Test protocol for Conversion service

The test protocol relates to the following standard:

|  |  |  |  |
| --- | --- | --- | --- |
| Standard’s name ENG | Standard’s name DK | **Version** | **Type** |
| Standard: Conversion service | Konverteringsløsning | 1.0.0 | HL7 FHIR / OIOXML |

|  |  |  |  |
| --- | --- | --- | --- |
| **Versioning** | | | |
| **Version** | **Initials** | **Date** | **Description** |
| 1.0 | TMS/KML | November 2024 | First release |
| 1.1 | KML/SKS/RCH | January 2025 | A note is added, stating that the files must be saved instead of sent at the end of test steps. |
| 1.2 | RCH/SKS | January 2025 | The test steps related to converting from Edifact to FHIR have been removed, as they are out of scope. Test files have been provided for the applicable test steps, and a clear distinction has been established between the test steps and the expected results. |

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# Introduction

This is a test protocol for Conversion service.

All documentation concerning the conversion service will be the subject of testing, and the test protocol will be continuously updated to reflect the requirements in the best way possible.

The conversion service converts to/from FHIR CareCommunication v. 3.0 and XDIS91 as well as FHIR Acknowledgement and XCTL.

## Purpose

The test protocol forms the basis for the tests, which must ensure that system under test (SUT) complies with the established rules and requirements for the standard. The test protocol also forms the basis for the self-test that vendor carries out prior to a live test.

## Prerequisites for live test

The following prerequisites must be met prior to the live test:

1. The vendor has read the standard documentation, cf. the [background material](#_Baggrundsmaterialer_1).
2. The vendor has performed [self-test](#_Dokumentation_af_egentest), approved by MedCom.
3. The vendor has created [relevant test persons](#_Testeksempler_og_testpersoner) in SUT.
4. The vendor uses the same version of SUT during self-test and live test.

## Documentation of self-test

**Self-test**

The self-test is documented by the vendor completing this test protocol.

For self-tests, only the following column must be completed by the vendor:

* [Current result]: is filled in with the results of the self-test and relevant descriptions.

Other columns are reserved for MedCom.

**During the self-test the vendor must document the test results by saving relevant files and screen dumps, and subsequently send these in a combined ZIP file (together with the completed test protocol) to** [**fhir@medcom.dk**](mailto:fhir@medcom.dk)**.**

* Standard name
* The number of the relevant test step
* Consecutive letter
* File type

Eksempel: ConversionService\_3.4\_A.xml or ConversionService\_2.2\_B.png

## Background materials

| **Name** | **Version[[1]](#footnote-2)** | **Link/reference** | **Description** |
| --- | --- | --- | --- |
| Documentation site |  | <https://medcomdk.github.io/dk-medcom-carecommunication/#3-conversion-service> | The overall site for the conversion service |
| Use cases |  | <https://medcomdk.github.io/dk-medcom-carecommunication/#31-use-cases-and-rules> | Use cases and rules describing when to convert a message and which rules must be followed during the conversion. |
| Mapping of messages |  | <https://medcomdk.github.io/dk-medcom-carecommunication/#32-mapping-of-messages> | A mapping table of the messages |
| Governance for MedCom FHIR |  | <https://medcomdk.github.io/MedCom-FHIR-Communication/> | Governance for MedCom’s FHIR standards, which describes general rules for all MedCom standards and specific rules for this standard, as well as for sending the message |
| CareCommunication | 4.0 | <https://medcomdk.github.io/dk-medcom-carecommunication> | Documentation site with references to all relevant documentation, including:   * Clinical guidelines for application (Sundhedsfaglige retningslinjer for anvendelse) * Use cases * Technical specifications |
| XDIS91 |  | <https://svn.medcom.dk/svn/releases/Standarder/Den%20gode%20korrespondance/XML/> | Documentation site regarding XDIS91 |
| Acknowledgement | 2.0 | <https://medcomdk.github.io/dk-medcom-acknowledgement> | Documentation site with references to all relevant documentation, including:   * Use cases * Technical specifications |
| XCTL |  | <https://svn.medcom.dk/svn/releases/Standarder/Den%20gode%20CONTRL/XML/> | Documentation site regarding XCTL |
| VANSEnvelope | 1.0 | <https://svn.medcom.dk/svn/releases/Standarder/Den%20gode%20VANSEnvelope/Dokumentation/>  FHIR specific values in the VANSEnvelope: <https://medcomdk.github.io/MedCom-FHIR-Communication/assets/documents/FHIRMessages_NetworkEnvelopes_EN.html> | The overall site for the VANSEnvelope including relevant documentation |

## Test examples and test persons

|  |  |  |
| --- | --- | --- |
| **Name** | **Link/reference** | **Description** |
| Test examples /FHIR example files | <https://medcomdk.github.io/dk-medcom-carecommunication/#3-conversion-service> | Includes test examples used during the test and certification and an overview of all these. |
| Overview of the test persons | <https://www.medcom.dk/opslag/koder-tabeller-ydere/tabeller/nationale-test-cpr-numre> | Overview of national test personal identification number (DA: CPR-nummer), that can be used during test.  Note: During test and certification, the vendor must be able to use any of the test persons on the list. |

## Test tool

|  |  |  |
| --- | --- | --- |
| **Navne** | **Link/reference** | **Description** |
| FHIR-server with MedCom profiles | <https://fhir.medcom.dk/> | Public server that validates against MedCom's FHIR profiles. It is permitted to use the server for testing the upload/download of FHIR resources. |
| TouchStone | <https://touchstone.aegis.net/touchstone/> | Test tool for testing the FHIR standard.  The vendor can get access to TouchStone as an organisation - either through a license that MedCom supplies (inquiry at [fhir@medcom.dk](mailto:fhir@medcom.dk)), or a license that the supplier has acquired itself.  Find [instructions for TouchStone](https://medcomdk.github.io/MedComLandingPage/assets/documents/TouchStoneGettingStarted.html) here |
| TouchStone test scripts for CareCommunication | [https://touchstone.aegis.net/touchstone/carecommunication](https://touchstone.aegis.net/touchstone/testdefinitions?selectedTestGrp=/FHIRSandbox/MedCom/CareCommunication/v400-send/Send&activeOnly=false&contentEntry=TEST_SCRIPTS) | Test scripts relevant for the standard. These may be run, and may be used during development, but this is not a requirement.  Find [instructions for TouchStone](https://medcomdk.github.io/MedComLandingPage/assets/documents/TouchStoneGettingStarted.html) here |
| TouchStone test scripts for Acknowledgement | [https://touchstone.aegis.net/touchstone/acknowledgement](https://touchstone.aegis.net/touchstone/testdefinitions?selectedTestGrp=/FHIRSandbox/MedCom/Acknowledgement/v200-send&activeOnly=false&contentEntry=TEST_SCRIPTS) | Test scripts relevant for the standard. These may be run, and may be used during development, but this is not a requirement.  Find [instructions for TouchStone](https://medcomdk.github.io/MedComLandingPage/assets/documents/TouchStoneGettingStarted.html) here |

## Test Result

The result for each test step is categorized based on the table below:

| **Marking** | **F1** | **F2** | **F3** | **F4** | **Ok** | **Not relevant** |
| --- | --- | --- | --- | --- | --- | --- |
| **Evaluation** | **Critical** | **Serious** | **Significant** | **Less significant** | **Approved** | **Not an error** |

To get the test and certification approved, the test protocol must consist exclusively of [F4] as well as [OK] results. All [F1], [F2] and [F3] must, therefore, be fixed prior to final approval.

For further information, please read [MedCom’s test og certification](#_Baggrundsmaterialer_2).

# Vendor, system under test (SUT) and test result information

## Information about the vendor

This table must be completed by **the vendor** prior to the test.

|  |  |
| --- | --- |
| Company | Completed by vendor |
| Address | Completed by vendor |
| Contact person | Completed by vendor |
| Telephone | Completed by vendor |
| E-mail | Completed by vendor |

## Information about system under test (SUT)

This table must be completed by **the vendor** prior to the test.

|  |  |
| --- | --- |
| System | Completed by vendor |
| Version | Completed by vendor |
| Description | Completed by vendor |
| Test type | Self-test  Final test/certification |

## Information about the test result

Note: This table must be completed by MedCom when the test has been completed.

|  |  |
| --- | --- |
| Test date | 2023-01-01 |
| Test location | Completed by MedCom |
| Approved | Yes  No |
| Remarks | Completed by MedCom |
| Carried out by | The name of the MedCom responsible (initials) for this test. |

# The test

This section describes the requirements which SUT must meet before final approval.

The test is divided into two sections:

1. Test of requirements for content and flow/workflows, including received receipts
2. Test of technical requirements

Test participants will be asked to complete tests as described in the tables.

**OBS:**

* **The test EAN numbers (da: testlokationsnumre) used in the test as the sender and receiver of a CareCommunication must be manually created in the VANS system if an online lookup in SOR is not performed and a local copy is used instead. This is because local copies do not contain test location numbers.**
* **It is important that no files are sent to actual receivers in production during the test.**
* **In FHIR, systems need to be robust and capable of handling incoming bundles that may vary in structure while still being valid. This means that resources within a bundle can appear in different orders or formats, and the receiving system should be able to process them correctly without assuming a fixed sequence or structure.**
* **It is allowed to send CareCommunications in both XML and JSON format.**

## Documentation of the test

**Documentation of the test**

As valid documentation, the test participant or test manager must document completion by continuous screen dumps (.png/.jpeg) and/or files/log files (.xml/.json). **Before the test, it is agreed on who is responsible for this.**

The following applies:

* The files must be viewable in a standard tool and must not require further processing by MedCom
* All files and screen dumps must be named with:
  + Standard name
  + The number of the relevant test step
  + Consecutive letter
  + File type

Example: ConversionService\_3.4\_A.xml or ConversionService \_2.2\_B.png

If the vendor has documented the test themselves, the files must be sent in a ZIP file to [fhir@medcom.dk](mailto:fhir@medcom.dk).

## Test of requirements for content and flow/workflows

The purpose of these tests is to ensure that the standard is implemented with a satisfactory quality, i.e. that implementation meets the business requirements for flow and content as described in the [use case-material](#_Baggrundsmaterialer_2). These test steps are mainly for testing the system of the conversion service.

The table below reflects the use cases that are tested in relation to content and flow/workflows. The table also shows which [example fil](#_Testeksempler_og_testpersoner)es must be loaded in connection with each test step.

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| [**Use case**](#_Baggrundsmaterialer_2) | **Description [ENG]** | **Description [DK]** | **Section** | **Example file [TBD]** |
| R1 | Receive a message and check receiver capabilities | Modtag en meddelelse og kontroller modtager | 3.2.1 |  |
| R1.A1 | Receive a CareCommunication with attachments | Modtag en CareCommunication med bilag | 3.2.2 |  |
| R1.A2 | Receive a XDIS91 with attachments | Modtag en XDIS91 med bilag | 3.2.3 |  |
| S1 | Send a CareCommunication | Afsend en CareCommunication | 3.2.4 |  |
| S1.A1 | Send a CareCommunication with attachments | Afsend en CareCommunication med bilag | 3.2.5  3.2.6 |  |
| S1.A2 | XBIN01 is not received within 60 min | XBIN01 modtages ikke indenfor 60 min | 3.2.7 |  |
| S1.A3 | XBIN01 is received, but XDIS91 is not received within 60 min. | XBIN01 er modtaget, men XDIS91 modtages ikke indenfor 60 min | 3.2.8 |  |
| S1.A4 | XBIN01 contains non-permitted filetypes | XBIN01 indeholder ikke-tilladt filtype | 3.2.9 |  |
| S2 | Send an XDIS91 | Afsend en XDIS91 | 3.2.10 |  |
| S2.A1 | Send an XDIS91 and XBIN01 | Afsend en XDIS91 og XBIN01 | 3.2.11  3.2.12 |  |
| S2.A2 | Send a reply or forwarding | Afsend en besvarelse eller videresendelse | 3.2.13 |  |
| S3 | Send an Acknowledgement | Afsend en Acknowledgement | 3.2.14 |  |
| S4 | Send an XCTL | Afsend en XCTL | 3.2.15 |  |

*Tabel 1: Overview of use cases being tested.*

### R1: Receive a message and check receiver capabilities

| **Test step #** | **Action** | **Test data** | **Expected result** | **Actual result** | **MedCom assessment** |
| --- | --- | --- | --- | --- | --- |
|  | Receive a communication message of the type FHIR (load test data). | ConSer\_CC\_01\_reply | A message of the type FHIR is received. |  | Choose |
|  | Demonstrate that it is mandatory to check the VANSEnvelope to identify the message type. |  | Message type is identified. |  | Choose |
|  | Demonstrate that it is mandatory to check the capabilities of the receiver of the message in SOR or a local copy of SOR. |  | The capabilities of the receiver of the message are identified after look-up in SOR or in a local copy. |  | Choose |
|  | Demonstrate that the SUT identifies a need for conversion of the message. |  | The message must be converted before the message is ready to be sent to receiver. |  | Choose |
| **Receive a CareCommunication (receiver can receive a XDIS91)** | | | | | |
|  | Receive a communication message of the type CareCommunication. | CC\_2  ConSer\_CC\_02 | A message is received. |  | Choose |
|  | Demonstrate that the SUT checks the VANSEnvelope to identify the message type. |  | Message type is a FHIR CareCommunication. |  | Choose |
|  | Demonstrate that the SUT checks the capabilities of the receiver of the message in SOR or a local copy of SOR.  Receiver can receive a XDIS91 message. |  | Receiver can receive a XDIS91 after look-up in SOR or a local copy. |  | Choose |
| **Receive a CareCommunication (receiver can receive a CareCommunication)** | | | | | |
|  | Receive a communication message of the type CareCommunication. | ConSer\_CC\_03 | A message is received. |  | Choose |
|  | Demonstrate that the SUT checks the VANSEnvelope to identify the message type. |  | Message type is a FHIR CareCommunication. |  | Choose |
|  | Demonstrate that the SUT checks the capabilities of the receiver of the message in SOR or a local copy of SOR.  Receiver can receive a CareCommunication message. |  | Receiver can receive a CareCommunication after look-up in SOR or a local copy. |  | Choose |
| **Receive a XDIS91 (receiver can receive a CareCommuncation)** | | | | | |
|  | Receive a communication message of the type XDIS91. | ConSer\_XDIS91\_01 | A message is received. |  | Choose |
|  | Check the VANSEnvelope to identify the message type. |  | Message type is a XDIS91. |  | Choose |
|  | Check the capabilities of the receiver of the message in SOR or a local copy of SOR.  Receiver can receive a CareCommunication message. |  | Receiver can receive a CareCommunication after look-up in SOR or a local copy. |  | Choose |
| **Receive a XDIS91 (receiver can receive a XDIS91)** | | | | | |
|  | Receive a communication message of the type XDIS91. | ConSer\_XDIS91\_02 | A message is received. |  | Choose |
|  | Check the VANSEnvelope to identify the message type. |  | Message type is a XDIS91. |  | Choose |
|  | Check the capabilities of the receiver of the message in SOR or a local copy of SOR.  Receiver can receive a XDIS91 message. |  | Receiver can receive a CareCommunication after look-up in SOR or a local copy. |  | Choose |

### R1.A1: Receive a CareCommunication with attachments

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Test step #** | **Action** | **Test data** | **Expected result** | **Actual result** | **MedCom assessment** |
| Receiver can receive XBIN01 | | | | | |
|  | Receive a communication message of the type CareCommunication including attachment. | ConSer\_CC\_02\_attachment | A message is received. |  | Choose |
|  | Demonstrate that the SUT checks the VANSEnvelope to identify the message type. |  | Message type is a FHIR CareCommunication. |  | Choose |
|  | Demonstrate that the SUT checks the capabilities of the receiver of the message in SOR or a local copy of SOR. |  | Receiver can receive a XDIS91 after look-up in SOR or a local copy. |  | Choose |
|  | Demonstrate that the SUT checks the capabilities of the receiver of the attachment in SOR or a local copy of SOR. |  | Receiver can receive a XBIN01 (or MedBin) after look-up in SOR or a local copy. |  | Choose |
|  | The SUT has identified a need for conversion of the CareCommunication with attachment. |  | The CareCommunication with attachment must be converted before the message is ready to be sent to receiver. |  | Choose |
| Receiver cannot receive XBIN01 | | | | | |
|  | Receive a communication message of the type CareCommunication including attachment. | ConSer\_CC\_03\_attachment | A message is received. |  | Choose |
|  | Demonstrate that the SUT checks the VANSEnvelope to identify the message type. |  | Message type is a FHIR CareCommunication. |  | Choose |
|  | Demonstrate that the SUT checks the capabilities of the receiver of the message in SOR or a local copy of SOR. |  | Receiver can receive an XDIS91 after look-up in SOR or a local copy. |  | Choose |
|  | Demonstrate that the receiver **cannot** receive a XBIN01 (or MedBin) message. |  | Receiver **cannot** receive a XBIN01 after look-up in SOR or a local copy. |  | Choose |
|  | Demonstrate that the conversion service creates a negative Acknowledgement including a reason for the negative receipt (cf. [section 4.4 in use case document](https://medcomdk.github.io/dk-medcom-carecommunication/assets/UseCases-ConversionService.pdf)). |  | A negative Acknowledgement is created and ready to be sent.  Save file for documentation.  *Note: Do not actually send files in production during test in this protocol.* |  | Choose |

### R1.A2: Receive an XDIS91 with attachments

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Test step #** | **Action** | **Test data** | **Expected result** | **Actual result** | **MedCom assessment** |
|  | Receive a communication message of the type XDIS91 and XBIN01. | ConSer\_XDIS91\_03\_Xdis91  ConSer\_XDIS91\_03\_XBIN | Two messages are received. |  | Choose |
|  | Demonstrate that the SUT checks the VANSEnvelope to identify the message types. |  | Message type is a XDIS91 and XBIN01. |  | Choose |
|  | Demonstrate that the SUT checks the capabilities of the receiver of the message in SOR or a local copy of SOR. |  | Receiver can receive a CareCommunication after look-up in SOR or a local copy. |  | Choose |
|  | The SUT has identified a need for conversion of the XDIS91 and the XBIN01. |  | The XDIS91 and XBIN01 must be converted to a CareCommunication before the message is ready to be sent to receiver. |  | Choose |

### S1: Send a CareCommunication (from XML to FHIR)

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Test step #** | **Action** | **Test data** | **Expected result** | **Actual result** | **MedCom assessment** |
|  | Perform test step 3.2.1.11-3.2.1.13, where the received communication message is of the type XDIS91. | Use the file from 3.2.1.11: ConSer\_XDIS91\_01 | The XDIS91 must be converted to CareCommunication. |  | Choose |
|  | Demonstrate that the SUT maps the XDIS91 to a CareCommunication cf. [mapping table](#_Baggrundsmaterialer_2). |  | Mapping is performed as described in the mapping table. |  | Choose |
|  | Demonstrate that the SUT saves relevant information from XDIS91:   * Emessage.Envelope.identifier * Emessage.Letter.identifier * Emessage.ClinicalEmail.Letter.VersionCode |  | Relevant information is saved. |  | Choose |
|  | Demonstrate that the SUT includes correct SOR-id on sender and receiver after look-up in SOR or a local copy. |  | Correct SOR-id is included after look-up in SOR or a local copy. |  | Choose |
|  | Demonstrate that the SUT includes telephone number of the sender in the author information after look-up in SOR or a local copy. |  | Correct telephone number is included after look-up in SOR or a local copy. |  | Choose |
|  | Demonstrate that the CareCommunication message is validated against the implementation guide. |  | Validation is performed and went well. |  | Choose |
|  | Demonstrate that the SUT saves relevant information from the CareCommunication:   * Bundle.id * MessageHeader.id |  | Relevant information is saved. |  | Choose |
|  | The CareCommunication is wrapped in a VANSEnvelope with correct content. |  | CareCommunciation is wrapped in the VANSEnvelope. |  | Choose |
|  | Show that the message is ready to be sent to the correct receiver. |  | The message is mapped correctly to the correct receiver and is ready to be sent.  Save the file for documentation. |  | Choose |

### S1.A1: Send a CareCommunication with an attachment

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Test step #** | **Action** | **Test data** | **Expected result** | **Actual result** | **MedCom assessment** |
|  | Perform test step 3.2.3.1-3.2.3.4 where the received communication message is of the type XDIS91 and XBIN01. | Use the file from 3.2.3.1:  ConSer\_XDIS91\_03\_XDIS91  ConSer\_XDIS91\_XBIN | The XDIS91 and XBIN01 must be converted to CareCommunication. |  | Choose |
|  | Map the XDIS91 and XBIN01 to a CareCommunication cf. [mapping table](#_Baggrundsmaterialer_2). |  | Mapping is performed as described in the mapping table. |  | Choose |
|  | Saves relevant information from XDIS91 and XBIN01:  XDIS91:   * Emessage.Envelope.identifier * Emessage.Letter.identifier * Emessage.ClinicalEmail.Letter.VersionCode   XBIN01:   * Emessage.Envelope.identifier * Emessage.BinaryLetter.Letter.identifier * Emessage.BinaryLetter.Letter.VersionCode |  | Relevant information is saved. |  | Choose |
|  | Demonstrate that the SUT includes correct SOR-id on sender and receiver after look-up in SOR or a local copy. |  | Correct SOR-id is included after look-up in SOR or a local copy. |  | Choose |
|  | Demonstrate that the SUT includes telephone number of the sender in the author information after look-up in SOR or a local copy.  ***Note****: If the telephone number cannot be identified the value ‘0000 0000’ is inserted. This must not be common practise*. |  | Correct telephone number is included after look-up in SOR or a local copy. |  | Choose |
|  | CareCommunication is validated against the implementation guide.  ***Note:*** *If the validation does not go well, it should be handled by the responsible part.* |  | Validation is performed and went well. |  | Choose |
|  | Saves relevant information from the CareCommunication:   * Bundle.id * MessageHeader.id |  | Relevant information is saved. |  | Choose |
|  | The CareCommunication is wrapped in a [VANSEnvelope](#_Baggrundsmaterialer_2) with correct content. |  | CareCommunciation is wrapped in the VANSEnvelope. |  | Choose |
|  | Show that the CareCommunication including attachment is ready to be sent to the correct receiver. |  | The message including attachment is mapped correctly and is ready to be sent to the correct receiver.  Save the file for documentation. |  | Choose |

### S1.A1a: Send a CareCommunication with multiple attachment

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Test step #** | **Action** | **Test data** | **Expected result** | **Actual result** | **MedCom assessment** |
|  | Perform test step 3.2.3.1-3.2.3.4 using the test data for this test step. | ConSer\_XDIS91\_04\_XDIS91  ConSer\_XDIS91\_04\_XBIN1  ConSer\_XDIS91\_04\_XBIN2  ConSer\_XDIS91\_04\_XBIN3 | The XDIS91 and all the associated XBIN01 must be converted to a CareCommunication. |  | Choose |
|  | Demonstrate that the SUT maps the XDIS91 and all associated XBIN01 to a CareCommunication cf. [mapping table](#_Baggrundsmaterialer_2). |  | Mapping is performed as described in the mapping table.  CareCommunication includes several attachments. |  | Choose |
|  | Demonstrate that the SUT saves relevant information from XDIS91 and the associated XBIN01:  XDIS91:   * Emessage.Envelope.identifier * Emessage.Letter.identifier * Emessage.ClinicalEmail.Letter.VersionCode   XBIN01 (all):   * Emessage.Envelope.identifier * Emessage.BinaryLetter.Letter.identifier * Emessage.BinaryLetter.Letter.VersionCode |  | Relevant information is saved. |  | Choose |
|  | Demonstrate that the SUT includes correct SOR-id on sender and receiver after look-up in SOR or a local copy. |  | Correct SOR-id is included after look-up in SOR or a local copy. |  | Choose |
|  | Demonstrate that the SUT includes telephone number of the sender in the author information after look-up in SOR or a local copy. |  | Correct telephone number is included after look-up in SOR or a local copy. |  | Choose |
|  | CareCommunication is validated against the implementation guide. |  | Validation is performed and went well. |  | Choose |
|  | Demonstrate that the SUT saves relevant information from the CareCommunication:   * Bundle.id * MessageHeader.id |  | Relevant information is saved. |  | Choose |
|  | The CareCommunication is wrapped in a VANSEnvelope with correct content. |  | CareCommunciation is wrapped in the VANSEnvelope. |  | Choose |
|  | Show that the CareCommunication including attachment is ready to be sent to the correct receiver. |  | The message including attachments is mapped correctly and is ready to be sent sent to the correct receiver.  *Save the file for documentation.* |  | Choose |

### S1.A2: XBIN01 is not received within 60 min.

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Test step #** | **Action** | **Test data** | **Expected result** | **Actual result** | **MedCom assessment** |
|  | Describe and if possible, show how SUT handles the following situation: Receive a communication message of the type XDIS91 with a reference to an XBIN01.  The references XBIN01 does not arrive within 60 minutes. Therefore a negative XCTL(cf. [[section 4.4 in use case document](https://medcomdk.github.io/dk-medcom-carecommunication/assets/UseCases-ConversionService.pdf)](https://medcomdk.github.io/dk-medcom-carecommunication/assets/UseCases-ConversionService.pdf)), and a reference to the XDIS91 is created. |  | An XDIS91 is received, and a negative XCTL is created. |  | Choose |
|  | The negative XCTL is wrapped in a VANSEnvelope. |  | The XCTL is correctly wrapped. |  | Choose |
|  | Show that the XCTL is ready to be sent to sender. |  | The XCTL, including a reference to the XDIS91 and a reason for the negative receipt, is ready to be returned.  Save the files for documentation. |  | Choose |

### S1.A3: XBIN01 is received, but XDIS91 is not received within 60 min

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Test step #** | **Action** | **Test data** | **Expected result** | **Actual result** | **MedCom assessment** |
|  | Receive a communication message of the type XBIN01. | ConSer\_XBIN\_Standalone | A XBIN01 is received. |  | Choose |
|  | **The XDIS91 with a reference to the XBIN01 does not arrive within 60 minutes.**  The XBIN01 is wrapped in a VANSEnvelope |  | The XBIN01 is correctly wrapped. |  | Choose |
|  | Forward the XBIN01 to the correct receiver. |  | XBIN01 is ready to be forwarded to correct receiver. |  | Choose |

### S1.A4: XBIN01 includes non-allowed filetypes.

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Test step #** | **Action** | **Test data** | **Expected result** | **Actual result** | **MedCom assessment** |
|  | Perform test step 3.2.3.1-3.2.3.4. | ConSer\_XDIS91\_05\_XDIS91  ConSer\_XDIS91\_05\_XBIN | The XDIS91 and XBIN01 is received and must be converted to CareCommunication. |  | Choose |
|  | The XBIN01 does not include one of the allowed file types.  Allowed fil types can be found [here](https://medcomfhir.dk/ig/terminology/ValueSet-medcom-core-attachmentMimeTypes.html). |  | Evaluation states that the file type in the XBIN01 is not allowed. |  | Choose |
|  | A negative XCTL, including a reason for the negative receipt (cf. [section 4.4 in use case document](https://medcomdk.github.io/dk-medcom-carecommunication/assets/UseCases-ConversionService.pdf)), and a reference to the XDIS91, is created. |  | A XCTL is created with information from the XDIS91. |  | Choose |
|  | The negative XCTL is wrapped in a VANSEnvelope. |  | The XCTL is correctly wrapped. |  | Choose |
|  | Show that the XCTL is ready to be sent to sender. |  | The XCTL, including a reference to the XDIS91 and a reason for the negative receipt, is ready to be returned.  Save the file for documentation. |  | Choose |

### S2: Send an XDIS91 (from FHIR to XML)

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Test step #** | **Action** | **Test data** | **Expected result** | **Actual result** | **MedCom assessment** |
|  | Perform test step 3.2.1.5-3.2.1.7. | Use the file from 3.2.1.5:  ConSer\_CC\_02 | The CareCommunication must be converted to XDIS91. |  | Choose |
|  | Demonstrate that the SUT maps the CareCommunication to a XDIS91 cf. [mapping table](#_Baggrundsmaterialer_2). |  | Mapping is performed as described in the mapping table. |  | Choose |
|  | Demonstrate that the SUT saves relevant information from the CareCommunication:   * Bundle.id * MessageHeader.id |  | Relevant information is saved. |  | Choose |
|  | Demonstrate that the SUT includes correct SOR-id on sender and receiver after look-up in SOR or a local copy. |  | Correct SOR-id is included after look-up in SOR or a local copy. |  | Choose |
|  | Demonstrate that the SUT saves relevant information from the XDIS91:  XDIS91:   * Emessage.Envelope.identifier * Emessage.Letter.identifier |  | Relevant information is saved. |  | Choose |
|  | The XDIS91 is wrapped in a VANSEnvelope with correct content. |  | XDIS91 is wrapped in the VANSEnvelope. |  | Choose |
|  | Show that the message is ready to be sent to the correct receiver. |  | The message is mapped correctly and is ready to be sent to the correct receiver.  Save the file for documentation. |  | Choose |

### S2.A1: Send an XDIS91 and XBIN01

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Test step #** | **Action** | **Test data** | **Expected result** | **Actual result** | **MedCom assessment** |
|  | Perform test step 3.2.2.1 -3.2.2.5, by using the provided test file in this test step. | Use the file from 3.2.2.1: ConSer\_CC\_02\_attachment | The CareCommunication must be converted to XDIS91 and XBIN01. |  | Choose |
|  | Demonstrate that the SUT saves relevant information from the CareCommunication:   * Bundle.id * MessageHeader.id |  | Relevant information is saved. |  | Choose |
|  | Demonstrate that the SUT maps the CareCommunication to a XDIS91 and a XBIN01 cf. [mapping table](#_Baggrundsmaterialer_2). |  | Mapping is performed as described in the mapping table. |  | Choose |
|  | Demonstrate that the SUT includes correct SOR-id on sender and receiver after look-up in SOR or a local copy. |  | Correct SOR-id is included after look-up in SOR or a local copy. |  | Choose |
|  | Demonstrate that the SUT saves relevant information from the XDIS91 and XBIN01:  XDIS91:   * Emessage.Envelope.identifier * Emessage.Letter.identifier   XBIN01:   * Emessage.Envelope.identifier * Emessage.BinaryLetter.Letter.identifier |  | Relevant information is saved. |  | Choose |
|  | The XDIS91 and XBIN01 is wrapped in individual VANSEnvelope with correct content. |  | XDIS91 and XBIN01 is wrapped in individual VANSEnvelopes. |  | Choose |
|  | Show that the messages are ready to be sent to the correct receiver. |  | The messages are mapped correctly and are ready to be sent to the correct receiver.  Save the files for documentation. |  | Choose |

### S2.A1a: Send an XDIS91 with multiple XBIN01

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Test step #** | **Action** | **Test data** | **Expected result** | **Actual result** | **MedCom assessment** |
|  | Perform test step 3.2.2.1-3.2.2.5 by using the test file provided in Test data in this test step. | ConSer\_CC\_02\_MultipleAttachments | The CareCommunication must be converted to XDIS91 and multiple XBIN01. |  | Choose |
|  | Demonstrate that the SUT saves relevant information from the CareCommunication:   * Bundle.id * MessageHeader.id |  | Relevant information is saved. |  | Choose |
|  | Demonstrate that the SUT maps the CareCommunication to a XDIS91 and multiple XBIN01 cf. [mapping table](#_Baggrundsmaterialer_2). |  | Mapping is performed as described in the mapping table. |  | Choose |
|  | Demonstrate that the SUT includes correct SOR-id on sender and receiver after look-up in SOR or a local copy. |  | Correct SOR-id is included after look-up in SOR or a local copy. |  | Choose |
|  | Demonstrate that the SUT saves relevant information from the XDIS91 and all XBIN01:  XDIS91:   * Emessage.Envelope.identifier * Emessage.Letter.identifier   XBIN01 (all):   * Emessage.Envelope.identifier * Emessage.BinaryLetter.Letter.identifier |  | Relevant information is saved. |  | Choose |
|  | The XDIS91 and every XBIN01 is wrapped in individual VANSEnvelope with correct content. |  | XDIS91 and XBIN01 is wrapped in the VANSEnvelope. |  | Choose |
|  | Show that the messages are ready to be sent to the correct receiver. |  | The messages are mapped correctly and are ready to be sent to the correct receiver.  Save the files for documentation. |  | Choose |

### S2.A2: Send a reply or forward

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Test step #** | **Action** | **Test data** | **Expected result** | **Actual result** | **MedCom assessment** |
| Send a reply | | | | | |
|  | Perform test step 3.2.1.5-3.2.1.7 using the test file from 3.2.1.1.  Demonstrate that the SUT registers that the CareCommunication is a reply. | Use the file from 3.2.1.1: ConSer\_CC\_01\_reply | The CareCommunication is a reply.  The CareCommunication must be converted to XDIS91. |  | Choose |
|  | Demonstrate that the SUT saves relevant information from the CareCommunication:   * Bundle.id * MessageHeader.id |  | Relevant information is saved. |  | Choose |
|  | Demonstrate that the SUT maps the CareCommunication to an XDIS91 cf. [mapping table](#_Baggrundsmaterialer_2). |  | Mapping is performed as described in the mapping table. |  | Choose |
|  | Demonstrate that the SUT includes a note in the text informing that the message is a reply. |  | A XDIS91 is created with information about being a reply. |  | Choose |
|  | Demonstrate that the SUT saves relevant information from the XDIS91:   * Emessage.Envelope.identifier * Emessage.Letter.identifier |  | Relevant information is saved. |  | Choose |
|  | The XDIS91 is wrapped in individual VANSEnvelope with correct content. |  | XDIS91 is wrapped in the VANSEnvelope. |  | Choose |
|  | Show that the message is ready to be sent to the correct receiver. |  | The message is mapped correctly and is ready to be sent to the correct receiver with information about being a reply.  Save the file for documentation. |  | Choose |
| Send a reply (to a message with an attachment) | | | | | |
|  | | Receive a communication message of the type CareCommunication.  Demonstrate that the SUT registers that the CareCommunication is a reply to a message with an attachment.  ***Note****: The base64-encoded content of the attachment is not included, when the CareCommunication is a reply.* | ConSer\_CC\_04\_reply | The CareCommunication is a reply.  The CareCommunication must be converted to XDIS91 with a reference to the attachment. |  | Choose |
|  | | Demonstrate that the SUT saves relevant information from the CareCommunication:   * Bundle.id * MessageHeader.id |  | Relevant information is saved |  | Choose |
|  | | Demonstrate that the SUT maps the CareCommunication to an XDIS91 with a reference in the text to the attachment in the original reply, cf. [mapping table](#_Baggrundsmaterialer_2). |  | Mapping is performed as described in the mapping table. |  | Choose |
|  | | Demonstrate that the SUT includes a note in the text informing that the message is a reply. |  | A XDIS91 is created with information about being a reply. |  | Choose |
|  | | Demonstrate that the SUT saves relevant information from the XDIS91:   * Emessage.Envelope.identifier * Emessage.Letter.identifier |  | Relevant information is saved. |  | Choose |
|  | | The XDIS91 is wrapped in individual VANSEnvelope with correct content. |  | XDIS91 is wrapped in the VANSEnvelope. |  | Choose |
|  | | Show that the messages are ready to be sent to the correct receiver. |  | The message is mapped correctly and are ready to be sent to the correct receiver with information about being a reply with a reference to the attachment.  Save the files for documentation. |  | Choose |
| Send a reply with attachment | | | | | | |
|  | | Receive a communication message of the type CareCommunication with an attachment.  Demonstrate that the SUT registers that the CareCommunication is a reply and includes an attachment. | ConSer\_CC\_05\_reply\_attachment | The CareCommunication is a reply and includes an attachment.  The CareCommunication must be converted to XDIS91 and XBIN01. |  | Choose |
|  | | Demonstrate that the SUT saves relevant information from the CareCommunication:   * Bundle.id * MessageHeader.id |  | Relevant information is saved. |  | Choose |
|  | | Demonstrate that the SUT maps the CareCommunication to a XDIS91 and XBIN01, cf. [mapping table](#_Baggrundsmaterialer_2). |  | Mapping is performed as described in the mapping table. |  | Choose |
|  | | Demonstrate that the SUT includes a note in the text informing that the message is a reply. |  | A XDIS91 is created with information about being a reply. |  | Choose |
|  | | Demonstrate that the SUT saves relevant information from the XDIS91 and XBIN01:  XDIS91:   * Emessage.Envelope.identifier * Emessage.Letter.identifier   XBIN01:   * Emessage.Envelope.identifier * Emessage.BinaryLetter.Letter.identifier |  | Relevant information is saved. |  | Choose |
|  | | The XDIS91 and XBIN01 are wrapped in individual VANSEnvelope with correct content. |  | XDIS91 and XBIN01 are wrapped in individual VANSEnvelopes. |  | Choose |
|  | | Show that the messages are ready to be sent to the correct receiver. |  | The messages are mapped correctly and are ready to be sent to the correct receiver with information about being a reply.  Save the files for documentation. |  | Choose |
| Send a forward | | | | | | |
|  | | Perform test step 3.2.1.5-3.2.1.7 and use the test file provided in this test step.  Demonstrate that the SUT registers that the CareCommunication is a forward. | ConSer\_CC\_06\_forward | The CareCommunication is a forward.  The CareCommunication must be converted to XDIS91. |  | Choose |
|  | | Demonstrate that the SUT saves relevant information from the CareCommunication:   * Bundle.id * MessageHeader.id |  | Relevant information is saved |  | Choose |
|  | | Demonstrate that the SUT maps the CareCommunication to an XDIS91, cf. [mapping table](#_Baggrundsmaterialer_2). |  | Mapping is performed as described in the mapping table. |  | Choose |
|  | | Demonstrate that the SUT includes a note in the text informing that the message is a forward. |  | A XDIS91 is created with information about being a forward. |  | Choose |
|  | | Demonstrate that the SUT saves relevant information from the XDIS91:   * Emessage.Envelope.identifier * Emessage.Letter.identifier |  | Relevant information is saved. |  | Choose |
|  | | The XDIS91 is wrapped in individual VANSEnvelope with correct content. |  | XDIS91 is wrapped in the VANSEnvelope. |  | Choose |
|  | | Show that the message is ready to be sent to the correct receiver. |  | The message is mapped correctly and is ready to be sent to the correct receiver with information about being a forward.  Save the file for documentation. |  | Choose |
| Send a forward with attachment | | | | | | |
|  | | Receive a communication message of the type CareCommunication.  Demonstrate that the SUT registers that the CareCommunication is a forward and includes an attachment. | ConSer\_CC\_06\_forward\_attachment | The CareCommunication is a forward with an attachment.  The CareCommunication must be converted to XDIS91 and XBIN01. |  | Choose |
|  | | Demonstrate that the SUT saves relevant information from the CareCommunication:   * Bundle.id * MessageHeader.id |  | Relevant information is saved. |  | Choose |
|  | | Demonstrate that the SUT maps the CareCommunication to a XDIS91 and XBIN01 cf. [mapping table](#_Baggrundsmaterialer_2). |  | Mapping is performed as described in the mapping table. |  | Choose |
|  | | Demonstrate that the SUT includes a note in the text informing that the message is a forward. |  | A XDIS91 is created with information about being a forward to receiver. |  | Choose |
|  | | Demonstrate that the SUT saves relevant information from the XDIS91 and XBIN01:  XDIS91:   * Emessage.Envelope.identifier * Emessage.Letter.identifier   XBIN01:   * Emessage.Envelope.identifier * Emessage.BinaryLetter.Letter.identifier |  | Relevant information is saved. |  | Choose |
|  | | The XDIS91 and XBIN01 is wrapped in individual VANSEnvelope with correct content. |  | XDIS91 and XBIN01 is wrapped in individual VANSEnvelope. |  | Choose |
|  | | Show that the messages are ready to be sent to the correct receiver. |  | The XDIS91 and the XBIN01 are mapped correctly and are ready to be sent to the correct receiver with information about being a forward.  Save the files for documentation. |  | Choose |

### S3: Send an Acknowledgement (from XML to FHIR)

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Test step #** | **Action** | **Test data** | **Expected result** | **Actual result** | **MedCom assessment** |
| Send a positive Acknowledgement (a positive XCTL is received) | | | | | |
|  | Load the XCTL test file given in this test step that matches the test file ConSer\_CC\_01\_reply used in test step 3.2.1.1 and 3.2.13.1.  Demonstrate that the SUT registers that the XCTL is positive.  ***Note:*** *This covers scenarios where all XCTL are positive.*  ***Note:*** *To complete this test step, VANS tester must transfer relevant information manually from the XDIS91 that is generated in test step 3.2.13.3 to the correct elements in the given test data file for this test step. This is to ensure that the XCTL matches* ConSer\_CC\_01\_reply *test file*. | ConSer\_XCTL03\_01  ***OBS:*** *General example file that needs to be updated with correct information by VANS.* | The message is a positive XCTL and must be converted to a positive Acknowledgement before the message is ready to be sent to receiver. |  | Choose |
|  | Demonstrate that the SUT maps the positive XCTL to a positive Acknowledgement cf. [mapping table](#_Baggrundsmaterialer_2) including using the saved data from the initial Carecommunication converted in 3.2.13.1-3.2.13.7 |  | Mapping is performed as described in the mapping table. |  | Choose |
|  | Demonstrate that the SUT uses relevant information, saved by VANS, to ensure that the Acknowledgement is paired to the correct CareCommunication. |  | Acknowledgement is paired to the correct CareCommunication. |  | Choose |
|  | Acknowledgement is validated against the implementation guide. |  | Validation is performed and went well. |  | Choose |
|  | The Acknowledgement is wrapped in a [VANSEnvelope](#_Baggrundsmaterialer_2) with correct content. |  | Acknowledgement is wrapped in the VANSEnvelope. |  | Choose |
|  | Show that the positive Acknowledgement is ready to be sent to the correct receiver. |  | The message is mapped correctly and is ready to to be sent to the correct receiver.  Save the file for documentation. |  | Choose |
| Send a negative Acknowledgement (a negative XCTL is received) | | | | | |
|  | Load the XCTL test file given in this test step that matches the test file ConSer\_CC\_01\_reply used in test step 3.2.1.1 and 3.2.13.1.  Demonstrate that the SUT registers that the XCTL is negative.  ***Note:*** *This covers scenarios where one or more XCTL are negative.*  ***Note:*** *To complete this test step, VANS tester must transfer relevant information manually from the XDIS91 that is generated in test step 3.2.13.3 to the correct elements in the given test data file for this test step. This is to ensure that the XCTL matches* ConSer\_CC\_01\_reply *test file*. | ConSer\_XCTL02\_01  ***OBS:*** *General example file that needs to be updated with correct information by VANS.* | The message is a negative XCTL and must be converted to a negative Acknowledgement before the message is send to receiver. |  | Choose |
|  | Demonstrate that the SUT maps the negative XCTL to a negative Acknowledgement cf. [mapping table](#_Baggrundsmaterialer_2), including using the saved data from the initial Carecommunication converted in 3.2.13.1-3.2.13.7 |  | Mapping is performed as described in the mapping table. |  | Choose |
|  | Demonstrate that the SUT uses relevant information, saved by VANS, to ensure that the Acknowledgement is paired to the correct CareCommunication. |  | Acknowledgement is paired to the correct CareCommunication. |  | Choose |
|  | Acknowledgement is validated against the implementation guide. |  | Validation is performed and went well. |  | Choose |
|  | The Acknowledgement is wrapped in a [VANSEnvelope](#_Baggrundsmaterialer_2) with correct content. |  | Acknowledgement is wrapped in the VANSEnvelope. |  | Choose |
|  | Show that the negative Acknowledgement is ready to be sent to the correct receiver. |  | The message is mapped correctly and is ready to be sent to the correct receiver.  Save the file for documentation. |  | Choose |
| Send a negative Acknowledgement (an XCTL is not received within the timeframe, cf. [section 4.5 in use case document](#_Baggrundsmaterialer_2)) | | | | | |
|  | | Demonstrate that the SUT registers that an XCTL is missing/not received.  ***Note:*** *This covers scenarios where one or more XCTL are missing.* |  | No XCTL is received and SUT must send a negative Acknowledgement to correct receiver. |  | Choose |
|  | | Demonstrate that the SUT creates a negative Acknowledgement, cf. [mapping table](#_Baggrundsmaterialer_2). |  | A negative Acknowledgement is created. |  | Choose |
|  | | Demonstrate that the SUT uses relevant information, saved by VANS, to ensure that the Acknowledgement is paired to the correct CareCommunication. |  | Acknowledgement is paired to the correct CareCommunication. |  | Choose |
|  | | Acknowledgement is validated against the implementation guide. |  | Validation is performed and went well. |  | Choose |
|  | | The Acknowledgement is wrapped in a [VANSEnvelope](#_Baggrundsmaterialer_2) with correct content. |  | Acknowledgement is wrapped in the VANSEnvelope. |  | Choose |
|  | | Show that the negative Acknowledgement is ready to be sent to the correct receiver. |  | The message is mapped correctly and is ready to be sent to the correct receiver.  Save the file for documentation. |  | Choose |

### S4: Send an XCTL (from FHIR to XML)

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Test step #** | **Action** | **Test data** | **Expected result** | **Actual result** | **MedCom assessment** |
| Send a positive XCTL (a positive Acknowledgement is received) | | | | | |
|  | Load the ACK test file given in this test step that matches the test file ConSer\_XDIS91\_01 used in test step 3.2.1.11.  ***Note:*** *To complete this test step, VANS tester must transfer relevant information manually from the CareCommunication that is generated in test step 3.2.4.2 to the correct elements in the given test data file for this test step. This is to ensure that the XCTL matches* ConSer\_XDIS91\_01 *test file*. | ConSer\_ACK\_01  ***OBS:*** *General example file that needs to be updated with correct information by VANS.* | The message is a positive Acknowledgement and must be converted to XCTL before the message is ready to be sent to receiver. |  | Choose |
|  | Demonstrate that the SUT maps the Acknowledgement to an XCTL cf. [mapping table](#_Baggrundsmaterialer_2).  ***Note****: The mapping table includes XCTL01, 02 and 03.* |  | Mapping is performed as described in the mapping table. |  | Choose |
|  | Demonstrate that the SUT uses relevant information, saved by VANS, to ensure that the XCTL is paired to the correct XDIS91. |  | XCTL is paired to the correct XDIS91. |  | Choose |
|  | The XCTL is wrapped in a [VANSEnvelope](#_Baggrundsmaterialer_2) with correct content. |  | XCTL is wrapped in the VANSEnvelope. |  | Choose |
|  | Show that the XCTL is ready to be sent to the correct receiver. |  | The message is mapped correctly and is ready to be sent to the correct receiver.  Save the file for documentation. |  | Choose |
| Send a negative XCTL (a negative Acknowledgement is received) | | | | | |
|  | | Perform test step 3.2.1.1-3.2.1.4.  Load the ACK test file given in this test step that matches the test file ConSer\_XDIS91\_01 used in test step 3.2.1.11.  ***Note:*** *To complete this test step, VANS tester must transfer relevant information manually from the CareCommunication that is generated in test step 3.2.4.2 to the correct elements in the given test data file for this test step. This is to ensure that the XCTL matches* ConSer\_XDIS91\_01 *test file*. | ConSer\_ACK\_02  ***OBS:*** *General example file that needs to be updated with correct information by VANS.* | The message is a negative Acknowledgement and must be converted to XCTL before the message is ready to be sent to receiver. |  | Choose |
|  | | Demonstrate that the SUT maps the negative Acknowledgement to a negative XCTL cf. [mapping table](#_Baggrundsmaterialer_2).  ***Note****: The mapping table includes XCTL01, 02 and 03.* |  | Mapping is performed as described in the mapping table. |  | Choose |
|  | | Demonstrate that the SUT uses relevant information, saved by VANS, to ensure that the XCTL is paired to the correct XDIS91. |  | XCTL is paired to the correct XDIS91. |  | Choose |
|  | | The XCTL is wrapped in a [VANSEnvelope](#_Baggrundsmaterialer_2) with correct content. |  | XCTL is wrapped in the VANSEnvelope. |  | Choose |
|  | | Show that the XCTL is ready to be sent to the correct receiver. |  | The message is mapped correctly and is ready to be sent to the correct receiver.  Save the file for documentation. |  | Choose |
| Send a negative XCTL (an Acknowledgement is not received within the timeframe, cf. [section 4.5 in use case document](#_Baggrundsmaterialer_2)) | | | | | | |
|  | | Demonstrate that the SUT registers that an Acknowledgement is missing/not received. |  | No Acknowledgement is received, and SUT must send a negative XCTL to correct receiver. |  | Choose |
|  | | Demonstrate that the SUT creates a negative XCTL cf. [mapping table](#_Baggrundsmaterialer_2). |  | A negative XCTL is created. |  | Choose |
|  | | Demonstrate that the SUT uses relevant information, saved by VANS, to ensure that the XCTL is paired to the correct XDIS91. |  | XCTL is paired to the correct XDIS91. |  | Choose |
|  | | The XCTL is wrapped in a [VANSEnvelope](#_Baggrundsmaterialer_2) with correct content. |  | XCTL is wrapped in the VANSEnvelope. |  | Choose |
|  | | Show that the negative XCTL is ready to be sent to the correct receiver. |  | The message is mapped correctly and is ready to be sent to the correct receiver.  Save the file for documentation. |  | Choose |

## Test of general technical requirements

The purpose of these test steps is to ensure that the technical aspects of messages generated by the Conversion service is implemented with satisfactory quality.

### General technical requirements

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Test step #** | **Action** | **Test data** | **Expected results** | **Actual result** | **MedCom assessment** |
| Use of SOR | | | | | |
|  | Describe the use of look-up in SOR or a local copy. |  | E.g.” *When a XDIS91, XBIN01, or XCTL is received, only including an EAN-number, this is used to lookup the corresponding code in SOR. When a CareCommunication and Acknowledgement is received EAN-number and SOR-code are mapped to the corresponding elements in the XDIS91, XBIN01, or XCTL*” |  | Choose |
| Correct mapping | | | | | |
|  | Demonstrate that elements are mapped correctly from a new CareCommunication to XDIS91, cf. [mapping table](#_Baggrundsmaterialer_2).  ***Note****: As test data, mappings performed earlier in the test protocol can be referenced in this and the following test steps.* |  | Mapping is performed correctly |  | Choose |
|  | Demonstrate that elements are mapped correctly from reply CareCommunication to XDIS91, cf. [mapping table](#_Baggrundsmaterialer_2). |  | Mapping is performed correctly |  | Choose |
|  | Demonstrate that elements are mapped correctly from forwarded CareCommunication to XDIS91, cf. [mapping table](#_Baggrundsmaterialer_2). |  | Mapping is performed correctly |  | Choose |
|  | Demonstrate that elements are mapped correctly from CareCommunication to XBIN01, cf. [mapping table](#_Baggrundsmaterialer_2). |  | Mapping is performed correctly |  | Choose |
|  | Demonstrate that elements are mapped correctly from XDIS91 to CareCommunication, cf. [mapping table](#_Baggrundsmaterialer_2). |  | Mapping is performed correctly |  | Choose |
|  | Demonstrate that elements are mapped correctly from XBIN01 to CareCommunication, cf. [mapping table](#_Baggrundsmaterialer_2). |  | Mapping is performed correctly |  | Choose |
|  | Demonstrate that elements are mapped correctly from XCTL to Acknowledgement, cf. [mapping table](#_Baggrundsmaterialer_2). |  | Mapping is performed correctly |  | Choose |
|  | Demonstrate that elements are mapped correctly from Acknowledgement to XCTL, cf. [mapping table](#_Baggrundsmaterialer_2). |  | Mapping is performed correctly |  | Choose |
| EpisodeOfCare | | | | | |
|  | Demonstrate that the EpisodeOfCare-identifiers are transferred correct from CareCommunication to XDIS91.  ***Note****: it is allowed to include more episodeOfCare-identifiers, but there is only room for one in the XDIS91. In case more episodeOfCare-identifiers are included, the locally defined one is expected to be included cf.* [*Governance for EpisodeofCare-identifier*](https://medcomdk.github.io/MedCom-FHIR-Communication/assets/documents/080_Governance-for-episode-of-care-identifiers.html) | ConSer\_CC\_tes\_EpisodeOfCare | The locally defined EpisodeOfCare-identifier is included the XDIS91. |  |  |
|  | Demonstrate that the Encounter.status and class are transferred, cf. section 4.2 in use case document, see Background materials from the CareCommunication to the XDIS91. | ConSer\_CC\_tes\_EpisodeOfCare | Encounter.status and Encounter.class are transferred correctly to the XDIS91 |  |  |
|  | Demonstrate that the EpisodeOfCare-identifier is transferred correct from XDIS91 to CareCommunication | ConSer\_XIS91\_tec\_EpisodeOfCare | The episodeOfCare-identifier is transferred correctly to the CareCommunication. |  |  |
|  | Demonstrate that the statuses are transferred, cf. section 4.2 in use case document, see Background materials, from the XDIS91 to the CareCommunication | ConSer\_XIS91\_tec\_EpisodeOfCare | Statuses are transferred correctly to the CareCommunication |  |  |
| Attachment size | | | | | |
|  | Describe and demonstrate how the size of the attachment is calculated before sending the XBIN01.  ***Note:*** *In a CareCommunication with an attachment, the size of the attachment is not mandatory to include*. |  | E.g. “*The size of the base64encoded content is calculated before including it into the XBIN01*” |  |  |
| Title of attachment | | | | | |
|  | Demonstrate that the title of the attachment is transferred, cf. section 4.6.2 in use case document, see Background materials, from the CareCommunication to XDIS91 | Use the file from test step 3.2.2.1: ConSer\_CC\_02\_attachment | The title of the attachment is transferred correctly |  |  |
|  | Demonstrate that the title of the attachment is transferred, cf. section 4.6.2 in use case document, see Background materials, from the XDIS91 to CareCommunication | Use the file from test step 3.2.3.1: ConSer\_XDIS91\_03\_XDIS91  ConSer\_XDIS91\_03\_XBIN | The title of the attachment is transferred correctly |  |  |
| Number of attachments (more than 10) | | | | | |
|  | Perform test step - with the provided file: | ConSer\_CC\_tec\_TooManyAttachments | The CareCommunication must be converted to XDIS91 and XBIN01. |  | Choose |
|  | The CareCommunication includes more than 10 attachments.  ***Note****: As described in “Forudsætning 5”, cf.* [*section 1*.*4.2.5 in use case document*](https://medcomdk.github.io/dk-medcom-carecommunication/assets/UseCases-ConversionService.pdf)*,* *a maximum of 10 attachments may be included in a CareCommunication in the transition period.* |  | Evaluation states that more than ten attachments are included. |  |  |
|  | A negative ACK including a reason for the negative receipt is created.  The ACK includes a reference to the CareCommunication containing too many attachments. |  | An ACKis created with information from the CareCommunication. |  | Choose |
|  | The negative ACK is wrapped in a VANSEnvelope. |  | The ACK is correctly wrapped. |  | Choose |
| Timestamps | | | | | |
|  | Demonstrate the timestamps and time zones are transferred correctly from the CareCommunication to the XDIS91.  ***Note****: Time zone is included in CareCommunication and can be zulutime or another timezone.* | Demonstrate on the file from test step 3.2.1.5: ConSer\_CC\_02 | Timestamps are transferred correctly.  The timestamps in the XDIS91 and XBIN01 has the format: HH:MM = "00:00", where seconds and timezone is included in the CareCommunication. |  | Choose |

### Use of texts for negative receipts

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Test step #** |  | **Test data** | **Expected result** | **Actual result** | **MedCom assessment** |
|  | Describe the use of predefined texts for negative receipts. |  | E.g. “*The different predefined texts from the use case document are used in the different situations where the conversion service generated a negative receipt*.” |  | Choose |

### Embedment into VANSEnvelope

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Test step #** |  | **Test data** | **Expected result** | **Actual result** | **MedCom assessment** |
|  | Demonstrate that the XDIS91 is correctly wrapped in VANSEnvelope  ***Note****: Link to VANSEnvelope specifications can be found in Background materials.*  ***Note****: Test data performed earlier in the test protocol can be referenced in this and the following test steps.* |  | The XDIS91 is wrapped correctly in the VANSEnvelope. |  | Choose |
|  | Demonstrate that the XBIN01 is correctly wrapped in VANSEnvelope |  | The XBIN01 is wrapped correctly in the VANSEnvelope. |  | Choose |
|  | Demonstrate that the CareCommunication is correctly wrapped in VANSEnvelope |  | The CareCommunication is wrapped correctly in the VANSEnvelope. |  | Choose |
|  | Demonstrate that the XCTL is correctly wrapped in VANSEnvelope |  | The XCTL is wrapped correctly in the VANSEnvelope. |  | Choose |
|  | Demonstrate that the Acknowledgement is correctly wrapped in VANSEnvelope |  | The Acknowledgement is wrapped correctly in the VANSEnvelope. |  | Choose |

### Timelimits on receipts (XCLT and Acknowledgement)

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Test step #** |  | **Test data** | **Expected result** | **Actual result** | **MedCom assessment** |
|  | Demonstrate that the conversion service returns a negative receipt to the sender if no receipts (XCTL or Acknowledgement) have been received within 72 hours.  ***Note****: for testing purposes, the time limit may be adjusted to a lower timeframe.* |  | The conversion service returns a negative receipt if no XCLT or Acknowledgement has been received from the receiver of the original message. |  | Choose |

### Attachments from DNHF

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Test step #** |  | **Test data** | **Expected result** | **Actual result** | **MedCom assessment** |
|  | Demonstrate that BIN01 and XBIN01 which are sent from DNHF are passed on without a delay.  Note: Both test data files must be tested. | ConSer\_BIN\_DNHF  ConSer\_XBIN\_DNHF | The BIN01 and XBIN01 with DNHF as the receiver is passed on without delay. |  | Choose |

1. X expresses patch-level versioning, which includes minor fixes that are backward compatible. [↑](#footnote-ref-2)