

Functional Design eCM Test scenarios for the EFET Test facility

- **Trader tests (Broker process)**
- **Product tests**

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By order of EFET

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1 INTRODUCTION

EFET defined the electronic Confirmation and Matching (eCM) system to enable electronic exchange of Trade Confirmations and Match suggestions regarding these trades.

Starting with version 3.0 of this standard the messaging layer 'below' this standard is based on ebXML MS V2.0. With this requirement all implementations of the eCM should be interoperable, even when coming from different sources.

In order to check if the standard is detailed enough to reach this interoperability and to check if implementers and users have followed the standard as it was meant, EFET asked KEMA to provide a test facility that is able to simulate the applicable participant roles covering the complete functionality of the eCM standard. This test facility must comprise various test scenarios, selected by EFET, which must be performed by the System Under Test with positive result in order to be certified. The System Under Test can have different functionality, performing the role of a Trader (Seller or Buyer) or Broker. Important is that the Test facility can only test the interfacing with the System Under Test. The test facility will be available on the public Internet, 24 hours per day 7 days per week

This document describes the test scenarios that are to be performed to certify eCM version 3.2 compliant products and a market participant using these products. When the test scenarios are approved by EFET, KEMA will propose selections from the list of scenarios that must be performed in a vendor test and in a market participant test.

Chapter two describes in general the checks that will be performed by the test facility.

In chapter three the behavior of the test facility in case a message is received is described.

Chapter four describes the coding of the test scenarios.

Chapter five describes in details the test scenarios on the transport, semantic and syntax level. Paragraph two of this chapter describes the scenarios for the ebXML layer. These tests always have to be performed prior to all other scenarios. Paragraph three of chapter five describes the scenarios for the business document flow of the EFET eCM.

2 GENERAL CHECKS

This section describes the general checks that will be performed by the test facility on all incoming messages, unless otherwise specified in a test scenario.

- Correct XML structure
- Correct eCM documents conform EFET eCM XML Schema's
- Correct eCM message according to eCM V3.2
- The use of correct EIC-codes
- Correct use of ebXML parameters (CPAID, Service, Action, ConversationID, MessageID, PartyID)
- Correct use of ebXML message encodings (signature formats, compression)
- Each party has one party address where they should send their messages.
- The messages should be according to the test scenario currently active. This involves checking of:
 - Expected message
 - expected changes in data
 - expected references to previous messages

3 GENERAL ACTIONS OF THE TEST FACILITY

This section describes the general actions that will be performed by the Test Facility when it has received a message, unless otherwise specified in a test scenario.

Incoming Message	Action
The source of the incoming message is unknown (the party address is unknown)	<ul style="list-style-type: none">– Message is discarded– No error message is displayed on website
There is no scenario active for the sender of the message	<ul style="list-style-type: none">– Message is discarded– No error message is displayed on website
Message is not a valid eCM message while a scenario is active	<ul style="list-style-type: none">– Scenario is aborted– Error message is displayed on website– Rejection is sent with code “Validation error”
Message is a valid eCM message but not as expected by the scenario	<ul style="list-style-type: none">– Scenario is aborted– Error message is displayed on website– No reply is sent
Message is valid and as expected by the scenario	<ul style="list-style-type: none">– Scenario proceeds to the next step (if there is a next step)– Positive ACK is sent– If required by the scenario, the next message is sent.

4 GENERAL REMARKS ABOUT THE SCENARIOS

Each scenario has a unique code (for example S101010). The scheme for this code is as follows:

- Position 1: An 'S' to indicate that the System Under Test (**SUT**) has to send the first message, a "T" when the Test Facility takes the initiative.
- Position 2: At the moment this number will always be 1. If the eCM Test Facility needs to be extended in the future with a new set of scenarios, this number can be increased for the new scenarios.
- Position 3+4: The eCM message Type:
 - 01: CNF (Trade Confirmation)
 - 02: REJ (Rejection)
 - 03: MSU (Match Suggestion)
 - 04: MSA (Match Suggestion Acceptance)
 - 05: MSR (Match Suggestion Rejection)
 - 06: CAN (Cancellation)
 - 07: ACK (Acknowledgement)
 - 08: BFI (Broker Fee Information)
 - 09: BMN (Broker Match Notification)
 - 10: BCN (Broker Confirmation)
- Position 5+6: The scenario number
- Position 7: Version number. When a scenario needs to be changed (due to an error or new insights) after the parties have started testing, this number can be used to show the scenario is a new version. Standard this number will be 0.

The scenarios contain references to make it easier for the helpdesk to find the necessary specifications. All references are to the eCM standard documents.

The steps of the scenarios are numbered in the following way for a S-Scenario:

- Steps that require action from the SUT (the system of the party performing the test): Odd step numbers
- Steps that require action from the Test Facility: Even step numbers

This can result in skipping a step-number, when one of the systems needs to perform two steps after each other (for example, when the SUT needs to send an Acknowledgement and a Confirmation).

The steps of the scenarios are numbered in the following way for a T-Scenario:

- Steps that require action from the Test Facility: Odd step numbers
- Steps that require action from the SUT (the system of the party performing the test): Even step numbers

This can result in skipping a step-number, when one of the systems needs to perform two steps after each other (for example, when the Test Facility needs to send an Acknowledgement and a Confirmation) .

We defined most scenarios as S-scenarios because we want to avoid the following:

- Test Facility sends a CNF for a Commodity / Market / TransactionType the SUT does not support.
- Test Facility uses locations not supported by the SUT

These situations would never result in a MATCHING status.

In some scenarios the data that must be send must be containing specific data fields.

All specific data entries must be specified and agreed upon before the scenario's can be implemented.

This is avoided when the SUT sends in what they support. The Test Facility can make offences or not on the received data. For the Test Facility it is in most scenario's not relevant which Commodity / Market / TransactionType and locations are being used. In paragraph 5.3.4 there are defined special scenarios so the SUT can prove that they support multiple Commodity / Market / TransactionType combinations.

Each SUT will be assigned a unique EIC-code for the communication. The Test Facility will have a unique EIC-code for:

- Trader Role
- Broker Role

The Test Facility has to perform two roles in some scenario's to test the actual situation as close as possible.

The overall purpose of the testing is that the Test Facility must check that the incoming messages at the test facility side are according what is expected. In the process of entering them at the beginning of the cycle and the delivery at the test facility no changes may occur. Also the other way around: In the process of sending by the test facility and handling the received files at the SUT-side changes may not occur either.

Therefore for every scenario the configured input and changes must be prescribed to be able to verify this (automatically by the Test Facility or manually by the SUT-operator).

For example:

- SUT sends a CNF which contains the information from Trade A. The contents of this trade A must then be specified in the appendix so that there is no discussion about the contents and values that are required
 - The only difference with the appendix may be the EIC-codes of the SUT (Sender / Receiver / Buyer / Seller)
 - Other key fields must stay the same
 - Informational fields may be changed because they should not influence the matching process
- SUT must send an amendment, containing the information from Trade B.
- Test Facility will send an amendment with the information from Trade B.

In combination with the wish of the EFET members the state changes are specified in the scenarios, so checks can be done manually at the SUT-side to verify that the states are according what is expected. **The specified states are the states after handling the step.**

When errors are detected at the Test Facility side the scenario will fail, and the history will show the results of the steps. The states and generated files can then be verified to see where the problem occurred within the SUT.

The Testing of BFI is a local matter and can not be tested with the Test Facility.

Below is an example of the manner how to prescribe specific trades used in scenarios and the state changes required for a good result.

Overview of statuses for CNF and BCN during the scenario

	System Under Test (Buyer)		Test Facility (Seller)	Test Facility (Broker)
Step	CNF 1	BFI 1	CNF 2	BCN 1
1	Sending to CP Trade ...			
2	Pending			
3		Valid		
4				Start Trade ...
5				Pending

Colors indicate the following knowledge:

Color in Step Column	Explanation
Yellow	CNF 1 / BCN 1 of SUT
Light Yellow	CNF 2 / BCN 2 of SUT
Light Green	CNF 3 / BCN 3 of SUT
Light Grey	CNF 1 of Test Facility
Medium Grey	CNF 2 of Test Facility
Dark Grey	CNF 3 of Test Facility
Purple	Related to matching process

Color in Step Column	Explanation
Yellow	CNF 1 / BCN 1 of SUT
Light Yellow	CNF 2 / BCN 1 of SUT
Light Green	CNF 3 / BCN 1 of SUT
Light Cyan	BFI 1 of SUT
Light Grey	CNF 1 of Test Facility
Medium Grey	CNF 2 of Test Facility
Dark Grey	CNF 3 of Test Facility
Light Blue	BCN 1 of Test Facility
Medium Blue	BCN 2 of Test Facility
Dark Blue	BCN 3 of Test Facility

Special attention is required for the states not mentioned in the state diagrams of the EFET eCM standard. These states are:

State	Explanation
Not Applicable	<p>The state of a trade confirmation document being received is rejected by the ebXML layer</p> <p>The situation is not in the state diagrams but this situation can occur when:</p> <ul style="list-style-type: none"> ▪ document not according schema ▪ ebXML validation is turned on ▪ errors detected by the ebXML layer when validating document against schema
Rejected	<p>The state of a trade confirmation document being received from counterparty and sent rejection document</p> <p>The situation is not in the state diagrams but this situation can occur when:</p> <ul style="list-style-type: none"> ▪ errors not detected by the ebXML layer ▪ errors not detected by the schema

The states specified in this document are the states seen in the SUT and not the states seen in the testsystem. Making the scenario's understandable is possible in this document by indicating what the other side is doing. Therefore two states are added:

- The state "Sending to CP" can only be seen in the local system, therefore this state is indicated as "**Start**" to differentiate the local and remote states. This involves CNF and BCN documents.
- The state "Potential Match" can only be seen in the local system, therefore this state is indicated as "**Potential**" to differentiate the local and remote states.

4.1 Testdata end-user

Testdata for end-user testing will be generated by the Test Facility:

- Activation using a web-interface
- Generation of trade-slips (WORD-documents)
 - Trade Confirmation documents
- Zipping of all trade-slips into a zipfile
- Downloading the zipfile from the website

After receiving the zipfile the testing party (SUT) needs to activate the scenario's and needs to send the required testfiles when required. Only trade-slips are part of the testdata, which must be entered into the ETRM system, resulting in a XML-file for the EFET-box. All other documents must be created by the ETRM and EFET-box of the SUT.

When not all scenario's can be completed with success, the generation of test data must be repeated to retry the scenario's that failed. The generated data for already completed scenario's will also be regenerated, because all tests must succeed in one run without errors, within the certification.

Besides for certification the testfacility can also be used for:

- Development (product-test)
- Learning (end-user test)
- Integration (end-user test after certification before taking new partners into operation)

For these purposes it is allowed to have failed scenario's and then also testdata will be regenerated for already completed scenario's, being able to repeat them again.

When registering on the website a login will be generated for:

- Certification
- Testmode (development, learning and integration)

It will only be possible to test on one of the two accounts at every point in time. This will be handled by agreeing a certain time period for each type of test.

Outside the time periods it will not be possible to use the test facility.

Example of different time periods and different accounts:

From ... till ...	From ... till ...	From ... till ...
Development	Certification	Integration
Account 1	Account 2	Account 1

5 TEST SCENARIOS

5.1 Overview

Subject of the test	Type of tests	Used in	References
EFET extensions to EbXML MS V2.0	EbXML messaging	Prod. + Part. Test	EbXML MS 2.0 EFET eCM standard V3.2F draft
Real World Business	Business Document Flow <ul style="list-style-type: none"> ▪ Normal behavior ▪ Normal behavior combined with offences 	Prod. + Part. Test	EFET eCM standard V3.2F draft
	Business Rules <ul style="list-style-type: none"> ▪ Normal behavior ▪ Offences 	Prod. + Part. Test	EFET eCM standard V3.2F draft
	ECM Fields <ul style="list-style-type: none"> ▪ Normal behavior ▪ Type errors not covered by schema 	Prod. + Part. Test	EFET eCM standard V3.2F draft
eCM XML document exchange	Syntax	Prod. + Part. Test	EFET eCM standard V3.2F draft

5.2 Connectivity testing

The purpose of connectivity testing is that it will check if the communication between two systems is valid and makes it possible to continue testing all scenarios.

These scenarios should verify that ebXML Messaging layer works and complies with the eCM Standard ebXML Profile and the ebXML Messaging Service Standard 2.0.

Issues that must be working are:

- Valid ebXML messages
- Communication to the right URI
- Encryption and Decryption of the messages
- Compression and Decompression of the messages

Look at the standard for the required settings.

When problems are available with one of the mentioned issues they must be solved before the testing with the Test Facility can be continued. For all test scenarios the eCM Standard ebXML Profile and the ebXML Messaging Service Standard 2.0 requirements will be tested on the background as it will be stopping the progress during the test scenarios.

When both systems have the “ping-pong” functionality available, this can verify that the other side is reachable and that the configured URI’s are valid.

Preconditions:

- The SUT ebXML implementation is setup with one private/public key pair for its own usage
- SUT provides an external URL for ebXML Service Access by means of HTTP

Look in the standard for the required settings for the ebXML profile mandated by ebXML MS 2.0 / EFET 3.2. The required settings will be tested by the EFET test facility.

Connectivity Test 1: Test the ping-pong functionality (when supported by at least one side)

System Under Test	Test Facility
	Activate Ping-pong
Activate Ping-pong	

Checks performed

- Validate that ping-pong works from Testfacility to System Under Test
- Validate that ping-pong works from System Under Test to Testfacility
- Communication is configured correctly for:
 - Ebxml
 - Routers
 - Firewalls
 - DNZ

Scenario: T101010 – Send a Trade Confirmation (CNF)
 Purpose: To check the ebXML interoperability between the parties
 Test type: Product test and end-user test

Step	System Under Test	State SUT	Test Facility	State TS
1		-	Send a CNF	Start
2	Send an ACK	Pending		Pending
3		-	Send a CAN to cancel the CNF <ul style="list-style-type: none"> ▪ DocumentID and DocumentVersion of previous sent CNF (<u>Step 1</u>) 	-
4	Send an ACK	Cancelled		Cancelled
6	Send a CNF	Sending to CP		-
7		Pending	Send an ACK	Pending
8	Send a CAN to cancel the CNF <ul style="list-style-type: none"> ▪ DocumentID and DocumentVersion of previous sent CNF (<u>Step 6</u>) 			
9		Cancelled	Send an ACK	Cancelled

Checks performed

- Validate ebXML message against XSD of ebXML
- Check if an Acknowledgement (for CNF) was received
- Check if an Acknowledgement (for CAN) was received
- EFET box functionality can be used in the communication
- Communication works both ways

Overview of statuses for CNF during the scenario

	System Under Test	Test Facility
Step	CNF 2	CNF 1
1		Start Trade 4A
2		Pending
3		
4		Cancelled
6	Start Trade 2A	
7	Pending	
8		
9	Cancelled	

Scenario: T101020 – Send a Trade Confirmation (CNF) with an error in ebXML
 → DocumentID missing (structure not according the XML Schema)
 Purpose: To check the ebXML validation against the XML Schema
 Test type: Product test and end-user test

Step	System Under Test	State SUT	Test Facility	State TS
1		-	Send a CNF	Start
2	Send an ebXML error with DocumentID missing. Note that the error to return is not defined by the eCM-standard.	Not Applicable		Not Applicable

Checks performed

- Check if a XML Rejection was received
- Check if the correct rejection reason is returned

Overview of statuses for CNF during the scenario

	System Under Test	Test Facility
Step		CNF 1
1		Start Trade 44A
2		Not Applicable

Scenario: T101030 – Send a Trade Confirmation (CNF) with an enumeration error in ebXML
 → AgreementType is invalid (enumeration not valid according the XML Schema)

Purpose: To check the ebXML validation against the XML Schema

Test type: Product test and end-user test

Step	System Under Test	State SUT	Test Facility	State TS
1		-	Send a CNF	Start
2	Send an ebXML error with DocumentID missing. Note that the error to return is not defined by the eCM-standard.	Not Applicable		Not Applicable

Checks performed

- Check if an ebXML Rejection was received
- Check if the correct rejection reason is returned

Overview of statuses for CNF during the scenario

	System Under Test	Test Facility
Step		CNF 1
1		Start Trade 44A
2		Not Applicable

5.3 **Scenarios for testing eCM Standard compliance**

These scenarios should show that the SUT handles and processes the eCM documents in conformance to the EFET eCM V3.2 standard.

5.3.1 Broker Confirmation Matching Process – (Trader) – Normal behavior

The testing of “withoutCp” is not taken into account because it is not possible to test this as the Trade Confirmations are only exchanged locally at the SUT-side.

Scenario: S73 – Full Broker Confirmation Matching process with Preliminary Match (SUT = Trader (Buyer))
 Purpose: To test the full document flow of the Confirmation Matching Process **withCp** and if the documents comply with the Business Rules.
 Role: Test Facility acts as a Trader (Seller) and a Broker
 Test type: Product test

Step	System Under Test (Buyer)	State SUT	Test Facility (Seller)	State TS (Seller)	Test Facility (Broker)	State TS (Broker)
1	Send a CNF Contents: <ul style="list-style-type: none"> DocumentID: new and unique 	Sending to CP		-		-
2		Pending	Send an ACK if the CNF is correct	Pending		-
3	Create a local BFI with TotalFee = -100 EUR linked to the created CNF of <u>Step 1</u>	Valid	-	-	-	-
4		-		-	Send a BCN to Buyer <ul style="list-style-type: none"> Document complies with the Business Rules for BCN. DocumentID: new and unique <u>Same</u> contents as CNF of Buyer TotalFee = -100 EUR 	Start
5	Send an ACK if the BCN is correct	Pending		-		Pending

Step	System Under Test (Buyer)	State SUT	Test Facility (Seller)	State TS (Seller)	Test Facility (Broker)	State TS (Broker)
7	Send a BMN Preliminary Match <ul style="list-style-type: none"> DocumentID: new and unique ProcessType = <u>withCp</u> 	-		-		-
8		Preliminary Matched		-	Send an ACK if the BMN is correct	Preliminary Matched
10		-	Send a CNF to Buyer <ul style="list-style-type: none"> Document complies with the Business Rules for CNF. DocumentID: new and unique <u>Same</u> data as in CNF of Buyer (<u>Step 1</u>) 	Start		-
11	Send an ACK if the CNF is correct	Pending		Pending		-
13	Send a MSU Contents: <ul style="list-style-type: none"> DocumentID and DocumentVersion CNF of Buyer (<u>Step 1</u>) DocumentID and DocumentVersion CNF of Seller (<u>Step 10</u>) 	Potential Match		-		-
14		Match Suggested	Send an ACK if the MSU is correct	Match Suggested		-

Step	System Under Test (Buyer)	State SUT	Test Facility (Seller)	State TS (Seller)	Test Facility (Broker)	State TS (Broker)
16		-	Send a MSA Contents: <ul style="list-style-type: none"> ▪ DocumentID of MSU 	-		-
17	Send an ACK if the MSA is correct	Matched		Matched		-
19	Send a BMN Final (Match) <ul style="list-style-type: none"> ▪ DocumentID: new and unique ▪ ProcessType = <u>withCp</u> 	-		-		-
20		Matched		-	Send an ACK if the BMN is correct	Matched

Overview of statuses for CNF and BCN during the scenario

	System Under Test (Buyer)		Test Facility (Seller)	Test Facility (Broker)
Step	CNF 1	BFI 1	CNF 2	BCN 1
1	Sending to CP Trade 42A			
2	Pending			
3		Valid		
4				Start Trade 47C
5				Pending
7	Pending			
8				Preliminary Matched
10			Start Trade 43A	
11			Pending	
13	Potential Match			
14	Match Suggested		Match Suggested	
16				
17	Matched		Matched	
19				
20				Matched

Scenario: S74 – Full Broker Confirmation Matching process with CNF Amendment (SUT = Trader (Buyer))
 Purpose: To test the full document flow of the Confirmation Matching Process **withCp** and if the documents comply with the Business Rules.
 Role: Test Facility acts as a Trader (Seller) and a Broker
 Test type: Product test

Step	System Under Test (Buyer)	State SUT	Test Facility (Seller)	State TS (Seller)	Test Facility (Broker)	State TS (Broker)
1	Send a CNF Contents: <ul style="list-style-type: none"> DocumentID: new and unique 	Sending to CP		-		-
2		Pending	Send an ACK if the CNF is correct	Pending		-
3	Create a local BFI with TotalFee = 100 EUR linked to the created CNF of <u>Step 1</u>	Valid	-	-	-	-
4		-		-	Send a BCN to Buyer <ul style="list-style-type: none"> Document complies with the Business Rules for BCN. DocumentID: new and unique <u>Same</u> contents as CNF of Buyer TotalFee = 100 EUR 	Start
5	Send an ACK if the BCN is correct	Pending		-		Pending
7	Send a BMN Preliminary Match <ul style="list-style-type: none"> DocumentID: new and unique ProcessType = <u>withCp</u> 					

Step	System Under Test (Buyer)	State SUT	Test Facility (Seller)	State TS (Seller)	Test Facility (Broker)	State TS (Broker)
8		Preliminary Matched		-	Send an ACK if the BMN is correct	Preliminary Matched
10		-		-	Send a BCN <u>Amendment</u> to Buyer <ul style="list-style-type: none"> ▪ Document complies with the Business Rules for BCN. ▪ DocumentID: new and unique ▪ TotalFee = 100 EUR ▪ <u>Data will be the same as the CNF of the Seller in Step 16</u> 	Start
11	Send an ACK if the BCN is correct	Amended + Pending		-		Amended + Pending
13	Send a BMN Reversal <ul style="list-style-type: none"> ▪ DocumentID: new and unique ▪ ProcessType = <u>withCp</u> ▪ <u>BCN referenced from Step 4</u> 	-		-		-
14		Amended		-	Send an ACK if the BMN is correct	Amended

Step	System Under Test (Buyer)	State SUT	Test Facility (Seller)	State TS (Seller)	Test Facility (Broker)	State TS (Broker)
16		-	Send a CNF to Buyer <ul style="list-style-type: none"> ▪ Document complies with the Business Rules for CNF. ▪ DocumentID: new and unique ▪ <u>Different</u> data as in CNF of Buyer (<u>Step 1</u>) 	Start		-
17	Send an ACK if the CNF is correct	Pending		Pending		-
19	Send a CNF Contents: <ul style="list-style-type: none"> ▪ DocumentID: <u>Same</u> as in <u>Step 1</u> ▪ <u>Same</u> data as in CNF of Seller (<u>Step 16</u>) 	Sending to CP		-		-
20		Pending	Send an ACK if the CNF is correct	Pending		-
21	Send a BMN Preliminary Match <ul style="list-style-type: none"> ▪ DocumentID: new and unique ▪ ProcessType = <u>withCp</u> ▪ <u>CNF referenced from Step 19</u> ▪ <u>BCN referenced from Step 10</u> 	-		-		-

Step	System Under Test (Buyer)	State SUT	Test Facility (Seller)	State TS (Seller)	Test Facility (Broker)	State TS (Broker)
	<u>(Step 23 can also be started now, skipping steps 21 and 22)</u>					
22		Preliminary Matched		-	Send an ACK if the BMN is correct	Preliminary Matched
23	Send a MSU Contents: <ul style="list-style-type: none"> ▪ DocumentID and DocumentVersion CNF of Buyer (Step 19) ▪ DocumentID and DocumentVersion CNF of Seller (Step 16) 	Potential Match		-		-
24		Match Suggested	Send an ACK if the MSU is correct	Match Suggested		-
26		-	Send a MSA Contents: <ul style="list-style-type: none"> ▪ DocumentID of MSU 	-		-
27	Send an ACK if the MSA is correct	Matched		Matched		-
29	Send a BMN Final (Match) <ul style="list-style-type: none"> ▪ DocumentID: new and unique ▪ ProcessType = withCp ▪ CNF Referenced from Step 19 ▪ BCN referenced from Step 10 	-		-		-

Step	System Under Test (Buyer)	State SUT	Test Facility (Seller)	State TS (Seller)	Test Facility (Broker)	State TS (Broker)
30		Matched		-	Send an ACK if the BMN is correct	Matched

Overview of statuses for CNF and BCN during the scenario

Step	System Under Test (Buyer)			Test Facility (Seller)	Test Facility (Broker)	
	CNF 1	CNF 2	BFI 1	CNF 3	BCN 1	BCN 2
1	Sending to CP Trade 42A					
2	Pending					
3			Valid			
4					Start Trade 47A	
5					Pending	
7						
8					Preliminary Matched	
10						Start Trade 48A
11					Amended	Pending
13						
14					Amended	

Step	System Under Test (Buyer)			Test Facility (Seller)	Test Facility (Broker)	
	CNF 1	CNF 2	BFI 1	CNF 3	BCN 1	BCN 2
16				Start Trade 43B		
17				Pending		
19		Sending to CP Trade 42B				
20	Amended	Pending				
21		Pending				
22						Preliminary Matched
23		Potential Match				
24		Match Suggested		Match Suggested		
26						
27		Matched		Matched		
29		Matched				
30						Matched

Steps 21 and 22 can be skipped, while there is a Potential Match with the CP which does not require the signalling of the “Preliminary Matched” to the Broker anymore.

Scenario: S76 – Full Broker Confirmation Matching process with CNF Cancellation (SUT = Trader (Buyer))
 Purpose: To test the full document flow of the Confirmation Matching Process **withCp** and if the documents comply with the Business Rules.
 Role: Test Facility acts as a Trader (Seller) and a Broker
 Test type: Product test

Step	System Under Test (Buyer)	State SUT	Test Facility (Seller)	State TS (Seller)	Test Facility (Broker)	State TS (Broker)
1	Send a CNF Contents: <ul style="list-style-type: none"> DocumentID: new and unique 	Sending to CP		-		-
2		Pending	Send an ACK if the CNF is correct	Pending		-
3	Create a local BFI with TotalFee = 100 EUR linked to the created CNF of <u>Step 1</u>	Valid	-	-	-	-
4		-		-	Send a BCN to Buyer <ul style="list-style-type: none"> Document complies with the Business Rules for BCN. DocumentID: new and unique <u>Same</u> contents as CNF of Buyer TotalFee = 100 EUR 	Start
5	Send an ACK if the BCN is correct	Pending		-		Pending
7	Send a BMN Preliminary Match <ul style="list-style-type: none"> DocumentID: new and unique ProcessType = <u>withCp</u> 	-		-		-

Step	System Under Test (Buyer)	State SUT	Test Facility (Seller)	State TS (Seller)	Test Facility (Broker)	State TS (Broker)
8		Preliminary Matched		-	Send an ACK if the BMN is correct	Preliminary Matched
9	Send a CAN Contents: <ul style="list-style-type: none"> ▪ DocumentID: new and unique ▪ Reference to CNF (<u>Step 1</u>) 	-		-		-
10		Cancelled	Send an ACK if the CAN is correct	Cancelled		-
11	Send a BMN Reversal <ul style="list-style-type: none"> ▪ DocumentID: new and unique ▪ ProcessType = <u>withCp</u> ▪ <u>CNF referenced from Step 1</u> 	-				-
12		Pending		-	Send an ACK if the BMN is correct	Pending
14		-		-	Send a CAN Contents: <ul style="list-style-type: none"> ▪ DocumentID: new and unique ▪ Reference to BCN (<u>Step 4</u>) 	-
15	Send an ACK if the CAN is correct	Cancelled		-		Cancelled

Overview of statuses for CNF and BCN during the scenario

	System Under Test (Buyer)		Test Facility (Broker)
Step	CNF 1	BFI 1	BCN 1
1	Sending to CP Trade 42A		
2	Pending		
3		Valid	
4			Start Trade 47A
5			Pending
6			
7	Pending		
8			Preliminary Matched
10	Cancelled		
11	Cancelled		
12			Pending
14			
15			Cancelled

Scenario: S77 – Full Broker Confirmation Matching process with BCN Cancellation (SUT = Trader (Buyer))
 Purpose: To test the full document flow of the Confirmation Matching Process **withCp** and if the documents comply with the Business Rules.
 Role: Test Facility acts as a Trader (Seller) and a Broker
 Test type: Product test

Step	System Under Test (Buyer)	State SUT	Test Facility (Seller)	State TS (Seller)	Test Facility (Broker)	State TS (Broker)
1	Send a CNF Contents: <ul style="list-style-type: none"> DocumentID: new and unique 	Sending to CP		-		-
2		Pending	Send an ACK if the CNF is correct	Pending		-
3	Create a local BFI with TotalFee = 100 EUR linked to the created CNF of <u>Step 1</u>	Valid	-	-	-	-
4		-		-	Send a BCN to Buyer <ul style="list-style-type: none"> Document complies with the Business Rules for BCN. DocumentID: new and unique <u>Same</u> contents as CNF of Buyer TotalFee = 100 EUR 	Start
5	Send an ACK if the BCN is correct	Pending		-		Pending
7	Send a BMN <u>Preliminary Match</u> <ul style="list-style-type: none"> DocumentID: new and unique ProcessType = <u>withCp</u> 	-		-		-

Step	System Under Test (Buyer)	State SUT	Test Facility (Seller)	State TS (Seller)	Test Facility (Broker)	State TS (Broker)
8		Preliminary Matched		-	Send an ACK if the BMN is correct	Preliminary Matched
10		-		-	Send a CAN (<u>BCN Cancellation</u>) to Buyer <ul style="list-style-type: none"> ▪ Document complies with the Business Rules for CAN. ▪ DocumentID: new and unique ▪ Reference to BCN in Step 4 	-
11	Send an ACK if the CAN is correct	Cancelled		-		Cancelled
13	Send a BMN <u>Reversal</u> <ul style="list-style-type: none"> ▪ DocumentID: new and unique ▪ ProcessType = <u>withCp</u> ▪ <u>CNF referenced from Step 1</u> 	-		-		-
14		Cancelled		-	Send an ACK if the BMN is correct	Cancelled
16		-		-	Send a BCN to Buyer <ul style="list-style-type: none"> ▪ Document complies with the Business Rules for BCN. ▪ DocumentID: new and unique ▪ <u>Same</u> contents as CNF of Buyer ▪ TotalFee = <u>100 EUR</u> 	Start
17	Send an ACK if the BCN is correct	Pending		-		Pending

Step	System Under Test (Buyer)	State SUT	Test Facility (Seller)	State TS (Seller)	Test Facility (Broker)	State TS (Broker)
19	Send a BMN <u>Preliminary Match</u> <ul style="list-style-type: none"> ▪ DocumentID: new and unique ▪ ProcessType = <u>withCp</u> ▪ <u>CNF referenced from Step 1</u> 	-		-		-
20		Preliminary Matched		-	Send an ACK if the BMN is correct	Preliminary Matched
22		-	Send a CNF to Buyer <ul style="list-style-type: none"> ▪ Document complies with the Business Rules for CNF. ▪ DocumentID: new and unique ▪ <u>Same</u> data as in CNF of Buyer (<u>Step 1</u>) 	Start		-
23	Send an ACK if the CNF is correct	Pending		Pending		-
25	Send a MSU Contents: <ul style="list-style-type: none"> ▪ DocumentID and DocumentVersion CNF of Buyer (<u>Step 1</u>) ▪ DocumentID and DocumentVersion CNF of Seller (<u>Step 22</u>) 	Potential Match		-		-

Step	System Under Test (Buyer)	State SUT	Test Facility (Seller)	State TS (Seller)	Test Facility (Broker)	State TS (Broker)
26		Match Suggested	Send an ACK if the MSU is correct	Match Suggested		-
28		-	Send a MSA Contents: ▪ DocumentID of MSU	-		-
29	Send an ACK if the MSA is correct	Matched		Matched		-
31	Send a BMN Final ▪ DocumentID: new and unique ▪ ProcessType = <u>withCp</u> ▪ <u>CNF referenced from Step 1</u>	-				-
32		Matched			Send an ACK if the BMN is correct	Matched

Overview of statuses for CNF and BCN during the scenario

	System Under Test (Buyer)		Test Facility (Seller)	Test Facility (Broker)	
Step	CNF 1	BFI 1	CNF 2	BCN 1	BCN 2
1	Sending to CP Trade 42A				
2	Pending				
3		Valid			
4				Start Trade 47A	
5				Pending	

	System Under Test (Buyer)		Test Facility (Seller)	Test Facility (Broker)	
Step	CNF 1	BFI 1	CNF 2	BCN 1	BCN 2
6					
7	Pending				
8				Preliminary Matched	
10					
11				Cancelled	
13	Pending				
14				Cancelled	
16					Start Trade 47A
17					Pending
19	Pending				
20					Preliminary Matched
22			Start Trade 43A		
23			Pending		
25	Potential Match				
26	Match Suggested		Match Suggested		
28					
29	Matched		Matched		
31	Matched				
32					Matched

5.3.2 Broker Confirmation Matching Process – (Trader) - Business Rules Offences

Scenario: S78 – lower and same version (Business rule BCN004)

S78.2 – Multiple agents (**Brokers**) specified (Business Rule BCN013)

Purpose: To verify the detection of an eCM field type offence and checking that it does not disturb the matching process

Role: Test Facility acts as a Trader (Seller) and a Broker

Test type: Product test

Step	System Under Test (Buyer)	State SUT	Test Facility (Seller)	State TS (Seller)	Test Facility (Broker)	State TS (Broker)
1	Send a CNF Contents: <ul style="list-style-type: none"> DocumentID: new and unique 	Sending to CP		-		-
2		Pending	Send an ACK if the CNF is correct	Pending		-
3	Create a local BFI with TotalFee = 100 EUR linked to the created CNF of <u>Step 1</u>	Valid	-	-	-	-
4		-		-	Send a BCN to Buyer <ul style="list-style-type: none"> DocumentID: new and unique <u>Same</u> contents as CNF of Buyer TotalFee = 100 EUR 	Start
5	Send an ACK if the BCN is correct	Pending		-		Pending

Step	System Under Test (Buyer)	State SUT	Test Facility (Seller)	State TS (Seller)	Test Facility (Broker)	State TS (Broker)
7	Send a BMN Preliminary Match <ul style="list-style-type: none"> DocumentID: new and unique ProcessType = <u>withCp</u> 	-		-		-
8		Preliminary Matched		-	Send an ACK if the BMN is correct	Preliminary Matched
10		-		-	Send a BCN <u>Amendment</u> to Buyer <ul style="list-style-type: none"> DocumentID: Same as in <u>Step 4</u> DocumentVersion: <u>Lower</u> as in <u>Step 4</u> <u>Same</u> contents as CNF of Buyer TotalFee = <u>100 EUR</u> 	Start
11	Send a REJ with "EFET:AmendmentError"	Failed + Preliminary Matched		-		Failed + Preliminary Matched
12		-		-	Send a BCN <u>Amendment</u> to Buyer <ul style="list-style-type: none"> DocumentID: Same as in <u>Step 4</u> DocumentVersion: <u>Same</u> as in <u>Step 4</u> <u>Same</u> contents as CNF of Buyer TotalFee = <u>100 EUR</u> 	Start
13	Send a REJ with "EFET:AmendmentError"	Failed + Preliminary Matched		-		Failed + Preliminary Matched

Step	System Under Test (Buyer)	State SUT	Test Facility (Seller)	State TS (Seller)	Test Facility (Broker)	State TS (Broker)
14		-		-	Send a BCN <u>Amendment</u> to Buyer (S78.2) <ul style="list-style-type: none"> ▪ DocumentID: Same as in <u>Step 4</u> ▪ DocumentVersion: <u>Augmented from Step 4</u> ▪ <u>Same contents as CNF of Buyer with multiple agents (Brokers) specified</u> ▪ TotalFee = <u>100 EUR</u> 	Start
15	Send a REJ with "EFET:InvalidData"	Failed + Amended		-		Failed + Amended
16		-		-	Send a BCN <u>Amendment</u> to Buyer <ul style="list-style-type: none"> ▪ DocumentID: Same as in <u>Step 4</u> ▪ DocumentVersion: <u>Augmented from Step 4</u> ▪ <u>Same contents as CNF of Buyer</u> ▪ TotalFee = <u>100 EUR</u> 	Start
17	Send an ACK if the BCN is correct	Amended + Pending				Amended + Pending

Step	System Under Test (Buyer)	State SUT	Test Facility (Seller)	State TS (Seller)	Test Facility (Broker)	State TS (Broker)
19	Send a BMN Preliminary Reversal <ul style="list-style-type: none"> ▪ DocumentID: new and unique ▪ ProcessType = <u>withCp</u> ▪ <u>BCN referenced from Step 4</u> 	-		-		-
20		Amended		-	Send an ACK if the BMN is correct	Amended
21	Send a BMN Preliminary Match <ul style="list-style-type: none"> ▪ DocumentID: new and unique ▪ ProcessType = <u>withCp</u> ▪ <u>BCN referenced from Step 16</u> 	-		-		-
22		Preliminary Matched		-	Send an ACK if the BMN is correct	Preliminary Matched
24		-	Send a CNF to Buyer <ul style="list-style-type: none"> ▪ Document complies with the Business Rules for CNF. ▪ DocumentID: new and unique ▪ <u>Same</u> data as in CNF of Buyer (<u>Step 1</u>) 	Start		-
25	Send an ACK if the CNF is correct	Pending		Pending		-

Step	System Under Test (Buyer)	State SUT	Test Facility (Seller)	State TS (Seller)	Test Facility (Broker)	State TS (Broker)
27	Send a MSU Contents: <ul style="list-style-type: none"> ▪ DocumentID and DocumentVersion CNF of Buyer (Step 1) ▪ DocumentID and DocumentVersion CNF of Seller (Step 24) 	Potential Match		-		-
28		Match Suggested	Send an ACK if the MSU is correct	Match Suggested		-
30		-	Send a MSA Contents: <ul style="list-style-type: none"> ▪ DocumentID of MSU 	-		-
31	Send an ACK if the MSA is correct	Matched		Matched		-
33	Send a BMN Final (Match) <ul style="list-style-type: none"> ▪ DocumentID: new and unique ▪ ProcessType = withCp ▪ Reference to BCN from Step 16 	-		-		-
34		Matched		-	Send an ACK if the BMN is correct	Matched

Overview of statuses for CNF and BCN during the scenario

Step	System Under Test (Buyer)		Test Facility (Seller)	Test Facility (Broker)				
	CNF 1	BFI 1	CNF 2	BCN 1	BCN 2	BCN 3	BCN 4	BCN 5
1	Sending to CP Trade 42A							
2	Pending							
3		Valid						
4				Start Trade 47A				
5				Pending				
7	Pending							
8				Preliminary Matched				
10					Start Trade 47A			
11				Preliminary Matched	Failed			
12						Start Trade 47A		
13						Failed		
14							Start Trade 47A	
15							Failed	
16								Start Trade 47A
17				Amended	Amended	Amended	Amended	Pending

5.3.3 Broker Confirmation Matching Process – (Trader) - eCM Field Type Offences

This paragraph describes test scenario's, which cause eCM Field offences which will not be detected by the schema. The outcome of each scenario is still a match. This makes it possible to check that the offence is detected and does not disturb the matching process.

Scenario: S80 – PriceType with 10 decimal places (eCM field type rule in table A.2) Price within Trade Time Interval Quantity contains 5.1234567891
 Purpose: To verify the detection of an eCM field type offence and checking that it does not disturb the matching process
 Role: Test Facility acts as a Trader (Seller) and a Broker
 Test type: Product test

Step	System Under Test (Buyer)	State SUT	Test Facility (Seller)	State TS (Seller)	Test Facility (Broker)	State TS (Broker)
1	Send a CNF Contents: <ul style="list-style-type: none"> DocumentID: new and unique 	Sending to CP		-		-
2		Pending	Send an ACK if the CNF is correct	Pending		-
3	Create a local BFI with TotalFee = 100 EUR linked to the created CNF of <u>Step 1</u>	Valid	-	-	-	-
4		-		-	Send a BCN to Buyer <ul style="list-style-type: none"> DocumentID: new and unique <u>Same</u> contents as CNF of Buyer Containing <u>numbers not valid according length</u> (Price within Trade Time Interval Quantity contains value 5.1234567891) TotalFee = 100 EUR 	Start

Step	System Under Test (Buyer)	State SUT	Test Facility (Seller)	State TS (Seller)	Test Facility (Broker)	State TS (Broker)
5	Send a REJ with "EFET:InvalidData"	Failed		-		Failed
6		-		-	Send a BCN to Buyer <ul style="list-style-type: none"> ▪ DocumentID: new and unique ▪ <u>Same</u> contents as CNF of Buyer ▪ TotalFee = 100 EUR 	Start
7	Send an ACK if the BCN is correct	Pending + Amended		-		Pending + Amended
9	Send a BMN Preliminary Match <ul style="list-style-type: none"> ▪ DocumentID: new and unique ▪ ProcessType = <u>withCp</u> 	-		-		-
10		Preliminary Matched		-	Send an ACK if the BMN is correct	Preliminary Matched
12		-	Send a CNF to Buyer <ul style="list-style-type: none"> ▪ Document complies with the Business Rules for CNF. ▪ DocumentID: new and unique ▪ <u>Same</u> data as in CNF of Buyer (<u>Step 1</u>) 	Start		-
13	Send an ACK if the CNF is correct	Pending		Pending		-

Step	System Under Test (Buyer)	State SUT	Test Facility (Seller)	State TS (Seller)	Test Facility (Broker)	State TS (Broker)
15	Send a MSU Contents: <ul style="list-style-type: none"> ▪ DocumentID and DocumentVersion CNF of Buyer (Step 1) ▪ DocumentID and DocumentVersion CNF of Seller (Step 12) 	Potential Match		-		-
16		Match Suggested	Send an ACK if the MSU is correct	Match Suggested		-
18		-	Send a MSA Contents: <ul style="list-style-type: none"> ▪ DocumentID of MSU 	-		-
19	Send an ACK if the MSA is correct	Matched		Matched		-
21	Send a BMN Final (Match) <ul style="list-style-type: none"> ▪ DocumentID: new and unique ▪ ProcessType = <u>withCp</u> 	-		--		-
22		Matched		-	Send an ACK if the BMN is correct	Matched

Overview of statuses for CNF and BCN during the scenario

	System Under Test (Buyer)		Test Facility (Seller)		
Step	CNF 1	BFI 1	CNF 2	BCN 1	BCN 2
1	Sending to CP Trade 42A				
2	Pending				
3		Valid			
4				Start Trade 47A	
5				Failed	
6					Start Trade 47A
7				Amended	Pending
9	Pending				
10					Preliminary Matched
12			Start Trade 43A		
13			Pending		
15	Potential Match				
16	Match Suggested		Match Suggested		
18					
19	Matched		Matched		
21	Matched				
22					Matched

5.3.4 **Broker Confirmation Matching Process – (Trader) - Commodities and markets**

This paragraph describes test scenario's, which validate the different allowed commodities and markets. The outcome of each scenario is still a match. This makes it possible to check that the offence is detected and does not disturb the matching process.

Testing is normally the combination of the following three aspects:

- Commodity
- Market
- Scenario

This then becomes a three dimensional matrix describing all the test possibilities. We only make a selection of this matrix to limit the amount of tests.

We assume that most parties will support the Commodities Gas and Power for the Markets UK, BE, DE and NL. From these 16 combinations we have chosen 8 of them to have a good representation of the real-life situations later on.

Also EUA Trades are part of the tests.

Scenario: S81 – Gas commodity – UK – FOR

Purpose: To test the full document flow of the Confirmation Matching Process **withCp** and if the documents comply with the Business Rules.

Role: Test Facility acts as a Trader (Seller) and a Broker

Test type: Product test

Step	System Under Test (Buyer)	State SUT	Test Facility (Seller)	State TS (Seller)	Test Facility (Broker)	State TS (Broker)
1	Send a CNF Contents: <ul style="list-style-type: none"> ▪ DocumentID: new and unique ▪ Commodity = <u>Gas</u> ▪ Market = <u>UK</u> ▪ TransactionType = <u>FOR</u> 	Sending to CP		-		-
2		Pending	Send an ACK if the CNF is correct	Pending		-
3	Create a local BFI with TotalFee = 100 EUR linked to the created CNF of <u>Step 1</u>	-	-	-	-	-
4		-		-	Send a BCN to Buyer <ul style="list-style-type: none"> ▪ Document complies with the Business Rules for BCN. ▪ DocumentID: new and unique ▪ <u>Same</u> contents as CNF of Buyer ▪ TotalFee = 100 EUR 	Start
5	Send an ACK if the BCN is correct	Pending		-		Pending

Step	System Under Test (Buyer)	State SUT	Test Facility (Seller)	State TS (Seller)	Test Facility (Broker)	State TS (Broker)
7	Send a BMN Preliminary Match <ul style="list-style-type: none"> DocumentID: new and unique ProcessType = <u>withCp</u> 	-		-		-
8		Preliminary Matched		-	Send an ACK if the BMN is correct	Preliminary Matched
10		-	Send a CNF to Buyer <ul style="list-style-type: none"> Document complies with the Business Rules for CNF. DocumentID: new and unique <u>Same</u> data as in CNF of Buyer (<u>Step 1</u>) 	Start		-
11	Send an ACK if the CNF is correct	Pending		Pending		-
13	Send a MSU Contents: <ul style="list-style-type: none"> DocumentID and DocumentVersion CNF of Buyer (<u>Step 1</u>) DocumentID and DocumentVersion CNF of Seller (<u>Step 10</u>) 	Potential Match		-		-
14		Match Suggested	Send an ACK if the MSU is correct	Match Suggested		-

Step	System Under Test (Buyer)	State SUT	Test Facility (Seller)	State TS (Seller)	Test Facility (Broker)	State TS (Broker)
16		-	Send a MSA Contents: <ul style="list-style-type: none"> ▪ DocumentID of MSU 	-		-
17	Send an ACK if the MSA is correct	Matched		Matched		-
19	Send a BMN Final (Match) <ul style="list-style-type: none"> ▪ DocumentID: new and unique ▪ ProcessType = <u>withCp</u> 	-		-		-
20		Matched		-	Send an ACK if the BMN is correct	Matched

Overview of statuses for CNF and BCN during the scenario

	System Under Test (Buyer)		Test Facility (Seller)	Test Facility (Broker)
Step	CNF 1	BFI 1	CNF 2	BCN 1
1	Sending to CP Trade 41C			
2	Pending			
3		Valid		
4				Start Trade 45C
5				Pending
7	Pending			
8				Preliminary Matched
10			Start Trade 44C	
11			Pending	
13	Potential Match			
14	Match Suggested		Match Suggested	
16				
17	Matched		Matched	
19				
20				Matched

Scenario: S201 – Full Broker Confirmation Matching process with BFI amendment (SUT = Trader (Seller))
 Purpose: To test the full document flow of the Confirmation Matching Process **withCp** and if the documents comply with the Business Rules.
 Role: Test Facility acts as a Trader (Buyer) and a Broker
 Test type: Product test

Step	System Under Test (Seller)	State SUT	Test Facility (Buyer)	State TS (Seller)	Test Facility (Broker)	State TS (Broker)
1	Create a local BFI with TotalFee = 100 EUR	Valid	-	-	-	-
3	Send a CNF Contents: <ul style="list-style-type: none"> ▪ DocumentID: new and unique 	Sending to CP		-		-
4		Pending	Send an ACK if the CNF is correct	Pending		-
6		-	Send a CNF to Seller <ul style="list-style-type: none"> ▪ Document complies with the Business Rules for CNF. ▪ DocumentID: new and unique ▪ <u>Same</u> data as in CNF of Seller (<u>Step 3</u>) 	Start		-
7	Send an ACK if the CNF is correct	Pending		Pending		-

Step	System Under Test (Seller)	State SUT	Test Facility (Buyer)	State TS (Seller)	Test Facility (Broker)	State TS (Broker)
8		-		-	Send a BCN to Seller <ul style="list-style-type: none"> ▪ Document complies with the Business Rules for BCN. ▪ DocumentID: new and unique ▪ <u>Same</u> contents as CNF of Buyer, AgreementField differs from CNF ▪ TotalFee = 50 EUR 	Start
9	Send an ACK if the BCN is correct	Pending		-		Pending
10		-	Send a MSU Contents: <ul style="list-style-type: none"> ▪ DocumentID and DocumentVersion CNF of Seller (<u>Step 3</u>) ▪ DocumentID and DocumentVersion CNF of Buyer (<u>Step 6</u>) 	Potential		-
11	Send an ACK if the MSU is correct	Match Suggested		Match Suggested		-
13	Send a MSA Contents: <ul style="list-style-type: none"> ▪ DocumentID of MSU 	-		-		-
14		Matched	Send an ACK if the MSA is correct	Matched		-

Step	System Under Test (Seller)	State SUT	Test Facility (Buyer)	State TS (Seller)	Test Facility (Broker)	State TS (Broker)
15	Create a local BFI with TotalFee = 50 EUR linked to the created CNF of <u>Step 3</u>	Valid	-	-	-	-
17	Send a BMN Final (Match) <ul style="list-style-type: none"> ▪ DocumentID: new and unique ▪ ProcessType = <u>withCp</u> 	-		-		-
18		Matched		-	Send an ACK if the BMN is correct	Matched

Overview of statuses for CNF and BCN during the scenario

	System Under Test (Seller)			Test Facility (Buyer)	Test Facility (Broker)
Step	CNF 1	BFI 1	BFI 2	CNF 2	BCN 1
1		Valid			
3	Sending to CP Trade 41A				
4	Pending				
6				Start Trade 44A	
7				Pending	
8					Start Trade 45B
9					Pending
10				Potential	
11	Match Suggested			Match Suggested	
13					
14	Matched			Matched	
15		Amended	Valid		
17					
18					Matched

Scenario: S202 – Full Broker Confirmation Matching process with CP Stop / Broker Start (SUT = Trader (Seller))
 Purpose: To test the full document flow of the Confirmation Matching Process and if the documents comply with the Business Rules.
 Role: Test Facility acts as a Trader (Buyer) and a Broker
 Test type: Product test

Step	System Under Test (Seller)	State SUT	Test Facility (Buyer)	State TS (Seller)	Test Facility (Broker)	State TS (Broker)
1	Create a local BFI with TotalFee = 100 EUR	Valid	-	-	-	-
3	Send a CNF Contents: <ul style="list-style-type: none"> ▪ DocumentID: new and unique ▪ Receiver = CP 	Sending to CP		-		-
4		Pending	Send an ACK if the CNF is correct	Pending		-
6		-		-	Send a BCN to Seller <ul style="list-style-type: none"> ▪ Document complies with the Business Rules for BCN. ▪ DocumentID: new and unique ▪ <u>Same</u> contents as CNF of Seller ▪ TotalFee = 100 EUR 	Start
7	Send an ACK if the BCN is correct	Pending		-		Pending
9	Send a BMN Preliminary Match <ul style="list-style-type: none"> ▪ DocumentID: new and unique ▪ ProcessType = <u>withCp</u> 	-		-		-
10		Preliminary Matched		-	Send an ACK if the BMN is correct	Preliminary Matched

Step	System Under Test (Seller)	State SUT	Test Facility (Buyer)	State TS (Seller)	Test Facility (Broker)	State TS (Broker)
11	<p>Send a CNF amendment</p> <p>Contents:</p> <ul style="list-style-type: none"> ▪ DocumentID: Same as in <u>Step 3</u> ▪ DocumentVersion: Augmented from <u>Step 3</u> ▪ <u>Same data except for Receiver = Broker</u> <p>Note that this document is not sent out and that the state changes immediately to “Pending”.</p>	Pending		-		-
13	<p>Send a BMN Reversal</p> <ul style="list-style-type: none"> ▪ DocumentID: new and unique ▪ ProcessType = <u>withCp</u> 	-		-		-
14		Pending		-	Send an ACK if the BMN is correct	Pending
15	<p>Send a BMN Final (Match)</p> <ul style="list-style-type: none"> ▪ DocumentID: new and unique ▪ ProcessType = <u>withoutCp</u> 	-		-		-
16		Matched		-	Send an ACK if the BMN is correct	Matched

Overview of statuses for CNF and BCN during the scenario

	System Under Test (Seller)			Test Facility (Buyer)	Test Facility (Broker)
Step	CNF 1	CNF 2	BFI 1	CNF 2	BCN 1
1			Valid		
3	Sending to CP Trade 41A				
4	Pending				
6					Start Trade 45A
7					Pending
9					
10					Preliminary Matched
11	Amended	Pending Trade 41D			
13					
14					Pending
15					
16					Matched

Scenario: T203 – Full Broker Confirmation Matching process with Broker Change in Amendment (SUT = Trader (Seller))
 Purpose: To test the full document flow of the Confirmation Matching Process and if the documents comply with the Business Rules.
 Role: Test Facility acts as a Trader (Buyer) and a Broker
 Test type: Product test

Step	System Under Test (Seller)	State SUT	Test Facility (Buyer)	State TS (Seller)	Test Facility (Broker)	State TS (Broker)
1		-		-	Send a BCN to Seller <ul style="list-style-type: none"> ▪ Document complies with the Business Rules for BCN. ▪ DocumentID: new and unique not containing "BCN_" ▪ <u>Same</u> contents as CNF of Buyer (Step 15) ▪ TotalFee = <u>100 EUR</u> 	Start
2	Send a REJ with "EFET:InvalidData"	Failed		-		Failed
3		-		-	Send a BCN to Seller <ul style="list-style-type: none"> ▪ Document complies with the Business Rules for BCN. ▪ DocumentID: new and unique ▪ <u>Same</u> contents as CNF of Buyer (Step 15) ▪ TotalFee = <u>100 EUR</u> 	Start
4	Send an ACK if the BCN is correct	Pending + Amended		-		Pending + Amended

Step	System Under Test (Seller)	State SUT	Test Facility (Buyer)	State TS (Seller)	Test Facility (Broker)	State TS (Broker)
6	Create a local BFI with TotalFee = 100 EUR	Valid	-	-	-	-
8	Send a CNF Contents: <ul style="list-style-type: none"> ▪ DocumentID: new and unique ▪ Same data as in Step 3 ▪ <u>Other</u> Broker involved than in <u>Step 1</u> 	Sending to CP		-		-
9		Pending	Send an ACK if the CNF is correct	Pending		-
10	Send a CNF Contents: <ul style="list-style-type: none"> ▪ DocumentID: Same as in <u>Step 8</u> ▪ DocumentVersion: Augmented From <u>Step 8</u> ▪ Same data as in Step 3 ▪ <u>Same</u> Broker involved as in <u>Step 1</u> 	Sending to CP		-		-
11		Pending + Amended	Send an ACK if the CNF is correct	Pending + Amended		-
12	Send a BMN Preliminary Match <ul style="list-style-type: none"> ▪ DocumentID: new and unique ▪ ProcessType = <u>withCp</u> 	-		-		-

Step	System Under Test (Seller)	State SUT	Test Facility (Buyer)	State TS (Seller)	Test Facility (Broker)	State TS (Broker)
13		Preliminary Matched		-	Send an ACK if the BMN is correct	Preliminary Matched
15		-	Send a CNF to Seller <ul style="list-style-type: none"> ▪ Document complies with the Business Rules for CNF. ▪ DocumentID: new and unique ▪ <u>Same</u> data as in CNF of Seller (<u>Step 10</u>) 	Start		-
16	Send an ACK if the CNF is correct	Pending		Pending		-
17		-	Send a MSU Contents: <ul style="list-style-type: none"> ▪ DocumentID and DocumentVersion CNF of Seller (<u>Step 10</u>) ▪ DocumentID and DocumentVersion CNF of Buyer (<u>Step 15</u>) 	Potential		-
18	Send an ACK if the MSU is correct	Match Suggested		Match Suggested		-
20	Send a MSA Contents: <ul style="list-style-type: none"> ▪ DocumentID of MSU ▪ 	-		-		-

Step	System Under Test (Seller)	State SUT	Test Facility (Buyer)	State TS (Seller)	Test Facility (Broker)	State TS (Broker)
21		Matched	Send an ACK if the MSA is correct	Matched		-
22	Send a BMN Final (Match) <ul style="list-style-type: none"> ▪ DocumentID: new and unique ▪ ProcessType = <u>withCp</u> 	-		-		-
23		Matched		-	Send an ACK if the BMN is correct	Matched

Overview of statuses for CNF and BCN during the scenario

	System Under Test (Seller)			Test Facility (Buyer)	Test Facility (Broker)	
Step	CNF 1	CNF 2	BFI 1	CNF 2	BCN 1	BCN 2
1					Start Trade 45A	
2					Failed	
3						Start Trade 45A
4					Amended	Pending
6			Valid			
8	Sending to CP Trade 41A					
9	Pending					
10		Sending to CP Trade 41A				
11	Amended	Pending				
12						
13						Preliminary Matched
15				Start Trade 44A		
16				Pending		
17				Potential		
18		Match Suggested		Match Suggested		
20						

Step	System Under Test (Seller)			Test Facility (Buyer)	Test Facility (Broker)	
	CNF 1	CNF 2	BFI 1	CNF 2	BCN 1	BCN 2
21		Matched		Matched		
22						
23						Matched