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eDelivery AS4 profile

Test Assertions Description

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Document Approver(s):

Name	Role
Joao RODRIGUES-FRADE	CEF eDelivery

Document Reviewer(s):

Name	Role
Pim van der Eijk	CEF eDelivery
Maarten Daniels	CEF eDelivery
Grzegorz Kopec	CEF eDelivery

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1.0	31/05/2018	Ahmed GHOUILI	Implementation of comments
1.1	27/09/2018	Caroline AEBY	Contact information update
1.2	03/04/2019	Maarten DANIELS	Added the ENTSOG Usage Profile Test Assertions

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Approach and purpose of the document

The present document describes the test assertions for the eDelivery AS4 profile which has been adopted in CEF eDelivery AS4 Access Points.
More specifically, the AS4 profile of eDelivery is the AS4 Usage Profile based on the AS4 Profile of ebMS 3.0 Version 1.0. OASIS Standard. AS4 itself is based on other standards, in particular on OASIS ebXML Messaging Services Version 3.0: Part 1, Core Features OASIS Standard, which in turn is based on various Web Services specifications.
The eDelivery AS4 profile is a modular profile: its core is a mandatory Common Profile that selects, extends and profiles the AS4 ebHandler Conformance Profile and AS4 Additional Features and provides a common Usage Profile. In addition to the Common Profile, a number of optional Profile Enhancement modules are provided. Those modules specify functionality enhancements covering AS4 message exchange in four corner topologies, the use of AS4 in conjunction with the UN/CEFACT Standard Business Document Header (SBDH) specification, and Dynamic Receiver and Dynamic Sender behavior.

This document also contains additional Test Assertions that provide coverage for the ENTSOG AS4 Usage Profile. An AS4 implementation that, in addition to passing the eDelivery AS4 Common Profile tests, successfully passes these additional tests provides a more complete implementation for the ENTSOG AS4 profile.

The purpose of the test assertions is to focus more on what is expected from the implementation rather than how to test it. In fact, some of the test assertions might not be testable (transformed into test cases).
This document is intended for software providers implementing the specifications of CEF eDelivery and service providers reusing the sample software of CEF eDelivery.

The applicable terms and conditions of CEF eDelivery can be consulted in its Master Service Arrangement, available on the CEF Digital Single Web Portal:

https://ec.europa.eu/cefdigital/wiki/display/CEFDIGITAL/eDelivery+Resources

Glossary

The key terms used in this Test Assertions Description are defined in the CEF Definitions section on the CEF Digital Single Web Portal:

https://ec.europa.eu/cefdigital/wiki/display/CEFDIGITAL/CEF+Definitions

The key acronyms used in this Test Assertions Description are defined in the CEF Glossary on the CEF Digital Single Web Portal:

https://ec.europa.eu/cefdigital/wiki/pages/viewpage.action?spaceKey=CEFDIGITAL&title=CEF+Glossary

1. INTRODUCTION

1.1. System overview

1.1.1. System entities

Entity	Description
Message Service Handler (MSH):	An entity that is able to generate or process AS4 messages.
Producer:	An entity (e.g. application) that interacts with a sending MSH to initiate the sending of a user message.
Consumer:	An entity that interacts with a receiving MSH to consume data from a received user message.

1.1.2. Messaging Model

Business applications or middleware, acting as Producer, Submit message content and metadata to the Sending MSH, which packages this content and sends it to the Receiving MSH of the business partner, which in turn Delivers the message to another business application that Consumes the message content and metadata. Subject to configuration, Sending and Receiving MSH may Notify Producer or Consumer of particular events.

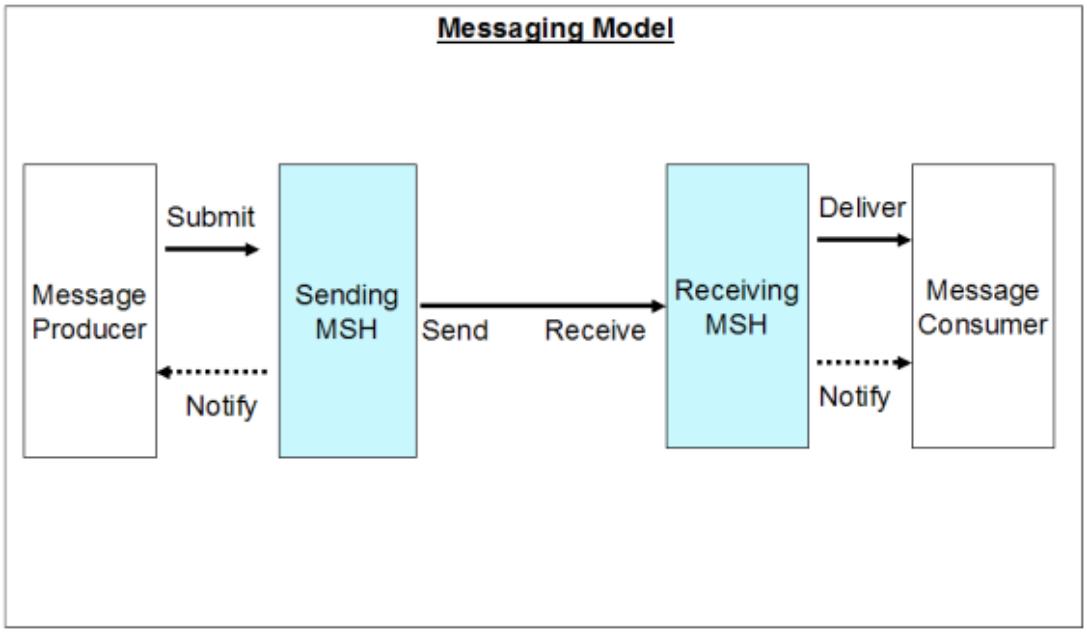

Figure 1: Messaging Model

1.1.3. Definitions

Term	Description
User Message	A message that contains a User Message unit. It allows transmitting data interpreted by a Consumer
Signal Message	A message that contains a Signal Message unit. It allows transmitting data interpreted by an MSH (as a signal).
MEP (Message Exchange Pattern):	An agreement between sending and receiving MSHs. Some aspects of MEPs supported in the messaging layer include: - Specifying the correlation between messages sent and received in the message header. - Message binding to the underlying transfer-protocol. Two MEPs are defined in this specification, not exclusive of others: • The One-Way MEP, which governs the exchange of a single, User Message Unit unrelated to other User Messages. Its label is "oneway". • The Two-Way MEP, which governs the exchange of two User Message Units in opposite directions, the first one to occur, is labeled "request", the other one "reply". In an actual instance, the "reply" must reference the "request" using eb:RefToMessageId.
PMode (Processing Mode):	The contextual information that governs the processing of a particular message (thus is basically a set of configuration parameters).

1.1.4. Abbreviations

Abbreviation	Description
SMSH	An MSH in the sending role.
RMSH	An MSH in the receiving role.

1.1.5. Notes

This document contains lists of test assertions specific to each module of the eDelivery AS4 profile

- A list for the Common Profile. Those test assertions are labelled AS4_CP_TAXX.
- A list for the Four Corner Topology Profile Enhancement. Those test assertions are labelled AS4_4CT_TAXX.
- A list for the SBDH Profile Enhancement. Those test assertions are labelled AS4_SBDH_TAXX.
- A list for the Dynamic Receiver Profile Enhancement. Those test assertions are labelled AS4_DR_TAXX.
- A list for the Dynamic Sender Profile Enhancement. Those test assertions are labelled AS4_DS_TAXX.

This document also contains additional Test Assertions that provide coverage for the ENTSOG AS4 Usage Profile. An AS4 implementation that, in addition to passing the eDelivery AS4 Common Profile tests, successfully passes these additional tests provides a more complete implementation for the ENTSOG AS4 profile. Those test assertions are labelled AS4_ENTSOG_TAXX.

For the details on the MSHs configuration, please refer to Access Point specifications[1]. Configurations as described in test assertions:

Configuration in predicate	PMode parameters
"***SMSH and RMSH are configured to exchange AS4 messages according to the eDelivery AS4 profile***"	PModes are set according to the Access Point specifications[2]. The Common Profile and all the Profile Enhancements contain a section that lists all relevant PMode parameters in a table.
"***SMSH and RMSH are configured to exchange***	- PMode[1].MEP: set to One-Way.

[1] https://ec.europa.eu/cefdigital/wiki/display/CEFDIGITAL/eDelivery+AS4

[2] https://ec.europa.eu/cefdigital/wiki/display/CEFDIGITAL/eDelivery+AS4

AS4 messages: <u>One-Way/Push MEP</u>"	- PMode[1].MEPBinding: set to Push.
"*SMSH and RMSH are configured to exchange AS4 messages: <u>Two-Way/Push-and-Push MEP</u>"*	- PMode[1].MEP: set to Two-Way. - PMode[1].MEPBinding: set to Push-and-Push.

In order to cover some requirements, MSHs are sometimes misconfigured or "simulated" to produce AS4 messages not conform to the eDelivery AS4 profile. This can also be achieved by intercepting the messages and altering them before they reach their destination.

The test assertions were structured in this document following the best practices described in the tests assertions guidelines provided by OASIS (can be found via http://docs.oasis-open.org/tag/guidelines/v1.0/testassertionsguidelines.html). In this specification, the “Prescription Level” label defines how imperative it is for a Target to satisfy the Predicate. It reflects the conformance keywords used in the normative source: mandatory (corresponding to normative keywords MUST [NOT] / REQUIRED / SHALL [NOT]), permitted (MAY , OPTIONAL) or preferred (SHOULD [NOT] / RECOMMENDED).

More information can be found in the following sources:

[eDelivery-AS4] (specifications source)	**https://ec.europa.eu/cefdigital/wiki/display/CEFDIGITAL/eDelivery+AS4**
[EBMS3]	http://docs.oasis-open.org/ebxml-msg/ebms/v3.0/core/os/
[AS4]	http://docs.oasis-open.org/ebxml-msg/ebms/v3.0/profiles/AS4-profile/v1.0/os/AS4-profile-v1.0-os.html
[XML10]	http://www.w3.org/TR/REC-xml/
[EIC]	https://docstore.entsoe.eu/Documents/EDI/Library/EIC_Short_Guide_and_FAQ_V3_Approved%20April%202016.pdf
[ENTSOG-AS4]	ENTSOG AS4 Usage Profile Version 3.5. https://entsog.eu/public/uploads/files/as4/pdf/INT0488-170328 AS4 Usage Profile_Rev_3.5.pdf

2. COMMON PROFILE TEST ASSERTIONS

AS4_CP_TA01	
TA id	AS4_CP_TA01
Normative source	[eDelivery-AS4] "The AS4 ebHandler Conformance Profile is the AS4 conformance profile that provides support for Sending and Receiving roles using Push channel bindings. Support is required for the following Message Exchange Patterns: • One Way / Push • Two Way / Push-and-Push"
Target	"One-Way/Push" MEP
Prerequisite	• SMSH and RMSH are configured to exchange AS4 messages according to the eDelivery AS4 profile: One-Way/Push MEP. • SMSH sends an AS4 User message to the RMSH.
Predicate	The RMSH returns a non-repudiation receipt within a HTTP response with status code 2XX (for more details on http response codes please refer to https://issues.oasis-open.org/browse/EBXMLMSG-57?jql=project%20%3D%20EBXMLMSG).
Prescription Level	Mandatory
Tag	Message Exchange pattern, One-Way/Push
Variable	

AS4_CP_TA02	
TA id	AS4_CP_TA02
Normative source	[eDelivery-AS4] "Message Exchange Patterns: • One Way / Push • Two Way / Push-and-Push" And "AS4 provides multiple mechanisms to correlate messages within a particular flow. 1. eb:UserMessage/eb:MessageInfo/eb:RefToMessageId provides a way to express that a message is a response to a single specific previous message. Presence of an eb:RefToMessageId is required in response messages in Two Way message exchanges. By default, exchanges are considered One Way."
Target	"Two-Way/Push-and-Push" MEP, CollaborationInfo
Prerequisite	• SMSH and RMSH are configured to exchange AS4 messages according to the eDelivery AS4 profile: Two-Way/Push-and-Push MEP. • SMSH sends an AS4 User Message (M1 with ID MESSAGEID) that requires a consumer response to the RMSH.
Predicate	The RMSH sends back a User Message (M2) with element REFTOMESSAGEID set to the same value as MESSAGEID (of M1).
Prescription Level	Mandatory
Tag	Message Exchange pattern, Two-Way/Push-and-Push, correlation Request/Response
Variable	MESSAGEID: XML element of AS4 user message (M1) *Messaging/UserMessage/MessageInfo/MessageId* REFTOMESSAGEID: XML element of AS4 user message (M2) *Messaging/UserMessage/MessageInfo/RefToMessageId*

AS4_CP_TA03	
TA id	AS4_CP_TA03
Normative source	[eDelivery-AS4] "This profile REQUIRES an MSH to not include more than one eb:PartyId element in the eb:UserMessage/eb:PartyInfo/eb:From and eb:UserMessage/eb:PartyInfo/eb:To elements"
Target	User Message single exchange parties
Prerequisite	• SMSH and RMSH are configured to exchange AS4 messages according to the eDelivery AS4 profile: One-Way/Push MEP. • SMSH and RMSH exchange several AS4 User Messages.
Predicate	Each exchanged AS4 message contains single ORIGIN and DESTINATION elements.
Prescription Level	Mandatory
Tag	User Message, party info
Variable	ORIGIN: XML element XML element of AS4 user message *Messaging/UserMessage/PartyInfo/From* DESTINATION: XML element XML element of AS4 user message *Messaging/UserMessage/PartyInfo/To*

AS4_CP_TA04	
TA id	AS4_CP_TA04 Note: This test assertion is created to verify that non compressed payloads (in case it happens) are also processed and delivered to the consumer.
Normative source	[eDelivery-AS4] "Due to the mandatory use of the AS4 compression feature in this profile (see section 2.2.3.3), XML payloads MAY be converted to binary data." And "A receiving MSH MUST NOT reject messages with payloads that are not compressed even though AS4 compression is specified in the P-Mode. However, the receiving MSH is REQUIRED to decompress any compressed payloads for messages for which the P-Mode specifies the use of AS4 compression, and for which the CompressionType part property is set to application/gzip."
Target	Payload compression
Prerequisite	• SMSH and RMSH are configured to exchange AS4 messages according to the eDelivery AS4 profile. (One-Way/Push MEP) • SMSH is simulated to produce uncompressed payloads. • The SMSH sends the AS4 message to the RMSH.
Predicate	The RMSH returns a non-repudiation receipt and delivers the message to the consumer.
Prescription Level	Mandatory
Tag	Payload, compression
Variable	

AS4_CP_TA05	
TA id	AS4_CP_TA05
Normative source	[eDelivery-AS4] "Due to the mandatory use of the AS4 compression feature in this profile (see section 2.2.3.3), XML payloads MAY be converted to binary data, which is carried in separate MIME parts and not in the SOAP Body. Conformant eDelivery AS4 messages therefore always have an empty SOAP Body."
Target	Payload location
Prerequisite	• SMSH and RMSH are configured to exchange AS4 messages according to the eDelivery AS4 profile. (One-Way/Push MEP) • Producer submits a message with metadata information and an XML payload to the SMSH. • SMSH generates an AS4 message to send to the RMSH.
Predicate	In the AS4 message created by the SMSH, the compressed payload is carried in a separate MIME part and the soap body is empty.
Prescription Level	Mandatory
Tag	Payload packaging
Variable	

AS4_CP_TA06	
TA id	AS4_CP_TA06
Normative source	[eDelivery-AS4] "Due to the mandatory use of the AS4 compression feature in this profile (see section 2.2.3.3), XML payloads MAY be converted to binary data, which is carried in separate MIME parts and not in the SOAP Body. Conformant eDelivery AS4 messages therefore always have an empty SOAP Body." And "In any exchange involving an AS4 eb:UserMessage that has a structured document payload and any number of associated payloads, the eb:UserMessage MUST reference the structured document payload part using the first eb:PartInfo element in the eb:PayloadInfo header."
Target	Payload location
Prerequisite	• SMSH and RMSH are configured to exchange AS4 messages according to the eDelivery AS4 profile. (One-Way/Push MEP) • Producer submits a message to the SMSH with metadata information, an XML payload (leading business document) and other payloads (XML and non XML). • SMSH generates an AS4 message to send to the RMSH.
Predicate	In the AS4 message created by the SMSH the XML payload is referenced by the first PARTINFO element inside the PAYLOADINFO element and the compressed payloads are carried in separate MIME parts and the soap body is empty.
Prescription Level	Mandatory
Tag	Payload packaging
Variable	PARTINFO: XML element of AS4 user message *Messaging/UserMessage/PayloadInfo/PartInfo* PAYLOADINFO: XML element of AS4 user message *Messaging/UserMessage/PayloadInfo*

AS4_CP_TA07	
TA id	AS4_CP_TA07
Normative source	[eDelivery-AS4] "In any exchange involving an AS4 eb:UserMessage that has a structured document payload and any number of associated payloads, the eb:UserMessage MUST reference the structured document payload part using the first eb:PartInfo element in the eb:PayloadInfo header. Subsequent eb:PartInfo elements MAY be used to reference additional structured or unstructured payload parts. The payload part referenced using the first eb:PartInfo element is the leading payload part for business processing. Any payload parts other than the leading document payload part MUST NOT to be processed in isolation but only as adjuncts to the business document. Structured document, attachments and metadata MUST be submitted and delivered as a logical unit."
Target	Payload processing
Prerequisite	• AS4_CP_TA06 • SMSH sends an AS4 message to the RMSH.
Predicate	The RMSH successfully processes the AS4 message and sends a non-repudiation receipt to the SMSH and all payloads are correctly delivered.
Prescription Level	Mandatory
Tag	Payload packaging
Variable	

AS4_CP_TA08	
TA id	AS4_CP_TA08
Normative source	[eDelivery-AS4] "The ebMS3 mechanism of supporting "external" payloads via hyperlink references (as mentioned in section 5.2.2.12 of the ebMS3 Core Specification [EBMS3]) MUST NOT be used."
Target	Payload location
Prerequisite	• SMSH and RMSH are configured to exchange AS4 messages according to the eDelivery AS4 profile (One-Way/Push MEP). • SMSH is simulated to send an AS4 user message with a payload hyperlink reference.
Predicate	The RMSH sends back a synchronous ebMS error message.
Prescription Level	Mandatory
Tag	Payload reference
Variable	

AS4_CP_TA09	
TA id	AS4_CP_TA09
Normative source	[eDelivery-AS4] "In this eDelivery AS4 Common Profile the use of the AS4 Reception Awareness feature is REQUIRED. This feature provides a built-in Retry mechanism that can help overcome temporary network or other issues and detection of message duplicates. • The parameter PMode[].ReceptionAwareness MUST be set to true. • The parameter PMode[].ReceptionAwareness.Retry MUST be set to true. • The parameter PMode[].ReceptionAwareness.DuplicateDetection MUST be set to true. The PMode[].ReceptionAwareness.Retry.Parameters and related PMode[].ReceptionAwareness.DuplicateDetection.Parameters are sets of parameters configuring retries and duplicate detection. These parameters are not fully specified in [AS4] and are implementation-dependent. Implementations MUST support configuration of parameters for retries and duplicate detection."
Target	Message reliability
Prerequisite	• SMSH and RMSH are configured to exchange AS4 messages according to the eDelivery AS4 profile (One-Way/Push MEP). • Simulate the RMSH to not send receipts (can be done by intercepting the receipts). • SMSH tries to send an AS4 User Message to the RMSH.
Predicate	The SMSH retries to send the AS4 User Message (at least once).
Prescription Level	Mandatory
Tag	Reception Awareness
Variable	

AS4_CP_TA10	
TA id	AS4_CP_TA10
Normative source	[eDelivery-AS4] "The PMode[].ReceptionAwareness.Retry.Parameters and related PMode[].ReceptionAwareness.DuplicateDetection.Parameters are sets of parameters configuring retries and duplicate detection. These parameters are not fully specified in [AS4] and are implementation-dependent. Implementations MUST support configuration of parameters for retries and duplicate detection."
Target	Message reliability
Prerequisite	• SMSH and RMSH are configured to exchange AS4 messages according to the eDelivery AS4 profile (One-Way/Push MEP). • Simulate the RMSH to not send receipts. • SMSH tries to send an AS4 User Message to the RMSH. • Before a TIME_OUT is reached network connection is restored (RMSH is able to send a non-repudiation receipt).
Predicate	The RMSH sends back an AS4 non-repudiation receipt to the SMSH and delivers only one message to the consumer and the SMSH stops resending the original AS4 User Message.
Prescription Level	Mandatory
Tag	Reception Awareness
Variable	TIME_OUT: deadline (in terms of time or number of retries) allocated for resending messages.

AS4_CP_TA11	
TA id	AS4_CP_TA11 Note: Not testable.
Normative source	[eDelivery-AS4] "The parameter PMode[].ErrorHandling.Report.SenderErrorsTo MUST not be set. There is no support for reporting sender errors to a third party."
Target	Message reliability
Prerequisite	• SMSH and RMSH are configured to exchange AS4 messages according to the eDelivery AS4 profile.
Predicate	PMode parameter " PMode[].ErrorHandling.Report.SenderErrors" is not set.
Prescription Level	Mandatory
Tag	Error report
Variable	

AS4_CP_TA12	
TA id	AS4_CP_TA12
Normative source	[eDelivery-AS4] "This eDelivery AS4 profile uses the following AS4 parameters and values: •The PMode[].Security.X509.Sign parameter must be set in accordance with section 5.1.4 and 5.1.5 of [AS4]. •The PMode[].Security.X509.Signature.HashFunction parameter must be set to http://www.w3.org/2001/04/xmlenc#sha256. •The PMode[].Security.X509.Signature.Algorithm parameter must be set to http://www.w3.org/2001/04/xmldsig-more#rsa-sha256." And "The PMode[].Security.X509.Signature.Certificate parameter MUST be set to a value matching the signing certificate of the Sending MSH."
Target	Payload signature
Prerequisite	• SMSH and RMSH are configured to exchange AS4 messages according to the eDelivery AS4 profile (One-Way/Push MEP). • Producer submits a message with metadata information and a payload to the SMSH. • SMSH sends an AS4 signed message to the RMSH.
Predicate	In the AS4 Message generated by the SMSH: - Signature Hash function parameter is set to http://www.w3.org/2001/04/xmlenc#sha256 - Signature Algorithm parameter is set to http://www.w3.org/2001/04/xmldsig-more#rsa-sha256 - Signature Certificate used is the certificate of the SMSH. - The Messaging header, the empty body and all MIME body parts of included payload are included in the signature - The Messaging header is referenced in the signature using the ID attribute.
Prescription Level	Mandatory
Tag	Signature/Compression
Variable	ID: XML attribute Id of XML element *Messaging* from the AS4 message

AS4_CP_TA13	
TA id	AS4_CP_TA13
Normative source	[eDelivery-AS4] "For encryption, WS-Security leverages the W3C XML Encryption recommendation used by WS-Security. The following AS4 processing mode parameters configure this feature: • The PMode[].Security. X509.Encryption.Encrypt parameter MUST be set in accordance with section 5.1.6 and 5.1.7 of [AS4]. • The parameter PMode[].Security.X509.Encryption.Algorithm MUST be set to http://www.w3.org/2009/xmlenc11#aes128-gcm . This is the algorithm used as value for the Algorithm attribute of xenc:EncryptionMethod on xenc:EncryptedData" And "The PMode[].Security.X509.Encryption.Certificate parameter MUST be set to a value matching the encryption certificate of the Receiving MSH"
Target	Payload signature
Prerequisite	• SMSH and RMSH are configured to exchange AS4 messages according to the eDelivery AS4 profile (One-Way/Push MEP). • Producer submits a message with metadata information and a payload to the SMSH. • SMSH sends an AS4 encrypted message to the RMSH.
Predicate	In the AS4 Message generated by the SMSH: - Encryption Algorithm is set to http://www.w3.org/2009/xmlenc11#aes128-gcm - Encryption Certificate used is the certificate of the RMSH.
Prescription Level	Mandatory
Tag	Signature/Compression
Variable	

AS4_CP_TA14	
TA id	AS4_CP_TA14
Normative source	[eDelivery-AS4] "For Reliable Messaging this profile specifies that AS4 non-repudiation receipts MUST be sent synchronously for each message type. The parameter PMode[].Security.SendReceipt.NonRepudiation MUST be set to the value true. The parameter PMode[].Security.SendReceipt.ReplyPattern MUST be set to the value Response."
Target	Message reliability
Prerequisite	• SMSH and RMSH are configured to exchange AS4 messages according to the eDelivery AS4 profile (Two-Way/Push-and-Push MEP). • SMSH sends an AS4 User Message to the RMSH.
Predicate	The RMSH returns a non-repudiation receipt within a HTTP response with status code 2XX.
Prescription Level	Mandatory
Tag	Non-repudiation receipt
Variable	

AS4_CP_TA15	
TA id	AS4_CP_TA15
Normative source	[eDelivery-AS4] "If no AS4 Receipt is returned by the Receiving MSH to the Sending MSH for a message, an EBMS:0301, MissingReceipt, Reception Awareness error MUST be generated for the message in the Sending MSH. This error MUST be reported to the Producer, because the parameter PMode[].ErrorHandling.Report.MissingReceiptNotifyProducer is set to true."
Target	Message reliability
Prerequisite	• AS4_CP_TA09. • TIME_OUT for resending the messages is reached.
Predicate	The SMSH reports an EBMS:0301, MissingReceipt, Reception Awareness error to the producer.
Prescription Level	Mandatory
Tag	Reception Awareness
Variable	TIME_OUT: deadline (in terms of time or number of retries) allocated for resending messages.

AS4_CP_TA16	
TA id	AS4_CP_TA16
Normative source	[eDelivery-AS4] " Section 5.2.2 of [EBMS3] defines a server test feature that allows a party to "Ping" a communication partner. The feature is based on messages with the values of: • eb:UserMessage/eb:CollaborationInfo/eb:Service set to http://docs.oasis-open.org/ebxml-msg/ebms/v3.0/ns/core/200704/service • eb:UserMessage/eb:CollaborationInfo/eb:Action set to http://docs.oasis-open.org/ebxml-msg/ebms/v3.0/ns/core/200704/test This feature allows communication partners to perform a basic test of the communication configuration (including security at network, transport and message layer, and reliability) in any environment, including the production environment. A conformant implementation MUST allow configuration of processing modes for exchanges involving these values for service and action. It MUST be possible to configure an MSH such that messages with these values are not delivered to any Consumer business application. "
Target	Test service
Prerequisite	• SMSH and RMSH are configured to exchange AS4 messages according to the eDelivery AS4 profile: One-Way/Push MEP. • Producer submits a "ping" message with metadata information to the SMSH (to "ping" consumer).
Predicate	The SMSH generates an AS4 message with values (and sends it to the RMSH): UserMessage/CollaborationInfo/Service set to http://docs.oasis-open.org/ebxml-msg/ebms/v3.0/ns/core/200704/service UserMessage/CollaborationInfo/Action set to http://docs.oasis-open.org/ebxml-msg/ebms/v3.0/ns/core/200704/test
Prescription Level	Mandatory
Tag	Ping message
Variable	

AS4_CP_TA17	
TA id	AS4_CP_TA17
Normative source	[eDelivery-AS4] "It MUST be possible to configure an MSH such that messages with these values are not delivered to any Consumer business application."
Target	Test service
Prerequisite	• AS4_CP_TA16. • The consumer is reachable.
Predicate	The RMSH sends back a non-repudiation receipt within a HTTP response with status code 2XX and the consumer doesn't receive any message.
Prescription Level	Mandatory
Tag	Ping message
Variable	

AS4_CP_TA18	
TA id	AS4_CP_TA18 Note: Not testable.
Normative source	[eDelivery-AS4] "The ebMS3 and AS4 specifications do not constrain the use of the elements eb:RefToMessageId and eb:ConversationId, but the following profiling applies: 1. eb:UserMessage/eb:MessageInfo/eb:RefToMessageId is to be used to support message exchanges that are modeled as request-response interactions. In the response message, the value of the element MUST be set to the value of the eb:UserMessage/eb:MessageInfo/eb:MessageId element in the request message. 2. eb:UserMessage/eb:CollaborationInfo/eb:ConversationId MUST be included in any AS4 message (as it is a mandatory element). The value MUST be consistent with the data type specified in the ebMS3 XML schema, which is xs:token. In a Two Way exchange, the value of the eb:ConversationId in the response MUST be the same as the value of the eb:ConversationId in the request message."
Target	Message Exchange conversation
Prerequisite	• SMSH and RMSH are configured to exchange AS4 messages according to the eDelivery AS4 profile: One-Way/Push MEP. • The producer submits a message with metadata information and payload without specifying any conversationId value.
Predicate	In the AS4 Message generated by the SMSH, CONVERSATIONID element is present and set (to a value created by the SMSH).
Prescription Level	Mandatory
Tag	Message Packaging, Correlation, Conversation ID
Variable	CONVERSATIONID: XML element of AS4 user message *Messaging/UserMessage/CollaborationInfo/ConversationId*

AS4_CP_TA19	
TA id	AS4_CP_TA19
Normative source	[eDelivery-AS4] "The ebMS3 and AS4 specifications do not constrain the use of the elements eb:RefToMessageId and eb:ConversationId, but the following profiling applies: 3. eb:UserMessage/eb:MessageInfo/eb:RefToMessageId is to be used to support message exchanges that are modeled as request-response interactions. In the response message, the value of the element MUST be set to the value of the eb:UserMessage/eb:MessageInfo/eb:MessageId element in the request message. 4. eb:UserMessage/eb:CollaborationInfo/eb:ConversationId MUST be included in any AS4 message (as it is a mandatory element). The value MUST be consistent with the data type specified in the ebMS3 XML schema, which is xs:token. In a Two Way exchange, the value of the eb:ConversationId in the response MUST be the same as the value of the eb:ConversationId in the request message."
Target	Message Exchange conversation
Prerequisite	• SMSH and RMSH are configured to exchange AS4 messages according to the eDelivery AS4 profile: Two-Way/Push-and-Push MEP. • The producer submits a message with metadata information and payload with specifying any conversationId value. • SMSH sends an AS4 user message (M1) to the RMSH in the context of a two way exchange. • The RMSH replies to the SMSH request with an AS4 user message (M2).
Predicate	In the AS4 Message generated by the RMSH, CONVERSATIONID2 is equal to CONVERSATIONID1 which is equal to conversationId value (set by producer).
Prescription Level	Mandatory
Tag	Message Packaging, Correlation, Conversation ID
Variable	CONVERSATIONIDM1: XML element of AS4 user message (M1) *Messaging/UserMessage/CollaborationInfo/ConversationId* CONVERSATIONIDM2: XML element of AS4 user message (M2) *Messaging/UserMessage/CollaborationInfo/ConversationId*

AS4_CP_TA20	
TA id	AS4_CP_TA20
Normative source	[eDelivery-AS4] "As in the AS4 ebHandler profile, support for eb:MessageProperties is REQUIRED in this profile. It MUST be possible to set the type attribute for message properties (see https://issues.oasis-open.org/browse/EBXMLMSG-2)."
Target	User Message properties
Prerequisite	• SMSH and RMSH are configured to exchange AS4 messages according to the eDelivery AS4 profile (One-Way/Push MEP). • SMSH is simulated to send an AS4 User message to the RMSH with parameter MESSAGEPROPERTIES containing: • A property with attributes "name" and "type" present. • A property with only attribute "name" present.
Predicate	The RMSH returns a non-repudiation receipt within a HTTP response with status code 2XX.
Prescription Level	Permitted
Tag	User Message
Variable	MESSAGEPROPERTIES: XML element of AS4 user message *Messaging/UserMessage/MessageProperties* with children nodes format *<Property name="" type=""> </Property>*

AS4_CP_TA21	
TA id	AS4_CP_TA21
Normative source	[eDelivery-AS4] "Section 5.1.1 of the ebMS3 Core Specification [EBMS3] requires implementations to process both non-multipart (simple SOAP) messages and multipart (SOAP-with-attachments) messages, and this is a requirement for the AS4 ebHandler Conformance Profile."
Target	AS4 Message format
Prerequisite	• SMSH and RMSH are configured to exchange AS4 messages according to the eDelivery AS4 profile: One-Way/Push MEP. • SMSH sends an AS4 message (User Message with payload) to the RMSH.
Predicate	The RMSH sends a non-repudiation receipt to the SMSH.
Prescription Level	Mandatory
Tag	Message format, Message packaging, SOAP-with-attachments
Variable	

AS4_CP_TA22	
TA id	AS4_CP_TA22
Normative source	[eDelivery-AS4] "Section 5.1.1 of the ebMS3 Core Specification [EBMS3] requires implementations to process both non-multipart (simple SOAP) messages and multipart (SOAP-with-attachments) messages, and this is a requirement for the AS4 ebHandler Conformance Profile."
Target	AS4 Message format
Prerequisite	• AS4_CP_TA21
Predicate	The SMSH acknowledges the message reception.
Prescription Level	Mandatory
Tag	Message format, simple SOAP
Variable	

AS4_CP_TA23	
TA id	AS4_CP_TA23
Normative source	[eDelivery-AS4] "Due to the mandatory use of the AS4 compression feature in this profile (see section 2.2.3.3), XML payloads MAY be converted to binary data"
Target	Payload compression
Prerequisite	• SMSH and RMSH are configured to exchange AS4 messages according to the eDelivery AS4 profile (One-Way/Push MEP). • Producer submits a Message with metadata information and XML payload to the SMSH.
Predicate	The SMSH generates an AS4 message with a gzip compressed payload.
Prescription Level	Mandatory
Tag	Payload, compression
Variable	

AS4_CP_TA24	
TA id	AS4_CP_TA24
Normative source	[eDelivery-AS4] "The PartInfo element in the message header that relates to a compressed payload part MUST have an eb:Property element with its name attribute set to the value CompressionType. The content type of a compressed payload part MUST be application/gzip."
Target	Payload compression
Prerequisite	• SMSH and RMSH are configured to exchange AS4 messages according to the eDelivery AS4 profile (One-Way/Push MEP). • Producer submits a Message with metadata information and payload to the SMSH.
Predicate	In the AS4 message generated by the SMSH, a property element with name "CompressionType" and value set to "application/gzip" is present.
Prescription Level	Mandatory
Tag	Payload, compression, compression Type
Variable	PARTPROPERTIES: XML element of AS4 user message *Messaging/UserMessage/PayloadInfo/PartInfo/PartProperties*

AS4_CP_TA25	
TA id	AS4_CP_TA25
Normative source	[eDelivery-AS4] "Packaging requirements: •An PartInfo/PartProperties/Property/@name="MimeType" value is required to identify the MIME type of the payload before compression was applied."
Target	Payload compression
Prerequisite	• SMSH and RMSH are configured to exchange AS4 messages according to the eDelivery AS4 profile (One-Way/Push MEP). • Producer submits a message to the SMSH with payload (ex: xml document) and metadata information including a property element with name "MimeType" and value ("application/xml").
Predicate	The SMSH generates an AS4 message with the property "MimeType" present and set to the value specified by the producer ("application/xml").
Prescription Level	Mandatory
Tag	Payload, compression, Mime Type
Variable	

AS4_CP_TA26	
TA id	AS4_CP_TA26
Normative source	[eDelivery-AS4] "Packaging requirements: •An PartInfo/PartProperties/Property/@name="MimeType" value is required to identify the MIME type of the payload before compression was applied."
Target	Payload compression
Prerequisite	• SMSH and RMSH are configured to exchange AS4 messages according to the eDelivery AS4 profile (One-Way/Push MEP). • The SMSH is simulated to send an AS4 message without property "MimeType" present to the RMSH.
Predicate	The RMSH sends a synchronous ebMS error response.
Prescription Level	Preferred
Tag	Payload, compression, Mime Type
Variable	

AS4_CP_TA27	
TA id	AS4_CP_TA27
Normative source	[eDelivery-AS4] "Packaging requirements: •For XML payloads, an PartInfo/PartProperties/Property/@name="CharacterSet" value is recommended to identify the character set of the payload before compression was applied. The value of this property MUST conform to the values defined in section 4.3.3 of [XML10]."
Target	Payload compression
Prerequisite	• SMSH and RMSH are configured to exchange AS4 messages according to the eDelivery AS4 profile (One-Way/Push MEP). • Producer submits a message to the SMSH with xml (UTF-16) payload and metadata information including payload characterset info.
Predicate	The SMSH generates an AS4 message with the property "CharacterSet" present and set to the value "UTF-16".
Prescription Level	Preferred
Tag	Payload, compression, Character Set
Variable	

AS4_CP_TA28	
TA id	AS4_CP_TA28
Normative source	[eDelivery-AS4] "Packaging requirements: •For XML payloads, an PartInfo/PartProperties/Property/@name="CharacterSet" value is recommended to identify the character set of the payload before compression was applied. The value of this property MUST conform to the values defined in section 4.3.3 of [XML10]."
Target	Payload compression
Prerequisite	• SMSH and RMSH are configured to exchange AS4 messages according to the eDelivery AS4 profile (One-Way/Push MEP). • Producer submits a message to the SMSH with xml (UTF-8) payload and metadata information including payload characterset info.
Predicate	The SMSH generates an AS4 message with the property "CharacterSet" present and set to the value "UTF-8".
Prescription Level	Preferred
Tag	Payload, compression, Character Set
Variable	

AS4_CP_TA29	
TA id	AS4_CP_TA29
Normative source	[eDelivery-AS4] "Packaging requirements: •For XML payloads, an PartInfo/PartProperties/Property/@name="CharacterSet" value is recommended to identify the character set of the payload before compression was applied. The value of this property MUST conform to the values defined in section 4.3.3 of [XML10]." And "https://issues.oasis-open.org/browse/EBXMLMSG-87" And "https://issues.oasis-open.org/browse/EBXMLMSG-88"
Target	Payload compression
Prerequisite	• SMSH and RMSH are configured to exchange AS4 messages according to the eDelivery AS4 profile (One-Way/Push MEP). • SMSH is simulated to send an AS4 message with property element "CharacterSet" set to value not conform to section 4.3.3 of [XML10] (example: "!utf*"). • The SMSH sends the AS4 message to the RMSH.
Predicate	The RMSH returns a synchronous ebMS error message.
Prescription Level	Preferred
Tag	Payload, compression, Character Set
Variable	

AS4_CP_TA30	
TA id	AS4_CP_TA30
Normative source	[eDelivery-AS4] "In case an error occurs during decompression, the following error MUST be used: Code = EBMS:0303, Short Description = DecompressionFailure, Severity = Failure, Category = Communication." "For the error handling feature this profile specifies that errors MUST be reported and transmitted synchronously to the Sender and SHOULD be reported to the Consumer and the Producer. Note that the two error notification parameters do not affect interoperability between Sender and Receiver MSH. • The parameter PMode[].ErrorHandling.Report.AsResponse MUST be set to the value true. • The parameter PMode[].ErrorHandling.Report.ProcessErrorNotifyConsumer SHOULD be set to the value true. • The parameter PMode[].ErrorHandling.Report.ProcessErrorNotifyProducer SHOULD be set to the value true."
Target	Message compression
Prerequisite	• SMSH and RMSH are configured to exchange AS4 messages according to the eDelivery AS4 profile (One-Way/Push MEP). • SMSH is simulated to send an AS4 User Message with compressed but damaged payloads. • The SMSH sends the AS4 User Message to the RMSH.
Predicate	The RMSH sends back a synchronous error response with error code "Code = EBMS:0303, Short Description = DecompressionFailure, Severity = Failure, Category = Communication".
Prescription Level	Mandatory
Tag	Payload Compression, error handling
Variable	

AS4_CP_TA31	
TA id	AS4_CP_TA31
Normative source	[eDelivery-AS4] "In case an error occurs during decompression, the following error MUST be used: Code = EBMS:0303, Short Description = DecompressionFailure, Severity = Failure, Category = Communication." "For the error handling feature this profile specifies that errors MUST be reported and transmitted synchronously to the Sender and SHOULD be reported to the Consumer and the Producer. Note that the two error notification parameters do not affect interoperability between Sender and Receiver MSH. • The parameter PMode[].ErrorHandling.Report.AsResponse MUST be set to the value true. • The parameter PMode[].ErrorHandling.Report.ProcessErrorNotifyConsumer SHOULD be set to the value true. • The parameter PMode[].ErrorHandling.Report.ProcessErrorNotifyProducer SHOULD be set to the value true."
Target	Message compression
Prerequisite	• AS4_CP_TA30. • The User Message is bound to a PMode with parameter PMode[1].ErrorHandling.Report.ProcessErrorNotifyConsumer: set to true.
Predicate	The RMSH sends back a synchronous error response (with error code "Code = EBMS:0303, Short Description = DecompressionFailure, Severity = Failure, Category = Communication") and the RMSH sends an error notification to the consumer of the message.
Prescription Level	Preferred
Tag	Payload Compression error
Variable	

AS4_CP_TA32	
TA id	AS4_CP_TA32
Normative source	[eDelivery-AS4] "The receiving AS4 MSH must decompress any payload part(s) compressed by the SMSH before delivering the message."
Target	Payload reception
Prerequisite	• SMSH and RMSH are configured to exchange AS4 messages according to the eDelivery AS4 profile (One-Way/Push MEP). • SMSH sends an AS4 User Message with a compressed payload to the RMSH.
Predicate	The RMSH delivers the message with decompressed payload to the consumer.
Prescription Level	Mandatory
Tag	Payload delivery
Variable	

AS4_CP_TA33	
TA id	AS4_CP_TA33
Normative source	[eDelivery-AS4] "The receiving AS4 MSH must decompress any payload part(s) compressed by the SMSH before delivering the message."
Target	Payload reception
Prerequisite	• SMSH and RMSH are configured to exchange AS4 messages according to the eDelivery AS4 profile (One-Way/Push MEP). • SMSH sends an AS4 User Message with several compressed payloads (XML and non XML) to the RMSH.
Predicate	The RMSH delivers the message with decompressed payloads to the consumer.
Prescription Level	Mandatory
Tag	Payload delivery
Variable	

AS4_CP_TA34	
TA id	AS4_CP_TA34
Normative source	[eDelivery-AS4] "When compression, signature and/or encryption are required, any attached payload(s) must be compressed prior to being signed and/or encrypted."
Target	Payload compression
Prerequisite	• SMSH and RMSH are configured to exchange AS4 messages according to the eDelivery AS4 profile (One-Way/Push MEP). • Producer submits a message with metadata information and a payload to the SMSH. • The SMSH sends an AS4 User message with a compressed then signed payload to the RMSH.
Predicate	The RMSH sends back an AS4 non-repudiation receipt.
Prescription Level	Mandatory
Tag	Signature/Compression
Variable	

AS4_CP_TA35	
TA id	AS4_CP_TA35
Normative source	[eDelivery-AS4] "When compression, signature and/or encryption are required, any attached payload(s) must be compressed prior to being signed and/or encrypted."
Target	Message level security
Prerequisite	• SMSH and RMSH are configured to exchange AS4 messages according to the eDelivery AS4 profile (One-Way/Push MEP). • Producer submits a message with metadata information and a payload to the SMSH. • Simulated SMSH sends a signed AS4 User Message with a signed then compressed payload to the RMSH.
Predicate	The RMSH sends back an error response.
Prescription Level	Mandatory
Tag	Encryption/Signing Compression
Variable	

AS4_CP_TA36	
TA id	AS4_CP_TA36
Normative source	[eDelivery-AS4] "When compression, signature and/or encryption are required, any attached payload(s) must be compressed prior to being signed and/or encrypted."
Target	Payload encryption
Prerequisite	• SMSH and RMSH are configured to exchange AS4 messages according to the eDelivery AS4 profile (One-Way/Push MEP). • Producer submits a message with metadata information and a payload to the SMSH. • The SMSH sends a compressed then encrypted AS4 message to the RMSH.
Predicate	The RMSH sends back an AS4 non-repudiation receipt.
Prescription Level	Mandatory
Tag	encryption/Compression
Variable	

AS4_CP_TA37	
TA id	AS4_CP_TA37
Normative source	[eDelivery-AS4] "When compression, signature and/or encryption are required, any attached payload(s) must be compressed prior to being signed and/or encrypted."
Target	Message level security
Prerequisite	• SMSH and RMSH are configured to exchange AS4 messages according to the eDelivery AS4 profile (One-Way/Push MEP). • Producer submits a message with metadata information and a payload to the SMSH. • Simulated SMSH sends a signed AS4 User Message with an encrypted first, then compressed payload to the RMSH.
Predicate	The RMSH sends back an error response.
Prescription Level	Mandatory
Tag	Encryption/Signing Compression
Variable	

AS4_CP_TA38	
TA id	AS4_CP_TA38
Normative source	[eDelivery-AS4] "When compression, signature and/or encryption are required, any attached payload(s) must be compressed prior to being signed and/or encrypted."
Target	Payload signature/encryption/compression
Prerequisite	• SMSH and RMSH are configured to exchange AS4 messages according to the eDelivery AS4 profile (One-Way/Push MEP). • The SMSH sends an AS4 message with a compressed then encrypted and signed payload to the RMSH.
Predicate	The RMSH sends back an AS4 non-repudiation receipt.
Prescription Level	Mandatory
Tag	Signature/encryption/compression
Variable	

AS4_CP_TA39	
TA id	AS4_CP_TA39 Note: This test assertion is only valid in case TLS is handled by the AS4 message handler.
Normative source	[eDelivery-AS4] "If TLS is handled by the AS4 message handler (and not off-loaded to some infrastructure component), then: • It MUST be possible to configure the accepted TLS version(s) in the AS4 message handler. The ENISA and BSI reports state that TLS 1.0 and TLS 1.1 SHOULD NOT be used in new applications. Older version such as SSL 2.0 [RFC6176] and SSL 3.0 MUST NOT be used. Implementations conformant with this profile MUST therefore support TLS 1.2 [RFC5246]. • It MUST be possible to configure accepted TLS cipher suites in the AS4 message handler. IANA publishes a list of TLS cipher suites [TLSSP], only a subset of which the ENISA Report considers future-proof (see [ENISAAKSP], section 5.1.2). Implementations MUST support cipher suites included in this subset. Vendors SHOULD add support for newer, safer cipher suites, as and when such suites are published by IANA/IETF."
Target	Transport Layer security
Prerequisite	
Predicate	Parameters to configure TLS version and cipher suites exist.
Prescription Level	Mandatory
Tag	TLS
Variable	

AS4_CP_TA40	
TA id	AS4_CP_TA40 Note: This test assertion is only valid in case TLS is handled by the AS4 message handler.
Normative source	[eDelivery-AS4] "The ENISA and BSI reports state that TLS 1.0 and TLS 1.1 should not be used in new applications. Older version such as SSL 2.0 [RFC6176] and SSL 3.0 must not be used. Products compliant with this profile should therefore support TLS 1.2 [RFC5246]."
Target	Transport Layer security
Prerequisite	• AS4_CP_TA39 • RMSH is configured with TLS version 1.2 • SMSH is configured with TLS1.0 or TLS1.1 version • SMSH tries to submit an AS4 message to the RMSH.
Predicate	Connection is not established between the SMSH and the RMSH.
Prescription Level	Preferred
Tag	TLS
Variable	

AS4_CP_TA41	
TA id	AS4_CP_TA41 Note: This test assertion is only valid in case TLS is handled by the AS4 message handler.
Normative source	[eDelivery-AS4] "The ENISA and BSI reports state that TLS 1.0 and TLS 1.1 should not be used in new applications. Older version such as SSL 2.0 [RFC6176] and SSL 3.0 must not be used. Products compliant with this profile should therefore support TLS 1.2 [RFC5246]."
Target	Transport Layer security
Prerequisite	• AS4_CP_TA39 • RMSH is configured with TLS version 1.2 • SMSH is configured with SSL2.0 or SSL3.0 version • SMSH tries to submit an AS4 message to the RMSH.
Predicate	Connection is not established between the SMSH and the RMSH.
Prescription Level	Mandatory
Tag	TLS, Error
Variable	

AS4_CP_TA42	
TA id	AS4_CP_TA42 Note: This test assertion is only valid in case TLS is handled by the AS4 message handler.
Normative source	[eDelivery-AS4] "•IANA publishes a list of TLS cipher suites [TLSSP], only a subset of which the ENISA Report considers future-proof (see [ENISAAKSP], section 5.1.2). Products must support cipher suites included in this subset. Vendors must add support for newer, safer cipher suites, as and when such suites are published by IANA/IETF. •Support for SSL 3.0 and for cipher suites that are not currently considered secure should be disabled by default. •Perfect Forward Secrecy, which is required in [BSITLS], is supported by the TLS_ECDHE_* and TLS_DHE_* cipher suites, which are therefore preferred and should be supported."
Target	Transport Layer security
Prerequisite	• AS4_CP_TA39 • RMSH is configured with TLS version 1.2 and list_accepted_cipher_ suites. • SMSH is configured with TLS 1.2 and cipher_suites not in list_accepted_cipher_ suites. • SMSH submits an AS4 message to the RMSH.
Predicate	Connection is not established between the SMSH and the RMSH.
Prescription Level	Mandatory
Tag	TLS
Variable	list_accepted_cipher_ suites: subset of list of TLS cipher suites [TLSSP] and TLS_ECDHE_* and TLS_DHE_* cipher suites

AS4_CP_TA43	
TA id	AS4_CP_TA43 Note: This test assertion is only valid in case TLS is handled by the AS4 message handler.
Normative source	[eDelivery-AS4] "•IANA publishes a list of TLS cipher suites [TLSSP], only a subset of which the ENISA Report considers future-proof (see [ENISAAKSP], section 5.1.2). Products must support cipher suites included in this subset. Vendors must add support for newer, safer cipher suites, as and when such suites are published by IANA/IETF. •Support for SSL 3.0 and for cipher suites that are not currently considered secure should be disabled by default. •Perfect Forward Secrecy, which is required in [BSITLS], is supported by the TLS_ECDHE_* and TLS_DHE_* cipher suites, which are therefore preferred and should be supported."
Target	Transport Layer security
Prerequisite	• AS4_CP_TA39 • RMSH is configured with TLS version 1.2 and list_accepted_cipher_ suites. • SMSH is configured with TLS version 1.2 and cipher_suites in list_accepted_cipher_ suites. • SMSH submits an AS4 message to the RMSH.
Predicate	The RMSH returns an HTTP response code 2XX.
Prescription Level	Mandatory
Tag	TLS
Variable	list_accepted_cipher_ suites: subset of list of TLS cipher suites [TLSSP] and TLS_ECDHE_* and TLS_DHE_* cipher suites

AS4_CP_TA44	
TA id	AS4_CP_TA44
Normative source	"https://issues.oasis-open.org/browse/EBXMLMSG-2"
Target	User Message properties
Prerequisite	• SMSH and RMSH are configured to exchange AS4 messages according to the eDelivery AS4 profile (One-Way/Push MEP). • SMSH is simulated to send an AS4 User message to the RMSH with parameter PARTPROPERTIES containing: • A property with attributes "name" and "type" present. • A property with only attribute "name" present.
Predicate	The RMSH returns a non-repudiation receipt within a HTTP response with status code 2XX.
Prescription Level	Permitted
Tag	User Message
Variable	PARTPROPERTIES: XML element of AS4 user message *Messaging/UserMessage/PayloadInfo/PartInfo/PartProperties* with children nodes format *<Property name="" type=""> </Property>*

AS4_CP_TA45	
TA id	AS4_CP_TA45
Normative source	[eDelivery-AS4] "A Producer that submits a message with multiple payloads to an MSH MUST be able to control the order of the corresponding eb:PartInfo elements in the ebMS3 eb:PayloadInfo element."
Target	Payloads order
Prerequisite	• SMSH and RMSH are configured to exchange AS4 messages according to the eDelivery AS4 profile. (One-Way/Push MEP) • Producer submits a message to the SMSH with metadata information, an XML payload (leading business document) and 2 other non XML payloads P1 and P2. • In the message submitted by the producer to the SMSH, the payloads are ordered as following: first is XML payload, second is P1 and third is P2. • SMSH generates an AS4 message to send to the RMSH.
Predicate	In the AS4 message created by the SMSH, inside the PAYLOADINFO element, the XML payload is referenced by the first PARTINFO element, P1 is referenced by the second PARTINFO element and P2 is referenced by the third PARTINFO element.
Prescription Level	Mandatory
Tag	Payload ordering
Variable	PARTINFO: XML element of AS4 user message *Messaging/UserMessage/PayloadInfo/PartInfo* PAYLOADINFO: XML element of AS4 user message *Messaging/UserMessage/PayloadInfo*

AS4_CP_TA46	
TA id	AS4_CP_TA46 Note: Not testable.
Normative source	[eDelivery-AS4] "Conformant implementations MUST support IPv4 and IPv6 networking."
Target	Internet Protocol Version
Prerequisite	• SMSH and RMSH are configured to exchange AS4 messages according to the eDelivery AS4 profile: One-Way/Push MEP. • SMSH is deployed in an IPv6 configured host. • RMSH is deployed in an IPv4 configured host. • SMSH sends an AS4 User message to the RMSH.
Predicate	The RMSH returns a non-repudiation receipt within a HTTP response with status code 2XX.
Prescription Level	Mandatory
Tag	IPv4, IPv6
Variable	

3. Four Corner Topology Profile Enhancement test assertions

AS4_4CT_TA01	
TA id	AS4_4CT_TA01
Normative source	[eDelivery-AS4] "To be able to route a received message, the receiving Access Point (C3) needs to be able to determine the final recipient (C4). This information is generally available in a structured payload. However, using information from a structured payload assumes an understanding of the schema on which the payload is based. In order to allow Access Points to process payloads of any type, it is desirable to adopt a mechanism that is independent of particular schemas. Furthermore, in some situations there MAY be a requirement to route unstructured or encrypted data. This Profile Enhancement therefore uses the ebMS3 property mechanism to identify C1 and C4. The property mechanism allows the use of arbitrary property-value pairs in an AS4 message and is independent of payload format or structure. When used in a Four Corner typology: • A property named originalSender MUST be added to the message that identifies the original sender (C1) party. • A property named finalRecipient MUST be added to the message that identifies the final recipient (C4) Party"
Target	Messaging Reliability
Prerequisite	• Producer submits a business document with the information “Sender” and “destination” to the SMSH • SMSH and RMSH are configured to exchange AS4 messages according to the eDelivery AS4 profile (One-Way/Push MEP). • SMSH sends an AS4 User message to the RMSH.
Predicate	The message received by the RMSH contains 2 property elements in the MessageProperties node with attribute name. One has name = "OriginalSender" and value producerID and the other has name = "finalRecipient" and value consumerID (producerID and consumerID are provided by the original message submitted by the producer).
Prescription Level	Mandatory
Tag	User message, end entity Addressing
Variable	producerID: ID of the producer of the AS4 message consumerID: ID of the consumer of the message

AS4_4CT_TA02	
TA id	AS4_4CT_TA02
Normative source	[eDelivery-AS4] "This profile defines an additional, optional third property: • A property named trackingIdentifier MAY be added to the message to include an identifier (in arbitrary string format) that allows end-to-end tracking of messages in a four-corner exchange. Its value MAY be set to the value of an identifier for the message from C1 to C2 that the AS4 message relates to. This allows tracking and tracing of messages."
Target	Message Exchange tracking
Prerequisite	• SMSH and RMSH are configured to exchange AS4 messages according to the eDelivery AS4 profile: One-Way/Push MEP. • SMSH sends an AS4 User Message including a TRACKINGIDENTIFIER property set by the producer.
Predicate	The RMSH returns a non-repudiation receipt within a HTTP response with status code 2XX and the received AS4 message contains the TRACKINGIDENTIFIER property.
Prescription Level	Permitted
Tag	Message Packaging, Tracking, TrackingIdentifier
Variable	TRACKINGIDENTIFIER: an arbitrary string format.

AS4_4CT_TA03	
TA id	AS4_4CT_TA03
Normative source	[eDelivery-AS4] "In a four-corner-model, the Sender and Receiver of AS4 messages are the inner corner Access Points (C2, C3), not the outer corner parties (C1, C4). To facilitate the use of unmodified AS4 messaging implementations and to simplify configuration of AS4 message service handlers, eb:From/eb:PartyId and eb:To/eb:PartyId MUST identify the inner corner Access Points."
Target	Messaging Reliability
Prerequisite	• SMSH and RMSH are configured to exchange AS4 messages according to the eDelivery AS4 profile (One-Way/Push MEP). • SMSH sends an AS4 User message to the RMSH.
Predicate	In the message sender|receiver elements reference the MSHs and not the (producer,consumer).
Prescription Level	Mandatory
Tag	Adressing
Variable	sender|receiver: XML elements of AS4 user message *Messaging/UserMessage/PartyInfo/{From|to}/PartyId*

4. SBDH Profile Enhancement test assertions

AS4_SBDH_TA01	
TA id	AS4_SBDH_TA01
Normative source	[eDelivery-AS4] "The following table shows the identifiers of various parts of an AS4 messaging containing a standalone SDBH and one or more additional payloads. The MIME parts are all identified using a Content-ID header. The enveloping HTTP/MIME structure references the SOAP root MIME part using its start parameter. The ebMS3 header in the SOAP root part references the standalone SBDH header document payload and all other payloads from its eb:PayloadInfo structure. In this situation, the SBDH MUST be referenced using the first eb:PartInfo part reference and is considered the initial leading document."
Target	SBDH reference order
Prerequisite	• SMSH and RMSH are configured to exchange AS4 messages according to the eDelivery AS4 profile (One-Way/Push MEP). • Producer submits a message with several payloads, first being an SBDH standalone XML document, others being non-XML payloads.
Predicate	In the AS4 message generated by the SMSH, the SBDH payload is referenced by the first PARTINFO element inside the PAYLOADINFO element.
Prescription Level	Mandatory
Tag	Message Packaging
Variable	PARTINFO: XML element of AS4 user message *Messaging/UserMessage/PayloadInfo/PartInfo* PAYLOADINFO: XML element of AS4 user message *Messaging/UserMessage/PayloadInfo*

AS4_SBDH_TA02	
TA id	AS4_SBDH_TA02
Normative source	[eDelivery-AS4] "The SBDH MUST be referenced using the first eb:PartInfo part reference and is considered the initial leading document. Any other payload parts MUST be referenced from the SBDH, in addition to being referenced from the AS4 header." and "The SBDH references the additional message parts using the sh:Manifest element. "
Target	SBDH other payloads reference
Prerequisite	• SMSH and RMSH are configured to exchange AS4 messages according to the eDelivery AS4 profile (One-Way/Push MEP). • Producer submits a message with several payloads, first being an SBDH standalone XML document, others being non-XML payloads. All the non-XML payloads are referenced inside the MANIFEST element of the SBDH. • The SMSH sends the AS4 message to the RMSH.
Predicate	The RMSH successfully processes the AS4 message and sends a non-repudiation receipt to the SMSH and all non-XML payloads are referenced inside the manifest element in the received SBDH.
Prescription Level	Mandatory
Tag	Message Packaging
Variable	MANIFEST: XML element of SBDH *StandardBusinessDocumentHeader/Manifest*

5. Dynamic Receiver Profile Enhancement test assertions

AS4_DR_TA01	
TA id	AS4_DR_TA01
Normative source	[eDelivery-AS4] "A Receiving MSH that implements this Profile Enhancement, when processing a message from an unregistered Sender Party under control of a Dynamic Receiver P-Mode, MUST verify the following constraints: • The presented leaf signing certificate MUST chain to one of the specified trust anchors. • Any policy and issuing Certification Authorities involved in issuing the presented signing certificate MUST implement the specified certificate policies, if any are specified. • Subject identity fields in the presented certificate MUST match the presented values in the eb:Messaging/eb:UserMessage/eb:PartyInfo/eb:From/eb:PartyId structure in the AS4 message."
Target	Dynamic sender
Prerequisite	• RMSH is not statically pre-configured to exchange messages with SMSH. RMSH is configured with trust anchor (Certificate authority root certificate) • The PMode of the RMSH is configured with PMode.Initiator.Party parameter not set. • The SMSH is configured to exchange AS4 messages with RMSH according to the eDelivery AS4 profile (One-Way/Push MEP). • The SMSH is configured with a signing certificate that chains to the trust anchor configured in RMSH. The signing certificate of the SMSH implements all the required certificate policies. The SMSH is configured with a partyId that matches the subject identity in the signing certificate. • The SMSH sends an AS4 message to the RMSH targeting the configuration without PMode.Initiator.Party of RMSH.
Predicate	The RMSH successfully processes the AS4 message and sends a non-

	repudiation receipt to the SMSH.
Prescription Level	Mandatory
Tag	Dynamic Receiver
Variable	

AS4_DR_TA02	
TA id	AS4_DR_TA02
Normative source	[eDelivery-AS4] "A Receiving MSH that implements this Profile Enhancement, when processing a message from an unregistered Sender Party under control of a Dynamic Receiver P-Mode, MUST verify the following constraints: • The presented leaf signing certificate MUST chain to one of the specified trust anchors. • Any policy and issuing Certification Authorities involved in issuing the presented signing certificate MUST implement the specified certificate policies, if any are specified. • Subject identity fields in the presented certificate MUST match the presented values in the eb:Messaging/eb:UserMessage/eb:PartyInfo/eb:From/eb:PartyId structure in the AS4 message."
Target	Trust anchors
Prerequisite	• RMSH is not statically pre-configured to exchange messages with SMSH. RMSH is configured with trust anchor (Certificate authority root certificate) • The PMode of the RMSH is configured with PMode.Initiator.Party parameter not set. • The SMSH is configured to exchange AS4 messages with RMSH according to the eDelivery AS4 profile (One-Way/Push MEP). • The SMSH is configured with a signing certificate that does not chain to the trust anchor configured in RMSH. The signing certificate of the SMSH implements all the required certificate policies. The SMSH is configured with a partyId that matches the subject identity in the signing certificate. • The SMSH sends an AS4 message to the RMSH targeting the configuration without PMode.Initiator.Party of RMSH.
Predicate	The RMSH sends back an error response.
Prescription Level	Mandatory

Tag	Dynamic Receiver
Variable	

AS4_DR_TA03	
TA id	AS4_DR_TA03
Normative source	[eDelivery-AS4] "A Receiving MSH that implements this Profile Enhancement, when processing a message from an unregistered Sender Party under control of a Dynamic Receiver P-Mode, MUST verify the following constraints: • The presented leaf signing certificate MUST chain to one of the specified trust anchors. • Any policy and issuing Certification Authorities involved in issuing the presented signing certificate MUST implement the specified certificate policies, if any are specified. • Subject identity fields in the presented certificate MUST match the presented values in the eb:Messaging/eb:UserMessage/eb:PartyInfo/eb:From/eb:PartyId structure in the AS4 message."
Target	Certificate policies
Prerequisite	• RMSH is not statically pre-configured to exchange messages with SMSH. RMSH is configured with trust anchor (Certificate authority root certificate) • The PMode of the RMSH is configured with PMode.Initiator.Party parameter not set. • The SMSH is configured to exchange AS4 messages with RMSH according to the eDelivery AS4 profile (One-Way/Push MEP). • The SMSH is configured with a signing certificate that chains to the trust anchor configured in RMSH. The signing certificate of the SMSH does not implement all the required certificate policies. The SMSH is configured with a partyId that matches the subject identity in the signing certificate. • The SMSH sends an AS4 message to the RMSH targeting the configuration without PMode.Initiator.Party of RMSH.
Predicate	The RMSH sends back an error response.
Prescription Level	Mandatory

Tag	Dynamic Receiver
Variable	

AS4_DR_TA04	
TA id	AS4_DR_TA04
Normative source	[eDelivery-AS4] "A Receiving MSH that implements this Profile Enhancement, when processing a message from an unregistered Sender Party under control of a Dynamic Receiver P-Mode, MUST verify the following constraints: • The presented leaf signing certificate MUST chain to one of the specified trust anchors. • Any policy and issuing Certification Authorities involved in issuing the presented signing certificate MUST implement the specified certificate policies, if any are specified. • Subject identity fields in the presented certificate MUST match the presented values in the eb:Messaging/eb:UserMessage/eb:PartyInfo/eb:From/eb:PartyId structure in the AS4 message."
Target	Subject identity
Prerequisite	• RMSH is not statically pre-configured to exchange messages with SMSH. RMSH is configured with trust anchor (Certificate authority root certificate) • The PMode of the RMSH is configured with PMode.Initiator.Party parameter not set. • The SMSH is configured to exchange AS4 messages with RMSH according to the eDelivery AS4 profile (One-Way/Push MEP). • The SMSH is configured with a signing certificate that chains to the trust anchor configured in RMSH. The signing certificate of the SMSH implements all the required certificate policies. The SMSH is configured with a partyId different from the subject identity in the signing certificate. • The SMSH sends an AS4 message to the RMSH targeting the configuration without PMode.Initiator.Party of RMSH.
Predicate	The RMSH sends back an error response.
Prescription Level	Mandatory

Tag	Dynamic Receiver
Variable	

6. DYNAMIC SENDER PROFILE ENHANCEMENT TEST ASSERTIONS

AS4_DS_TA01	
TA id	AS4_DS_TA01 Note: This test assertion is used in combination with the Four Corner Topology Profile Enhancement in which: C1=originalSender/producer, C2=SMSH, C3=RMSH and C4=finalReceiver.
Normative source	[eDelivery-AS4] "This Profile Enhancement supports two modes of operation: • When used in combination with the Four Corner Topology Profile Enhancement, in a One Way exchange the PMode.Responder.Party (which corresponds to the C3) is not known but the finalRecipient ebMS3 Property (which corresponds to the C4) is provided by the Producer. In this case, the PMode.Responder.Party is determined dynamically, in addition to the Receiver MSH specific AS4 protocol parameters. • When used for Point-to-Point communication, in a One Way exchange the PMode.Responder.Party is set directly by the Producer. Additional Receiver specific AS4 protocol parameters are determined dynamically for this party." and "One of more P-Mode templates MUST be deployed in the AS4 MSH for Dynamic Sender use that have preset values for the PMode.Initiator.Party, PMode.Initiator.Role, PMode.Responder.Role, PMode[].BusinessInfo.Service and/or PMode[].BusinessInfo.Action parameters. These templates MUST NOT have values for PMode.Responder.Party, PMode[].Security.X509.Encryption.Certificate, and PMode[].Protocol.Address."
Target	Dynamic sender Four Corner Topology
Prerequisite	• SMSH is not statically pre-configured to exchange messages with RMSH. • The SMSH is configured with PMode.Responder.Party, PMode[].Security.X509.Encryption.Certificate, and

	PMode[].Protocol.Address parameters not set. • The RMSH is configured to exchange AS4 messages with the SMSH according to the eDelivery AS4 profile (One-Way/Push MEP). • The finalReceiver party identifier is already registered within a discovery infrastructure accessible by the SMSH. • The registered metadata in the discovery infrastructure indicates the RMSH as C3 linked to the finalReceiver. • The producer submits a message to the SMSH that contains properties originalSender and finalReceiver set.
Predicate	The SMSH creates an AS4 message with TO/PARTYID element set to the discovered RMSH party id and delivers it to the RMSH which successfully processes the AS4 message and sends back a non-repudiation receipt to the SMSH which successfully processes the non-repudiation receipt.
Prescription Level	Mandatory
Tag	Dynamic Sender
Variable	TO/PARTYID: XML element of AS4 user message Messaging/UserMessage/PartyInfo/MessageId/To/PartyId

AS4_DS_TA02	
TA id	AS4_DS_TA02 Note: This test assertion is used for Point-To-Point communication in which: the Four Corner Topology Profile Enhancement is not used.
Normative source	[eDelivery-AS4] "This Profile Enhancement supports two modes of operation: • When used in combination with the Four Corner Topology Profile Enhancement, in a One Way exchange the PMode.Responder.Party (which corresponds to the C3) is not known but the finalRecipient ebMS3 Property (which corresponds to the C4) is provided by the Producer. In this case, the PMode.Responder.Party is determined dynamically, in addition to the Receiver MSH specific AS4 protocol parameters. • When used for Point-to-Point communication, in a One Way exchange the PMode.Responder.Party is set directly by the Producer. Additional Receiver specific AS4 protocol parameters are determined dynamically for this party." and "One of more P-Mode templates MUST be deployed in the AS4 MSH for Dynamic Sender use that have preset values for the PMode.Initiator.Party, PMode.Initiator.Role, PMode.Responder.Role, PMode[].BusinessInfo.Service and/or PMode[].BusinessInfo.Action parameters. These templates MUST NOT have values for PMode.Responder.Party, PMode[].Security.X509.Encryption.Certificate, and PMode[].Protocol.Address."
Target	Dynamic sender point-to-point communication
Prerequisite	• SMSH is not statically pre-configured to exchange messages with RMSH. • The SMSH is configured with PMode.Responder.Party set to RMSH, PMode[].Security.X509.Encryption.Certificate and PMode[].Protocol.Address parameters not set. • The RMSH is configured to exchange AS4 messages with the SMSH according to the eDelivery AS4 profile (One-Way/Push MEP).

	• The RMSH is already registered within a discovery infrastructure accessible by the SMSH.
Predicate	The SMSH creates an AS4 message with TO/PARTYID element set to the discovered RMSH party id and delivers it to the RMSH which successfully processes the AS4 message and sends back a non-repudiation receipt to the SMSH.
Prescription Level	Mandatory
Tag	Dynamic Sender
Variable	TO/PARTYID: XML element of AS4 user message Messaging/UserMessage/PartyInfo/MessageId/To/PartyId

AS4_DS_TA03	
TA id	AS4_DS_TA03 Note: This test assertion is used in combination with the Four Corner Topology profile in which: C1=originalSender/producer, C2=SMSH, C3=RMSH and C4=finalReceiver.
Normative source	[eDelivery-AS4] "This Profile Enhancement supports two modes of operation: • When used in combination with the Four Corner Topology Profile Enhancement, in a One Way exchange the PMode.Responder.Party (which corresponds to the C3) is not known but the finalRecipient ebMS3 Property (which corresponds to the C4) is provided by the Producer. In this case, the PMode.Responder.Party is determined dynamically, in addition to the Receiver MSH specific AS4 protocol parameters. • When used for Point-to-Point communication, in a One Way exchange the PMode.Responder.Party is set directly by the Producer. Additional Receiver specific AS4 protocol parameters are determined dynamically for this party." and " The discovered X.509 certificate which the Responding MSH SHOULD use to sign AS4 receipts or errors. The P-Mode template MSH MAY configure trust anchors and certificate policies that the discovered certificate MUST meet."
Target	Dynamic sender Four Corner Topology
Prerequisite	• SMSH is not statically pre-configured to exchange messages with RMSH. • The SMSH is configured with PMode.Responder.Party, PMode[].Security.X509.Encryption.Certificate, and PMode[].Protocol.Address parameters not set. • The RMSH is configured to exchange AS4 messages with the SMSH according to the eDelivery AS4 profile (One-Way/Push MEP). • The finalReceiver party identifier is already registered within a discovery infrastructure accessible by the SMSH: certificate registered is different from the one actually configured in RMSH.

	• The producer submits a message to the SMSH that contains properties originalSender and finalReceiver set. • The SMSH sends an AS4 message to the RMSH and the RMSH successfully processes the AS4 message and sends a non-repudiation receipt to the SMSH
Predicate	The SMSH fails to process the non-repudiation receipt and reports an error to the producer.
Prescription Level	Preferred
Tag	Dynamic Sender
Variable	

7. ENTSOG USAGE PROFILE TEST ASSERTIONS

AS4_ENTSOG_TA01	
TA id	AS4_ENTSOG_TA01
Normative source	[ENTSOG-AS4], section 2.3.3. "*The use of mpc is profiled. The attribute:* • *MAY be present in the AS4 UserMessage. If this is the case, it MUST be set to the value http://docs.oasis-open.org/ebxml-msg/ebms/v3.0/ns/core/200704/defaultMPC, which identifies the default MPC, and therefore MUST NOT be set to some other value* • *MAY be omitted from the AS4 UserMessage. This is equivalent to it being present with the default MPC value*"
Target	*mpc* attribute
Prerequisite	SMSH and RMSH exchange a message
Predicate	XPath expression encoding the above constraint: *not(//eb:UserMessage[@mpc and not(@mpc= "http://docs.oasis-open.org/ebxml-msg/ebms/v3.0/ns/core/200704/defaultMPC")])*
Prescription Level	Mandatory
Tag	ENTSOG
Variable	

AS4_ENTSOG_TA02	
TA id	AS4_ENTSOG_TA02
Normative source	[ENTSOG-AS4], section 2.3.1.1 “The *type* attribute on the *PartyId* element MUST be present and set to the fixed value *http://www.entsoe.eu/eic-codes/eic-party-codes-x* which indicates that the value of the element is to be interpreted as an EIC code.”
Target	*PartyId/@type* attribute
Prerequisite	SMSH and RMSH exchange a message.
Predicate	XPath expression encoding the above constraint: *not(//eb:PartyId[not(@type='http://www.entsoe.eu/eic-codes/eic-party-codes-x ')])*
Prescription Level	Mandatory
Tag	ENTSOG
Variable	

AS4_ENTSOG_TA03	
TA id	AS4_ENTSOG_TA03
Normative source	[ENTSOG-AS4], section 2.3.1.1. *"When exchanging messages in compliance with this profile, parties registered in the ENTSOG Energy Identification Coding Scheme (EIC) for natural gas transmission MUST be identified using the appropriate EIC Code [EIC]. This value MUST be used as the content for the PMode.Initiator.Party and PMode.Responder.Party processing mode parameters, which AS4 message handlers use to populate the UserMessage/PartyInfo/{From|to}/PartyId elements."* [EIC] *The EIC is based on fixed length alphanumeric codes which can be broken down as follows:* • *A 2-character number identifying the Issuing Office assigned by ENTSO-E.* • *One Character identifying the object type that the code represents.* • *12 digits, uppercase characters or minus signs allocated by the issuing office* • *1 check character to ensure the code validity.* *Valid characters of an EIC code are A-Z, 0-9 and "-".*
Target	*PartyId* value
Prerequisite	SMSH and RMSH exchange a message.
Predicate	The value of *//eb:PartyId/text()* must match the regular expression: **^[\d]{2}[A-Z]{1}[A-Z\d\-]{12}[A-Z\d]$** (Note that the predicate only checks the identifier format. It does not check the code against any specific list of EIC codes, as it is a dynamic and large set)
Prescription Level	Mandatory
Tag	ENTSOG
Variable	

AS4_ENTSOG_TA04	
TA id	AS4_ENTSOG_TA04
Normative source	[ENTSOG-AS4], section 2.3.1.2.1 *For gas business processes covered by EDIG@S, the value MUST be the fixed value http://edigas.org/service. This value is a URI used as an identifier only. It does not resolve to a URL on the EDIGAS web sites.*
Target	Service type
Prerequisite	SMSH and RMSH exchange an ENTSOG user message carrying an EDIG@S XML business document (i.e. not a test message and not a certificate update message).
Predicate	XPath expression encoding the above constraint: *not(//eb:Service[@type and not(@type='http://edigas.org/service')])*
Prescription Level	Mandatory
Tag	ENTSOG
Variable	

AS4_ENTSOG_TA05	
TA id	AS4_ENTSOG_TA05
Normative source	[ENTSOG-AS4], section 2.3.1.2.1 *For gas business processes covered by EDIG@S, the value content of Service is specified in the ENTSOG AS4 Mapping Table (section 2.3.1.2.4) which MUST be used for AS4 messages carrying specified messages. These values are taken from an EDIG@S process area code list.*
Target	Service value
Prerequisite	SMSH and RMSH exchange an ENTSOG user message carrying an EDIG@S XML business document (i.e. not a test message and not a certificate update message).
Predicate	XPath expression encoding the above constraint: *not(//eb:Service[not(text()='A01') and not(text()='A02') and not(text()='A03') and not(text()='A04') and not(text()='A05') and not(text()='A06') and not(text()='A07') and not(text()='A08') and not(text()='A09') and not(text()='A10') and not(text()='A11')])* N.B. this predicate includes the current set of process code value. This may need to be adapted in the future with newer EDIG@S versions.
Prescription Level	Mandatory
Tag	ENTSOG
Variable	

AS4_ENTSOG_TA06	
TA id	AS4_ENTSOG_TA06
Normative source	[ENTSOG-AS4], section 2.3.1.2.2 *For gas business processes covered by EDIG@S in which EDIG@S XML documents are exchanged, ENTSOG provides a value table listing actions (section 2.3.1.2.4). The value for Action in that table for a particular exchange MUST be used in AS4 messages. The example messages in section 3.1 use the http://docs.oasis-open.org/ebxml-msg/as4/200902/action value, which is the default action defined in section 5.2.5 of the AS4 standard [AS4].*
Target	Action for business messages
Prerequisite	SMSH and RMSH exchange an ENTSOG user message carrying an EDIG@S XML business document (i.e. not a test message and not a certificate update message).
Predicate	XPath expression encoding the above constraint: *not(//eb:Action[not(text()='http://docs.oasis-open.org/ebxml-msg/as4/200902/action')])*
Prescription Level	Mandatory
Tag	ENSOG
Variable	

AS4_ENTSOG_TA07	
TA id	AS4_ENTSOG_TA07
Normative source	[ENTSOG-AS4], 2.3.6 *for the business document part a Property SHOULD be included in the PartProperties with a name EDIGASDocumentType set to the same value as the top level type element in the EDIG@S XML document, which is of type DocumentType.*
Target	EDIGAS Part Property
Prerequisite	SMSH and RMSH exchange an ENTSOG user message carrying an EDIG@S XML business document (i.e. not a test message and not a certificate update message).
Predicate	XPath expression encoding the above constraint: not(//eb:PayloadInfo/eb:PartInfo[1][not(eb:Property[@name='EDIGASDocumentType'])])
Prescription Level	Preferred
Tag	ENTSOG
Variable	

AS4_ENTSOG_TA08	
TA id	AS4_ENTSOG_TA08
Normative source	[ENTSOG-AS4], 2.3.1.2.3 [Role values] "*MUST be set to values specified in the ENTSOG AS4 Mapping Table (section 2.3.1.2.4). For gas business processes, that table will relate to information in the EDIG@S document content. In EDIG@S, the sender and receiver role are expressed as EDIG@S header elements [..] In situations where the data exchange has not been classified, the role values http://docs.oasis-open.org/ebxml-msg/ebms/v3.0/ns/core/200704/initiator MAY be used for the initiator role and http://docs.oasis-open.org/ebxml-msg/ebms/v3.0/ns/core/200704/responder for the responder role.*"
Target	Role
Prerequisite	SMSH and RMSH exchange an ENTSOG user message carrying an EDIG@S XML business document (i.e. not a test message and not a certificate update message).
Predicate	The content of elements selected using the XPath expression *//eb:Role* must be one of http://docs.oasis-open.org/ebxml-msg/ebms/v3.0/ns/core/200704/initiator or http://docs.oasis-open.org/ebxml-msg/ebms/v3.0/ns/core/200704/responder or match the following regular expression: **^[A-Z]{2,3}$** N.B. the regular expression catches all values in the EDIG@S code list syntactically. There are too many values in this code list to exhaustively list them all.
Prescription Level	Mandatory
Tag	ENTSOG
Variable	

AS4_ENTSOG_TA09	
TA id	AS4_ENTSOG_TA09
Normative source	[ENTSOG-AS4], section 2.3.2. *The AgreementRef element is profiled as follows: [..] The element MUST be present in every AS4 message.*
Target	AgreementRef
Prerequisite	SMSH and RMSH exchange a message.
Predicate	XPath expression encoding the above constraint: not(eb:CollaborationInfo[not(eb:AgreementRef)])
Prescription Level	Mandatory
Tag	ENTSOG
Variable	

AS4_ENTSOG_TA10	
TA id	AS4_ENTSOG_TA10
Normative source	[ENTSOG-AS4], section 2.3.1.3. *UserMessage/CollaborationInfo/ ConversationId MUST be included in any AS4 message (as it is a mandatory element) with as content the empty string.*
Target	Conversation Identifier
Prerequisite	SMSH and RMSH exchange a message.
Predicate	XPath expression encoding the above constraint: not(not(//eb:ConversationId[not(text())]))
Prescription Level	Mandatory
Tag	ENTSOG
Variable	

AS4_ENTSOG_TA11	
TA id	AS4_ENTSOG_TA11
Normative source	[ENTSOG-AS4], section 2.3.6. "*The format of the business document SHOULD be XML, but other datatypes MAY be supported in specific business processes or contexts.*"
Target	Payload format
Prerequisite	SMSH and RMSH exchange an ENTSOG user message carrying an EDIG@S XML business document (i.e. not a test message and not a certificate update message).
Predicate	XPath expression encoding the above constraint: //eb:PayloadInfo[1]/eb:PartInfo[1]/eb:PartProperties/eb:Property[@name='MimeType' and (text() ='text/xml' or text() ='application/xml')] N.B. this predicate assumes the payload is compressed, as a side effect of which we know there will always be a MimeType property in PartInfo. For uncompressed (but still encrypted, as mandated) payloads, it would be available in the xenc:EncryptedData/@MimeType attribute.
Prescription Level	Preferred
Tag	ENTSOG
Variable	

AS4_ENTSOG_TA12	
TA id	AS4_ENTSOG_TA12
Normative source	[ENTSOG-AS4], 2.3.6. “It is expected that the vast majority of payloads will be less than 1 MB in size (prior to compression), with rare exceptions up to 10 MB.”
Target	Maximum size of payload(s) is 10 MB uncompressed
Prerequisite	SMSH and RMSH exchange a message.
Predicate	For each message, for each payload, after decryption and decompression (if compression was used), check that the size of the payload is less than 10 MB.
Prescription Level	Mandatory
Tag	ENTSOG
Variable	

8. CONTACT INFORMATION

CEF Support Team

By email: CEF-EDELIVERY-SUPPORT@ec.europa.eu

Support Service: 8am to 6pm (Normal EC working Days)