configuring a real-time clock		
Coverage	**Spec**	[ISO/IEEE 11073-20601-2015A] and [ISO/IEEE 11073-20601-2016C]		
	Testable items	AbsTime 7;M		
Test purpose		Check that: In this case, neither the mds-time-mgr-set-time nor the mds-time-capab-set-clock bits shall be set and the PHG shall not attempt to set the clock.		
Applicability		C_MAN_OXP_000		
Other PICS		C_MAN_OXP_083, C_MAN_OXP_084, C_MAN_OXP_085		
Initial condition		The simulated PHD and the PHG under test are in the Unassociated state. The PHD has the MDSTimeInfo attribute with the mds-time-mgr-set-time and mds-time-capab-set-clock bits set to 0.		
Test procedure		1. The simulated PHD sends an Association Request to the PHG under test.		

	2. IF C_MAN_OXP_083 OR C_MAN_OXP_084 THEN: a. IF the PHG sends a GET request while it is in the Configuring state, the simulated PHD sends rors-cmip-get with MDS attributes. b. Wait until the Operating state is reached. c. If the PHG under test did not set automatically the GET Mds in the Configuring state, force the PHG to request MDS attributes. d. The simulated PHD sends rors-cmip-get with MDS attributes. 3. IF C_MAN_OXP_085 THEN: a. PHG sends a GET request while it is in Configuring/Sending GetMDS state, and simulated PHD sends rors-cmip-get with MDS attributes. 4. The PHG under test shall not set the time of the simulated PHD.
Pass/Fail criteria	Verify that the PHG does not send the Set-Time message.
Notes	

TP Id		TP/PLT/PHG/OXP/DIM/BV-048		
TP label		Not supported specialization - Glucose meter		
Coverage	**Spec**	[ISO/IEEE 11073-20601-2015A] and [ISO/IEEE 11073-20601-2016C]		
	Testable items	ManagerProc 3;M		
Test purpose		Check that: A specialization declared by the vendor as "not supported" is really not supported by the PHG under test.		
Applicability		C_MAN_OXP_000 AND NOT(C_MAN_OXP_055)		
Other PICS				
Initial condition		The simulated PHD and the PHG under test are in the Unassociated state.		
Test procedure		1. The simulated PHD sends an Association Request to the PHG under test with the dev-config-id set to 0x06 0xA4 (glucose meter). 2. IF the PHG under test responds with an Association Response (rejected-*) or an Abort, THEN: a. IF C_MAN_OXP_083 OR C_MAN_OXP_084 THEN the PHG shall not move to Operating state and the Test Procedure ends. b. IF C_MAN_OXP_085 THEN the PHG shall not move to Configuring/Sending GetMDS substate and the Test Procedure ends. 3. IF the PHG under test responds with an Association Response (accepted-unknown-config) THEN the simulated PHD sends a configuration event report with the config-report-id set to 0x06 0xA4 and including the glucose meter standard configuration objects. a. IF the PHG under test responds with a rors-cmip-confirmed-event-report (unsupported-config) or a Release Request or Abort THEN i. IF C_MAN_OXP_083 OR C_MAN_OXP_084 THENthe PHG shall not move to Operating state and the Test Procedure ends. ii. IF C_MAN_OXP_085 THEN the PHG shall not move to Configuring/Sending GetMDS substate and the Test Procedure ends. b. IF the PHG under test responds with a rors-cmip-confirmed-event-report (accepted-config) THEN i. IF C_MAN_OXP_083 OR C_MAN_OXP_084 THEN the PHG moves to Operating state ii. IF C_MAN_OXP_085 THEN: ❑ The PHG under test moves to Configuring/Sending GetMDS substate and issues a roiv-cmip-get command.		

	❑ The simulated PHD sends rors-cmip-get with MDS attributes. ❑ The PHG under test moves to Configuring/Sending Set Time and issues a Set Time action command. ❑ The simulated PHD responds to the PHG under test so it moves to Operating. iii. The simulated PHD sends a confirmed fixed event report with one measurement for every object present in the configuration: ❑ If the PHG under test responds with a roer, rorj, rlrq or Abort then the test procedure ends. ❑ If the PHG under test responds with a rors-cmip-confirmed-event-report then it shall not store or display the received measurement and the test procedure ends. 4. IF the PHG under test responds with an Association Response (accepted) THEN: a. IF C_MAN_OXP_083 OR C_MAN_OXP_084 THEN the PHG moves to Operating state. b. IF C_MAN_OXP_085 THEN: i. The PHG under test moves to Configuring/Sending GetMDS substate and issues a roiv-cmip-get command. ii. The simulated PHD sends rors-cmip-get with MDS attributes. iii. The PHG under test moves to Configuring/Sending Set Time and issues a Set Time action command. iv. The simulated PHD responds to the PHG under test so it moves to Operating. c. The simulated PHD sends a confirmed fixed event report with one measurement for every object present in the configuration: i. If PHG under test responds with roer, rorj, rlrq or Abort then Test Procedure ends. ii. If PHG under test responds with rors-cmip-confirmed-event-report then it shall not store or display the received measurement and the Test Procedure ends
Pass/Fail criteria	• In step 2 or step 3.a, the PHG does not move to the Operating state (2.a and 3.a.i) or Configuring/Sending GetMDS (2.b and 3.a.ii). • In step 3.b or step 4, the PHG does not accept the received measurement or if PHG accepts the measurement then it shall not store or display the received measurement.
Notes	

TP Id		TP/PLT/PHG/OXP/DIM/BV-049		
TP label		Not supported specialization - Blood Pressure Monitor		
Coverage	**Spec**	[ISO/IEEE 11073-20601-2015A] and [ISO/IEEE 11073-20601-2016C]		
	Testable items	ManagerProc 3;M		
Test purpose		Check that: A specialization declared by the vendor as "not supported" is really not supported by the PHG under test.		
Applicability		C_MAN_OXP_000 AND NOT(C_MAN_OXP_056)		
Other PICS		C_MAN_OXP_083, C_MAN_OXP_084, C_MAN_OXP_085		
Initial condition		The simulated PHD and the PHG under test are in the Unassociated state.		
Test procedure		1. The simulated PHD sends an Association Request to the PHG under test with dev-config-id set to 0x02 0xBC (blood pressure monitor). 2. IF the PHG under test responds with an Association Response (rejected-*) or an Abort, THEN:		

	a. IF C_MAN_OXP_083 OR C_MAN_OXP_084 THEN the PHG shall not move to the Operating state and the test procedure ends. b. IF C_MAN_OXP_085 THEN the PHG shall not move to Configuring/Sending GetMDS substate and the Test Procedure ends. 3. IF the PHG under test responds with an Association Response (accepted-unknown-config) THEN the simulated PHD sends a configuration event report with config-report-id set to 0x02 0xBC and including blood pressure monitor standard configuration objects. a. IF the PHG under test responds with a rors-cmip-confirmed-event-report (unsupported-config) or a Release Request or Abort THEN: i. IF C_MAN_OXP_083 OR C_MAN_OXP_084 THEN the PHG shall not move to Operating state and the Test Procedure ends. ii. IF C_MAN_OXP_085 THEN the PHG shall not move to Configuring/Sending GetMDS substate and the Test Procedure ends. b. IF the PHG under test responds with a rors-cmip-confirmed-event-report (accepted-config) THEN: i. IF C_MAN_OXP_084 OR C_MAN_OXP_085 THEN the PHG moves to the Operating state, ii. IF C_MAN_OXP_085: ❑ The PHG under test moves to Configuring/Sending GetMDS substate and issues a roiv-cmip-get command. ❑ The simulated PHD sends rors-cmip-get with MDS attributes. ❑ The PHG under test moves to Configuring/Sending Set Time and issues a Set Time action command. ❑ The simulated PHD responds to the PHG under test so it moves to Operating. iii. The simulated PHD sends a confirmed fixed event report with one measurement for every object present in the configuration: ❑ If the PHG under test responds with a roer, rorj, rlrq or Abort then the test procedure ends. ❑ If the PHG under test responds with a rors-cmip-confirmed-event-report then it shall not store or display the received measurement and the test procedure ends. 4. IF the PHG under test responds with an Association Response (accepted) THEN: a. IF C_MAN_OXP_083 OR C_MAN_OXP_084 THENthe PHG moves to Operating state. b. IF C_MAN_OXP_085 THEN: i. The PHG under test moves to Configuring/Sending GetMDS substate and issues a roiv-cmip-get command. ii. The simulated PHD sends rors-cmip-get with MDS attributes. iii. The PHG under test moves to Configuring/Sending Set Time and issues a Set Time action command. iv. The simulated PHD responds to the PHG under test so it moves to Operating. c. simulated PHD sends a confirmed fixed event report with one measurement for every object present in the configuration: i. If the PHG under test responds with a roer, rorj, rlrq or Abort then the test procedure ends. ii. If the PHG under test responds with a rors-cmip-confirmed-event-report then it shall not store or display the received measurement and the test procedure ends.
Pass/Fail criteria	• In step 2 or step 3.a, the PHG does not move to the Operating state (2.a and 3.a.i) or Configuring/Sending GetMDS (2.b and 3.a.ii). • In step 3.b or step 4, the PHG does not accept the received measurement or if the

	PHG accepts the measurement then it shall not store or display the received measurement.
Notes	

TP Id		TP/PLT/PHG/OXP/DIM/BV-050		
TP label		Not supported specialization - Independent living activity hub		
Coverage	**Spec**	[ISO/IEEE 11073-20601-2015A] and [ISO/IEEE 11073-20601-2016C]		
	Testable items	ManagerProc 3;M		
Test purpose		Check that: A specialization declared by the vendor as "not supported" is really not supported by the PHG under test.		
Applicability		C_MAN_OXP_000 AND NOT(C_MAN_OXP_057)		
Other PICS		C_MAN_OXP_083, C_MAN_OXP_084, C_MAN_OXP_085		
Initial condition		The simulated PHD and the PHG under test are in the Unassociated state.		
Test procedure		1. The simulated PHD sends an Association Request to the PHG under test with the dev-config-id set to an extended Config-Id. 2. IF the PHG under test responds with an Association Response (rejected-*) or an Abort, THEN: a. IF C_MAN_OXP_083 OR C_MAN_OXP_084 THEN the PHG shall not move to the Operating state and the test procedure ends. b. IF C_MAN_OXP_085 THEN the PHG shall not move to Configuring/Sending GetMDS substate and the Test Procedure ends. 3. IF the PHG under test responds with an Association Response (accepted-unknown-config) THEN simulated PHD sends a configuration event report including an extended configuration for the independent living activity hub. a. IF the PHG under test responds with rors-cmip-confirmed-event-report (unsupported-config) or a Release Request or an Abort THEN: i. IF C_MAN_OXP_083 OR C_MAN_OXP_084 THEN the PHG shall not move to Operating state and the Test Procedure ends. ii. IF C_MAN_OXP_085 THEN the PHG shall not move to Configuring/Sending GetMDS substate and the Test Procedure ends. b. IF the PHG under test responds with a rors-cmip-confirmed-event-report (accepted-config) THEN: i. IF C_MAN_OXP_083 OR C_MAN_OXP_084 THEN the PHG moves to Operating state. ii. IF C_MAN_OXP_085 THEN: ❑ The PHG under test moves to Configuring/Sending GetMDS substate and issues a roiv-cmip-get command. ❑ The simulated PHD sends rors-cmip-get with MDS attributes. ❑ The PHG under test moves to Configuring/Sending Set Time and issues a Set Time action command. ❑ The simulated PHD responds to the PHG under test so it moves to Operating. iii. The simulated PHD sends a confirmed fixed event report with one measurement for every object present in the configuration for every object present in the configuration: ❑ If PHG under test responds with roer, rorj, rlrq or Abort then Test Procedure ends. ❑ If PHG under test responds with rors-cmip-confirmed-event-report then it shall not store or display the received measurement and the Test Procedure end		

	4. IF the PHG under test responds with an Association Response (accepted) THEN: a. IF C_MAN_OXP_083 OR C_MAN_OXP_084 THEN the PHG moves to the Operating state. b. IF C_MAN_OXP_085 THEN: i. The PHG under test moves to Configuring/Sending GetMDS substate and issues a roiv-cmip-get command ii. The simulated PHD sends rors-cmip-get with MDS attributes. iii. The PHG under test moves to Configuring/Sending Set Time and issues a Set Time action command. iv. The simulated PHD responds to the PHG under test so it moves to Operating. b. The simulated PHD sends a confirmed fixed event report with one measurement for every object present in the configuration for every object present in the configuration: i. If PHG under test responds with roer, rorj, rlrq or Abort then Test Procedure ends. ii. If PHG under test responds with rors-cmip-confirmed-event-report then it shall not store or display the received measurement and the Test Procedure ends.
Pass/Fail criteria	• In step 2 or step 3.a, the PHG does not move to the Operating state (2.a and 3.a.i) or Configuring/Sending GetMDS (2.b and 3.a.ii). • In step 3.b or step 4, the PHG does not accept the received measurement or if the PHG accepts the measurement then it shall not store or display the received measurement.
Notes	

TP Id		TP/PLT/PHG/OXP/DIM/BV-051		
TP label		Not supported specialization - Strength fitness equipment		
Coverage	**Spec**	[ISO/IEEE 11073-20601-2015A] and [ISO/IEEE 11073-20601-2016C]		
	Testable items	ManagerProc 3;M		
Test purpose		Check that: A specialization declared by the vendor as "not supported" is really not supported by the PHG under test.		
Applicability		C_MAN_OXP_000 AND NOT(C_MAN_OXP_058)		
Other PICS		C_MAN_OXP_083, C_MAN_OXP_084, C_MAN_OXP_085		
Initial condition		The simulated PHD and the PHG under test are in the Unassociated state.		
Test procedure		1. The simulated PHD sends an Association Request to the PHG under test with the dev-config-id set to an extended Config-Id. 2. IF the PHG under test responds with an Association Response (rejected-*) or an Abort, THEN: a. IF C_MAN_OXP_083 OR C_MAN_OXP_084 THEN the PHG shall not move to Operating state and the Test Procedure ends. b. IF C_MAN_OXP_085 THEN the PHG shall not move to Configuring/Sending GetMDS substate and the Test Procedure ends. 3. IF the PHG under test responds with an Association Response (accepted-unknown-config) THEN the simulated PHD sends a configuration event report including an extended configuration for the strength fitness equipment. a. IF the PHG under test responds with a rors-cmip-confirmed-event-report (unsupported-config) or Release Request or an Abort THEN: i. IF C_MAN_OXP_083 OR C_MAN_OXP_084 THEN the PHG shall not move to Operating state and the Test Procedure ends. ii. IF C_MAN_OXP_085 THEN the PHG shall not move to Configuring/Sending		

	GetMDS state and the Test Procedure ends. b. IF PHG under test responds with rors-cmip-confirmed-event-report (accepted-config) THEN: i. IF C_MAN_OXP_083 OR C_MAN_OXP_084 THEN the PHG moves to Operating state. ii. IF C_MAN_OXP_085 THEN: ❑ The PHG under test moves to Configuring/Sending GetMDS substate and issues a roiv-cmip-get command. ❑ The simulated PHD sends rors-cmip-get with MDS attributes. ❑ The PHG under test moves to Configuring/Sending Set Time and issues a Set Time action command. ❑ The simulated PHD responds to the PHG under test so it moves to Operating. iii. The simulated PHD sends a confirmed fixed event report with one measurement for every object present in the configuration: ❑ If PHG under test responds with roer, rorj, rlrq or Abort then Test Procedure ends. ❑ If PHG under test responds with rors-cmip-confirmed-event-report then it shall not store or display the received measurement and the Test Procedure end. 4. IF the PHG under test responds with an Association Response (accepted) THEN: a. IF C_MAN_OXP_083 OR C_MAN_OXP_084 THEN the PHG moves to Operating state. b. IF C_MAN_OXP_085 THEN: i. The PHG under test moves to Configuring/Sending GetMDS substate and issues a roiv-cmip-get command. ii. The simulated PHD sends rors-cmip-get with MDS attributes. iii. The PHG under test moves to Configuring/Sending Set Time and issues a Set Time action command. iv. The simulated PHD responds to the PHG under test so it moves to Operating. c. The simulated PHD sends a confirmed fixed event report with one measurement for every object present in the configuration: i. If PHG under test responds with roer, rorj, rlrq or Abort then Test Procedure ends. ii. If PHG under test responds with rors-cmip-confirmed-event-report then it shall not store or display the received measurement and the Test Procedure ends
Pass/Fail criteria	• In step 2 or step 3.a, the PHG does not move to the Operating state (2.a and 3.a.i) or Configuring/Sending GetMDS (2.b and 3.a.ii). • In step 3.b or step 4, the PHG does not accept the received measurement or if the PHG accepts the measurement then it shall not store or display the received measurement.
Notes	

TP Id		TP/PLT/PHG/OXP/DIM/BV-052		
TP label		Not supported specialization - Cardiovascular fitness and activity monitor		
Coverage	**Spec**	[ISO/IEEE 11073-20601-2015A] and [ISO/IEEE 11073-20601-2016C]		
	Testable items	ManagerProc 3;M		
Test purpose		Check that: A specialization declared by the vendor as "not supported" is really not supported by the PHG under test.		

Applicability	C_MAN_OXP_000 AND NOT(C_MAN_OXP_059)
Other PICS	C_MAN_OXP_083, C_MAN_OXP_084, C_MAN_OXP_085
Initial condition	The simulated PHD and the PHG under test are in the Unassociated state.
Test procedure	1. The simulated PHD sends an Association Request to the PHG under test with the dev-config-id set to an extended Config-Id. 2. IF the PHG under test responds with an Association Response (rejected-*) or an Abort, THEN: a. IF C_MAN_OXP_083 OR C_MAN_OXP_084 THEN the PHG shall not move to Operating state and the Test Procedure ends. b. IF C_MAN_OXP_085 THEN the PHG shall not move to Configuring/Sending GetMDS substate and the Test Procedure ends. 3. IF the PHG under test responds with an Association Response (accepted-unknown-config) THEN the simulated PHD sends a configuration event report including an extended configuration for the cardiovascular fitness and activity monitor. a. IF the PHG under test responds with a rors-cmip-confirmed-event-report (unsupported-config) or Release Request or an Abort THEN: i. IF C_MAN_OXP_083 OR C_MAN_OXP_084 THEN the PHG shall not move to Operating state and the Test Procedure ends. ii. IF C_MAN_OXP_085 THEN the PHG shall not move to Configuring/Sending GetMDS substate and the Test Procedure ends. b. IF PHG under test responds with rors-cmip-confirmed-event-report (accepted-config) THEN: i. IF C_MAN_OXP_083 OR C_MAN_OXP_084 THEN the PHG moves to Operating state. ii. IF C_MAN_OXP_085 THEN: ❑ The PHG under test moves to Configuring/Sending GetMDS substate and issues a roiv-cmip-get command. ❑ The simulated PHD sends rors-cmip-get with MDS attributes. ❑ The PHG under test moves to Configuring/Sending Set Time and issues a Set Time action command. ❑ The simulated PHD responds to the PHG under test so it moves to Operating. iii. simulated PHD sends a confirmed fixed event report with one measurement for every object present in the configuration: ❑ If the PHG under test responds with a roer, rorj, rlrq or an Abort then the test procedure ends. ❑ If the PHG under test responds with a rors-cmip-confirmed-event-report then it shall not store or display the received measurement and the test procedure ends. 4. IF the PHG under test responds with an Association Response (accepted) THEN: a. IF C_MAN_OXP_083 OR C_MAN_OXP_084 THEN the PHG moves to Operating state. b. IF C_MAN_OXP_085 THEN: i. The PHG under test moves to Configuring/Sending GetMDS substate and issues a roiv-cmip-get command. ii. The simulated PHD sends rors-cmip-get with MDS attributes. iii. The PHG under test moves to Configuring/Sending Set Time and issues a Set Time action command. iv. The simulated PHD responds to the PHG under test so it moves to Operating. c. The simulated PHD sends a confirmed fixed event report with one measurement for every object present in the configuration:

	i. If the PHG under test responds with a roer, rorj, rlrq or an Abort then the test procedure ends. ii. If the PHG under test responds with a rors-cmip-confirmed-event-report then it shall not store or display the received measurement and the test procedure ends.
Pass/Fail criteria	• In step 2 or step 3.a, the PHG does not move to the Operating state (2.a and 3.a.i) or Configuring/Sending GetMDS (2.b and 3.a.ii). • In step 3.b or step 4, the PHG does not accept the received measurement or if the PHG accepts the measurement then it shall not store or display the received measurement.
Notes	

TP Id		TP/PLT/PHG/OXP/DIM/BV-053		
TP label		Not supported specialization - Weighing scale		
Coverage	**Spec**	[ISO/IEEE 11073-20601-2015A] and [ISO/IEEE 11073-20601-2016C]		
	Testable items	ManagerProc 3;M		
Test purpose		Check that: A specialization declared by the vendor as "not supported" is really not supported by the PHG under test.		
Applicability		C_MAN_OXP_000 AND NOT(C_MAN_OXP_060)		
Other PICS		C_MAN_OXP_083, C_MAN_OXP_084, C_MAN_OXP_085		
Initial condition		The simulated PHD and the PHG under test are in the Unassociated state.		
Test procedure		1. The simulated PHD sends an Association Request to the PHG under test with the dev-config-id set to 0x05 0xDC (weighing scales). 2. IF the PHG under test responds with an Association Response (rejected-*) or an Abort, THEN: a. IF C_MAN_OXP_083 OR C_MAN_OXP_084 THEN the PHG shall not move to Operating state and the Test Procedure ends. b. IF C_MAN_OXP_085 THEN the PHG shall not move to Configuring/Sending GetMDS substate and the Test Procedure ends. 3. IF the PHG under test responds with an Association Response (accepted-unknown-config) THEN the simulated PHD sends a configuration event report with the config-report-id set to 0x05 0xDC and including weighing scales standard configuration objects. a. IF the PHG under test responds with rors-cmip-confirmed-event-report (unsupported-config) or Release Request or Abort THEN: i. IF C_MAN_OXP_083 OR C_MAN_OXP_084 THEN the PHG shall not move to Operating state and the Test Procedure ends. ii. IF C_MAN_OXP_085 THEN the PHG shall not move to Configuring/Sending GetMDS substate and the Test Procedure ends. b. IF the PHG under test responds with rors-cmip-confirmed-event-report (accepted-config) THEN: i. IF C_MAN_OXP_083 OR C_MAN_OXP_084 THEN the PHG moves to Operating state. ii. IF C_MAN_OXP_085 THEN: ❑ The PHG under test moves to Configuring/Sending GetMDS substate and issues a roiv-cmip-get command. ❑ The simulated PHD sends rors-cmip-get with MDS attributes. ❑ The PHG under test moves to Configuring/Sending Set Time and issues a Set Time action command. ❑ The simulated PHD responds to the PHG under test so it moves to		

	Operating.. iii. The simulated PHD sends a confirmed fixed event report with one measurement for every object present in the configuration: ❑ If the PHG under test responds with roer, rorj, rlrq or Abort then Test Procedure ends. ❑ If the PHG under test responds with rors-cmip-confirmed-event-report then it shall not store or display the received measurement and the Test Procedure end. 4. IF the PHG under test responds with an Association Response (accepted) THEN: a. IF C_MAN_OXP_083 OR C_MAN_OXP_084 THEN the PHG moves to Operating state. b. IF C_MAN_OXP_085 THEN: i. The PHG under test moves to Configuring/Sending GetMDS substate and issues a roiv-cmip-get command. ii. The simulated PHD sends rors-cmip-get with MDS attributes. iii. The PHG under test moves to Configuring/Sending Set Time and issues a Set Time action command. iv. The simulated PHD responds to the PHG under test so it moves to Operating. c. The simulated PHD sends a confirmed fixed event report with one measurement for every object present in the configuration: i. If the PHG under test responds with roer, rorj, rlrq or Abort then Test Procedure ends. ii. If the PHG under test responds with rors-cmip-confirmed-event-report then it shall not store or display the received measurement and the Test Procedure ends.
Pass/Fail criteria	• In step 2 or step 3.a, the PHG does not move to the Operating state (2.a and 3.a.i) or Configuring/Sending GetMDS (2.b and 3.a.ii). • In step 3.b or step 4, the PHG does not accept the received measurement or if the PHG accepts the measurement then it shall not store or display the received measurement.
Notes	

TP Id		TP/PLT/PHG/OXP/DIM/BV-054		
TP label		Not supported specialization - Thermometer		
Coverage	**Spec**	[ISO/IEEE 11073-20601-2015A] and [ISO/IEEE 11073-20601-2016C]		
	Testable items	ManagerProc 3;M		
Test purpose		Check that: A specialization declared by the vendor as "not supported" is really not supported by the PHG under test.		
Applicability		C_MAN_OXP_000 AND NOT(C_MAN_OXP_061)		
Other PICS		C_MAN_OXP_083, C_MAN_OXP_084, C_MAN_OXP_085		
Initial condition		The simulated PHD and the PHG under test are in the Unassociated state.		
Test procedure		1. The simulated PHD sends an Association Request to the PHG under test with the dev-config-id set to 0x03 0x20 (thermometer). 2. IF the PHG under test responds with an Association Response (rejected-*) or an Abort, THEN: a. IF C_MAN_OXP_083 OR C_MAN_OXP_084 THEN the PHG shall not move to Operating state and the Test Procedure ends. b. IF C_MAN_OXP_085 THEN the PHG shall not move to Configuring/Sending GetMDS substate and the Test Procedure ends.		

	3. IF the PHG under test responds with an Association Response (accepted-unknown-config) THEN the simulated PHD sends a configuration event report with the config-report-id set to 0x03 0x20 and including thermometer standard configuration objects. a. IF the PHG under test responds with rors-cmip-confirmed-event-report (unsupported-config) or Release Request or Abort THEN: i. IF C_MAN_OXP_083 OR C_MAN_OXP_084 THEN the PHG shall not move to Operating state and the Test Procedure ends. ii. IF C_MAN_OXP_085 THEN the PHG shall not move to Configuring/Sending GetMDS substate and the Test Procedure ends. b. IF the PHG under test responds with rors-cmip-confirmed-event-report (accepted-config) THEN: i. IF C_MAN_OXP_083 OR C_MAN_OXP_084 THEN the PHG moves to Operating state. ii. IF C_MAN_OXP_085 THEN: ❑ The PHG under test moves to Configuring/Sending GetMDS substate and issues a roiv-cmip-get command. ❑ The simulated PHD sends rors-cmip-get with MDS attributes. ❑ The PHG under test moves to Configuring/Sending Set Time and issues a Set Time action command. ❑ The simulated PHD responds to the PHG under test so it moves to Operating.. iii. The simulated PHD sends a confirmed fixed event report with one measurement for every object present in the configuration: ❑ If the PHG under test responds with roer, rorj, rlrq or Abort then Test Procedure ends. ❑ If the PHG under test responds with rors-cmip-confirmed-event-report then it shall not store or display the received measurement and the Test Procedure end 4. IF the PHG under test responds with an Association Response (accepted) THEN: a. IF C_MAN_OXP_083 OR C_MAN_OXP_084 THEN the PHG moves to Operating state. b. IF C_MAN_OXP_085 THEN: i. The PHG under test moves to Configuring/Sending GetMDS substate and issues a roiv-cmip-get command. ii. The simulated PHD sends rors-cmip-get with MDS attributes. iii. The PHG under test moves to Configuring/Sending Set Time and issues a Set Time action command. iv. The simulated PHD responds to the PHG under test so it moves to Operating. c. The simulated PHD sends a confirmed fixed event report with one measurement for every object present in the configuration: i. If the PHG under test responds with roer, rorj, rlrq or Abort then Test Procedure ends. ii. If the PHG under test responds with rors-cmip-confirmed-event-report then it shall not store or display the received measurement and the Test Procedure ends.
Pass/Fail criteria	• In step 2 or step 3.a, the PHG does not move to the Operating state (2.a and 3.a.i) or Configuring/Sending GetMDS (2.b and 3.a.ii). • In step 3.b or step 4, the PHG does not accept the received measurement or if the PHG accepts the measurement then it shall not store or display the received measurement.
Notes	

TP Id		TP/PLT/PHG/OXP/DIM/BV-055		
TP label		Not supported specialization - Pulse Oximeter		
Coverage	**Spec**	[ISO/IEEE 11073-20601-2015A] and [ISO/IEEE 11073-20601-2016C]		
	Testable Items	ManagerProc 3;M		
Test purpose		Check that: A specialization declared by the vendor as "not supported" is really not supported by the PHG under test.		
Applicability		C_MAN_OXP_000 AND NOT(C_MAN_OXP_062)		
Other PICS		C_MAN_OXP_083, C_MAN_OXP_084, C_MAN_OXP_085		
Initial condition		The simulated PHD and the PHG under test are in the Unassociated state.		
Test procedure		1. The simulated PHD sends an Association Request to the PHG under test with the dev-config-id set to 0x01 0x90 (pulse oximeter). 2. IF the PHG under test responds with an Association Response (rejected-*) or an Abort, THEN: a. IF C_MAN_OXP_083 OR C_MAN_OXP_084 THEN the PHG shall not move to Operating state and the Test Procedure ends. b. IF C_MAN_OXP_085 THEN the PHG shall not move to Configuring/Sending GetMDS substate and the Test Procedure ends. 3. IF the PHG under test responds with an Association Response (accepted-unknown-config) THEN the simulated PHD sends a configuration event report with the config-report-id set to 0x01 0x90 and including the pulse oximeter standard configuration objects. a. IF the PHG under test responds with rors-cmip-confirmed-event-report (unsupported-config) or Release Request or Abort THEN: i. IF C_MAN_OXP_083 OR C_MAN_OXP_084 THEN the PHG shall not move to Operating state and the Test Procedure ends. ii. IF C_MAN_OXP_085 THEN the PHG shall not move to Configuring/Sending GetMDS substate and the Test Procedure ends. b. IF the PHG under test responds with rors-cmip-confirmed-event-report (accepted-config) THEN: i. IF C_MAN_OXP_083 OR C_MAN_OXP_084 THEN the PHG moves to Operating state. ii. IF C_MAN_OXP_085 THEN: ❑ The PHG under test moves to Configuring/Sending GetMDS substate and issues a roiv-cmip-get command. ❑ The simulated PHD sends rors-cmip-get with MDS attributes. ❑ The PHG under test moves to Configuring/Sending Set Time and issues a Set Time action command. ❑ The simulated PHD responds to the PHG under test so it moves to Operating. iii. The simulated PHD sends a unconfirmed fixed event report with one measurement for every object present in the configuration: ❑ If the PHG under test responds with roer, rorj, rlrq or Abort then Test Procedure ends. ❑ If time-out expires and no message is received PHG shall not store or display the received measurement and the Test Procedure end 4. IF the PHG under test responds with an Association Response (accepted) THEN: a. IF C_MAN_OXP_083 OR C_MAN_OXP_084 THEN the PHG moves to Operating state. b. IF C_MAN_OXP_085 THEN: i. The PHG under test moves to Configuring/Sending GetMDS substate and issues		

	a roiv-cmip-get command. ii. The simulated PHD sends rors-cmip-get with MDS attributes. iii. The PHG under test moves to Configuring/Sending Set Time and issues a Set Time action command. iv. The simulated PHD responds to the PHG under test so it moves to Operating. c. The simulated PHD sends a unconfirmed fixed event report with one measurement for every object present in the configuration: i. If PHG under test responds with roer, rorj, rlrq or Abort then Test Procedure ends. ii. If time-out expires and no message is received PHG shall not store or display the received measurement and the Test Procedure ends.
Pass/Fail criteria	• In step 2 or step 3.a, the PHG does not move to Operating state (2.a and 3.a.i) or Configuring/Sending GetMDS (2.b and 3.a.ii). • In step 3.b or step 4, the PHG does not accept the received measurement or if the PHG accepts the measurement then it shall not store or display the received measurement.
Notes	

TP Id		TP/PLT/PHG/OXP/DIM/BV-056		
TP label		Not supported specialization - Adherence Monitor		
Coverage	**Spec**	[ISO/IEEE 11073-20601-2015A] and [ISO/IEEE 11073-20601-2016C]		
	Testable items	ManagerProc 3;M		
Test purpose		Check that: A specialization declared by the vendor as "not supported" is really not supported by the PHG under test.		
Applicability		C_MAN_OXP_000 AND NOT(C_MAN_OXP_052)		
Other PICS		C_MAN_OXP_083, C_MAN_OXP_084, C_MAN_OXP_085		
Initial condition		The simulated PHD and the PHG under test are in the Unassociated state.		
Test procedure		1. The simulated PHD sends an Association Request to the PHG under test with the dev-config-id set to 0x1C 0x20 (adherence monitor). 2. IF the PHG under test responds with an Association Response (rejected-*) or an Abort, THEN: a. IF C_MAN_OXP_083 OR C_MAN_OXP_084 THEN the PHG shall not move to Operating state and the Test Procedure ends. b. IF C_MAN_OXP_085 THEN the PHG shall not move to Configuring/Sending GetMDS substate and the Test Procedure ends. 3. IF the PHG under test responds with an Association Response (accepted-unknown-config) THEN the simulated PHD sends a configuration event report with the config-report-id set to 0x1C 0x20 and including the adherence monitor standard configuration objects. a. IF the PHG under test responds with rors-cmip-confirmed-event-report (unsupported-config) or Release Request or Abort THEN: i. IF C_MAN_OXP_083 OR C_MAN_OXP_084 THEN the PHG shall not move to Operating state and the Test Procedure ends. ii. IF C_MAN_OXP_085 THEN the PHG shall not move to Configuring/Sending GetMDS substate and the Test Procedure ends. b. IF the PHG under test responds with rors-cmip-confirmed-event-report (accepted-config) THEN: i. IF C_MAN_OXP_083 OR C_MAN_OXP_084 THEN the PHG moves to Operating state. ii. IF C_MAN_OXP_085 THEN:		

	❑ The PHG under test moves to Configuring/Sending GetMDS substate and issues a roiv-cmip-get command. ❑ The simulated PHD sends rors-cmip-get with MDS attributes. ❑ The PHG under test moves to Configuring/Sending Set Time and issues a Set Time action command. ❑ The simulated PHD responds to the PHG under test so it moves to Operating. iii. The simulated PHD sends a confirmed fixed event report with one measurement for every object present in the configuration: ❑ If PHG under test responds with roer, rorj, rlrq or Abort then Test Procedure ends. ❑ If PHG under test responds with rors-cmip-confirmed-event-report then it shall not store or display the received measurement and the Test Procedure end 4. IF the PHG under test responds with an Association Response (accepted) THEN: a. IF C_MAN_OXP_083 OR C_MAN_OXP_084 THEN the PHG moves to Operating state. b. IF C_MAN_OXP_085 THEN: i. The PHG under test moves to Configuring/Sending GetMDS substate and issues a roiv-cmip-get command. ii. The simulated PHD sends rors-cmip-get with MDS attributes. iii. The PHG under test moves to Configuring/Sending Set Time and issues a Set Time action command. iv. The simulated PHD responds to the PHG under test so it moves to Operating. c. The simulated PHD sends a confirmed fixed event report with one measurement for every object present in the configuration: i. If the PHG under test responds with roer, rorj, rlrq or Abort then Test Procedure ends. ii. If the PHG under test responds with rors-cmip-confirmed-event-report then it shall not store or display the received measurement and the Test Procedure ends.
Pass/Fail criteria	• In step 2 or step 3.a, the PHG does not move to the Operating state (2.a and 3.a.i) or Configuring/Sending GetMDS (2.b and 3.a.ii). • In step 3.b or step 4, the PHG does not accept the received measurement or if the PHG accepts the measurement then it shall not store or display the received measurement.
Notes	

TP Id		TP/PLT/PHG/OXP/DIM/BV-058		
TP label		Not supported specialization - Peak Flow		
Coverage	**Spec**	[ISO/IEEE 11073-20601-2015A] and [ISO/IEEE 11073-20601-2016C]		
	Testable items	ManagerProc 3;M		
Test purpose		Check that: A specialization declared by the vendor as "not supported" is really not supported by the PHG under test.		
Applicability		C_MAN_OXP_000 AND NOT(C_MAN_OXP_054)		
Other PICS		C_MAN_OXP_083, C_MAN_OXP_084, C_MAN_OXP_085		
Initial condition		The simulated PHD and PHG under test are in the Unassociated state.		
Test procedure		1. The simulated PHD sends an Association Request to the PHG under test with the dev-config-id set to 0x08 0x34 (peak flow).		

	2. IF the PHG under test responds with an Association Response (rejected-*) or an Abort, THEN: a. IF C_MAN_OXP_083 OR C_MAN_OXP_084 THEN the PHG shall not move to Operating state and the Test Procedure ends. b. IF C_MAN_OXP_085 THEN the PHG shall not move to Configuring/Sending GetMDS substate and the Test Procedure ends. 3. IF the PHG under test responds with an Association Response (accepted-unknown-config) THEN the simulated PHD sends a configuration event report with the config-report-id set to 0x08 0x34 and including the peak flow standard configuration objects. a. IF the PHG under test responds with rors-cmip-confirmed-event-report (unsupported-config) or Release Request or Abort THEN: i. IF C_MAN_OXP_083 OR C_MAN_OXP_084 THEN the PHG shall not move to Operating state and the Test Procedure ends. ii. IF C_MAN_OXP_085 THEN the PHG shall not move to Configuring/Sending GetMDS substate and the Test Procedure ends. b. IF the PHG under test responds with rors-cmip-confirmed-event-report (accepted-config) THEN: i. IF C_MAN_OXP_083 OR C_MAN_OXP_084 THEN the PHG moves to Operating state. ii. IF C_MAN_OXP_085 THEN: ❑ The PHG under test moves to Configuring/Sending GetMDS substate and issues a roiv-cmip-get command. ❑ The simulated PHD sends rors-cmip-get with MDS attributes. ❑ The PHG under test moves to Configuring/Sending Set Time and issues a Set Time action command. ❑ The simulated PHD responds to the PHG under test so it moves to Operating. iii. The simulated PHD sends a confirmed fixed event report with one measurement for every object present in the configuration: ❑ If the PHG under test responds with roer, rorj, rlrq or Abort then Test Procedure ends. ❑ If the PHG under test responds with rors-cmip-confirmed-event-report then it shall not store or display the received measurement and the Test Procedure end 4. IF the PHG under test responds with an Association Response (accepted) THEN: a. IF C_MAN_OXP_083 OR C_MAN_OXP_084 THEN the PHG moves to Operating state. b. IF C_MAN_OXP_085 THEN: i. The PHG under test moves to Configuring/Sending GetMDS substate and issues a roiv-cmip-get command. ii. The simulated PHD sends rors-cmip-get with MDS attributes. iii. The PHG under test moves to Configuring/Sending Set Time and issues a Set Time action command. iv. The simulated PHD responds to the PHG under test so it moves to Operating. c. The simulated PHD sends a confirmed fixed event report with one measurement for every object present in the configuration: i. If the PHG under test responds with roer, rorj, rlrq or Abort then Test Procedure ends. ii. If the PHG under test responds with rors-cmip-confirmed-event-report then it shall not store or display the received measurement and the Test Procedure ends.
Pass/Fail criteria	• In step 2 or step 3.a, the PHG does not move to the Operating state (2.a and 3.a.i) or Configuring/Sending GetMDS (2.b and 3.a.ii).

	• In step 3.b or step 4, the PHG does not accept the received measurement or if the PHG accepts the measurement then it shall not store or display the received measurement.
Notes	

TP Id		TP/PLT/PHG/OXP/DIM/BV-059		
TP label		Not supported specialization - Body Composition Analyser		
Coverage	**Spec**	[ISO/IEEE 11073-20601-2015A] and [ISO/IEEE 11073-20601-2016C]		
	Testable items	ManagerProc 3;M		
Test purpose		Check that: A specialization declared by the vendor as "not supported" is really not supported by the PHG under test.		
Applicability		C_MAN_OXP_000 AND NOT(C_MAN_OXP_051)		
Other PICS		C_MAN_OXP_083, C_MAN_OXP_084, C_MAN_OXP_085		
Initial condition		The simulated PHD and the PHG under test are in the Unassociated state.		
Test procedure		1. The simulated PHD sends an Association Request to the PHG under test with the dev-config-id set to 0x07 0xD0 (body composition analyser). 2. IF the PHG under test responds with an Association Response (rejected-*) or an Abort, THEN: a. IF C_MAN_OXP_083 OR C_MAN_OXP_084 THEN the PHG shall not move to Operating state and the Test Procedure ends. b. IF C_MAN_OXP_085 THEN the PHG shall not move to Configuring/Sending GetMDS substate and the Test Procedure ends. 3. IF the PHG under test responds with an Association Response (accepted-unknown-config) THEN the simulated PHD sends a configuration event report with the config-report-id set to 0x07 0xD0 and including the body composition analyser configuration objects. a. IF the PHG under test responds with rors-cmip-confirmed-event-report (unsupported-config) or Release Request or Abort THEN: i. IF C_MAN_OXP_083 OR C_MAN_OXP_084 THEN the PHG shall not move to Operating state and the Test Procedure ends. ii. IF C_MAN_OXP_085 THEN the PHG shall not move to Configuring/Sending GetMDS and the Test Procedure ends.. b. IF the PHG under test responds with rors-cmip-confirmed-event-report (accepted-config) THEN: i. IF C_MAN_OXP_083 OR C_MAN_OXP_084 THEN the PHG moves to Operating state. ii. IF C_MAN_OXP_085 THEN: ❑ The PHG under test moves to Configuring/Sending GetMDS substate and issues a roiv-cmip-get command. ❑ The simulated PHD sends rors-cmip-get with MDS attributes. ❑ The PHG under test moves to Configuring/Sending Set Time and issues a Set Time action command. ❑ The simulated PHD responds to the PHG under test so it moves to Operating. iii. The simulated PHD sends a confirmed fixed event report with one measurement for every object present in the configuration: ❑ If the PHG under test responds with roer, rorj, rlrq or Abort then Test Procedure ends. ❑ If the PHG under test responds with rors-cmip-confirmed-event-report then it shall not store or display the received measurement and the Test		

	Procedure end 4. IF the PHG under test responds with an Association Response (accepted) THEN: a. IF C_MAN_OXP_083 OR C_MAN_OXP_084 THEN the PHG moves to Operating state. b. IF C_MAN_OXP_085 THEN: i. The PHG under test moves to Configuring/Sending GetMDS substate and issues a roiv-cmip-get command. ii. The simulated PHD sends rors-cmip-get with MDS attributes. iii. The PHG under test moves to Configuring/Sending Set Time and issues a Set Time action command. iv. The simulated PHD responds to the PHG under test so it moves to Operating. c. The simulated PHD sends a confirmed fixed event report with one measurement for every object present in the configuration: i. If the PHG under test responds with roer, rorj, rlrq or Abort then Test Procedure ends. ii. If the PHG under test responds with rors-cmip-confirmed-event-report then it shall not store or display the received measurement and the Test Procedure ends.
Pass/Fail criteria	• In step 2 or step 3.a, the PHG does not move to the Operating state (2.a and 3.a.i) or Configuring/Sending GetMDS (2.b and 3.a.ii). • In step 3.b or step 4, the PHG does not accept the received measurement or if the PHG accepts the measurement then it shall not store or display the received measurement.
Notes	

TP Id		TP/PLT/PHG/OXP/DIM/BV-060		
TP label		Not supported specialization - Basic ECG specialization/Heart Rate profile		
Coverage	**Spec**	[ISO/IEEE 11073-20601-2015A] and [ISO/IEEE 11073-20601-2016C]		
	Testable items	ManagerProc 3;M		
Test purpose		Check that: A specialization declared by the vendor as "not supported" is really not supported by the PHG under test.		
Applicability		C_MAN_OXP_000 AND NOT(C_MAN_OXP_064)		
Other PICS		C_MAN_OXP_083, C_MAN_OXP_084, C_MAN_OXP_085		
Initial condition		The simulated PHD and the PHG under test are in the Unassociated state.		
Test procedure		1. The simulated PHD sends an Association Request to the PHG under test with the dev-config-id set to 0x02 0x58 (heart rate profile). 2. IF the PHG under test responds with an Association Response (rejected-*) or an Abort, THEN: a. IF C_MAN_OXP_083 OR C_MAN_OXP_084 THEN the PHG shall not move to Operating state and the Test Procedure ends. b. IF C_MAN_OXP_085 THEN the PHG shall not move to Configuring/Sending GetMDS substate and the Test Procedure ends. 3. IF the PHG under test responds with an Association Response (accepted-unknown-config) THEN the simulated PHD sends a configuration event report with the config-report-id set to 0x02 0x58 and including the Heart Rate Profile configuration objects. a. IF the PHG under test responds with rors-cmip-confirmed-event-report (unsupported-config) or Release Request or Abort THEN: i. IF C_MAN_OXP_083 OR C_MAN_OXP_084 THEN the PHG shall not move to Operating state and the Test Procedure ends.		

	ii. IF C_MAN_OXP_085 THEN the PHG shall not move to Configuring/Sending GetMDS substate and the Test Procedure ends. b. IF the PHG under test responds with rors-cmip-confirmed-event-report (accepted-config) THEN: i. IF C_MAN_OXP_083 OR C_MAN_OXP_084 THEN the PHG moves to Operating state. ii. IF C_MAN_OXP_085 THEN: ❑ The PHG under test moves to Configuring/Sending GetMDS substate and issues a roiv-cmip-get command. ❑ The simulated PHD sends rors-cmip-get with MDS attributes. ❑ The PHG under test moves to Configuring/Sending Set Time and issues a Set Time action command. ❑ The simulated PHD responds to the PHG under test so it moves to Operating. iii. The simulated PHD sends a confirmed fixed event report with one measurement for every object present in the configuration: ❑ If the PHG under test responds with roer, rorj, rlrq or Abort then Test Procedure ends. ❑ If the PHG under test responds with rors-cmip-confirmed-event-report then it shall not store or display the received measurement and the Test Procedure end 4. IF the PHG under test responds with an Association Response (accepted) THEN: a. IF C_MAN_OXP_083 OR C_MAN_OXP_084 THEN the PHG moves to Operating state. b. IF C_MAN_OXP_085 THEN: i. The PHG under test moves to Configuring/Sending GetMDS substate and issues a roiv-cmip-get command. ii. The simulated PHD sends rors-cmip-get with MDS attributes. iii. The PHG under test moves to Configuring/Sending Set Time and issues a Set Time action command. iv. The simulated PHD responds to the PHG under test so it moves to Operating. c. The simulated PHD sends a confirmed fixed event report with one measurement for every object present in the configuration: i. If the PHG under test responds with roer, rorj, rlrq or Abort then Test Procedure ends. ii. If the PHG under test responds with rors-cmip-confirmed-event-report then it shall not store or display the received measurement and the Test Procedure ends.
Pass/Fail criteria	• In step 2 or step 3.a, the PHG does not move to the Operating state (2.a and 3.a.i) or Configuring/Sending GetMDS (2.b and 3.a.ii). • In step 3.b or step 4, the PHG does not accept the received measurement or if the PHG accepts the measurement then it shall not store or display the received measurement.
Notes	

TP Id		TP/PLT/PHG/OXP/DIM/BV-061		
TP label		Not supported specialization - Basic ECG specialization/Simple ECG profile		
Coverage	**Spec**	[ISO/IEEE 11073-20601-2015A] and [ISO/IEEE 11073-20601-2016C]		
	Testable items	ManagerProc 3;M		
Test purpose		Check that:		

	A specialization declared by the vendor as "not supported" is really not supported by the PHG under test.
Applicability	C_MAN_OXP_000 AND NOT(C_MAN_OXP_065)
Other PICS	C_MAN_OXP_083, C_MAN_OXP_084, C_MAN_OXP_085
Initial condition	The simulated PHD and the PHG under test are in the Unassociated state.
Test procedure	1. The simulated PHD sends an Association Request to the PHG under test with the dev-config-id set to an extended Config-Id. 2. IF the PHG under test responds with an Association Response (rejected-*) or an Abort, THEN: a. IF C_MAN_OXP_083 OR C_MAN_OXP_084 THEN the PHG shall not move to Operating state and the Test Procedure ends. b. IF C_MAN_OXP_085 THEN the PHG shall not move to Configuring/Sending GetMDS substate and the Test Procedure ends. 3. IF the PHG under test responds with an Association Response (accepted-unknown-config) THEN the simulated PHD sends a configuration event report including an extended configuration for the Simple ECG Profile (one RT-SA object for the ECG Waveform and one scanner referenced to RT-SA): a. IF PHG under test responds with rors-cmip-confirmed-event-report (unsupported-config) or Release Request or Abort THEN: i. IF C_MAN_OXP_083 OR C_MAN_OXP_084 THEN the PHG shall not move to Operating state and the Test Procedure ends. ii. IF C_MAN_OXP_085 THEN the PHG shall not move to Configuring/Sending GetMDS substate and the Test Procedure ends. b. IF PHG under test responds with rors-cmip-confirmed-event-report (accepted-config) THEN: i. IF C_MAN_OXP_083 OR C_MAN_OXP_084 THEN the PHG moves to Operating state. ii. IF C_MAN_OXP_085THEN: ❑ The PHG under test moves to Configuring/Sending GetMDS substate and issues a roiv-cmip-get command. ❑ The simulated PHD sends rors-cmip-get with MDS attributes. ❑ The PHG under test moves to Configuring/Sending Set Time and issues a Set Time action command. ❑ The simulated PHD responds to the PHG under test so it moves to Operating. iii. The Test Tool requests to Test Operator to enable the scanner ❑ If the PHG does not enable the scanner then Test Procedure ends. ❑ If the PHG enables the scanner then simulated PHD sends a confirmed Unbuf-Scan-Report-Fixed with one measurement for RT-SA: • If the PHG under test responds with roer, rorj, rlrq or Abort then Test Procedure ends. • If the PHG under test responds with rors-cmip-confirmed-event-report then it shall not store or display the received measurement and the Test Procedure end 4. IF the PHG under test responds with an Association Response (accepted) THEN: a. IF C_MAN_OXP_083 OR C_MAN_OXP_084 THEN the PHG moves to Operating state. b. IF C_MAN_OXP_085 THEN: i. The PHG under test moves to Configuring/Sending GetMDS substate and issues a roiv-cmip-get command. ii. The simulated PHD sends rors-cmip-get with MDS attributes. iii. The PHG under test moves to Configuring/Sending Set Time and issues a Set

	Time action command. iv. The simulated PHD responds to the PHG under test so it moves to Operating. c. The Test Tool requests to Test Operator to enable the scanner i. If thePHG does not enable the scanner then Test Procedure ends ii. If thePHG enables the scanner then simulated PHD sends a confirmed Unbuf-Scan-Report-Fixed with one measurement for RT-SA: ❑ If the PHG under test responds with roer, rorj, rlrq or Abort then Test Procedure ends. ❑ If the PHG under test responds with rors-cmip-confirmed-event-report then it shall not store or display the received measurement and the Test Procedure ends.
Pass/Fail criteria	• In step 2 or step 3.a, the PHG does not move to the Operating state (2.a and 3.a.i) or Configuring/Sending GetMDS (2.b and 3.a.ii). • In step 3.b or step 4, the PHG does not accept the received measurement or if PHG accepts the measurement then it shall not store or display the received measurement.
Notes	

TP Id		TP/PLT/PHG/OXP/DIM/BV-062		
TP label		Not supported specialization - International Normalized Ratio		
Coverage	**Spec**	[ISO/IEEE 11073-20601-2015A] and [ISO/IEEE 11073-20601-2016C]		
	Testable items	ManagerProc 3;M		
Test purpose		Check that: A specialization declared by the vendor as "not supported" is really not supported by the PHG under test.		
Applicability		C_MAN_OXP_000 AND NOT(C_MAN_OXP_066)		
Other PICS		C_MAN_OXP_083, C_MAN_OXP_084, C_MAN_OXP_085		
Initial condition		The simulated PHD and the PHG under test are in the Unassociated state.		
Test procedure		1. The simulated PHD sends an Association Request to the PHG under test with the dev-config-id set to 0x07 0x08 (international normalized ratio). 2. IF the PHG under test responds with an Association Response (rejected-*) or an Abort, THEN: a. IF C_MAN_OXP_083 OR C_MAN_OXP_084 THEN the PHG shall not move to Operating state and the Test Procedure ends. b. IF C_MAN_OXP_085 THEN the PHG shall not move to Configuring/Sending GetMDS substate and the Test Procedure ends. 3. IF the PHG under test responds with an Association Response (accepted-unknown-config) THEN the simulated PHD sends a configuration event report with the config-report-id set to 0x07 0x08 and including the international normalized ratio configuration objects. a. IF the PHG under test responds with rors-cmip-confirmed-event-report (unsupported-config) or Release Request or Abort THEN: i. IF C_MAN_OXP_083 OR C_MAN_OXP_084 THEN the PHG shall not move to Operating state and the Test Procedure ends. ii. IF C_MAN_OXP_085 THEN the PHG shall not move to Configuring/Sending GetMDS substate and the Test Procedure ends. b. IF the PHG under test responds with rors-cmip-confirmed-event-report (accepted-config) THEN: i. IF C_MAN_OXP_083 OR C_MAN_OXP_084 THEN the PHG moves to Operating state. ii. IF C_MAN_OXP_085 THEN:		

	❑ The PHG under test moves to Configuring/Sending GetMDS substate and issues a roiv-cmip-get command. ❑ The simulated PHD sends rors-cmip-get with MDS attributes. ❑ The PHG under test moves to Configuring/Sending Set Time and issues a Set Time action command. ❑ The simulated PHD responds to the PHG under test so it moves to Operating. iii. The simulated PHD sends a confirmed fixed event report with one measurement for every object present in the configuration: ❑ If the PHG under test responds with roer, rorj, rlrq or Abort then Test Procedure ends. ❑ If the PHG under test responds with rors-cmip-confirmed-event-report then it shall not store or display the received measurement and the Test Procedure end 4. IF the PHG under test responds with an Association Response (accepted) THEN: a. IF C_MAN_OXP_083 OR C_MAN_OXP_084 THEN the PHG moves to Operating state. b. IF C_MAN_OXP_085 THEN: i. The PHG under test moves to Configuring/Sending GetMDS substate and issues a roiv-cmip-get command. ii. The simulated PHD sends rors-cmip-get with MDS attributes. iii. The PHG under test moves to Configuring/Sending Set Time and issues a Set Time action command. iv. The simulated PHD responds to the PHG under test so it moves to Operating. c. The simulated PHD sends a confirmed fixed event report with one measurement for every object present in the configuration: i. If the PHG under test responds with roer, rorj, rlrq or Abort then Test Procedure ends. ii. If the PHG under test responds with rors-cmip-confirmed-event-report then it shall not store or display the received measurement and the Test Procedure ends.
Pass/Fail criteria	• In step 2 or step 3.a, the PHG does not move to the Operating state (2.a and 3.a.i) or Configuring/Sending GetMDS (2.b and 3.a.ii). • In step 3.b or step 4, the PHG does not accept the received measurement or if the PHG accepts the measurement then it shall not store or display the received measurement.
Notes	

TP Id		TP/PLT/PHG/OXP/DIM/BV-063		
TP label		Not supported specialization – Sleep Apnoea Breathing Therapy Equipment		
Coverage	**Spec**	[ISO/IEEE 11073-20601-2015A] and [ISO/IEEE 11073-20601-2016C]		
	Testable items	ManagerProc 3;M		
Test purpose		Check that: A specialization declared by the vendor as "not supported" is really not supported by the PHG under test.		
Applicability		C_MAN_OXP_000 AND NOT(C_MAN_OXP_068)		
Other PICS		C_MAN_OXP_083, C_MAN_OXP_084, C_MAN_OXP_085		

Initial condition	The simulated PHD and the PHG under test are in Unassociated state
Test procedure	1. The simulated PHD sends an Association Request to the PHG under test with dev-config-id set to 0x09 0x60 (Sleep Apnoea Breathing Therapy Equipment) 2. IF the PHG under test responds with an Association Response (rejected-*) or Abort, THEN: a. IF C_MAN_OXP_083 OR C_MAN_OXP_084 THEN the PHG shall not move to Operating state and the Test Procedure ends. b. IF C_MAN_OXP_085 THEN the PHG shall not move to Configuring/Sending GetMDS substate and the Test Procedure ends. 3. IF the PHG under test responds with an Association Response (accepted-unknown-config) THEN simulated PHD sends a configuration event report with config-report-id set to 0x07 0x08 and including International Normalized Ratio configuration objects. a. IF the PHG under test responds with rors-cmip-confirmed-event-report (unsupported-config) or Release Request or Abort THEN: i. IF C_MAN_OXP_083 OR C_MAN_OXP_084 THEN the PHG shall not move to Operating state and the Test Procedure ends. ii. IF C_MAN_OXP_085 THEN the PHG shall not move to Configuring/Sending GetMDS substate and the Test Procedure ends. b. IF the PHG under test responds with rors-cmip-confirmed-event-report (accepted-config) THEN: i. IF C_MAN_OXP_083 OR C_MAN_OXP_084 THEN the PHG moves to Operating state. ii. IF C_MAN_OXP_085 THEN: ❑ The PHG under test moves to Configuring/Sending GetMDS substate and issues a roiv-cmip-get command. ❑ The simulated PHD sends rors-cmip-get with MDS attributes. ❑ The PHG under test moves to Configuring/Sending Set Time and issues a Set Time action command. ❑ The simulated PHD responds to the PHG under test so it moves to Operating. iii. The simulated PHD sends a confirmed fixed event report with one measurement for every object present in the configuration: i. If the PHG under test responds with roer, rorj, rlrq or Abort then Test Procedure ends. ii. If the PHG under test responds with rors-cmip-confirmed-event-report then it shall not store or display the received measurement and the Test Procedure end 4. IF the PHG under test responds with an Association Response (accepted) THEN: a. IF C_MAN_OXP_083 OR C_MAN_OXP_084 THEN the PHG moves to Operating state. b. IF C_MAN_OXP_085 THEN: i. The PHG under test moves to Configuring/Sending GetMDS substate and issues a roiv-cmip-get command. ii. The simulated PHD sends rors-cmip-get with MDS attributes. iii. The PHG under test moves to Configuring/Sending Set Time and issues a Set Time action command. iv. The simulated PHD responds to the PHG under test so it moves to Operating. c. The simulated PHD sends a confirmed fixed event report with one measurement for every object present in the configuration: i. If the PHG under test responds with roer, rorj, rlrq or Abort then Test Procedure ends. ii. If the PHG under test responds with rors-cmip-confirmed-event-report then it shall not store or display the received measurement and the Test Procedure ends.
Pass/Fail criteria	• In step 2 or step 3.a, PHG does not move to Operating state (2.a and 3.a.i) or

	Configuring/Sending GetMDS (2.b and 3.a.ii). • In step 3.b or step 4, PHG does not accept the received measurement or if PHG accepts the measurement then it shall not store or display the received measurement.
Notes	

TP Id		TP/PLT/PHG/OXP/DIM/BV-064		
TP label		Not supported specialization – Insulin Pump		
Coverage	**Spec**	[ISO/IEEE 11073-20601-2015A]		
	Testable items	ManagerProc 3;M		
Test purpose		Check that: A specialization declared by the vendor as "not supported" is really not supported by the PHG under test.		
Applicability		C_MAN_OXP_000 AND NOT(C_MAN_OXP_070)		
Other PICS		C_MAN_OXP_083, C_MAN_OXP_084, C_MAN_OXP_085		
Initial condition		The The simulated PHD and the PHG under test are in Unassociated state		
Test procedure		1. The simulated PHD sends an Association Request to the PHG under test with dev-config-id set to 0x07 0x6C (Insulin Pump) 2. IF the PHG under test responds with an Association Response (rejected-*) or Abort, THEN: a. IF C_MAN_OXP_083 OR C_MAN_OXP_084 THEN the PHG shall not move to Operating state and the Test Procedure ends. b. IF C_MAN_OXP_085 THEN the PHG shall not move to Configuring/Sending GetMDS substate and the Test Procedure ends. 3. IF the PHG under test responds with an Association Response (accepted-unknown-config) THEN simulated PHD sends a configuration event report with config-report-id set to 0x07 0x6C and including Insulin Pump configuration objects. a. IF the PHG under test responds with rors-cmip-confirmed-event-report (unsupported-config) or Release Request or Abort THEN: i. IF C_MAN_OXP_083 OR C_MAN_OXP_084 THEN the PHG shall not move to Operating state and the Test Procedure ends. ii. IF C_MAN_OXP_085 THEN the PHG shall not move to Configuring/Sending GetMDS substate and the Test Procedure ends. b. IF the PHG under test responds with rors-cmip-confirmed-event-report (accepted-config) THEN: i. IF C_MAN_OXP_083 OR C_MAN_OXP_084 THEN the PHG moves to Operating state. ii. IF C_MAN_OXP_085 THEN: ❑ The PHG under test moves to Configuring/Sending GetMDS substate and issues a roiv-cmip-get command. ❑ The simulated PHD sends rors-cmip-get with MDS attributes. ❑ The PHG under test moves to Configuring/Sending Set Time and issues a Set Time action command. ❑ The simulated PHD responds to the PHG under test so it moves to Operating. iii. The simulated PHD sends a confirmed fixed event report with one measurement for every object present in the configuration: ❑ If the PHG under test responds with roer, rorj, rlrq or Abort then Test Procedure ends.		

	❑ If the PHG under test responds with rors-cmip-confirmed-event-report then it shall not store or display the received measurement and the Test Procedure ends 4. IF the PHG under test responds with an Association Response (accepted) THEN: a. IF C_MAN_OXP_083 OR C_MAN_OXP_084 THEN the PHG moves to Operating state. b. IF C_MAN_OXP_085 THEN: i. The PHG under test moves to Configuring/Sending GetMDS substate and issues a roiv-cmip-get command. ii. The simulated PHD sends rors-cmip-get with MDS attributes. iii. The PHG under test moves to Configuring/Sending Set Time and issues a Set Time action command. iv. The simulated PHD responds to the PHG under test so it moves to Operating. c. The simulated PHD sends a confirmed fixed event report with one measurement for every object present in the configuration: i. If the PHG under test responds with roer, rorj, rlrq or Abort then Test Procedure ends. ii. If the PHG under test responds with rors-cmip-confirmed-event-report then it shall not store or display the received measurement and the Test Procedure ends
Pass/Fail criteria	• In step 2 or step 3.a, PHG does not move to Operating state (2.a and 3.a.i) or Configuring/Sending GetMDS (2.b and 3.a.ii). • In step 3.b or step 4, PHG does not accept the received measurement or if PHG accepts the measurement then it shall not store or display the received measurement.
Notes	

TP Id		TP/PLT/PHG/OXP/DIM/BV-065		
TP label		Not supported specialization – Continuous Glucose Monitor		
Coverage	**Spec**	[ISO/IEEE 11073-20601-2015A]		
	Testable items	ManagerProc 3;M		
Test purpose		Check that: A specialization declared by the vendor as "not supported" is really not supported by the PHG under test.		
Applicability		C_MAN_OXP_000 AND NOT(C_MAN_OXP_072)		
Other PICS		C_MAN_OXP_083, C_MAN_OXP_084, C_MAN_OXP_085		
Initial condition		The simulated PHD and the PHG under test are in Unassociated state		
Test procedure		1. The simulated PHD sends an Association Request to the PHG under test with dev-config-id set to 0x09 0xC4 (Continuous Glucose Monitor) 2. IF the PHG under test responds with an Association Response (rejected-*) or Abort, THEN: a. IF C_MAN_OXP_083 OR C_MAN_OXP_084 THEN the PHG shall not move to Operating state and the Test Procedure ends. b. IF C_MAN_OXP_085 THEN the PHG shall not move to Configuring/Sending GetMDS substate and the Test Procedure ends. 3. IF the PHG under test responds with an Association Response (accepted-unknown-config) THEN simulated PHD sends a configuration event report with config-report-id set to 0x09 0xC4 and including Continuous Glucose Monitor configuration objects.		

	a. IF the PHG under test responds with rors-cmip-confirmed-event-report (unsupported-config) or Release Request or Abort THEN: i. IF C_MAN_OXP_083 OR C_MAN_OXP_084 THEN the PHG shall not move to Operating state and the Test Procedure ends. ii. IF C_MAN_OXP_085 THEN the PHG shall not move to Configuring/Sending GetMDS substate and the Test Procedure ends. b. IF the PHG under test responds with rors-cmip-confirmed-event-report (accepted-config) THEN: i. IF C_MAN_OXP_083 OR C_MAN_OXP_084 THEN the PHG moves to Operating state. ii. IF C_MAN_OXP_085 THEN: ❑ The PHG under test moves to Configuring/Sending GetMDS substate and issues a roiv-cmip-get command. ❑ The simulated PHD sends rors-cmip-get with MDS attributes. ❑ The PHG under test moves to Configuring/Sending Set Time and issues a Set Time action command. ❑ The simulated PHD responds to the PHG under test so it moves to Operating. iii. The simulated PHD sends a confirmed fixed event report with one measurement for every object present in the configuration: ❑ If PHG under test responds with roer, rorj, rlrq or Abort then Test Procedure ends. ❑ If PHG under test responds with rors-cmip-confirmed-event-report then it shall not store or display the received measurement and the Test Procedure ends 4. IF the PHG under test responds with an Association Response (accepted) THEN: a. IF C_MAN_OXP_083 OR C_MAN_OXP_084 THEN the PHG moves to Operating state. b. IF C_MAN_OXP_085 THEN: i. The PHG under test moves to Configuring/Sending GetMDS substate and issues a roiv-cmip-get command. ii. The simulated PHD sends rors-cmip-get with MDS attributes. iii. The PHG under test moves to Configuring/Sending Set Time and issues a Set Time action command. iv. The simulated PHD responds to the PHG under test so it moves to Operating. c. The simulated PHD sends a confirmed fixed event report with one measurement for every object present in the configuration: i. If PHG under test responds with roer, rorj, rlrq or Abort then Test Procedure ends. ii. If PHG under test responds with rors-cmip-confirmed-event-report then it shall not store or display the received measurement and the Test Procedure ends
Pass/Fail criteria	• In step 2 or step 3.a, PHG does not move to Operating state (2.a and 3.a.i) or Configuring/Sending GetMDS (2.b and 3.a.ii). • In step 3.b or step 4, PHG does not accept the received measurement or if PHG accepts the measurement then it shall not store or display the received measurement.
Notes	

TP Id		TP/PLT/PHG/OXP/DIM/BV-066
TP label		Not supported specialization – Power Status Monitor with Simple PSM profile
Coverage	**Spec**	[ISO/IEEE 11073-20601-2015A]

	Testable items	ManagerProc 3;M		
Test purpose		Check that: A specialization declared by the vendor as "not supported" is really not supported by the PHG under test.		
Applicability		C_MAN_OXP_000 AND NOT(C_MAN_OXP_074)		
Other PICS		C_MAN_OXP_084, C_MAN_OXP_085		
Initial condition		The simulated PHD and the PHG under test are in Unassociated state		
Test procedure		1. The simulated PHD sends an Association Request to the PHG under test with dev-config-id set to 0x0A8C (2700) OR 0x0A8D (2701) OR 0x0A8E (2702) OR 0x0A8F (2703) OR 0x0A90 (2704) OR 0x0A91 (2705) OR 0x0A92 (2706) OR 0x0A93 (2707) or an extended configuration between 0x4000-0x7FFF (Power Status Monitor with Simple PSM profile) 2. IF the PHG under test responds with an Association Response (rejected-*) or Abort, THEN: a. IF C_MAN_OXP_084 THEN the PHG shall not move to operating state and the Test Procedure ends. b. IF C_MAN_OXP_085 THEN the PHG shall not move to Configuring/Sending GetMDS substate and the Test Procedure ends. 3. IF the PHG under test responds with an Association Response (accepted-unknown-config) THEN simulated PHD sends a configuration event report with config-report-id set to one ot the ones mentioned in step 1 and including power status monitor configuration objects. c. IF the PHG under test responds with rors-cmip-confirmed-event-report (unsupported-config) or Release Request or Abort THEN: i. IF C_MAN_OXP_084 THEN the PHG shall not move to operating state and the Test Procedure ends. ii. IF C_MAN_OXP_085 THEN the PHG shall not move to Configuring/Sending GetMDS substate and the Test Procedure ends. d. IF the PHG under test responds with rors-cmip-confirmed-event-report (accepted-config) THEN: i. IF C_MAN_OXP_084 THEN the PHG moves to operating state. ii. IF C_MAN_OXP_085 THEN: ❑ The PHG under test moves to Configuring/Sending GetMDS substate and issues a roiv-cmip-get command. ❑ The simulated PHD sends rors-cmip-get with MDS attributes. ❑ The PHG under test moves to Configuring/Sending Set Time and issues a Set Time action command. ❑ The simulated PHD responds to the PHG under test so it moves to Operating. iii. The simulated PHD sends a confirmed fixed event report with one measurement for every object present in the configuration: ❑ If PHG under test responds with roer, rorj, rlrq or Abort then Test Procedure ends. ❑ If PHG under test responds with rors-cmip-confirmed-event-report then it shall not store or display the received measurement and the Test Procedure ends 4. IF the PHG under test responds with an Association Response (accepted) THEN: a. IF C_MAN_OXP_084 THEN the PHG moves to operating state. b. IF C_MAN_OXP_085 THEN: i. The PHG under test moves to Configuring/Sending GetMDS substate and issues a roiv-cmip-get command. ii. The simulated PHD sends rors-cmip-get with MDS attributes. iii. The PHG under test moves to Configuring/Sending Set Time and issues a Set Time		

	action command. iv. The simulated PHD responds to the PHG under test so it moves to Operating. c. The simulated PHD sends a confirmed fixed event report with one measurement for every object present in the configuration: i. If PHG under test responds with roer, rorj, rlrq or Abort then Test Procedure ends. ii. If PHG under test responds with rors-cmip-confirmed-event-report then it shall not store or display the received measurement and the Test Procedure ends
Pass/Fail criteria	• In step 2 or step 3.a, PHG does not move to operating state (2.a and 3.a.i) or Configuring/Sending GetMDS (2.b and 3.a.ii). • In step 3.b or step 4, PHG does not accept the received measurement or if PHG accepts the measurement then it shall not store or display the received measurement.
Notes	

TP Id		TP/PLT/PHG/OXP/DIM/BV-067		
TP label		Not supported specialization – Power Status Monitor with Advanced PSM profile		
Coverage	**Spec**	[ISO/IEEE 11073-20601-2015A]		
	Testable items	ManagerProc 3;M		
Test purpose		Check that: A specialization declared by the vendor as "not supported" is really not supported by the PHG under test.		
Applicability		C_MAN_OXP_000 AND NOT(C_MAN_OXP_075)		
Other PICS		C_MAN_OXP_084, C_MAN_OXP_085		
Initial condition		The simulated PHD and the PHG under test are in Unassociated state		
Test procedure		1. The simulated PHD sends an Association Request to the PHG under test with dev-config-id set to an extended configuration between 0x4000-0x7FFF (Power Status Monitor with Advanced PSM profile) 2. IF the PHG under test responds with an Association Response (rejected-*) or Abort, THEN: a. IF C_MAN_OXP_084 THEN the PHG shall not move to operating state and the Test Procedure ends. b. IF C_MAN_OXP_085 THEN the PHG shall not move to Configuring/Sending GetMDS substate and the Test Procedure ends. 3. IF the PHG under test responds with an Association Response (accepted-unknown-config) THEN simulated PHD sends a configuration event report with config-report-id set to one ot the ones mentioned in step 1 and including ower status monitor configuration objects. a) IF the PHG under test responds with rors-cmip-confirmed-event-report (unsupported-config) or Release Request or Abort THEN: i. IF C_MAN_OXP_084 THEN the PHG shall not move to operating state and the Test Procedure ends. ii. IF C_MAN_OXP_085 THEN the PHG shall not move to Configuring/Sending GetMDS substate and the Test Procedure ends. b) IF the PHG under test responds with rors-cmip-confirmed-event-report (accepted-config) THEN: i. IF C_MAN_OXP_084 THEN the PHG moves to operating state. ii. IF C_MAN_OXP_085 THEN:		

	❑ The PHG under test moves to Configuring/Sending GetMDS substate and issues a roiv-cmip-get command. ❑ The simulated PHD sends rors-cmip-get with MDS attributes. ❑ The PHG under test moves to Configuring/Sending Set Time and issues a Set Time action command. ❑ The simulated PHD responds to the PHG under test so it moves to Operating. iii. The simulated PHD sends a confirmed fixed event report with one measurement for every object present in the configuration: ❑ If PHG under test responds with roer, rorj, rlrq or Abort then Test Procedure ends. ❑ If PHG under test responds with rors-cmip-confirmed-event-report then it shall not store or display the received measurement and the Test Procedure ends 4. IF the PHG under test responds with an Association Response (accepted) THEN: a. IF C_MAN_OXP_084 THEN the PHG moves to operating state. b. IF C_MAN_OXP_085 THEN: i. The PHG under test moves to Configuring/Sending GetMDS substate and issues a roiv-cmip-get command. ii. The simulated PHD sends rors-cmip-get with MDS attributes. iii. The PHG under test moves to Configuring/Sending Set Time and issues a Set Time action command. iv. The simulated PHD responds to the PHG under test so it moves to Operating. c. The simulated PHD sends a confirmed fixed event report with one measurement for every object present in the configuration: i. If PHG under test responds with roer, rorj, rlrq or Abort then Test Procedure ends. ii. If PHG under test responds with rors-cmip-confirmed-event-report then it shall not store or display the received measurement and the Test Procedure ends
Pass/Fail criteria	• In step 2 or step 3.a, PHG does not move to operating state (2.a and 3.a.i) or Configuring/Sending GetMDS (2.b and 3.a.ii). • In step 3.b or step 4, PHG does not accept the received measurement or if PHG accepts the measurement then it shall not store or display the received measurement.
Notes	

A.4 Subgroup 2.2.3: PHD service model (SER)

TP Id		TP/PLT/PHG/OXP/SER/BV-000		
TP label		Configuration event report. Configuration Response Format		
Coverage	**Spec**	[ISO/IEEE 11073-20601-2015A] and [ISO/IEEE 11073-20601-2016C]		
	Testable items	ObjAccessServ 2;M	ConfNormalProc 8;M	
Test purpose		Check that: The PHG shall respond (to the configuration event) with a "Remote Operation Response | Confirmed Event Report" message with an event-type of MDC_NOTI_CONFIG filling in the ConfigReportRsp structure or with an appropriate roer error message with a suitable return code.		
Applicability		C_MAN_OXP_000		
Other PICS				
Initial condition		The simulated PHD and the PHG under test are in the Unassociated state. The PHG must not have any configuration memorised.		
Test procedure		1. The simulated PHD test sends an Association Request to the PHG under test with an unknown configuration to the PHG dev-config-id in the extended range. 2. The PHG under test responds with an Association Response with "accepted-unknown-config". 3. The simulated PHD sends a configuration event report with an extended configuration supported by the PHD. 4. The PHG under test must respond with: 5. Received message by the PHD must be: a. APDU Type ❑ field-length =2 bytes ❑ field-value =0xE7 0x00 (PrstAdpu) b. Invoke-id ❑ field-type = INT-U16 ❑ field-length =2 bytes ❑ field-value= it must be the same as the invoke-id of the simulated PHD's message. c. Obj-Handle: ❑ field-type = HANDLE ❑ field-length =2 bytes ❑ field-value = 0x00 0x00 d. Event-time: ❑ field-type = INT-U32 ❑ field-length =4 bytes ❑ field-value: <Relative time> OR <0xFF 0xFF 0xFF 0xFF> e. Event-type: ❑ field-length = 2 bytes ❑ field-value= 0x0D 0x1C (MDC_NOTI_CONFIG f. The following six bytes indicates: ❑ Event-replay-info.length (2 bytes) ❑ ConfigReportRsp.config-report-id:it must be the same as the config-report-id of the simulated PHD's message		

	❑ ConfigReportRsp.config-result:One of: ▪ accepted-config:0x00 0x00
Pass/Fail criteria	The message sent by the PHG under test must be the one specified.
Notes	We just want to test the format of the report, the unsupported-config behaviour is tested in TP/PLT/PHG/OXP/COM/BV-005

TP Id		TP/PLT/PHG/OXP/SER/BV-003_A		
TP label		Fixed format event report. Single-person unconfirmed event report.		
Coverage	**Spec**	[ISO/IEEE 11073-20601-2015A] and [ISO/IEEE 11073-20601-2016C]		
	Testable items	ObjAccessServ 2;M	MeasureDataTransf 8;C	PersonEventRep 1;M
		FormatEventRep 3;M		
	Spec	[b-ITU-T H.810 (2015)]		
	Testable items	Conformance 1; M		
Test purpose		Check that: A PHG receiving a confirmed event report from the PHD shall respond with either a rors-cmip-confirmed-event-report or an appropriate roer error message with a suitable return code. [AND] If a PHD uses agent-initiated measurements and if the Unconfirmed Event Report is used, the PHG shall not respond. [AND] A PHG shall support single-person event reports. [AND] A PHG shall support fixed format event reports.		
Applicability		C_MAN_OXP_000		
Other PICS				
Initial condition		The simulated PHD and the PHG under test are in the Operating state.		
Test procedure		1. The simulated PHD test sends an unconfirmed Fixed event report to the PHG under test. 2. Verify that the PHG under test does not send a confirmation.		
Pass/Fail criteria		In step 2 no confirmation can be received by the simulated PHD.		
Notes				

TP Id		TP/PLT/PHG/OXP/SER/BV-003_B		
TP label		Fixed format event report. Single-person confirmed event report.		
Coverage	**Spec**	[ISO/IEEE 11073-20601-2015A] and [ISO/IEEE 11073-20601-2016C]		
	Testable items	ObjAccessServ 2;M	MeasureDataTransf 7;C	PersonEventRep 1;M
		FormatEventRep 3;M		
	Spec	[b-ITU-T H.810 (2015)]		
	Testable items	Conformance 1; M		
Test purpose		Check that: A PHG receiving a confirmed event report from the PHD shall respond with either a rors-cmip-confirmed-event-report or an appropriate roer error message with a suitable return code.		

	[AND] A PHG shall support single-person event reports. [AND] A PHG shall support fixed format event reports.
Applicability	C_MAN_OXP_000
Other PICS	
Initial condition	The simulated PHD and the PHG under test are in the Operating state.
Test procedure	1. The simulated PHD sends a confirmed Fixed event report to the PHG under test. 2. The PHG under test sends a confirmation: a. APDU Type ❑ field-length =2 bytes ❑ field-value =0xE7 0x00 (PrstAdpu) b. Invoke-id ❑ field-type = INT-U16 ❑ field-length =2 bytes ❑ field-value= it must be the same as the invoke-id of the simulated PHD's message. c. The following two bytes indicate: ❑ message type= 0x02 0x01 (Remote Operation Response | Confirmed Event Report) d. Obj-Handle: ❑ field-type = HANDLE ❑ field-length =2 bytes ❑ field-value = 0 (MDS object) e. Event-time: ❑ field-type = INT-U32 ❑ field-length =4 bytes ❑ field-value: <Not relevant for this Test> f. Event-type: ❑ field-length = 2 bytes ❑ field-value= 0x0D 0x1D (MDC_NOTI_SCAN_REPORT_FIXED) g. event-reply-info ❑ field-length = 0 bytes (0x00 0x00) ❑ field-value= empty (0x00 0x00)
Pass/Fail criteria	The confirmation message must be like the one specified.
Notes	

TP Id		TP/PLT/PHG/OXP/SER/BV-003_C		
TP label		Fixed format event report. Multi-person unconfirmed event report.		
Coverage	**Spec**	[ISO/IEEE 11073-20601-2015A] and [ISO/IEEE 11073-20601-2016C]		
	Testable items	ObjAccessServ 2;M	MeasureDataTransf 8;C	PersonEventRep 1;M
		FormatEventRep 3;M		
	Spec	[b-ITU-T H.810 (2015)]		
	Testable items	Conformance 1; M		

Test purpose	Check that: A PHG receiving a confirmed event report from the PHD shall respond with either a rors-cmip-confirmed-event-report or an appropriate roer error message with a suitable return code. [AND] If a PHD uses agent-initiated measurements and if the Unconfirmed Event Report is used, the PHG shall not respond. [AND] A PHG shall support multi-person event reports. [AND] A PHG shall support fixed format event reports.
Applicability	C_MAN_OXP_000
Other PICS	
Initial condition	The simulated PHD and the PHG under test are in the Operating state.
Test procedure	1. The simulated PHD test sends a unconfirmed Fixed Multiple Person event report to the PHG under test. 2. The PHG under test does not send a confirmation.
Pass/Fail criteria	In step 2 no confirmation can be received by the simulated PHD.
Notes	

TP Id		TP/PLT/PHG/OXP/SER/BV-003_D		
TP label		Fixed format event report. Multi-person confirmed event report.		
Coverage	**Spec**	[ISO/IEEE 11073-20601-2015A] and [ISO/IEEE 11073-20601-2016C]		
	Testable items	ObjAccessServ 2;M	PersonEventRep 1;M	FormatEventRep 3;M
	Spec	[b-ITU-T H.810 (2015)]		
	Testable items	Conformance 1; M		
Test purpose		Check that: A PHG receiving a confirmed event report from the PHD shall respond with either a rors-cmip-confirmed-event-report or an appropriate roer error message with a suitable return code. [AND] A PHG shall support multi-person event reports. [AND] A PHG shall support fixed format event reports.		
Applicability		C_MAN_OXP_000		
Other PICS				
Initial condition		The simulated PHD and the PHG under test are in the Operating state.		
Test procedure		1. The simulated PHD test sends a confirmed Fixed Multi Person event report to the PHG under test. 2. The PHG under test sends a confirmation: a. APDU Type ❑ field-length =2 bytes ❑ field-value =0xE7 0x00 (PrstAdpu) b. Invoke-id ❑ field-type = INT-U16		

	❑ field-length =2 bytes ❑ field-value= it must be the same as the invoke-id of the simulated PHD's message. c. The following two bytes indicate: ❑ message type= 0x02 0x01 (Remote Operation Response | Confirmed Event Report) d. Obj-Handle: ❑ field-type = HANDLE ❑ field-length =2 bytes ❑ field-value = 0 (MDS object) e. Event-time: ❑ field-type = INT-U32 ❑ field-length =4 bytes ❑ field-value: <Not relevant for this Test> f. Event-type: ❑ field-length = 2 bytes ❑ field-value= 0x0D 0x1F (MDC_NOTI_SCAN_REPORT_MP_FIXED)
Pass/Fail criteria	The confirmation message must be like the one specified.
Notes	

TP Id		TP/PLT/PHG/OXP/SER/BV-003_E		
TP label		Variable format event report. Single-person unconfirmed event report.		
Coverage	**Spec**	[ISO/IEEE 11073-20601-2015A] and [ISO/IEEE 11073-20601-2016C]		
	Testable items	ObjAccessServ 2;M	MeasureDataTransf 8;C	PersonEventRep 1;M
		FormatEventRep 3;M		
	Spec	[b-ITU-T H.810 (2015)]		
	Testable items	Conformance 1; M		
Test purpose		Check that: A PHG receiving a confirmed event report from the PHD shall respond with either a rors-cmip-confirmed-event-report or an appropriate roer error message with a suitable return code. [AND] If a PHD uses agent-initiated measurements and if the Unconfirmed Event Report is used, the PHG shall not respond. [AND] A PHG shall support single-person event reports. [AND] A PHG shall support variable format event reports.		
Applicability		C_MAN_OXP_000		
Other PICS				
Initial condition		The simulated PHD and the PHG under test are in the Operating state.		
Test procedure		1. The simulated PHD test sends an unconfirmed variable event report to the PHG under test. The unconfirmed variable event report contains just one Observation Scan with information about Metric-Spec-Small attributes for metric objects that are present in the PHD´s configuration. 2. The PHG under test cannot send a confirmation.		

Pass/Fail criteria	In step 2 no confirmation can be received by the simulated PHD.
Notes	

TP Id		TP/PLT/PHG/OXP/SER/BV-003_F		
TP label		Variable format event report. Single-person confirmed event report.		
Coverage	**Spec**	[ISO/IEEE 11073-20601-2015A] and [ISO/IEEE 11073-20601-2016C]		
	Testable items	ObjAccessServ 2;M	MeasureDataTransf 7;C	PersonEventRep 1;M
		FormatEventRep 3;M		
	Spec	[b-ITU-T H.810 (2015)]		
	Testable items	Conformance 1; M		
Test purpose		Check that: A PHG receiving a confirmed event report from the PHD shall respond with either a rors-cmip-confirmed-event-report or an appropriate roer error message with a suitable return code. [AND] A PHG shall support single-person event reports. [AND] A PHG shall support variable format event reports.		
Applicability		C_MAN_OXP_000		
Other PICS				
Initial condition		The simulated PHD and the PHG under test are in the Operating state.		
Test procedure		1. The simulated PHD test sends a confirmed variable event report to the PHG under test. 2. The PHG under test sends a confirmation: a. APDU Type ❑ field-length =2 bytes ❑ field-value =0xE7 0x00 (PrstAdpu) b. Invoke-id ❑ field-type = INT-U16 ❑ field-length =2 bytes ❑ field-value= it must be the same as the invoke-id of the simulated PHD's message. c. The following two bytes indicates ❑ message type= 0x02 0x01 (Remote Operation Response | Confirmed Event Report) d. Obj-Handle: ❑ field-type = HANDLE ❑ field-length =2 bytes ❑ field-value = 0 (MDS object) e. Event-time: ❑ field-type = INT-U32 ❑ field-length =4 bytes ❑ field-value: <Not relevant for this Test> f. Event-type: ❑ field-length = 2 bytes		

	❑ field-value= 0x0D 0x1E (MDC_NOTI_SCAN_REPORT_VAR)
Pass/Fail criteria	The confirmation message must be like the one specified.
Notes	

TP Id		TP/PLT/PHG/OXP/SER/BV-003_G		
TP label		Variable format event report. Multi-person unconfirmed event report.		
Coverage	**Spec**	[ISO/IEEE 11073-20601-2015A] and [ISO/IEEE 11073-20601-2016C]		
	Testable items	ObjAccessServ 2;M	MeasureDataTransf 8;C	PersonEventRep 1;M
		FormatEventRep 3;M		
	Spec	[b-ITU-T H.810 (2015)]		
	Testable items	Conformance 1; M		
Test purpose		Check that: A PHG receiving a confirmed event report from the PHD shall respond with either a rors-cmip-confirmed-event-report or an appropriate roer error message with a suitable return code. [AND] If a PHD uses agent-initiated measurements and if the Unconfirmed Event Report is used, the PHG shall not respond. [AND] A PHG shall support multi-person event reports. [AND] A PHG shall support variable format event reports.		
Applicability		C_MAN_OXP_000		
Other PICS				
Initial condition		The simulated PHD and the PHG under test are in the Operating state.		
Test procedure		1. The simulated PHD sends an unconfirmed Variable Multiple Person event report to the PHG under test. 2. The PHG under test cannot send a confirmation.		
Pass/Fail criteria		In step 2 no confirmation can be received by the simulated PHD.		
Notes				

TP Id		TP/PLT/PHG/OXP/SER/BV-003_H		
TP label		Variable format event report. Multi-person confirmed event report		
Coverage	**Spec**	[ISO/IEEE 11073-20601-2015A] and [ISO/IEEE 11073-20601-2016C]		
	Testable items	ObjAccessServ 2;M	PersonEventRep 1;M	FormatEventRep 3;M
	Spec	[b-ITU-T H.810 (2015)]		
	Testable items	Conformance 1; M		
Test purpose		Check that: A PHG receiving a confirmed event report from the PHD shall respond with either a rors-cmip-confirmed-event-report or an appropriate roer error message with a suitable return code. [AND] A PHG shall support multi-person event reports. [AND]		

	A PHG shall support variable format event reports.
Applicability	C_MAN_OXP_000
Other PICS	
Initial condition	The simulated PHD and the PHG under test are in the Operating state.
Test procedure	1. The simulated PHD sends a confirmed Variable Multi Person event report to the PHG under test. 2. The PHG under test sends a confirmation: a. APDU Type ❑ field-length =2 bytes ❑ field-value =0xE7 0x00 (PrstAdpu) b. Invoke-id ❑ field-type = INT-U16 ❑ field-length =2 bytes ❑ field-value= it must be the same that the invoke-id of the simulated PHD's message. c. The following two bytes indicate: ❑ message type= 0x02 0x01 (Remote Operation Response | Confirmed Event Report) d. Obj-Handle: ❑ field-type = HANDLE ❑ field-length =2 bytes ❑ field-value = 0 (MDS object) e. Event-time: ❑ field-type = INT-U32 ❑ field-length =4 bytes ❑ field-value: <Not relevant for this Test> f. Event-type: ❑ field-length = 2 bytes ❑ field-value= 0x0D 0x20 (MDC_NOTI_SCAN_REPORT_MP_VAR)
Pass/Fail criteria	The confirmation message must be like the one specified.
Notes	

TP Id		TP/PLT/PHG/OXP/SER/BV-004		
TP label		Multi-person support		
Coverage	**Spec**	[ISO/IEEE 11073-20601-2015A] and [ISO/IEEE 11073-20601-2016C]		
	Testable items	PersonEventRep 1;M	FormatEventRep 3;M	
Test purpose		Check that: A PHG shall support both single-person and multi-person event reports. [AND] A PHG shall support variable format and fixed format, and if the PHG supports scanners, it shall support grouped format event reports.		
Applicability		C_MAN_OXP_000		
Other PICS		C_MAN_OXP_037		
Initial condition		The simulated PHD and the PHG under test are in the Operating state.		

Test procedure	1. The simulated PHD sends a confirmed Fixed Multi Person event report to the PHG under test with two different measurements assigned to different person-ids. 2. The PHG under test sends a confirmation. 3. The simulated PHG sends a new confirmed Fixed Multi Person with two different measurements from those in step 1 to the PHG under test. 4. The PHG under test sends a confirmation.
Pass/Fail criteria	IF C_MAN_OXP_037 = TRUE THEN the PHG under test correctly assigns the measurements to the correct person, ELSE the PHG under test does not assign the measurements correctly to every person.
Notes	

TP Id		TP/PLT/PHG/OXP/SER/BV-005		
TP label		Reserved Value Standard Configuration		
Coverage	**Spec**	[ISO/IEEE 11073-20601-2015A] and [ISO/IEEE 11073-20601-2016C]		
	Testable items	ConfEventRep 17;M		
Test purpose		Check that: All unused values in the standard range are reserved for future use, A PHG encountering such a reserved value shall assume the value to be an extended unsupported unrecognized standard configuration and use it as described in 8.7.3.3 and 8.8.3.		
Applicability		C_MAN_OXP_000 AND (C_MAN_OXP_016 OR C_MAN_OXP_018 OR C_MAN_OXP_019 OR C_MAN_OXP_020 OR C_MAN_OXP_024 OR C_MAN_OXP_025 OR C_MAN_OXP_026 OR C_MAN_OXP_027 OR C_MAN_OXP_029 OR C_MAN_OXP_067 OR C_MAN_OXP_071 OR C_MAN_OXP_073 OR C_MAN_OXP_076 OR C_MAN_OXP_077)		
Other PICS				
Initial condition		The simulated PHD and the PHG under test are in the Unassociated state.		
Test procedure		1. The simulated PHD sends an Association Request to the PHG under test with a dev-config-id set to an id in the standard range (reserved value). 2. The PHG under test responds with an Association Response: a. APDU Type ❑ field-length =2 bytes ❑ field-value =0xE3 0x00 (AareAdpu) b. Result ❑ field-length =2 bytes ❑ field-value =0x00 0x03 (accepted-unknown-config) or 0x00 0x00 (accepted) or 0x00 0x07 (rejected-unauthorized) or 0x00 0x01 (rejected-permanent) or 0x00 0x06 (rejected-unknown) 3. IF the PHG responds with "accepted-unknown-config", the simulated PHD sends its configuration. 4. The PHG under test sends a configuration response with accepted-config or unsupported-config.		
Pass/Fail criteria		• The response of step 2 shall have a value = "accepted-unknown-config" or "accepted" or "rejected-unauthorized" or "rejected-permanent" or "rejected-unknown". • The response of step 4 shall have a config-result = "unsupported-config" or "accepted-config".		
Notes				

A.5 Subgroup 2.2.4: PHD communication model (COM)

TP Id		TP/PLT/PHG/OXP/COM/BV-004		
TP label		Manager State Machine:TO_{config}		
Coverage	**Spec**	[ISO/IEEE 11073-20601-2015A] and [ISO/IEEE 11073-20601-2016C]		
	Testable items	ManagerStateMach 1;M	ConfErrorCond 3;M	
Test purpose		Check that: The PHG shall wait in the Waiting for Config state for at least TOconfig seconds before sending an Association Abort message [AND] The PHG shall wait at least TOconfig seconds in the Waiting for Configuration state for the configuration information prior to sending an Abort message and returning to the Unassociated state.		
Applicability		C_MAN_OXP_000		
Other PICS				
Initial condition		The simulated PHD and the PHG under test are in the Unassociated state.		
Test procedure		1. The simulated PHD sends an Association Request to the PHG under test with a dev-config-id unknown to the PHG and set on the extended range. 2. The PHG under test responds with an Association Response with AssociateResult = "accepted-unknown-config". 3. The simulated PHD intentionally does not send its configuration at all.		
Pass/Fail criteria		The PHG under test waits for I_MAN_OXP_008 us and then sends an Abort message		
Notes		Due to the delay introduced by the transport layer and decoder for the received APDU, the test tool accuracy may not be enough to measure this time-out. To get better accuracy it is necessary to run this test case using a hardware sniffer.		

TP Id		TP/PLT/PHG/OXP/COM/BV-005		
TP label		Manager State Machine:Unsupported Config		
Coverage	**Spec**	[ISO/IEEE 11073-20601-2015A] and [ISO/IEEE 11073-20601-2016C]		
	Testable items	ManagerStateMach 2;M	ConfNormalProc 12 ;M	
Test purpose		Check that: If the PHG does not accept the configuration, it shall send a configuration response with an unsupported-config result		
Applicability		C_MAN_OXP_000		
Other PICS				
Initial condition		The simulated PHD and the PHG under test are in the Unassociated state.		
Test procedure		1. Configure the simulated PHD to support one specialization that is not supported by the PHG and a second specialization that is supported by the PHG. In particular, make sure the following two attributes have values corresponding at least to the supported specialization in the MDS object:System-Type-Spec-List and Reg-Cert-Data-List. 2. The simulated PHD sends an Association Request to the PHG under test with a dev-config-id set to the unsupported device specialization (preferably a standard config). 3. The PHG under test responds with an Association Response with AssociateResult = "accepted-unknown-config". 4. If the PHG under test sends a GET request for the MDS object, the simulated PHD shall respond with the MDS information. 5. If PHG supports all specializations, the PHD sends a Config Report with an extended config-id and only OEM Objects; otherwise, the simulated PHD sends a Config report from the selected specialization that is not supported by the PHG.		

	6. The PHG under test sends a config response.
Pass/Fail criteria	The response of step 6 shall have a config-result = "unsupported-config". IF the config-result is not unsupported-config, the verdict is inconc.
Notes	There is no guarantee that the PHG will not accept the configuration.

TP Id		TP/PLT/PHG/OXP/COM/BV-006		
TP label		Manager State Machine:Accepted Config		
Coverage	**Spec**	[ISO/IEEE 11073-20601-2015A] and [ISO/IEEE 11073-20601-2016C]		
	Testable items	ConfEventRep 5;M	ConfEventRep 23;M	ManagerStateMach 3;M
		ManagerProc 4;M	ConfNormalProc 11; M	
Test purpose		Check that: If the PHG does not already know the PHD's device configuration (e.g., based on a previous association phase), the PHG asks for the PHD's device configuration. [AND] If the configuration is not known, the PHG shall respond with an accepted-unknown-config response [AND] If the PHG accepts the configuration, it shall send a configuration response with an accepted-config result [AND] If the PHG does not recognize the value in the dev-config-id field, the PHG shall send an Association Response message with the result field set to accepted-unknown-config and transition to the Configuring state. [AND] If the PHG accepts the configuration, it responds with an accepted-config message and both PHG and PHD move to the Operating state.		
Applicability		C_MAN_OXP_000		
Other PICS		C_MAN_OXP_046		
Initial condition		The simulated PHD and the PHG under test are in the Unassociated state.		
Test procedure		1. The simulated PHD sends an Association Request to the PHG under test with a previously unknown dev-config-id set in the extended range. 2. The PHG under test responds with an Association Response with result = "accepted-unknown-config". 3. Wait until Operating state is reached. 4. The PHD sends an abort message. 5. The simulated PHD sends the same Association Request to the PHG as in step 5. 6. IF C_MAN_OXP_046 = TRUE the PHG under test responds with an Association Response: a. APDU Type ❑ field-length =2 bytes ❑ field-value =0xE3 0x00 (AareAdpu) b. Result ❑ field-length =2 bytes ❑ field-value =0x00 0x00 (accepted) IF C_MAN_OXP_046 = FALSE the PHG under test responds with an Association Response: a. APDU Type ❑ field-length =2 bytes		

	❑ field-value =0xE3 0x00 (AareAdpu) b. Result ❑ field-length =2 bytes ❑ field-value =0x00 0x03 (accepted-unknown-config)
Pass/Fail criteria	The format of the received message in step 6 must be the one specified.
Notes	

TP Id		TP/PLT/PHG/OXP/COM/BV-007_A		
TP label		Manager State machine:Operating - Unassociated 1		
Coverage	**Spec**	[ISO/IEEE 11073-20601-2015A] and [ISO/IEEE 11073-20601-2016C]		
	Testable items	ConfEventRep 22;M	ManagerStateMach 49;M	ManagerProc 3;M
		ConfExitCond 1;M		
Test purpose		Check that: If the PHG already understands that configuration either because it was preloaded via an installation program or the PHD previously associated with the PHG, then the PHG shall respond with the configuration accepted response [AND] If PHG receives rlrq while in Operating state, the PHG shall transmit rlre(normal) and move to the Unassociated state. [AND] If the PHG recognizes the value in the dev-config-id field as representing a known standard device specialization, or a configuration from a previous association, the PHG shall send an Association Response message with a result field of accepted and transition to the Operating state or may send an Association Response message with a result field of accepted-unknown-config to force the PHD to enter Configuring state in order to check attributes from the MDS object prior to final acceptance of the association.		
Applicability		C_MAN_OXP_000		
Other PICS				
Initial condition		The simulated PHD and the PHG under test are in the Operating state.		
Test procedure		1. The simulated PHD sends a Release Request with reason = "normal". 2. The PHG under test responds with a Release Response and moves to the Unassociated state: a. APDU Type: ❑ field-length = 2 bytes ❑ field-value = 0xE5 0x00 (RlreApdu) b. ReleaseResponseReason: ❑ field-length = 2 bytes ❑ field-value = 0x00 0x00 (normal)		
Pass/Fail criteria		The format of the received message in step 2 must be the one specified and the PHG moves to the Unassociated state.		
Notes				

TP Id		TP/PLT/PHG/OXP/COM/BV-007_B		
TP label		Manager State machine:Unassociated - Unassociated 2		
Coverage	**Spec**	[ISO/IEEE 11073-20601-2015A] and [ISO/IEEE 11073-20601-2016C]		
	Testable items	ManagerStateMach 12;M		

Test purpose	Check that: If aare received while in Unassociated state, a PHG shall transmit an abrt (reason undefined) and remain in the Unassociated state.
Applicability	C_MAN_OXP_000
Other PICS	
Initial condition	The simulated PHD and the PHG under test are in the Unassociated state.
Test procedure	1. The simulated PHD sends an Association Response to the PHG under test. 2. The PHG under test responds with and Association Abort message: a. APDU Type: ❑ field-length = 2 bytes ❑ field-value = 0xE6 0x00 b. Abort-Reason: ❑ field-length = 2 bytes ❑ field-value = 0x00 0x00 (undefined)
Pass/Fail criteria	The format of the received message in step 2 must be the one specified.
Notes	

TP Id		TP/PLT/PHG/OXP/COM/BV-007_C		
TP label		Manager State machine:Unassociated - Unassociated 3		
Coverage	**Spec**	[ISO/IEEE 11073-20601-2015A] and [ISO/IEEE 11073-20601-2016C]		
	Testable items	ManagerStateMach 13;M		
Test purpose		Check that: If rlrq received while in Unassociated state, a PHG shall transmit an abrt (reason undefined) and remain in the Unassociated state.		
Applicability		C_MAN_OXP_000		
Other PICS				
Initial condition		The simulated PHD and the PHG under test are in the Unassociated state.		
Test procedure		1. The simulated PHD sends a Release Request message to the PHG under test. 2. The PHG under test responds with an Association Abort message: a. APDU Type: ❑ field-length = 2 bytes ❑ field-value = 0xE6 0x00 b. Abort-Reason: ❑ field-length = 2 bytes ❑ field-value = 0x00 0x00 (undefined)		
Pass/Fail criteria		The format of the received message in step 2 must be the one specified.		
Notes				

TP Id		TP/PLT/PHG/OXP/COM/BV-007_D		
TP label		Manager State machine:Unassociated - Unassociated 4		
Coverage	**Spec**	[ISO/IEEE 11073-20601-2015A] and [ISO/IEEE 11073-20601-2016C]		
	Testable items	ManagerStateMach 16;M		
Test purpose		Check that:		

	If prst (Any APDU not covered in 2.* (corrupt, unknown, unexpected, etc.) received while in Unassociated state, a PHG shall transmit an abrt(Abort-reason undefined) and remain in the Unassociated state.
Applicability	C_MAN_OXP_000
Other PICS	
Initial condition	The simulated PHD and the PHG under test are in the Unassociated state.
Test procedure	1. The simulated PHD sends a Configuration Event report to the PHG under test. 2. The PHG under test responds with an Association Abort message: a. APDU Type: ❑ field-length = 2 bytes ❑ field-value = 0xE6 0x00 b. Abort-Reason: ❑ field-length = 2 bytes ❑ field-value = 0x00 0x00 (undefined)
Pass/Fail criteria	The format of the received message in step 2 must be the one specified.
Notes	

TP Id		TP/PLT/PHG/OXP/COM/BV-007_E		
TP label		Manager State machine:Unassociated. Corrupt-unknown-unexpected APDU		
Coverage	**Spec**	[ISO/IEEE 11073-20601-2015A] and [ISO/IEEE 11073-20601-2016C]		
	Testable items	ManagerStateMach 16;M		
Test purpose		Check that: If prst (Any APDU not covered in 2.* (corrupt, unknown, unexpected, etc.) received while in Unassociated state, a PHG shall transmit an abrt(Abort-reason undefined) and remain in the Unassociated state.		
Applicability		C_MAN_OXP_000		
Other PICS				
Initial condition		The simulated PHD and the PHG under test are in the Unassociated state.		
Test procedure		1. The simulated PHD sends an invalid APDU. 2. The PHG under test responds with an Association Abort message: a. APDU Type: ❑ field-length = 2 bytes ❑ field-value = 0xE6 0x00 b. Abort-Reason: ❑ field-length = 2 bytes ❑ field-value = 0x00 0x00 (undefined)		
Pass/Fail criteria		The format of the received message in step 2 must be the one specified.		
Notes				

TP Id		TP/PLT/PHG/OXP/COM/BV-008_A		
TP label		Manager State machine:Configuring Waiting 1		
Coverage	**Spec**	[ISO/IEEE 11073-20601-2015A] and [ISO/IEEE 11073-20601-2016C]		
	Testable items	ManagerStateMach 27;M		

Test purpose	Check that: If PHG receives Rx roiv-* but not matching in any other 6* state, while in Waiting state, the PHG shall transmit an abrt(Abort-reason undefined) and moves to Unassociated state.
Applicability	C_MAN_OXP_000
Other PICS	
Initial condition	The simulated PHD and the PHG under test are in the Unassociated state.
Test procedure	1. The simulated PHD sends an Association Request to the PHG under test with a dev-config-id set to an id in the extended range unknown to the PHG. 2. The PHG under test responds with an Association Response: a. APDU Type ❑ field-length =2 bytes ❑ field-value =0xE3 0x00 (AareAdpu) b. Result ❑ field-length =2 bytes ❑ field-value =0x00 0x03 (accepted-unknown-config) 3. The simulated PHD sends a "roiv-cmip-get". 4. The PHG under test responds with an Association Abort message: a. APDU Type: ❑ field-length = 2 bytes ❑ field-value = 0xE6 0x00 b. Abort-Reason: ❑ field-length = 2 bytes ❑ field-value = 0x00 0x00 (undefined)
Pass/Fail criteria	The format of the received message in step 4 must be the one specified and the PHG moves to the Unassociated state.
Notes	

TP Id		TP/PLT/PHG/OXP/COM/BV-008_B		
TP label		Manager State machine:Configuring Waiting 2		
Coverage	**Spec**	[ISO/IEEE 11073-20601-2015A] and [ISO/IEEE 11073-20601-2016C]		
	Testable items	ManagerStateMach 27;M		
Test purpose		Check that: If PHG receives Rx roiv-* but not matching in any other 6* state, while in Waiting state, the PHG shall transmit an abrt(Abort-reason undefined) and moves to Unassociated state.		
Applicability		C_MAN_OXP_000		
Other PICS				
Initial condition		The simulated PHD and the PHG under test are in the Unassociated state.		
Test procedure		1. The simulated PHD sends an Association Request to the PHG under test with a dev-config-id set to an id in the extended range unknown to the PHG. 2. The PHG under test responds with an Association Response: a. APDU Type ❑ field-length =2 bytes ❑ field-value =0xE3 0x00 (AareAdpu) b. Result ❑ field-length =2 bytes		

	❑ field-value =0x00 0x03 (accepted-unknown-config) 3. The simulated PHD sends a "roiv-cmip-set". 4. The PHG under test responds with an Association Abort message: a. APDU Type: ❑ field-length = 2 bytes ❑ field-value = 0xE6 0x00 b. Abort-Reason: ❑ field-length = 2 bytes ❑ field-value = 0x00 0x00 (undefined)
Pass/Fail criteria	The format of the received message in step 4 must be the one specified and the PHG moves to the Unassociated state.
Notes	

TP Id		TP/PLT/PHG/OXP/COM/BV-008_C		
TP label		Manager State machine:Configuring Waiting 3		
Coverage	**Spec**	[ISO/IEEE 11073-20601-2015A] and [ISO/IEEE 11073-20601-2016C]		
	Testable items	ManagerStateMach 27;M		
Test purpose		Check that: If PHG receives Rx roiv-* but not matching in any other 6* state while in Waiting state, the PHG shall transmit abrt(Abort-reason undefined) and moves to Unassociated state		
Applicability		C_MAN_OXP_000		
Other PICS				
Initial condition		The simulated PHD and the PHG under test are in the Unassociated state.		
Test procedure		1. The simulated PHD sends an Association Request to the PHG under test with a dev-config-id set to an id in the extended range unknown to the PHG. 2. The PHG under test responds with an Association Response: a. APDU Type ❑ field-length =2 bytes ❑ field-value =0xE3 0x00 (AareAdpu) b. Result ❑ field-length =2 bytes ❑ field-value =0x00 0x03 (accepted-unknown-config) 3. The simulated PHD sends a "roiv-cmip-confirmed-set". 4. The PHG under test responds with an Association Abort message: a. APDU Type: ❑ field-length = 2 bytes ❑ field-value = 0xE6 0x00 b. Abort-Reason: ❑ field-length = 2 bytes ❑ field-value = 0x00 0x00 (undefined)		
Pass/Fail criteria		The format of the received message in step 4 must be the one specified and the PHG moves to the Unassociated state.		
Notes				

TP Id		TP/PLT/PHG/OXP/COM/BV-008_D		
TP label		Manager State machine:Configuring Waiting 4		
Coverage	**Spec**	[ISO/IEEE 11073-20601-2015A] and [ISO/IEEE 11073-20601-2016C]		
	Testable items	ManagerStateMach 27;M		
Test purpose		Check that: If PHG receives Rx roiv-* but not matching in any other 6* state while in Waiting state, the PHG shall transmit an abrt(Abort-reason undefined) and moves to Unassociated state		
Applicability		C_MAN_OXP_000		
Other PICS				
Initial condition		The simulated PHD and the PHG under test are in the Unassociated state.		
Test procedure		1. The simulated PHD sends an Association Request to the PHG under test with a dev-config-id set to an id in the extended range unknown to the PHG. 2. The PHG under test responds with an Association Response: a. APDU Type ❑ field-length =2 bytes ❑ field-value =0xE3 0x00 (AareAdpu) b. Result ❑ field-length =2 bytes ❑ field-value =0x00 0x03 (accepted-unknown-config) 3. The simulated PHD sends a "roiv-cmip-action". 4. The PHG under test responds with an Association Abort message: a. APDU Type: ❑ field-length = 2 bytes ❑ field-value = 0xE6 0x00 b. Abort-Reason: ❑ field-length = 2 bytes ❑ field-value = 0x00 0x00 (undefined)		
Pass/Fail criteria		The format of the received message in step 4 must be the one specified and the PHG moves to the Unassociated state.		
Notes				

TP Id		TP/PLT/PHG/OXP/COM/BV-008_E		
TP label		Manager State machine:Configuring Waiting 5		
Coverage	**Spec**	[ISO/IEEE 11073-20601-2015A] and [ISO/IEEE 11073-20601-2016C]		
	Testable items	ManagerStateMach 27;M		
Test purpose		Check that: If PHG receives Rx roiv-* but not matching in any other 6* state while in Waiting state, the PHG shall transmit an abrt(Abort-reason undefined) and moves to Unassociated state		
Applicability		C_MAN_OXP_000		
Other PICS				
Initial condition		The simulated PHD and the PHG under test are in the Unassociated state.		
Test procedure		1. The simulated PHD sends an Association Request to the PHG under test with a dev-config-id set to an id in the extended range unknown to the PHG. 2. The PHG under test responds with an Association Response:		

	a. APDU Type ❑ field-length =2 bytes ❑ field-value =0xE3 0x00 (AareAdpu) b. Result ❑ field-length =2 bytes ❑ field-value =0x00 0x03 (accepted-unknown-config) 3. The simulated PHD sends a "roiv-cmip-confirmed-action". 4. The PHG under test responds with an Association Abort message: a. PDU Type: ❑ field-length = 2 bytes ❑ field-value = 0xE6 0x00 b. Abort-Reason: ❑ field-length = 2 bytes ❑ field-value = 0x00 0x00 (undefined)
Pass/Fail criteria	The format of the received message in step 4 must be the one specified and the PHG moves to the Unassociated state.
Notes	

TP Id		TP/PLT/PHG/OXP/COM/BV-009		
TP label		Invalid Association Request management.		
Coverage	**Spec**	[ISO/IEEE 11073-20601-2015A] and [ISO/IEEE 11073-20601-2016C]		
	Testable items	ManagerProc 1; M	ManagerProc 2; M	
Test purpose		Check that: When a PHG receives an Association Request, it shall compare the protocol and operating parameters with its own and determine whether the PHD is compatible with the PHG. If the connection is bi-directional, the PHG shall report the outcome of this assessment in the result field of an Association Response. [AND] A PHG may reject the association for any of the possible rejection reasons enumerated in 8.7.3.2. If the PHG rejects the Association, it shall transition to the Unassociated state.		
Applicability		C_MAN_OXP_000		
Other PICS				
Initial condition		The simulated PHD and the PHG under test are in the Unassociated state.		
Test procedure		1. The simulated PHD sends an Association Request to the PHG under test with the data-proto-id set to a protocol unknown to the PHG. 2. The PHG under test responds with an Association Response: a. APDU Type ❑ field-length =2 bytes ❑ field-value =0xE3 0x00 (AareAdpu) b. Result ❑ field-length =2 bytes ❑ field-value =0x00 0x04 (rejected-no-common-protocol) c. Data-Proto ❑ data-proto-id = 0x00 0x00 (data-proto-id-empty) ❑ data-proto-info = <empty>		

	3. The simulated PHD sends an Association Request to the PHG under test with the data proto-id set to data-proto-id set to "data-proto-id-20601"data-proto-info containing an invalid attribute (encodingRules='0000000000000000'O) 4. The PHG under test responds with an Association Response: a. APDU Type ❑ field-length =2 bytes ❑ field-value =0xE3 0x00 (AareAdpu) b. Result ❑ field-length =2 bytes ❑ field-value =0x00 0x05 (rejected-no-common-parameters) c. Data-Proto ❑ data-proto-id = 0x00 0x00 (data-proto-id-empty) ❑ data-proto-info = <empty> 5. The simulated PHD sends an Association Request to the PHG under test with assoc-version set to an incorrect AssociationVersion 6. The PHG under test responds with an Association Response: a. APDU Type ❑ field-length =2 bytes ❑ field-value =0xE3 0x00 (AareAdpu) b. Result ❑ field-length = 2 bytes ❑ field-value = 0x00 0x08 (rejected-unsupported-assoc-version) c. Data-Proto ❑ data-proto-id = 0x00 0x00 (data-proto-id-empty) ❑ data-proto-info = <empty> 7. The simulated PHD sends an Association Request to the PHG under test with data-proto-id set to a protocol unknown to the PHG and a data-proto-id set to data-proto-id-20601 as a second option 8. The PHG under test responds with an Association Response: a. APDU Type ❑ field-length =2 bytes ❑ field-value =0xE3 0x00 (AareAdpu) b. Result ❑ field-length =2 bytes ❑ field-value =0x00 0x00 (accepted) OR 0x00 0x03 (accepted-unknown) c. Data-Proto ❑ data-proto-id = 0x00 0x00 (data-proto-id-20601) 9. The simulated PHD sends a Release Request message. 10. The PHG under test responds with a Release Response message. 11. The simulated PHD sends an Association Request to the PHG under test with a data-proto-id set to data-proto-id-20601 to the PHG and a data-proto-id set to a protocol unknown as a second option. 12. The PHG under test responds with an Association Response: a. APDU Type ❑ field-length =2 bytes ❑ field-value =0xE3 0x00 (AareAdpu) b. Result

	❑ field-length =2 bytes ❑ field-value =0x00 0x00 (accepted) OR 0x00 0x03 (accepted-unknown) c. Data-Proto ❑ data-proto-id = 0x00 0x00 (data-proto-id-20601)
Pass/Fail criteria	• The format of the received message in steps 2, 4, 6, 8 and 12 must be the ones specified • In steps4 and 6, Aare must be received from the PHG (after rejecting Aarq, the PHG has transitioned to the Unassociated state)
Notes	

TP Id		TP/PLT/PHG/OXP/COM/BV-010		
TP label		Configuring.Waiting Config state. Association Request		
Coverage	**Spec**	[ISO/IEEE 11073-20601-2015A] and [ISO/IEEE 11073-20601-2016C]		
	Testable items	ManagerStateMach 21;M		
Test purpose		Check that: If PHG receives aarq while in Waiting state, the PHG shall transmit an abrt (reason undefined) and move to the Unassociated state.		
Applicability		C_MAN_OXP_000		
Other PICS				
Initial condition		The PHG under test is in the waiting for config state.		
Test procedure		1. The simulated PHD sends an Association Request to the PHG under test. 2. The PHG under test responds with an Association Abort message and moves to the Unassociated state: a. APDU Type ❑ field-length =2 bytes ❑ field-value =0xE6 0x00 (AbrtApdu) b. reason ❑ field-type = Abort-reason ❑ field-length =2 bytes ❑ field-value = One of the following: ▪ undefined(0)		
Pass/Fail criteria		The format of the received message in step 2 must be the one specified and the PHG moves to the Unassociated state.		
Notes				

TP Id		TP/PLT/PHG/OXP/COM/BV-011		
TP label		Configuring.Waiting Config state. Association Response		
Coverage	**Spec**	[ISO/IEEE 11073-20601-2015A] and [ISO/IEEE 11073-20601-2016C]		
	Testable items	ManagerStateMach 22;M		
Test purpose		Check that: If PHG receives aare while in Waiting state, the PHG shall transmit an abrt (reason undefined) and move to the Unassociated state.		
Applicability		C_MAN_OXP_000		
Other PICS				
Initial condition		The PHG under test is in the waiting for config state.		

Test procedure	1. The simulated PHD sends an Association Response to the PHG under test. 2. The PHG under test responds with an Association Abort message and moves to the Unassociated state: a. APDU Type ❑ field-length =2 bytes ❑ field-value =0xE6 0x00 (AbrtApdu) b. reason ❑ field-type = Abort-reason ❑ field-length =2 bytes ❑ field-value = One of the following: ▪ undefined(0)
Pass/Fail criteria	The format of the received message in step 2 must be the one specified and the PHG moves to the Unassociated state.
Notes	

TP Id		TP/PLT/PHG/OXP/COM/BV-012		
TP label		Configuring.Waiting Config state. Release Request		
Coverage	**Spec**	[ISO/IEEE 11073-20601-2015A] and [ISO/IEEE 11073-20601-2016C]		
	Testable items	ManagerStateMach 23;M		
Test purpose		Check that: If PHG receives rlrq while in Waiting state, the PHG shall transmit rlre(normal) and move to the Unassociated state.		
Applicability		C_MAN_OXP_000		
Other PICS				
Initial condition		The PHG under test is in the waiting for config state.		
Test procedure		1. The simulated PHD sends an Association Release Request to the PHG under test. 2. The PHG under test responds with an Release Response message and moves to the Unassociated state: a. APDU Type ❑ field-length =2 bytes ❑ field-value =0xE5 0x00 (RlreApdu) b. reason ❑ field-type = ReleaseResponseReason ❑ field-length =2 bytes ❑ field-value = normal (0)		
Pass/Fail criteria		The format of the received message in step 2 must be the one specified and the PHG moves to the Unassociated state.		
Notes				

TP Id		TP/PLT/PHG/OXP/COM/BV-013		
TP label		Configuring.Waiting Config state. Release Response		
Coverage	**Spec**	[ISO/IEEE 11073-20601-2015A] and [ISO/IEEE 11073-20601-2016C]		
	Testable items	ManagerStateMach 24;M		
Test purpose		Check that:		

	If PHG receives rlre while in Waiting state, the PHG shall transmit an abrt(Abort-reason undefined) and move to the Unassociated state.
Applicability	C_MAN_OXP_000
Other PICS	
Initial condition	The PHG under test is in the waiting for config state.
Test procedure	1. The simulated PHD sends an Association Release Response to the PHG under test. 2. The PHG under test responds with an Association Abort message and moves to the Unassociated state: a. APDU Type ❑ field-length =2 bytes ❑ field-value =0xE6 0x00 (AbrtApdu) b. reason ❑ field-type = Abort-reason ❑ field-length =2 bytes ❑ field-value = One of the following: ▪ undefined(0)
Pass/Fail criteria	The format of the received message in step 2 must be the one specified and the PHG moves to the Unassociated state.
Notes	

TP Id		TP/PLT/PHG/OXP/COM/BV-014		
TP label		Operating state. Association Request		
Coverage	**Spec**	[ISO/IEEE 11073-20601-2015A] and [ISO/IEEE 11073-20601-2016C]		
	Testable items	ManagerStateMach 47;M		
Test purpose		Check that: If PHG receives aarq while in Operating state, the PHG shall transmit an abrt (reason undefined) and move to the Unassociated state.		
Applicability		C_MAN_OXP_000		
Other PICS				
Initial condition		The PHG under test is in the Operating state.		
Test procedure		1. The simulated PHD sends an Association Request to the PHG under test. 2. The PHG under test responds with an Association Abort message and moves to the Unassociated state: a. APDU Type ❑ field-length =2 bytes ❑ field-value =0xE6 0x00 (AbrtApdu) b. reason ❑ field-type = Abort-reason ❑ field-length = 2 bytes ❑ field-value = One of the following: ▪ undefined(0)		
Pass/Fail criteria		The format of the received message in step 2 must be the one specified and the PHG moves to the Unassociated state.		
Notes				

TP Id		TP/PLT/PHG/OXP/COM/BV-015		
TP label		Operating state. Association Response		
Coverage	**Spec**	[ISO/IEEE 11073-20601-2015A] and [ISO/IEEE 11073-20601-2016C]		
	Testable items	ManagerStateMach 48;M		
Test purpose		Check that: If PHG receives aare while in Operating state, the PHG shall transmit an abrt(Abort-reason undefined) and move to the Unassociated state.		
Applicability		C_MAN_OXP_000		
Other PICS				
Initial condition		The PHG under test is in the Operating state.		
Test procedure		1. The simulated PHD sends an Association Response to the PHG under test. 2. The PHG under test responds with an Association Abort message and moves to the Unassociated state: a. APDU Type ❑ field-length =2 bytes ❑ field-value =0xE6 0x00 (AbrtApdu) b. reason ❑ field-type = Abort-reason ❑ field-length = 2 bytes ❑ field-value = One of the following: ▪ undefined(0)		
Pass/Fail criteria		The format of the received message in step 2 must be the one specified and the PHG moves to the Unassociated state.		
Notes				

TP Id		TP/PLT/PHG/OXP/COM/BV-016		
TP label		Operating state. Release Response		
Coverage	**Spec**	[ISO/IEEE 11073-20601-2015A] and [ISO/IEEE 11073-20601-2016C]		
	Testable items	ManagerStateMach 50;M		
Test purpose		Check that: If PHG receives rlre while in Operating state, the PHG shall transmit an abrt (reason undefined) and move to the Unassociated state.		
Applicability		C_MAN_OXP_000		
Other PICS				
Initial condition		The PHG under test is in the Operating state.		
Test procedure		1. The simulated PHD sends a Release Response to the PHG under test. 2. The PHG under test responds with an Association Abort message and moves to the Unassociated state: a. APDU Type ❑ field-length =2 bytes ❑ field-value =0xE6 0x00 (AbrtApdu) b. reason ❑ field-type = Abort-reason ❑ field-length = 2 bytes		

	❑ field-value = One of the following: ▪ undefined(0)
Pass/Fail criteria	The format of the received message in step 2 must be the one specified and the PHG moves to the Unassociated state.
Notes	

TP Id		TP/PLT/PHG/OXP/COM/BV-017		
TP label		Disassociating state. Association Request		
Coverage	**Spec**	[ISO/IEEE 11073-20601-2015A] and [ISO/IEEE 11073-20601-2016C]		
	Testable items	ManagerStateMach 58;M		
Test purpose		Check that: If aarq is received while in Disassociating state, the PHG shall transmit abrt (reason undefined) and move to the Unassociated state.		
Applicability		C_MAN_OXP_000 AND C_MAN_OXP_043		
Other PICS				
Initial condition		The PHG under test is in the Operating state.		
Test procedure		1. Make the PHG under test release the association. 2. The simulated PHD responds to the Association Release Request with an Association Request. 3. The PHG under test responds with an Association Abort message and moves to the Unassociated state: a. APDU Type ❑ field-length = 2 bytes ❑ field-value = 0xE6 0x00 (AbrtApdu) b. reason ❑ field-type = Abort-reason ❑ field-length = 2 bytes ❑ field-value = One of the following: ▪ undefined(0)		
Pass/Fail criteria		The format of the received message in step 3 must be the one specified and the PHG moves to the Unassociated state.		
Notes				

TP Id		TP/PLT/PHG/OXP/COM/BV-018		
TP label		Disassociating state. Association Response		
Coverage	**Spec**	[ISO/IEEE 11073-20601-2015A] and [ISO/IEEE 11073-20601-2016C]		
	Testable items	ManagerStateMach 59;M		
Test purpose		Check that: If PHG receives aare while in Disassociating state, the PHG shall transmit an abrt (reason undefined) and move to the Unassociated state.		
Applicability		C_MAN_OXP_000 AND C_MAN_OXP_043		
Other PICS				
Initial condition		The PHG under test is in the Operating state.		
Test procedure		1. Make the PHG under test release the association.		

	2. The simulated PHD responds to the Association Release Request with an Association Response (AareAPDU). 3. The PHG under test responds with an Association Abort message and moves to the Unassociated state: a. APDU Type ❑ field-length =2 bytes ❑ field-value =0xE6 0x00 (AbrtApdu) b. reason ❑ field-type = Abort-reason ❑ field-length = 2 bytes ❑ field-value = One of the following: ▪ undefined(0)
Pass/Fail criteria	The format of the received message in step 3 must be the one specified and the PHG moves to the Unassociated state.
Notes	

TP Id		TP/PLT/PHG/OXP/COM/BV-019		
TP label		Disassociating state. Release Request		
Coverage	**Spec**	[ISO/IEEE 11073-20601-2015A] and [ISO/IEEE 11073-20601-2016C]		
	Testable items	ManagerStateMach 60;M	DisassocProc 6;M	DisassocProc 7;M
Test purpose		Check that: If PHG receives rlrq while in Disassociating state, the PHG shall transmit rlre(normal) and move to the Unassociated state. [AND] If both the PHG and the PHD simultaneously move to the Disassociating state such that one or both receive an Association Release Request while in the Disassociating state, then the receiver(s) shall respond to the request to avoid deadlock [AND] Note that this also means it is possible to receive an Association Release Request while in the Unassociated state. In such a case, an Association Release Response shall be sent.		
Applicability		C_MAN_OXP_000 AND C_MAN_OXP_043		
Other PICS				
Initial condition		The PHG under test is in the Operating state.		
Test procedure		1. Make the PHG under test release the association. 2. The simulated PHD responds to the Association Release Request with an Association Release Request (RlrqApdu). 3. The PHG under test responds with an Association Release Response a. APDU Type ❑ field-length =2 bytes ❑ field-value =0xE6 0x00 (RlreApdu) b. reason ❑ field-type = ReleaseResponseReason ❑ field-length =2 bytes (INT-U16) ❑ field-value= normal(0) 4. The PHD responds to the Rlrq message with an Rlre message.		
Pass/Fail criteria		The format of the received message in step 2 must be the one specified and the PHG		

	moves to the Unassociated state.
Notes	

TP Id		TP/PLT/PHG/OXP/COM/BV-020_B		
TP label		Dissociating state. Rors-cmip-get		
Coverage	**Spec**	[ISO/IEEE 11073-20601-2015A] and [ISO/IEEE 11073-20601-2016C]		
	Testable items	ManagerStateMach 64;M		
Test purpose		Check that: If rors-cmip-get is received while in the Disassociating state, a PHG shall transmit an abrt (reason undefined) and move to Unassociated state.		
Applicability		C_MAN_OXP_000 AND C_MAN_OXP_043		
Other PICS				
Initial condition		The PHG under test is in the Operating state.		
Test procedure		1. Make the PHG under test release the association. 2. The simulated PHD responds to the Association Release Request with a "rors-cmip-get" (PrstAPDU). 3. The PHG under test responds with an Association Abort message and moves to the Unassociated state: a. APDU Type ❑ field-length =2 bytes ❑ field-value =0xE6 0x00 (AbrtApdu) b. reason ❑ field-type = Abort-reason ❑ field-length = 2 bytes ❑ field-value = One of the following: ▪ undefined(0)		
Pass/Fail criteria		The format of the received message in step 2 must be the one specified and the PHG moves to the Unassociated state.		
Notes				

TP Id		TP/PLT/PHG/OXP/COM/BV-020_C		
TP label		Dissociating state. Rors-cmip-confirmed-set		
Coverage	**Spec**	[ISO/IEEE 11073-20601-2015A] and [ISO/IEEE 11073-20601-2016C]		
	Testable items	ManagerStateMach 64;M		
Test purpose		Check that: If rors-cmip-confirmed-set is received while in the Disassociating state, a PHG shall transmit an abrt (reason undefined) and move to Unassociated state.		
Applicability		C_MAN_OXP_000 AND C_MAN_OXP_043		
Other PICS				
Initial condition		The PHG under test is in the Operating state.		
Test procedure		1. Make the PHG under test release the association. 2. The simulated PHD responds to the Association Release Request with a "rors-cmip-confirmed-set" (PrstAPDU). 3. The PHG under test responds with an Association Abort message and moves to the Unassociated state:		

	a. APDU Type ❑ field-length =2 bytes ❑ field-value =0xE6 0x00 (AbrtApdu) b. reason ❑ field-type = Abort-reason ❑ field-length = 2 bytes ❑ field-value = One of the following: ▪ undefined(0)
Pass/Fail criteria	The format of the received message in step 2 must be the one specified and the PHG moves to the Unassociated state.
Notes	

TP Id		TP/PLT/PHG/OXP/COM/BV-020_D		
TP label		Dissociating state. Rors-cmip-confirmed-action		
Coverage	**Spec**	[ISO/IEEE 11073-20601-2015A] and [ISO/IEEE 11073-20601-2016C]		
	Testable items	ManagerStateMach 64;M		
Test purpose		Check that: If rors-cmip-confirmed-action is received while in the Disassociating state, a PHG shall transmit an abrt (reason undefined) and move to Unassociated state.		
Applicability		C_MAN_OXP_000 AND C_MAN_OXP_043		
Other PICS				
Initial condition		The PHG under test is in the Operating state.		
Test procedure		1. Make the PHG under test release the association. 2. The simulated PHD responds to the Association Release Request with a "rors-cmip-confirmed-action" (PrstAPDU). 3. The PHG under test responds with an Association Abort message and moves to the Unassociated state: a. APDU Type ❑ field-length =2 bytes ❑ field-value =0xE6 0x00 (AbrtApdu) b. reason ❑ field-type = Abort-reason ❑ field-length = 2 bytes ❑ field-value = One of the following: ▪ undefined(0)		
Pass/Fail criteria		The format of the received message in step 2 must be the one specified and the PHG moves to the Unassociated state.		
Notes				

TP Id		TP/PLT/PHG/OXP/COM/BV-020_E		
TP label		Dissociating state. Roer		
Coverage	**Spec**	[ISO/IEEE 11073-20601-2015A] and [ISO/IEEE 11073-20601-2016C]		
	Testable items	ManagerStateMach 64;M		
Test purpose		Check that:		

	If roer is received while in the Disassociating state, a PHG shall transmit an abrt (reason undefined) and move to Unassociated state.
Applicability	C_MAN_OXP_000 AND C_MAN_OXP_043
Other PICS	
Initial condition	The PHG under test is in the Operating state.
Test procedure	1. Make the PHG under test release the association. 2. The simulated PHD responds to the Association Release Request with a "roer" (PrstAPDU). 3. The PHG under test responds with an Association Abort message and moves to the Unassociated state: a. APDU Type ❑ field-length =2 bytes ❑ field-value =0xE6 0x00 (AbrtApdu) b. reason ❑ field-type = Abort-reason ❑ field-length = 2 bytes ❑ field-value = One of the following: ▪ undefined(0)
Pass/Fail criteria	The format of the received message in step 2 must be the one specified and the PHG moves to the Unassociated state.
Notes	

TP Id		TP/PLT/PHG/OXP/COM/BV-020_F		
TP label		Dissociating state. Rorj		
Coverage	**Spec**	[ISO/IEEE 11073-20601-2015A] and [ISO/IEEE 11073-20601-2016C]		
	Testable items	ManagerStateMach 64;M		
Test purpose		Check that: If rorj is received while in the Disassociating state, a PHG shall transmit an abrt (reason undefined) and move to Unassociated state.		
Applicability		C_MAN_OXP_000 AND C_MAN_OXP_043		
Other PICS				
Initial condition		The PHG under test is in the Operating state.		
Test procedure		1. Make the PHG under test release the association. 2. The simulated PHD responds to the Association Release Request with a "rorj" (PrstAPDU). 3. The PHG under test responds with an Association Abort message and moves to the Unassociated state: a. APDU Type ❑ field-length =2 bytes ❑ field-value =0xE6 0x00 (AbrtApdu) b. reason ❑ field-type = Abort-reason ❑ field-length = 2 bytes ❑ field-value = One of the following: ▪ undefined(0)		

Pass/Fail criteria	The format of the received message in step 2 must be the one specified and the PHG moves to the Unassociated state.
Notes	

TP Id		TP/PLT/PHG/OXP/COM/BV-022_A		
TP label		Encoding Rules. MDER and XER		
Coverage	**Spec**	[ISO/IEEE 11073-20601-2015A] and [ISO/IEEE 11073-20601-2016C]		
	Testable items	AssocResp 2;M		
Test purpose		Check that: The encoding-rules field contains the one and only one DataApdu encoding rule shall be chosen by the PHG, if the result field is equal to accepted or accepted-unknown-config		
Applicability		C_MAN_OXP_000		
Other PICS				
Initial condition		The PHG under test is in the Unassociated state.		
Test procedure		1. The simulated PHD sends an Association Request to the PHG under test with the encoding rules filed set to MDER and XER. 2. The PHG under test must respond with an Association Response, the field of interest is: a. Encoding rules ❑ field-type = ProtocolVersion ❑ field-length= 2 bytes (BITS-16) ❑ field-value= only one bit is set		
Pass/Fail criteria		The format of the received message in step 2 must be the one specified and the selected encoding rules must be either MDER or XER.		
Notes				

TP Id		TP/PLT/PHG/OXP/COM/BV-022_B		
TP label		Encoding Rules. MDER and PER		
Coverage	**Spec**	[ISO/IEEE 11073-20601-2015A] and [ISO/IEEE 11073-20601-2016C]		
	Testable items	AssocResp 2;M		
Test purpose		Check that: The encoding-rules field contains the one and only one DataApdu encoding rule shall be chosen by the PHG, if the result field is equal to accepted or accepted-unknown-config		
Applicability		C_MAN_OXP_000		
Other PICS				
Initial condition		The PHG under test is in the Unassociated state.		
Test procedure		1. The simulated PHD sends an Association Request to the PHG under test with the encoding rules field set to MDER and PER. 2. The PHG under test must respond with an Association Response, the field of interest is: a. Encoding rules ❑ field-type = ProtocolVersion ❑ field-length= 2 bytes (BITS-16) ❑ field-value= only one bit is set		
Pass/Fail criteria		The format of the received message in step 2 must be the one specified and the selected		

	encoding rules must be either MDER or PER.
Notes	

TP Id		TP/PLT/PHG/OXP/COM/BV-022_C		
TP label		Encoding Rules. MDER, XER and PER		
Coverage	**Spec**	[ISO/IEEE 11073-20601-2015A] and [ISO/IEEE 11073-20601-2016C]		
	Testable items	AssocResp 2;M		
Test purpose		Check that: The encoding-rules field contains the one and only one DataApdu encoding rule shall be chosen by the PHG, if the result field is equal to accepted or accepted-unknown-config		
Applicability		C_MAN_OXP_000		
Other PICS				
Initial condition		The PHG under test is in the Unassociated state.		
Test procedure		1. The simulated PHD sends an Association Request to the PHG under test with the encoding rules field set to MDER, XER and PER. 2. The PHG under test must respond with an Association Response, the field of interest is: a. Encoding rules ❑ field-type = ProtocolVersion ❑ field-length= 2 bytes (BITS-16) ❑ field-value= only one bit is set		
Pass/Fail criteria		The format of the received message in step 2 must be the one specified and the selected encoding rules must be MDER or XER or PER.		
Notes				

TP Id		TP/PLT/PHG/OXP/COM/BV-023		
TP label		Encoding Rules. MDER		
Coverage	**Spec**	[ISO/IEEE 11073-20601-2015A] and [ISO/IEEE 11073-20601-2016C]		
	Testable items	AssocResp 3;M	MessageEncod 1;M	
Test purpose		Check that: The PHG shall always support MDER enabling interoperability. [AND] Both PHG and PHD shall support the Medical Device Encoding Rules (MDER) as defined in ISO/IEEE Std 11073-20101.		
Applicability		C_MAN_OXP_000		
Other PICS				
Initial condition		The PHG under test is in the Unassociated state.		
Test procedure		1. The simulated PHD sends an Association Request to the PHG under test with the encoding rules field set to MDER. 2. The PHG under test must respond with an Association Response, the field of interest is: a. Encoding rules ❑ field-type = ProtocolVersion ❑ field-length= 2 bytes (BITS-16) ❑ field-value= bit 0 must be set		

Pass/Fail criteria	The format of the received message in step 2 must be the one specified.
Notes	

TP Id		TP/PLT/PHG/OXP/COM/BV-031		
TP label		Operating procedures. Persistently stored metric data transfer 1		
Coverage	**Spec**	[ISO/IEEE 11073-20601-2015A] and [ISO/IEEE 11073-20601-2016C]		
	Testable items	PersStoreMtrDatTransf 1;O	PersStoreMtrDatTransf 2;C	PersStoreMtrDatTransf 26; O
Test purpose		Check that: If the PHG queries each PM-Store to determine the number of PM-Segments that exist within the PM-Store, the attribute-id-list shall be left empty to query for all attributes of the PM-store object.		
Applicability		C_MAN_OXP_000 AND C_MAN_OXP_003 AND C_MAN_OXP_048		
Other PICS				
Initial condition		The PHG under test is in the Operating state. The simulated PHD has one PM-Store.		
Test procedure		1. Make the PHG under test perform a GET service to the PM-Store. 2. The received message by the simulated PHD must be: a. APDU Type ❑ field-length =2 bytes ❑ field-value =0xE7 0x00 (PrstApdu) b. invoke-id ❑ field-type = InvokeIDType ❑ field-length= 2 bytes ❑ field-value= <Not relevant for this test> c. CHOICE: ❑ field-value= 0x01 0x03 (roiv-cmip-get) d. obj-Handle: ❑ field-type = HANDLE ❑ field-length = 2 bytes ❑ field-value = <The handle of the simulated PHD´s PM-Store> e. attribute-Id-List: ❑ field-type = AttributeIdList ❑ field-count = 0x00 0x00 ❑ field-length = 0x00 0x00		
Pass/Fail criteria		The format of the received message in step 2 must be the one specified.		
Notes				

TP Id		TP/PLT/PHG/OXP/COM/BV-032		
TP label		Operating procedures. Persistently stored metric data transfer 2		
Coverage	**Spec**	[ISO/IEEE 11073-20601-2015A] and [ISO/IEEE 11073-20601-2016C]		
	Testable items	PersStoreMtrDatTransf 16;M	PersStoreMtrDatTransf 17;M	
Test purpose		Check that: When the PHG receives an Event report, it shall reply with a SegmentDataResult response that shall contain the same store-handle, segm-instance number, segm-evt-entry-index, and segm-evt-entry-count.		

	[AND] In the segm-evt-status, the PHG shall set the sevtsta-manager-confirm bit.
Applicability	C_MAN_OXP_000 AND C_MAN_OXP_003
Other PICS	
Initial condition	The PHG under test is in the Operating state. The simulated PHD has one PM-Store with at least one Segment that contains data.
Test procedure	1. Make the PHG under test retrieve the information stored in a PM-Segment. 2. The simulated PHD responds to the TrigSegmDataXferReq with an appropriate TrigSegmDataXferRsp message. 3. The simulated PHD sends a SegmentDataEvent to the PHG. 4. The PHG under test must respond with a SegmentDataResult message, the fields of interest are: a. APDU Type ❑ field-length =2 bytes ❑ field-value =0xE7 0x00 (PrstApdu) b. invoke-id ❑ field-type = InvokeIDType ❑ field-length= 2 bytes ❑ field-value= <The same of the sent SegmentDataEvent> c. CHOICE: ❑ field-value= 0x02 0x01 (rors-cmip-confirmed-event-report) d. Obj-Handle: ❑ field-type = HANDLE • field-length = 2 bytes • field-value = < The same of the sent SegmentDataEvent > e. CurrentTime ❑ field-type = RelativeTime ❑ field-length = 4 bytes ❑ field-value = <Not relevant for this test> f. event-type ❑ field-type = OID-Type ❑ field-length = 2 bytes ❑ field-value = 0x0D 0x21 (MDC_NOTI_SEGMENT_DATA) g. SegmentDataResult ❑ field-length = 12 bytes ❑ field-value = • segm-instance.value = < The same of the sent SegmentDataEvent > • segm-evt-entry-index.value = < The same of the sent SegmentDataEvent > • segm-evt-entry-count.value = < The same of the sent SegmentDataEvent > • segm-evt-status.value = Bit 8 (sevtsta-manager-confirm)
Pass/Fail criteria	The format of the received message in step 4 must be the one specified.
Notes	

TP Id	TP/PLT/PHG/OXP/COM/BV-033_A
TP label	Operating procedures. Error conditions. Timeout confirmed action 1

Coverage	**Spec**	[ISO/IEEE 11073-20601-2015A] and [ISO/IEEE 11073-20601-2016C]		
	Testable items	OperErrorCond 3;M	OperErrorCond 4;M	
Test purpose		Check that: After sending a Confirmed Action invoke message, the PHG shall wait for a Confirmed Action response message for an TOca (timeout: confirmed action service) period by default unless another timeout applies (e.g., TOclr-pms overrides TOca as described in 8.9.5.6)... [AND] If the TOca expires, the PHG shall send an Association Abort message to the PHD and transition back to the Unassociated state		
Applicability		C_MAN_OXP_000		
Other PICS				
Initial condition		The PHG under test is in the Operating state. The PHD has a MDSTimeInfo attribute which indicates that it supports settable time and Absolute Time and Relative Time and the PHG is encouraged to set the time.		
Test procedure		1. Make the PHG under test set the Absolute Time of the simulated PHD. 2. The simulated PHD does not answer to the confirmed action for at least TOca time.		
Pass/Fail criteria		The PHG under test must wait for a Confirmed Action Report Response message for a TOca period. When the time expires, the PHG under test must send an abort to the simulated PHD and moves to the Unassociated state.		
Notes		Due to the delay introduced by the transport layer and decoder for the received APDU, the test tool accuracy may not be enough to measure this time-out. To get better accuracy, it is necessary to run this test case using a hardware sniffer.		

TP Id		TP/PLT/PHG/OXP/COM/BV-033_B		
TP label		Operating procedures. Error conditions. Timeout confirmed action 2		
Coverage	**Spec**	[ISO/IEEE 11073-20601-2015A] and [ISO/IEEE 11073-20601-2016C]		
	Testable items	OperErrorCond 3;M	OperErrorCond 4;M	
Test purpose		Check that: After sending a Confirmed Action invoke message, the PHG shall wait for a Confirmed Action response message for an TOca (timeout: confirmed action service) period by default unless another timeout applies (e.g., TOclr-pms overrides TOca as described in 8.9.5.6)... [AND] If the TOca expires, the PHG shall send an Association Abort message to the PHD and transition back to the Unassociated state		
Applicability		C_MAN_OXP_000 AND C_MAN_OXP_003		
Other PICS				
Initial condition		The PHG under test is in the Operating state, the PHD has one PM-Store.		
Test procedure		1. If the PHG did not perform a GetSegmentInfo on its own, make the PHG under test perform a GetSegmentInfo action. 2. In both cases the simulated PHD does not answer to the confirmed action for at least TOca time.		
Pass/Fail criteria		The PHG under test must wait for a Confirmed Action Report message for a TOca period .When the time expires, the PHG under test must send an abort to the simulated PHD and moves to the Unassociated state.		
Notes		Due to the delay introduced by the transport layer and decoder for the received APDU, the test tool accuracy may not be enough to measure this time-out. To get better accuracy, it is necessary to run this test case using a hardware sniffer.		

TP Id		TP/PLT/PHG/OXP/COM/BV-035_A		
TP label		Operating procedures. Error conditions. Timeout Get service 1		
Coverage	**Spec**	[ISO/IEEE 11073-20601-2015A] and [ISO/IEEE 11073-20601-2016C]		
	Testable items	OperErrorCond 8;M		
Test purpose		Check that: If the RTOget expires, the PHG shall send an Association Abort message to its peer and transition back to the Unassociated state.		
Applicability		C_MAN_OXP_000		
Other PICS				
Initial condition		The PHG under test is in the Operating state.		
Test procedure		1. If the PHG under test did not send automatically a GET request for the MDS object, make the PHG under test perform a GET for the MDS object. 2. Whether it was an automatic behaviour of the PHG under test or a forced one, the simulated PHD does not answer to the GET for at least TOget time.		
Pass/Fail criteria		The PHG under test must wait for a Confirmed Event Report Response message for a TOget period. When the time expires, the PHG under test must send an abort to the simulated PHD and moves to the Unassociated state.		
Notes		Due to the delay introduced by the transport layer and decoder for the received APDU, the test tool accuracy may not be enough to measure this time-out. To get better accuracy, it is necessary to run this test case using a hardware sniffer.		

TP Id		TP/PLT/PHG/OXP/COM/BV-035_B		
TP label		Operating procedures. Error conditions. Timeout Get service 2		
Coverage	**Spec**	[ISO/IEEE 11073-20601-2015A] and [ISO/IEEE 11073-20601-2016C]		
	Testable items	OperErrorCond 8;M		
Test purpose		Check that: If the TOget expires, the PHG shall send an Association Abort message to its peer and transition back to the Unassociated state.		
Applicability		C_MAN_OXP_000 AND C_MAN_OXP_003 AND C_MAN_OXP_048		
Other PICS				
Initial condition		The PHG under test is in the Operating state.		
Test procedure		1. If the PHG under test did not send automatically a GET Service to the PM-Store object, make the PHG under test perform a GET to the PM-Store object. 2. Whether it was an automatic behaviour of the PHG under test or a forced one, the simulated PHD does not answer to the GET for at least TOget time.		
Pass/Fail criteria		The PHG under test must wait for a Confirmed Event Report Response message for a TOget period. When the time expires, the PHG under test must send an abort to the simulated PHD and moves to the Unassociated state.		
Notes		Due to the delay introduced by the transport layer and decoder for the received APDU, the test tool accuracy may not be enough to measure this time-out. To get better accuracy, it is necessary to run this test case using a hardware sniffer.		

TP Id		TP/PLT/PHG/OXP/COM/BV-036_B		
TP label		Operating procedures. Error conditions. Timeout Set service		
Coverage	**Spec**	[ISO/IEEE 11073-20601-2015A] and [ISO/IEEE 11073-20601-2016C]		
	Testable items	OperErrorCond 10;M		

Test purpose	Check that: If the TOcs expires, the PHG shall send an Association Abort message to the PHD and transition back to the Unassociated state
Applicability	C_MAN_OXP_000 AND (C_MAN_OXP_006 OR C_MAN_OXP_001)
Other PICS	
Initial condition	The PHG under test is in the Operating state, the simulated PHD´s scanner is disabled.
Test procedure	1. Make the PHG under test perform a SET Service to the Scanner´s OperationalState. 2. The simulated PHD does not answer to the SET for at least TOcs time.
Pass/Fail criteria	The PHG under test must wait for a Confirmed Event Report Response message for a TOcs period. When the time expires, the PHG under test must send an abort to the simulated PHD and moves to the Unassociated state.
Notes	Due to the delay introduced by the transport layer and decoder for the received APDU, the test tool accuracy may not be enough to measure this time-out. To get better accuracy, it is necessary to run this test case using a hardware sniffer.

TP Id		TP/PLT/PHG/OXP/COM/BV-037		
TP label		Operating procedures. Error conditions. Timeout clear-segments		
Coverage	**Spec**	[ISO/IEEE 11073-20601-2015A] and [ISO/IEEE 11073-20601-2016C]		
	Testable items	OperErrorCond 12;M	StoreClassAttr 10;M	
Test purpose		Check that: If, after the PHG sends an Invoke Confirmed Action (Clear Segment) command, the TOclr-pms expires prior to the PHG receiving the corresponding Response Confirmed Action message, the PHG shall send an Association Abort message to the PHD and transition to the Unassociated state.		
Applicability		C_MAN_OXP_000 AND C_MAN_OXP_003 AND (C_MAN_OXP_040 OR C_MAN_OXP_041 OR C_MAN_OXP_042)		
Other PICS				
Initial condition		The PHG under test is in the Operating state and the simulated PHD has at least one segment with data.		
Test procedure		1. Make the PHG under test perform a ClearSegment action to one of the simulated PHD´s segments. 2. The simulated PHD does not answer to the ClearSegment for at least Tocer-pms time.		
Pass/Fail criteria		The PHG under test must wait for a Confirmed Action Report message for a TOclr-pms period (as stated in the PMS.Clear-Timeout attribute). When the time expires, the PHG under test must send an abort to the simulated PHD.		
Notes		Due to the delay introduced by the transport layer and decoder for the received APDU, the test tool accuracy may not be enough to measure this time-out. To get better accuracy, it is necessary to run this test case using a hardware sniffer.		

TP Id		TP/PLT/PHG/OXP/COM/BV-039		
TP label		Operating procedures. Error conditions. Timeout special segment transfer of the PM-Store object		
Coverage	**Spec**	[ISO/IEEE 11073-20601-2015A] and [ISO/IEEE 11073-20601-2016C]		
	Testable items	PM-SegmAttr 14;M	PM-SegmAttr 15;M	OperErrorCond 16;M
		OperErrorCond 15; M	OperErrorCond 17; M	
Test purpose		Check that: If the TOsp-pms expires (minimum time that the PHG shall wait for the complete transfer of PM-Segment information), the PHG shall send an Association Abort message to the PHD and transition back to the Unassociated state.		

	[AND] After sending a Confirmed Action (MDC_ACT_SEG_TRIG_XFER) invoke message and receiving the response, the PHG shall wait up to a TOsp-pms (timeout: special segment transfer timeout of the PM-store object) period for a Confirmed Event Report (segm-evt-status=sevtsta-last-entry, semg-data-event-entries) invoke message
Applicability	C_MAN_OXP_000 AND C_MAN_OXP_003
Other PICS	
Initial condition	The PHG under test is in the Operating state and the simulated PHD has at least one segment with data.
Test procedure	1. Make the PHG under test perform a Trig-Segment-Data-Xfer. 2. The simulated PHD sends a TriggerResponse with TrigSegmXferRsp = tsxr_successful. 3. The PHD does not send any SegmentData Event for at least TOsp-pms time.
Pass/Fail criteria	The PHG under test must wait for the last SegmentData Event message for a TOsp-pms period (as stated in the Transfer-Timeout attribute). When the time expires, the PHG under test must send an abort to the simulated PHD.
Notes	Due to the delay introduced by the transport layer and decoder for the received APDU, the test tool accuracy may not be enough to measure this time-out. To get better accuracy, it is necessary to run this test case using a hardware sniffer.

TP Id		TP/PLT/PHG/OXP/COM/BV-040		
TP label		Disassociating procedure. Association Release Reason		
Coverage	**Spec**	[ISO/IEEE 11073-20601-2015A] and [ISO/IEEE 11073-20601-2016C]		
	Testable items	DisassocProc 2;M		
Test purpose		Check that: The Association Release Request contains a ReleaseRequestReason to indicate the reason for releasing the association.		
Applicability		C_MAN_OXP_000 AND C_MAN_OXP_043		
Other PICS				
Initial condition		The PHG under test is in the Operating state.		
Test procedure		1. Make the PHG under test release the Association. 2. The received message by the simulated PHD must be: a. APDU Type: ❑ field-length = 2 bytes ❑ field-value = 0xE4 0x00 (RlrqApdu) b. Reason ❑ field-type = ReleaseRequestReason ❑ field-length = 2 bytes (INT-U16) ❑ field-value = One of the following: ▪ normal (0)		
Pass/Fail criteria		The format of the received message in step 2 must be the one specified.		
Notes				

TP Id		TP/PLT/PHG/OXP/COM/BV-042
TP label		Disassociating procedure. Association Release Request Reason 2
Coverage	**Spec**	[ISO/IEEE 11073-20601-2015A] and [ISO/IEEE 11073-20601-2016C]

	Testable items	DisassocProc 8;M	DisassocProc 9;M	
Test purpose		Check that: After sending an Association Release message, the PHG shall wait for an Association Release Response message for a TOrelease (timeout: association release procedure) period. [AND] If the TOrelease expires, the PHG shall send an Association Abort message to its peer and transition back to the Unassociated state.		
Applicability		C_MAN_OXP_000 AND C_MAN_OXP_043		
Other PICS				
Initial condition		The PHG under test is in the Operating state.		
Test procedure		1. Make the PHG under test release the Association. 2. The simulated PHD does not send any message for at least the Torelease time.		
Pass/Fail criteria		The PHG under test must wait for a Release Response message for a Torelease period. When the time expires, the PHG under test must send an abort to the simulated PHD.		
Notes				

TP Id		TP/PLT/PHG/OXP/COM/BV-043		
TP label		Unrecognized standard configuration		
Coverage	**Spec**	[ISO/IEEE 11073-20601-2015A] and [ISO/IEEE 11073-20601-2016C]		
	Testable items	ConfNormalProc 18;C	ConfNormalProc 24; O	
Test purpose		Check that: If the PHG does not recognize the standard configuration (e.g., the PHG was released prior to the device specialization being released), it shall send a response of standard-config-unknown. [AND] If the PHG is able to interoperate with the provided standard configuration, it may accept that configuration. If the PHG stores configurations, it may store this configuration for future reference when any PHD uses this standard configuration identification and henceforth treat the configuration as recognized.		
Applicability		C_MAN_OXP_000 AND NOT(C_MAN_OXP_032) AND (C_MAN_OXP_016 OR C_MAN_OXP_018 OR C_MAN_OXP_019 OR C_MAN_OXP_020 OR C_MAN_OXP_024 OR C_MAN_OXP_025 OR C_MAN_OXP_026 OR C_MAN_OXP_027 OR C_MAN_OXP_029 OR C_MAN_OXP_067 OR C_MAN_OXP_071 OR C_MAN_OXP_073 OR C_MAN_OXP_076 OR C_MAN_OXP_077)		
Other PICS		C_MAN_OXP_046, C_MAN_OXP_085		
Initial condition		The PHG under test is in the Unassociated state.		
Test procedure		1. The simulated PHD sends an Association Request with the attribute dev-config-id set to the standard configuration defined in the device specialization. 2. The PHG under test sends an Association Response with the result = "accepted-unknown-config". 3. The simulated PHD sends a Configuration Event Report with the config-report-id set to the same dev-config-id of step 1 and an empty ConfigObjectList. 4. The PHG under test must respond with a "rors-cmip-confirmed-event-report and the fields of interest are: a. ConfigReportRsp.config-report-id ❑ field-length =2 bytes ❑ field-value= it must be the same as the device-config-id of the simulated PHD's message		

	b. ConfigReportRsp.config-result ❑ field-length =2 bytes ❑ field-value= 0x00 0x02 (standard-config-unknown) 5. The simulated PHD sends the full configuration information (ConfigObjectList completed, no empty). 6. The PHG under test must respond with a "rors-cmip-confirmed-event-report and the fields of interest are: a. ConfigReportRsp.config-report-id ❑ field-length =2 bytes ❑ field-value= it must be the same as the device-config-id of the simulated PHD's message b. ConfigReportRsp.config-result ❑ field-length =2 bytes ❑ field-value= 0x00 0x00 (accepted-config) or 0x00 0x01(unsupported-config) 7. IF C_MAN_OXP_085 THEN: a. The simulated PHD moves to Configuring/Waiting GetMDS. b. PHG under test issues a roiv-cmip-get command. c. The simulated PHD sends a rors-cmip-get with MDS attributes, and moves to Operating. 8. IF the PHG and the simulated PHD are in the Operating state, the simulated PHD sends a Rlrq(normal) to the PHG. If the PHG and the simulated PHD are in the Configuring state, the simulated PHD sends an Rlrq (no-more-configurations) to the PHG. 9. The PHG sends a Release Response. 10. IF C_MAN_OXP_046 = TRUE, the simulated PHD sends an aarq with the config-report-id set to the same dev-config-id of step 1, the PHG under test may respond with an Association Response: a. APDU Type ❑ field-length =2 bytes ❑ field-value =0xE3 0x00 (AareAdpu) b. Result ❑ field-length =2 bytes ❑ field-value =0x00 0x00 (accepted-config)
Pass/Fail criteria	The PHG under test must respond with a "standard-config-unknown" result in step 4. In step 6 and 10, the PHG may accept the configuration.
Notes	At this moment, all Continua Device Specs only support the Standard Dev-Config-id defined in the Device Specialization spec, and according to subsection 7.4.3.5.1 "A PHG that supports one (or more) of the ISO/IEEE 11073-104xx device specialization standards shall be able to accept all the standard device configurations specified in that particular standard."

TP Id		TP/PLT/PHG/OXP/COM/BV-044		
TP label		Extended configuration - Empty ConfigObjectList		
Coverage	**Spec**	[ISO/IEEE 11073-20601-2015A] and [ISO/IEEE 11073-20601-2016C]		
	Testable items	ConfNormalProc 26;M		
Test purpose		Check that: A PHD may send an extended configuration with an empty config-object-list. This can happen, for instance, when a PHD accepts plug-in components, but presently does not have any inserted. The PHG responds with either accepted-config or unsupported-config.		

Applicability	C_MAN_OXP_000
Other PICS	
Initial condition	The PHG under test is in the Unassociated state.
Test procedure	1. The simulated PHD sends an Association Request with the attribute dev-config-id set to an extended configuration. 2. The PHG under test sends an Association Response with the result = "accepted-unknown-config". 3. The simulated PHD sends a Configuration Event Report with config-report-id set to the same dev-config-id of step 1 and an empty ConfigObjectList. 4. The PHG under test must respond with a "rors-cmip-confirmed-event-report and the fields of interest are: a. ConfigReportRsp.config-report-id ❑ field-length =2 bytes ❑ field-value= it must be the same as the device-config-id of the simulated PHD's message b. ConfigReportRsp.config-result ❑ field-length =2 bytes ❑ field-value= 0x00 0x00 (accepted-config) or 0x00 0x01(unsupported-config)
Pass/Fail criteria	The PHG under test must respond with an "accepted-config" or an "unsupported-config" result in step 4.
Notes	

TP Id		TP/PLT/PHG/OXP/COM/BV-045		
TP label		Get Specific Attribute List PM-Store		
Coverage	**Spec**	[ISO/IEEE 11073-20601-2015A] and [ISO/IEEE 11073-20601-2016C]		
	Testable items	PersStoreMtrDatTransf 2;C		
Test purpose		Check that: Specific attributes of an object may be queried by listing the desired Attribute IDs found in Table 9		
Applicability		C_MAN_OXP_000 AND C_MAN_OXP_003 AND C_MAN_OXP_049		
Other PICS				
Initial condition		The PHG under test is in the Operating state. The simulated PHD has one PM-Store.		
Test procedure		1. Make the PHG under test perform a GET request to a specific list of PM-Store attributes. 2. The received message by the simulated PHD must be: a. APDU Type ❑ field-length =2 bytes ❑ field-value =0xE7 0x00 (PrstApdu) b. invoke-id ❑ field-type = InvokeIDType ❑ field-length= 2 bytes ❑ field-value= <Not relevant for this test> c. CHOICE: ❑ field-value= 0x01 0x03 (roiv-cmip-get) d. Obj-Handle: ❑ field-type = HANDLE		

	❑ field-length = 2 bytes ❑ field-value = <The handle of the simulated PHD´s PM-Store> e. Attribute-Id-List: ❑ field-type = AttributeIdList ❑ field-count = <It contains one attribute or more> ❑ field-value = <Attribute-Id match Attribute-id defined for PM-Store attributes (Table 9)>
Pass/Fail criteria	The format of the received message in step 2 must be the one specified.
Notes	

TP Id		TP/PLT/PHG/OXP/COM/BV-046		
TP label		Manager State machine:Configuring Waiting. Corrupt-unknown-unexpected APDU		
Coverage	**Spec**	[ISO/IEEE 11073-20601-2015A] and [ISO/IEEE 11073-20601-2016C]		
	Testable items	ManagerStateMach 78;M		
Test purpose		Check that: If prst (Any APDU not covered in 6.* (corrupt, unknown, unexpected, etc.) received while in Configuring–Waiting state, a PHG shall transmit an abrt(Abort-reason undefined) and remain in the Unassociated state.		
Applicability		C_MAN_OXP_000		
Other PICS				
Initial condition		The simulated PHD and the PHG under test are in the Unassociated state.		
Test procedure		1. The simulated PHD sends an Association Request to the PHG under test with a dev-config-id set to an id in the extended range unknown to the PHG. 2. The PHG under test responds with an Association Response: a. APDU Type ❑ field-length =2 bytes ❑ field-value =0xE3 0x00 (AareAdpu) b. Result ❑ field-length =2 bytes ❑ field-value =0x00 0x03 (accepted-unknown-config) 3. The simulated PHD sends an invalid apdu. 4. The PHG under test responds with an Association Abort message: a. APDU Type: ❑ field-length = 2 bytes ❑ field-value = 0xE6 0x00 b. Abort-Reason: ❑ field-length = 2 bytes ❑ field-value = 0x00 0x00 (undefined)		
Pass/Fail criteria		The format of the received message in step 4 must be the one specified.		
Notes				

TP Id		TP/PLT/PHG/OXP/COM/BV-047
TP label		Manager State machine:Operating. Corrupt-unknown-unexpected APDU
Coverage	**Spec**	[ISO/IEEE 11073-20601-2015A] and [ISO/IEEE 11073-20601-2016C]

	Testable items	ManagerStateMach 80;M		
Test purpose		Check that: If prst (Any APDU not covered in 8.* (corrupt, unknown, unexpected, etc.) received while in Operating state, a PHG shall transmit an abrt(Abort-reason undefined) and remain in the Unassociated state.		
Applicability		C_MAN_OXP_000		
Other PICS				
Initial condition		The PHG under test is in the Operating state.		
Test procedure		1. The simulated PHD sends an invalid apdu. 2. The PHG under test responds with an Association Abort message: a. APDU Type: ❑ field-length = 2 bytes ❑ field-value = 0xE6 0x00 b. Abort-Reason: ❑ field-length = 2 bytes ❑ field-value = 0x00 0x00 (undefined)		
Pass/Fail criteria		The format of the received message in step 2 must be the one specified.		
Notes				

TP Id		TP/PLT/PHG/OXP/COM/BV-048		
TP label		Manager State machine:Disassociating. Corrupt-unknown-unexpected APDU		
Coverage	**Spec**	[ISO/IEEE 11073-20601-2015A] and [ISO/IEEE 11073-20601-2016C]		
	Testable items	ManagerStateMach 81;M		
Test purpose		Check that: If prst (Any APDU not covered in 9.* (corrupt, unknown, unexpected, etc.) received while in disassociating state, a PHG shall transmit an abrt(Abort-reason undefined) and remain in the Unassociated state.		
Applicability		C_MAN_OXP_000 AND C_MAN_OXP_043		
Other PICS				
Initial condition		The PHG under test is in the Operating state.		
Test procedure		1. Make the PHG under test release the association. 2. The simulated PHD responds to the Association Release Request with an invalid APDU. 3. The PHG under test responds with an Association Abort message: a. APDU Type: ❑ field-length = 2 bytes ❑ field-value = 0xE6 0x00 b. Abort-Reason: ❑ field-length = 2 bytes ❑ field-value = 0x00 0x00 (undefined)		
Pass/Fail criteria		The format of the received message in step 3 must be the one specified.		
Notes				

TP Id		TP/PLT/PHG/OXP/COM/BV-049		
TP label		Configuring.Sending GetMDS substate. Association Request		
Coverage	**Spec**	[ISO/IEEE 11073-20601-2015A] and [ISO/IEEE 11073-20601-2016C]		
	Testable items	ManagerStateMach 86;M		
Test purpose		Check that: If the PHG receives aarq while in Sending GetMDS substate, the PHG shall transmit an abrt (reason undefined) and move to the Unassociated state.		
Applicability		C_MAN_OXP_000 AND C_MAN_OXP_085		
Other PICS				
Initial condition		PHG under test is in Sending GetMDS substate		
Test procedure		1. The simulated PHD sends an Association Request to the PHG under test 2. The PHG under test responds with an Association Abort message and moves to the Unassociated state: a. APDU Type ❑ field-length =2 bytes ❑ field-value =0xE6 0x00 (AbrtApdu) b. reason ❑ field- type = Abort-reason ❑ field-length =2 bytes ❑ field-value = One of the following: ▪ undefined(0)		
Pass/Fail criteria		The format of the received message in step 2 must be the one specified and the PHG moves to Unassociated state.		
Notes				

TP Id		TP/PLT/PHG/OXP/COM/BV-050		
TP label		Configuring.Sending GetMDS substate. Association Response		
Coverage	**Spec**	[ISO/IEEE 11073-20601-2015A] and [ISO/IEEE 11073-20601-2016C]		
	Testable items	ManagerStateMach 87;M		
Test purpose		Check that: If the PHG receives aare while in Sending GetMDS substate, the PHG shall transmit an abrt (reason undefined) and move to the Unassociated state.		
Applicability		C_MAN_OXP_000 AND C_MAN_OXP_085		
Other PICS				
Initial condition		The PHG under test is in Sending GetMDS substate		
Test procedure		1. The simulated PHD sends an Association Response to the PHG under test 2. The PHG under test responds with an Association Abort message and moves to the		

	Unassociated state: a. APDU Type ❑ field-length =2 bytes ❑ field-value =0xE6 0x00 (AbrtApdu) b. reason ❑ field- type = Abort-reason ❑ field-length =2 bytes ❑ field-value = One of the following: ▪ undefined(0),
Pass/Fail criteria	The format of the received message in step 2 must be the one specified and the PHG moves to Unassociated state.
Notes	

TP Id		TP/PLT/PHG/OXP/COM/BV-051		
TP label		Configuring.Sending GetMDS substate. Release Request		
Coverage	**Spec**	[ISO/IEEE 11073-20601-2015A] and [ISO/IEEE 11073-20601-2016C]		
	Testable items	ManagerStateMach 88;M		
Test purpose		Check that: If the PHG receives rlrq while in Sending GetMDS substate, the PHG shall transmit rlre(normal) and move to the Unassociated state.		
Applicability		C_MAN_OXP_000 AND C_MAN_OXP_085		
Other PICS				
Initial condition		The PHG under test is in Sending GetMDS substate		
Test procedure		1. The simulated PHD sends an Association Release Request to the PHG under test 2. The PHG under test responds with an Release Response message and moves to the Unassociated state: a. APDU Type ❑ field-length =2 bytes ❑ field-value =0xE5 0x00 (RlreApdu) b. reason ❑ field- type = ReleaseResponseReason ❑ field-length =2 bytes ❑ field-value = normal (0)		
Pass/Fail criteria		The format of the received message in step 2 must be the one specified and PHG moves to the Unassociated state.		
Notes				

TP Id	TP/PLT/PHG/OXP/COM/BV-052
TP label	Configuring.Sending GetMDS substate. Release Response

Coverage	**Spec**	[ISO/IEEE 11073-20601-2015A] and [ISO/IEEE 11073-20601-2016C]		
	Testable items	ManagerStateMach 89;M		
Test purpose		Check that: If the PHG receives rlre while in Sending GetMDS substate, the PHG shall transmit an abrt(Abort-reason undefined) and move to the Unassociated state.		
Applicability		C_MAN_OXP_000 AND C_MAN_OXP_085		
Other PICS				
Initial condition		The PHG under test is in Sending GetMDS substate		
Test procedure		1. The simulated PHD sends an Association Release Response to the PHG under test 2. The PHG under test responds with an Association Abort message and moves to the Unassociated state: c. APDU Type ❑ field-length =2 bytes ❑ field-value =0xE6 0x00 (AbrtApdu) d. reason ❑ field- type = Abort-reason ❑ field-length =2 bytes ❑ field-value = One of the following: ▪ undefined(0),		
Pass/Fail criteria		The format of the received message in step 2 must be the one specified and PHG moves to the Unassociated state.		
Notes				

TP Id		TP/PLT/PHG/OXP/COM/BV-053		
TP label		Manager State machine: Configuring Sending GetMDS 1		
Coverage	**Spec**	[ISO/IEEE 11073-20601-2015A] and [ISO/IEEE 11073-20601-2016C]		
	Testable items	ManagerStateMach 92;M		
Test purpose		Check that: If the PHG receives Rx roiv-cmip-get (handle = 0) while in Sending GetMDS substate, it responds with roiv-cmip-get (handle = 0) and stays in the same state		
Applicability		C_MAN_OXP_000 AND C_MAN_OXP_085		
Other PICS				
Initial condition		The simulated PHD and PHG under test are in Configuring state. The simulated PHD is in Waiting GetMDS substate, and PHG under test is in Sending GetMDS substate.		
Test procedure		1. The simulated PHD sends a "roiv-cmip-get" (handle = 0) 2. The PHG under test responds with a "roiv-cmip-get" (handle = 0). 3. The simulated PHD sends a "rors-cmip-get" (handle = 0) with mds-time-mgr-set-time(0), while in Sending GetMDS substate, PHG moves to Operating state.		

Pass/Fail criteria	In Step 2, the simulated PHD receives a "roiv-cmip-get" (handle = 0) and PHG under test stays in Sending GetMDS substate. In Step 3, PHG moves to Operating state.
Notes	

TP Id		TP/PLT/PHG/OXP/COM/BV-054		
TP label		Manager State machine: Configuring Sending GetMDS 2		
Coverage	**Spec**	[ISO/IEEE 11073-20601-2015A] and [ISO/IEEE 11073-20601-2016C]		
	Testable items	ManagerStateMach 93;M		
Test purpose		Check that: If the PHG receives Rx roiv-* but not roiv-cmip-get (handle = 0), while in Sending GetMDS substate, the PHG shall stay in the same state		
Applicability		C_MAN_OXP_000 AND C_MAN_OXP_085		
Other PICS				
Initial condition		The simulated PHD and the PHG under test are in the Configuring state. The simulated PHD is in Waiting GetMDS substate, and PHG under test is in Sending GetMDS substate.		
Test procedure		1. The simulated PHD sends a "roiv-cmip-get" (handle = 1) 2. The simulated PHD sends a "rors-cmip-get" (handle = 0) with mds-time-mgr-set-time(0), while in Sending GetMDS substate, PHG moves to Operating state.		
Pass/Fail criteria		In Step 1, PHG stays in Sending GetMDS substate. In Step 2, PHG moves to Operating state.		
Notes				

TP Id		TP/PLT/PHG/OXP/COM/BV-055		
TP label		Manager State machine: Configuring Sending GetMDS 3		
Coverage	**Spec**	[ISO/IEEE 11073-20601-2015A] and [ISO/IEEE 11073-20601-2016C]		
	Testable items	ManagerStateMach 94;M		
Test purpose		Check that: If the PHG receives Rx rors-cmip-get (handle = 0) with mds-time-mgr-set-time(1) while in the Sending GetMDS substate, the PHG shall transmit a roiv-cmip-confirmed-action (set time) and move to Sending SetTime substate.		
Applicability		C_MAN_OXP_000 AND C_MAN_OXP_085		
Other PICS				
Initial condition		The simulated PHD and the PHG under test are in the Configuring state. The simulated PHD is in the Waiting GetMDS substate, and the PHG under test is in Sending GetMDS substate.		
Test procedure		1. The simulated PHD sends a "rors-cmip-get" (handle = 0) with mds-time-mgr-set-time (1).		

	2. The PHG under test shall respond with a roiv-cmip-confirmed-action (set time) and move to Sending SetTime substate: a. Type = Remote Operation Invoke | Confirmed Action b. Handle = 0 (MDS object) c. Action = 0x0C 0x17 (MDC_ACT_SET_TIME) OR 0x0C 0x1D (MDC_ACT_SET_BO_TIME) d. SetTimeInvoke = SEQUENCE: ❑ date-time.length = 8 bytes ❑ date-time.value = <Record for comparison> ❑ Accuracy = 0.
Pass/Fail criteria	The simulated PHD receives a roiv-cmip-confirmed-action (set time) and the PHG under test moves to Sending SetTime substate
Notes	

TP Id		TP/PLT/PHG/OXP/COM/BV-056		
TP label		Manager State machine: Configuring Sending GetMDS 4		
Coverage	**Spec**	[ISO/IEEE 11073-20601-2015A] and [ISO/IEEE 11073-20601-2016C]		
	Testable items	ManagerStateMach 94;M		
Test purpose		Check that: If the PHG receives Rx rors-cmip-get (handle = 0) with mds-time-mgr-set-time(0) while in the Sending GetMDS substate, the PHG shall move to the Operating substate.		
Applicability		C_MAN_OXP_000 AND C_MAN_OXP_085		
Other PICS				
Initial condition		The simulated PHD and the PHG under test are in the Configuring state. The simulated PHD is in the Waiting GetMDS substate, and the PHG under test is in the Sending GetMDS substate.		
Test procedure		1. The simulated PHD sends a "rors-cmip-get" (handle = 0) with mds-time-mgr-set-time(0) 2. The PHG under test shall move to the Operating state.		
Pass/Fail criteria		The PHG under test moves to the Operating state.		
Notes				

TP Id		TP/PLT/PHG/OXP/COM/BV-057		
TP label		Configuring.Sending SetTime substate. Association Request		
Coverage	**Spec**	[ISO/IEEE 11073-20601-2015A] and [ISO/IEEE 11073-20601-2016C]		
	Testable items	ManagerStateMach 99;M		
Test purpose		Check that: If PHG receives aarq while in Sending SetTime substate, the PHG shall transmit an abrt (reason undefined) and move to the Unassociated state.		

Applicability	C_MAN_OXP_000 AND C_MAN_OXP_085
Other PICS	
Initial condition	PHG under test is in Sending SetTime substate
Test procedure	1. Simulated PHD sends an Association Request to the PHG under test 2. PHG under test responds with an Association Abort message and moves to the Unassociated state: a. APDU Type ❑ field-length =2 bytes ❑ field-value =0xE6 0x00 (AbrtApdu) b. reason ❑ field- type = Abort-reason ❑ field-length =2 bytes ❑ field-value = One of the following: ▪ undefined(0),
Pass/Fail criteria	The format of the received message in step 2 must be the one specified and PHG moves to Unassociated state.
Notes	

TP Id		TP/PLT/PHG/OXP/COM/BV-058		
TP label		Configuring.Sending SetTime substate. Association Response		
Coverage	**Spec**	[ISO/IEEE 11073-20601-2015A] and [ISO/IEEE 11073-20601-2016C]		
	Testable items	ManagerStateMach 100;M		
Test purpose		Check that: If the PHG receives an aare while in Sending SetTime substate, the PHG shall transmit an abrt (reason undefined) and move to the Unassociated state.		
Applicability		C_MAN_OXP_000 AND C_MAN_OXP_085		
Other PICS				
Initial condition		The PHG under test is in the Sending SetTime substate		
Test procedure		1. The simulated PHD sends an Association Response to the PHG under test 2. The PHG under test responds with an Association Abort message and moves to the Unassociated state: a. APDU Type ❑ field-length =2 bytes ❑ field-value =0xE6 0x00 (AbrtApdu) b. reason ❑ field- type = Abort-reason ❑ field-length =2 bytes ❑ field-value = One of the following: ▪ undefined(0),		

Pass/Fail criteria	The format of the received message in step 2 must be the one specified and the PHG moves to the Unassociated state.
Notes	

TP Id		TP/PLT/PHG/OXP/COM/BV-059		
TP label		Configuring.Sending SetTime substate. Release Request		
Coverage	**Spec**	[ISO/IEEE 11073-20601-2015A] and [ISO/IEEE 11073-20601-2016C]		
	Testable items	ManagerStateMach 101;M		
Test purpose		Check that: If the PHG receives rlrq while in Sending SetTime substate, the PHG shall transmit rlre(normal) and move to the Unassociated state.		
Applicability		C_MAN_OXP_000 AND C_MAN_OXP_085		
Other PICS				
Initial condition		The PHG under test is in the Sending SetTime substate		
Test procedure		1. The simulated PHD sends an Association Release Request to the PHG under test 2. The PHG under test responds with an Release Response message and moves to the Unassociated state: a. APDU Type ❑ field-length =2 bytes ❑ field-value =0xE5 0x00 (RlreApdu) b. reason ❑ field- type = ReleaseResponseReason ❑ field-length =2 bytes ▪ field-value = normal (0)		
Pass/Fail criteria		The format of the received message in step 2 must be the one specified and PHG moves to the Unassociated state.		
Notes				

TP Id		TP/PLT/PHG/OXP/COM/BV-060		
TP label		Configuring.Sending SetTime substate. Release Response		
Coverage	**Spec**	[ISO/IEEE 11073-20601-2015A] and [ISO/IEEE 11073-20601-2016C]		
	Testable items	ManagerStateMach 102;M		
Test purpose		Check that: If the PHG receives rlre while in the Sending SetTime substate, the PHG shall transmit an abrt(Abort-reason undefined) and move to the Unassociated state.		
Applicability		C_MAN_OXP_000 AND C_MAN_OXP_085		
Other PICS				

Initial condition	The PHG under test is in the Sending SetTime substate
Test procedure	1. The simulated PHD sends an Association Release Response to the PHG under test 2. The PHG under test responds with an Association Abort message and moves to the Unassociated state: a. APDU Type ❑ field-length =2 bytes ❑ field-value =0xE6 0x00 (AbrtApdu) b. reason ❑ field- type = Abort-reason ❑ field-length =2 bytes ❑ field-value = One of the following: ▪ undefined(0)
Pass/Fail criteria	The format of the received message in step 2 must be the one specified and the PHG moves to the Unassociated state.
Notes	

TP Id		TP/PLT/PHG/OXP/COM/BV-061		
TP label		Manager State machine: Configuring Sending SetTime 1		
Coverage	**Spec**	[ISO/IEEE 11073-20601-2015A] and [ISO/IEEE 11073-20601-2016C]		
	Testable items	ManagerStateMach 105;M		
Test purpose		Check that: If the PHG receives Rx rors-cmip-confirmed-action (set time), while in the Sending SetTime substate, the PHG shall move to the Operating state.		
Applicability		C_MAN_OXP_000 AND C_MAN_OXP_085		
Other PICS				
Initial condition		The simulated PHD and the PHG under test are in the Configuring state. The simulated PHD is in the Waiting SetTime substate, and the PHG under test is in the Sending SetTime substate.		
Test procedure		1. The simulated PHD sends a "rors-cmip-confirmed-action" (set time) 2. The PHG under test shall move to the Operating state.		
Pass/Fail criteria		The PHG under test moves to the Operating state.		
Notes				

TP Id		TP/PLT/PHG/OXP/COM/BV-062		
TP label		Manager State machine: Configuring Sending SetTime 2		
Coverage	**Spec**	[ISO/IEEE 11073-20601-2015A] and [ISO/IEEE 11073-20601-2016C]		
	Testable items	ManagerStateMach 106;M		

Test purpose	Check that: If the PHG receives Rx rors-* (other tan rors-cmip-confirmed-action (set time)), roer-* or rorj-*, while in the Sending SetTime substate, the PHG shall stay in the same state.
Applicability	C_MAN_OXP_000 AND C_MAN_OXP_085
Other PICS	
Initial condition	The simulated PHD and the PHG under test are in the Configuring state. The simulated PHD is in the Waiting SetTime substate, and the PHG under test is in the Sending SetTime substate.
Test procedure	1. The simulated PHD sends a "rors-cmip-get" (handle = 0) 2. The simulated PHD sends a "rors-cmip-confirmed-action" (set time) 3. The PHG under test shall move to the Operating state.
Pass/Fail criteria	In Step 1, the PHG stays in the Sending SetTime substate. In Step 3, the PHG moves to the Operating state.
Notes	

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