



Web Services Implementation Guide

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Document History

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1 Overview

The OneHealthPort Health Information Exchange (HIE) Web Services Implementation guide provides information for organizations that have the tools and resources to set up and manage web services using public key infrastructure certificate exchange for data submissions.

1.1 Purpose

The purpose of this document is to provide the certificate requirements, end point connectivity information and additional transaction-based information for organizations' use in preparing for and implementing web services with the OneHealthPort HIE.

1.2 Intended Audience

This document is intended for:

- New trading partners requiring information about OneHealthPort web services.
- Parties responsible for implementing and managing certificate-based connectivity to the OneHealthPort HIE.

2 Certificate Requirements for HIE Web Services

The OneHealthPort HIE web services use the open internet to allow maximum bandwidth for message exchange. Certificates are used to sign and encrypt messages using full Public Key Infrastructure (PKI) sent via a secured channel (https). Multiple web service transactions can be traded with a single certificate exchange.

Organizations choosing web services **are required to provide certificates to the OneHealthPort HIE**. Only certificates from a third-party certificate authority (CA) are accepted for use. The same CA issued certificate may be used with both the OneHealthPort production and UAT (User Acceptance Testing or test) environments.

Certificate requirements:

- Certificates supplied must be from a commercial certificate authority – self-signed certificates will not be accepted
- The same certificate may be used with the production and UAT (test) environments
- 2048-bit SSL Secure Sockets Layer with TLS Encryption (not less than TLS 1.2)

- 256 bit encryption
- SHA-2
- Standard or Basic SSL certificate for a single Domain name (Wildcard or multi-domain is not required unless that is your organization's standard)
- Validity option: 1-3 years
- Preferred format - A digital certificate will be required for secure exchange of data. This may be in the form of either a DER encoded binary X.509 (.cer) or Cryptographic Message Syntax Standard PKCS #7 (.p7b, .p7c). If a .p7b/.p7c file is used, please export the entire certificate chain for use during the connectivity process
- Provide full certificate chain from a third-party certificate authority PLUS the public key.

2.1 Certificate Handling

The certificate generated for trading partner connectivity to the HIE is unique for each partner. The trust relationship is created between each partner and the OneHealthPort HIE through execution of the HIE Participation Agreement.

Each trading partner will only require the certificate of the OneHealthPort HIE to trade with the entire OneHealthPort HIE trading community. The OneHealthPort HIE is designed as a spoke and hub model with a single connection from each participant (trading partner) to the HIE (hub). Data will flow from the sending party to the HIE and then outbound to the designated receiving party.

All the transactions to OneHealthPort HIE will be done using certificate based mutual authentication. Trading Partner and OneHealthPort HIE will need to exchange certificates prior to establishing the secure connection.

From a high-level point of view, the process of authenticating and establishing an encrypted channel using certificate-based mutual authentication involves the following steps:

1. A client requests access to a protected resource/service.
2. The server presents its certificate to the client.
3. The client verifies the server's certificate.
4. If successful, the client sends its certificate to the server.
5. The server verifies the client's credentials.
6. If successful, the server grants access to the protected resource requested by the client.

3 Endpoint for Web Service Transactions

WSDL and an endpoint URL are provided by the OneHealthPort Clinical Data Repository (CDR) for use by the organization when implementing web services to the CDR. The only accepted method for WSDL retrieval is a "GET". Any "POST" requests to the WSDL will fail. Production endpoints will be provided upon successful completion of testing.

OneHealthPort HIE UAT (test) Environment:

ITI-41NS WSDL – URL link for the ITI-41NS WSDL <https://uat-onehealthport-api.axwaycloud.com/wsdl/ITI41NS?wsdl>

- Endpoint - <https://uat-onehealthport-api.axwaycloud.com:8098/webservice/ITI41NS>

4 Signature

OneHealthPort requires that the transactions include signature on the timestamp. Specifically, the following web service transaction requires signature components:

- ITI-41NS

OneHealthPort will configure UAT web services with trading partner signature as optional to facilitate connectivity and testing. Once connected, and prior to completing testing, trading partners will need to provide signatures in their UAT messages. **All submitters must successfully submit web services transactions with signature in UAT before being authorized to send any production submissions for transactions requiring signature.** Production web services on transactions requiring signature are configured with signature required. For signatures, trading partners:

- should sign the timestamp in the message header – the security reference section is added to define the digital signature starting with: `<wsse:Security xmlns:wsse="http://docs.oasis-open.org/wss/2004/01/oasis-200401-wss-wssecurity-secext-1.0.xsd">`. The timestamp must occur within the `<wsse:Security>` tag.
- must use their own private key to sign the message – the encrypted signature is added in the `<dsig:SignatureValue>` **of the header**
- should include the public key in the messages – included in the `<dsig:X509Certificate>`

Verification Process		
User Acceptance Testing (UAT)	Production	Description
Required	Required	Mutual authentication occurs using the root and intermediate certificate information
Required	Required	Certificate validation occurs using the complete certificate chain with leaf
Optional	Required	Signature validation occurs by signing the timestamp in the SOAP message header

Sample signature signing timestamp in SOAP header:

```

<s:Envelope xmlns:a="http://www.w3.org/2005/08/addressing" xmlns:s="http://www.w3.org/2003/05/soap-envelope">
  <s:Header>
    <a:Action s:mustUnderstand="1">urn:ihe:iti:2007:ProvideAndRegisterDocumentSet-b</a:Action>
    <a:MessageID>urn:uuid:325d5e06-bae2-444b-a005-989d2b09d124</a:MessageID>
    <a:To s:mustUnderstand="1">https://uat-onehealthport-api.axwaycloud.com:8098/web/service/ITI41</a:To>
    <wsee:Security xmlns:wsee="http://docs.oasis-open.org/wss/2004/01/oasis-200401-wss-wssecurity-secext-1.0.xsd">
      <u:Timestamp u:Id="id-11eb754e-c5d1-493c-8ace-ac025a6c5bb9" xmlns:u="http://docs.oasis-open.org/wss/2004/01/oasis-200401-wss-wssecurity-utility-1.0.xsd">
        <u:Created>2017-06-08T17:47:49.6190756Z</u:Created>
        <u:Expires>2017-06-08T18:17:49.6190756Z</u:Expires>
      </u:Timestamp>
      <Signature Id="id-11eb754e-c5d1-493c-8ace-ac025a6c5bb9"
        xmlns="http://www.w3.org/2000/09/xmldsig#">
        <SignedInfo>
          <CanonicalizationMethod Algorithm="http://www.w3.org/2001/10/xml-exc-c14n#" />
          <SignatureMethod Algorithm="http://www.w3.org/2000/09/xmldsig#rsa-sha1" />
          <Reference URI="#id-11eb754e-c5d1-493c-8ace-ac025a6c5bb9">
            <Transforms>
              <Transform Algorithm="http://www.w3.org/2001/10/xml-exc-c14n#" />
            </Transforms>
            <DigestMethod Algorithm="http://www.w3.org/2001/04/xmlenc#sha256" />
            <DigestValue>Data Redacted</DigestValue>
          </Reference>
        </SignedInfo>
        <SignatureValue> Data Redacted </SignatureValue>
        <KeyInfo Id="Data Redacted ">
          <X509Data>
            <X509Certificate> Data Redacted </X509Certificate>
          </X509Data>
        </KeyInfo>
      </Signature>
    </wsee:Security>
  </s:Header>

```

5 Web Service Transactions

Currently OneHealthPort supports the following web services transaction shown below.

5.1 ITI-41NS Provide and Register Non-standard

Transaction used to push documents to a document registry for organizations who desire the use of a web service transaction but cannot meet the format and content requirements of the ITI-41. Currently the **CDR format required is SIMPLE SOAP with an embedded CCD that is base64 encoded**. When a transaction is submitted using this channel, internal logic exists to strip the ITI-41 wrapper, and internally create an ITI-41 that will successfully ingest in the CDR, using the content found in the CCD message header.

5.2 Message Responses

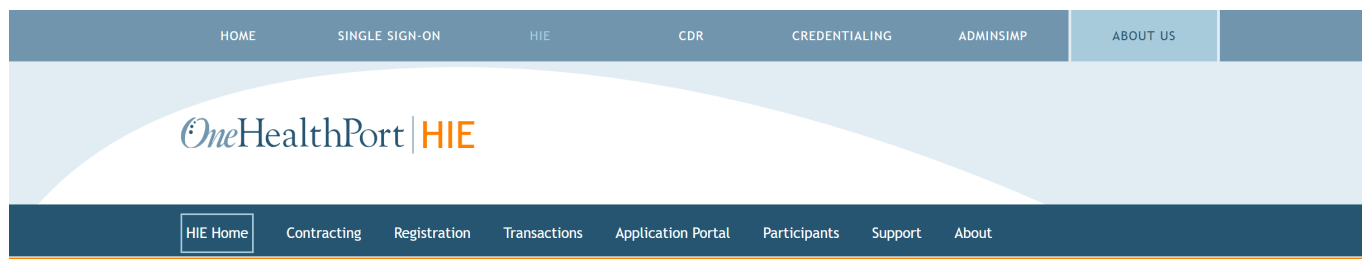
Web services Provide and Register transaction submissions will receive message responses, indicating a successful transmission or an error condition. Samples of message responses are shown in the Appendix.

6 HIE and CDR Operations Change Management

Organizations will need to incorporate management of HIE and CDR connectivity and data submission activity monitoring into existing system management and operational change management processes. In addition to daily activities, processes and resources will also need to be organized to support monthly HIE and CDR maintenance activities and unplanned outages. The information listed below can be used for HIE and CDR operations planning.

6.1 OneHealthPort HIE and CDR System Availability Notifications

Scheduled monthly maintenance windows are posted on [OneHealthPort HIE](#) and [OneHealthPort CDR](#) web pages under the *Maintenance Schedule* section for customer use in operational planning. Non-regularly scheduled maintenance windows and unplanned outages are communicated through email messages to a distribution list to which customers can subscribe. The screen shot below shows where to find maintenance information on the [OneHealthPort HIE web page](#).



Contracting

The HIE supports standard transactions such as C-CDA documents, Electronic Laboratory Reporting and Syndromic Surveillance messages to the Department of Health, and system-to-system query capability to the Prescription Monitoring Program database.

Registration

Organizations contracted with the OneHealthPort HIE must register facilities before exchanging information.

Transactions

The HIE supports standard transactions such as C-CDA documents, Electronic Laboratory Reporting and Syndromic Surveillance messages to the Department of Health, and system-to-system query capability to the Prescription Monitoring Program database.

Application Portal

HIE web applications offer OneHealthPort HIE participants access to tools for using HIE services through a secure website portal. Applications include the Clinical Data Repository, the OneHealthPort Provider Directory, and C-CDA Validation Testing.

Maintenance Schedule

Production maintenance is scheduled monthly for up to a 3-hour outage starting at 7 PM Pacific.

Next scheduled Production maintenance is Thursday, October 18, 2018.

UAT maintenance is scheduled for a 2-hour outage the first Thursday of each month from 2-4 AM Pacific. Additional scheduled UAT maintenance is performed on a Thursday later in the month from 7-9 PM Pacific. Please see schedule for details.

[Maintenance Schedule](#) | [Notification Sign-Up](#)

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The screenshot below shows where to find maintenance information on the [OneHealthPort CDR web page](#).

Use the CDR

To use the OneHealthPort CDR and other HIE applications, such as the C-CDA Validator and the OneHealthPort Provider Directory, your organization must be a participant with the OneHealthPort Health Information Exchange (HIE).

Vendor Readiness

Electronic Health Record (EHR) vendors play an important role assisting provider organizations to prepare for and begin C-CDA data submissions to the CDR. OneHealthPort is currently working with vendors to ready their systems for C-CDA data submissions. Learn where your vendor is at in the C-CDA data submission preparation process.

Prepare the C-CDA

These steps will help you prepare, test, and submit C-CDA documents to a Clinical Data Repository (CDR) or with other HIE participating organizations.

Become a Sponsor

Clinical Data Repository (CDR) services are offered by the OneHealthPort HIE to organizations interested in collecting clinical data for a specified patient population. The organizations, known as Sponsors, coordinate CDR initiatives with providers to exchange C-CDA documents using connectivity to the OneHealthPort HIE.

Maintenance Schedule

Production maintenance is scheduled monthly for up to a 3-hour outage starting at 7 PM Pacific.

Next scheduled Production maintenance is Thursday, October 18, 2018.

UAT maintenance is scheduled for a 2-hour outage the first Thursday of each month from 2-4 AM Pacific. Additional scheduled UAT maintenance is performed on a Thursday later in the month from 8 -10 PM Pacific. Please see schedule for details.

[Maintenance Schedule](#) | [Notification Sign-Up](#)

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6.2 OneHealthPort HIE and CDR Support Request Form

Use the OneHealthPort support request form to obtain technical support or assistance with issues related to information exchange activities with the OneHealthPort HIE or the CDR. The support request form is located on the OneHealthPort HIE and CDR web pages. The form is monitored by HIE and CDR technical consultants and business team members to ensure proper resources are quickly deployed to respond to customer issues. Access the support request form [here](#).

7 Appendix

7.1 Transaction Samples

7.1.1 I-41 NS- Provide and Register Non-Standard

```
<soap:Envelope xmlns:soap="http://www.w3.org/2003/05/soap-envelope" xmlns:urn="urn:ihe:iti:xds-b:2007"
xmlns:urn1="urn:oasis:names:tc:ebxml-regrep:xsd:lcm:3.0" xmlns:urn2="urn:oasis:names:tc:ebxml-regrep:xsd:rs:3.0"
xmlns:urn3="urn:oasis:names:tc:ebxml-regrep:xsd:rsm:3.0">
<soap:Header /> (Note see signature example in section 4 for sample header)
<soap:Body>
  <urn:ProvideAndRegisterDocumentSetRequest>
    <lcm:SubmitObjectsRequest xmlns:xsd="http://www.w3.org/2001/XMLSchema" xmlns:rs="urn:oasis:names:tc:ebxml-
regrep:xsd:rs:3.0" xmlns:lcm="urn:oasis:names:tc:ebxml-regrep:xsd:lcm:3.0" xmlns:rsm="urn:oasis:names:tc:ebxml-
regrep:xsd:rsm:3.0" xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance">
      <rsm:RegistryObjectList>
        <rsm:Identifiable xsi:type="rsm:ExtrinsicObjectType" id="Document01" mimeType="text/xml"
objectType="urn:uuid:7edca82f-054d-47f2-a032-9b2a5b5186c1">
          <rsm:Name>
            <rsm:LocalizedString value="Summarization of Episode Note" />
          </rsm:Name>
          <rsm:Slot name="creationTime">
            <rsm:ValueList>
              <!-- Creates a document with a creation date -->
              <rsm:Value>20161115105928</rsm:Value>
            </rsm:ValueList>
          </rsm:Slot>
          <rsm:Slot name="languageCode">
            <rsm:ValueList>
              <rsm:Value>en-us</rsm:Value>
            </rsm:ValueList>
          </rsm:Slot>
          <rsm:Slot name="sourcePatientId">
            <rsm:ValueList>
              <rsm:Value>Insert CDR Global Identifier here^^^OHP-MPI&
1.3.6.1.4.1.38630.3.99.1.2.1.1.2&ISO^PI</rsm:Value>
            </rsm:ValueList>
          </rsm:Slot>
          <rsm:Classification classificationScheme="urn:uuid:93606bcf-9494-43ec-9b4e-a7748d1a838d"
classifiedObject="Document01">
            <rsm:Slot name="authorPerson">
              <rsm:ValueList>
                <rsm:Value>^sending organization^^^^^^^&SendingOrgOID.999.5.2.5&ISO</rsm:Value>
              </rsm:ValueList>
            </rsm:Slot>
          </rsm:Classification>
          <!-- XSDDocumentEntry.classCode -->

```

```

<rim:Classification classificationScheme="urn:uuid:41a5887f-8865-4c09-adf7-e362475b143a"
classifiedObject="Document01" nodeRepresentation="34133-9">
  <rim:Name>
    <rim:LocalizedString value="XDSDocumentEntry.classCode" />
  </rim:Name>
  <rim:Slot name="codingScheme">
    <rim:ValueList>
      <rim:Value>LOINC</rim:Value>
    </rim:ValueList>
  </rim:Slot>
</rim:Classification>
<!--XDSDocumentEntry.confidentialityCode -->
<rim:Classification classificationScheme="urn:uuid:f4f85eac-e6cb-4883-b524-f2705394840f"
classifiedObject="Document01" nodeRepresentation="N">
  <rim:Name>
    <rim:LocalizedString value="Normal" />
  </rim:Name>
  <rim:Slot name="codingScheme">
    <rim:ValueList>
      <rim:Value>2.16.840.1.113883.5.25</rim:Value>
    </rim:ValueList>
  </rim:Slot>
</rim:Classification>
<!--XDSDocumentEntry.formatCode -->
<rim:Classification classificationScheme="urn:uuid:a09d5840-386c-46f2-b5ad-9c3699a4309d"
classifiedObject="Document01" nodeRepresentation="CCDA">
  <rim:Name>
    <rim:LocalizedString value="Consolidated CDA" />
  </rim:Name>
  <rim:Slot name="codingScheme">
    <rim:ValueList>
      <rim:Value>2.16.840.1.113883.3.37.4.1.9.101</rim:Value>
    </rim:ValueList>
  </rim:Slot>
</rim:Classification>
<!-- XDSDocumentEntry.typeCode -->
<rim:Classification classificationScheme="urn:uuid:f0306f51-975f-434e-a61c-c59651d33983"
classifiedObject="Document01" nodeRepresentation="34133-9">
  <rim:Name>
    <rim:LocalizedString value="SUMMARIZATION OF EPISODE NOTE" />
  </rim:Name>
  <rim:Slot name="codingScheme">
    <rim:ValueList>
      <rim:Value>LOINC</rim:Value>
      <!-- <rim:Value>2.16.840.1.113883.6.1</rim:Value> -->
    </rim:ValueList>
  </rim:Slot>
</rim:Classification>
<!--XDSDocumentEntry.healthCareFacilityTypeCode -->

```

```

<rim:Classification classificationScheme="urn:uuid:f33fb8ac-18af-42cc-ae0e-ed0b0bdb91e1"
classifiedObject="Document01" nodeRepresentation="282N00000X">
  <rim:Name>
    <rim:LocalizedString value="General Acute Care Hospital" />
    <!--<rim:LocalizedString value="65836-9" />-->
  </rim:Name>
  <rim:Slot name="codingScheme">
    <rim:ValueList>
      <rim:Value>2.16.840.1.113883.6.101</rim:Value>
      <!--<rim:Value>2.16.840.1.113883.6.101</rim:Value>-->
    </rim:ValueList>
  </rim:Slot>
</rim:Classification>
<!--XSDDocumentEntry.practiceSettingCode, AKA Speciality -->
<rim:Classification classificationScheme="urn:uuid:cccf5598-8b07-4b77-a05e-ae952c785ead"
classifiedObject="Document01" nodeRepresentation="282N00000X">
  <rim:Name>
    <rim:LocalizedString value="General Acute Care Hospital" />
  </rim:Name>
  <rim:Slot name="codingScheme">
    <rim:ValueList>
      <rim:Value>2.16.840.1.113883.6.101</rim:Value>
    </rim:ValueList>
  </rim:Slot>
</rim:Classification>
<!-- XSDDocumentEntry.patientId -->
<rim:ExternalIdentifier identificationScheme="urn:uuid:58a6f841-87b3-4a3e-92fd-a8ffeff98427"
registryObject="Document01" value="CDR Global Id^^OHP-MPI&amp;1.3.6.1.4.1.38630.3.99.1.2.1.1.2&amp;ISO^PI">
  <rim:Name>
    <rim:LocalizedString value="XSDDocumentEntry.patientId" />
  </rim:Name>
</rim:ExternalIdentifier>
<!-- XSDDocumentEntry.uniqueId -->
<rim:ExternalIdentifier identificationScheme="urn:uuid:2e82c1f6-a085-4c72-9da3-8640a32e42ab"
registryObject="Document01" value="1.3.6.1.4.1.22812.4.108.0.2000.3.1479500706949">
  <rim:Name>
    <rim:LocalizedString value="XSDDocumentEntry.uniqueId" />
  </rim:Name>
</rim:ExternalIdentifier>
</rim:Identifiable>
<!-- add submission set, this section for DocumentRegistry -->
<rim:Identifiable xsi:type="rim:RegistryPackageType" id="SubmissionSet01">
  <rim:Slot name="submissionTime">
    <rim:ValueList>
      <rim:Value>20161115105928</rim:Value>
    </rim:ValueList>
  </rim:Slot>
  <!--submission set authorPerson -->

```

```

<rim:Classification classificationScheme="urn:uuid:a7058bb9-b4e4-4307-ba5b-e3f0ab85e12d"
classifiedObject="SubmissionSet01">
  <rim:Slot name="authorPerson">
    <rim:ValueList>
      <rim:Value>Author^Title^^^^^^^&SendingOrgOID.999.1.1.2&ISO</rim:Value>
    </rim:ValueList>
  </rim:Slot>
</rim:Classification>
<!--XDSSubmissionSet.contentTypeCode -->
<rim:Classification classificationScheme="urn:uuid:aa543740-bdda-424e-8c96-df4873be8500"
classifiedObject="SubmissionSet01" nodeRepresentation="34133-9">
  <rim:Name>
    <rim:LocalizedString value="Summarization of Episode Note"/>
  </rim:Name>
  <rim:Slot name="codingScheme">
    <rim:ValueList>
      <!-- <rim:Value>2.16.840.1.113883.6.1</rim:Value> -->
      <rim:Value>LOINC</rim:Value>
    </rim:ValueList>
  </rim:Slot>
</rim:Classification>
<!-- XDSSubmissionSet.uniqueId -->
<rim:ExternalIdentifier identificationScheme="urn:uuid:96fdda7c-d067-4183-912e-bf5ee74998a8"
value="1.3.6.1.4.1.22812.4.108.0.3000.3.1479500706949">
  <rim:Name>
    <rim:LocalizedString value="XDSSubmissionSet.uniqueId" />
  </rim:Name>
</rim:ExternalIdentifier>
<!-- XDSSubmissionSet.sourceId -->
<rim:ExternalIdentifier identificationScheme="urn:uuid:554ac39e-e3fe-47fe-b233-965d2a147832" value="Insert OHP
organization assigned OID or mapped OID">
  <rim:Name>
    <rim:LocalizedString value="XDSSubmissionSet.sourceId" />
  </rim:Name>
</rim:ExternalIdentifier>
<!-- XDSSubmissionSet.patientId -->
<rim:ExternalIdentifier identificationScheme="urn:uuid:6b5aea1a-874d-4603-a4bc-96a0a7b38446" value="CDR Global
Id^^^OHP-MPI&1.3.6.1.4.1.38630.3.99.1.2.1.1.2&ISO^PI">
  <rim:Name>
    <rim:LocalizedString value="XDSSubmissionSet.patientId" />
  </rim:Name>
</rim:ExternalIdentifier>
</rim:Identifiable>
<rim:Classification classifiedObject="SubmissionSet01" classificationNode="urn:uuid:a54d6aa5-d40d-43f9-88c5-
b4633d873bdd" />
<!-- Associate SubmissionSet01 to Document01-->
<rim:Association associationType="urn:oasis:names:tc:ebxml-regrep:AssociationType:HasMember"
sourceObject="SubmissionSet01" targetObject="Document01">
  <rim:Slot name="SubmissionSetStatus">

```

```

        <rim:ValueList>
            <rim:Value>Original</rim:Value>
        </rim:ValueList>
    </rim:Slot>
</rim:Association>
</rim:RegistryObjectList>
</lcm:SubmitObjectsRequest>
<!-- This is a clinical document -->
<urn:Document id="Document01"> [Base64 encoded document is inserted here]
    </urn:Document>
</urn:ProvideAndRegisterDocumentSetRequest>
</soap:Body>
</soap:Envelope>

```

7.2 Provide and Register Transaction Response Message Samples

7.2.1 Success Response Sample

The CDR system sends HTTP 200 messages when a web services transaction crosses all the way to the CDR system. A **200 message** sample is shown below:

```

<?xml version="1.0" encoding="UTF-8"?>
<soap:Envelope xmlns:soap="http://www.w3.org/2003/05/soap-envelope">
    <soap:Header>
        <Action xmlns="http://www.w3.org/2005/08/addressing">urn:ihe:iti:2007:ProvideAndRegisterDocumentSet-
bResponse</Action>
        <MessageID xmlns="http://www.w3.org/2005/08/addressing">urn:uuid:9c763d6a-5af8-4610-a9bf-
1585ed9a1054</MessageID>
        <To
xmlns="http://www.w3.org/2005/08/addressing">http://www.w3.org/2005/08/addressing/anonymous</To>
        <RelatesTo xmlns="http://www.w3.org/2005/08/addressing">urn:uuid:4df59bfb-0386-4fad-bc32-
59b89811c279</RelatesTo>
    </soap:Header>
    <soap:Body>
        <ns3:RegistryResponse xmlns:ns6="urn:oasis:names:tc:ebxml-regrep:xsd:query:3.0"
xmlns:ns5="urn:oasis:names:tc:ebxml-regrep:xsd:lcm:3.0" xmlns:ns4="urn:ihe:iti:xds-b:2007"
xmlns:ns3="urn:oasis:names:tc:ebxml-regrep:xsd:rs:3.0" xmlns:ns2="urn:oasis:names:tc:ebxml-regrep:xsd:rim:3.0"
status="urn:oasis:names:tc:ebxml-regrep:ResponseStatusType:Success"/>
    </soap:Body>
</soap:Envelope>

```

7.2.2 Provide and Register Transaction Error Response Samples

The CDR system has quite an extensive list of provide and register transaction response errors, many depending on the content in the transaction sent to the CDR. The most common error responses are shown below.

Blocked Message Error (500)

A **500 error** is sent when a message is blocked from crossing to the CDR because of certificate validation and mutual authentication issues, or the signature is not recognized. This message means the submitted transaction did not reach the CDR. A sample of this message content is shown below:

```
<?xml version="1.0" encoding="UTF-8"?>
<env:Envelope xmlns:env="http://www.w3.org/2003/05/soap-envelope">
  <env:Header>
  </env:Header>
  <env:Body>
    <env:Fault>
      <env:Code>
        <env:Value>env:Receiver
      </env:Value>
      <env:Subcode>
        <env:Value xmlns:fault="http://www.vordel.com/soapfaults">fault:MessageBlocked
      </env:Value>
      </env:Subcode>
    </env:Code>
    <env:Reason>
    </env:Reason>
    <env:Detail xmlns:fault="http://www.vordel.com/soapfaults" fault:type="faultDetails">
    </env:Detail>
  </env:Fault>
</env:Body>
</env:Envelope>
```

Sample web service error message with single validation error:

```
<?xml version="1.0" encoding="UTF-8"?>
<soap:Envelope xmlns:soap="http://www.w3.org/2003/05/soap-envelope" xmlns="urn:hl7-org:v3">
  <soap:Body>
    <ns3:RegistryResponse xmlns:ns3="urn:oasis:names:tc:ebxml-regrep:xsd:rs:3.0" xmlns:ns2="urn:oasis:names:tc:ebxml-regrep:xsd:rim:3.0" xmlns:ns4="urn:ihe:iti:xds-b:2007" xmlns:ns5="urn:oasis:names:tc:ebxml-regrep:xsd:lcm:3.0"
xmlns:ns6="urn:oasis:names:tc:ebxml-regrep:xsd:query:3.0" status="urn:oasis:names:tc:ebxml-regrep:ResponseStatusType:Failure">
      <ns3:RegistryErrorList highestSeverity="urn:oasis:names:tc:ebxml-regrep:ErrorSeverityType:Error">
        <ns3:RegistryError codeContext="The clinical document you submitted to the CDR on Fri Feb 15
10:56:36 PST 2019, , has failed the CDA R2 base standard conformance. To see the actual error validation content submit your document to
our CCDa validator at https://identity.onehealthport.com/EmpowerIDWebIDPForms/Login/VALIDATOR to get detailed error information.
The validation error(s) in your file follow: CCD Validation Error: lineNumber: 33; columnNumber: 202; cvc-pattern-valid: Value `Not a valid
code` is not facet-valid with respect to pattern `[^\s]+` for type `cs`. CCD Validation Error: lineNumber: 33; columnNumber: 202; cvc-
attribute.3: The value `Not a valid code` of attribute `code` on element `religiousAffiliationCode` is not valid with respect to its type, `cs`. "
errorCode="InvalidDocumentContent" severity="urn:oasis:names:tc:ebxml-regrep:ErrorSeverityType:Error"/>
      </ns3:RegistryErrorList>
    </ns3:RegistryResponse>
  </soap:Body>
```



```
</soap:Envelope>
```

Sample web service error message with multiple validation errors:

```
<?xml version="1.0" encoding="UTF-8"?>
<soap:Envelope xmlns:soap="http://www.w3.org/2003/05/soap-envelope" xmlns="urn:hl7-org:v3">
  <soap:Body>
    <ns3:RegistryResponse xmlns:ns3="urn:oasis:names:tc:ebxml-regrep:xsd:rs:3.0" xmlns:ns2="urn:oasis:names:tc:ebxml-regrep:xsd:rim:3.0" xmlns:ns4="urn:ihe:iti:xds-b:2007" xmlns:ns5="urn:oasis:names:tc:ebxml-regrep:xsd:lcm:3.0"
      xmlns:ns6="urn:oasis:names:tc:ebxml-regrep:xsd:query:3.0" status="urn:oasis:names:tc:ebxml-regrep:ResponseStatusType:Failure">
      <ns3:RegistryErrorList highestSeverity="urn:oasis:names:tc:ebxml-regrep:ErrorSeverityType:Error">
        <ns3:RegistryError codeContext="The clinical document you submitted to the CDR on Fri Feb 15
10:57:39 PST 2019, , has failed the CDA R2 base standard conformance. To see the actual error validation content submit your document to
our CCDa validator at https://identity.onehealthport.com/EmpowerIDWebIDPForms/Login/VALIDATOR to get detailed error information.
The validation error(s) in your file follow: CCD Validation Error: lineNumber: 32; columnNumber: 153; cvc-pattern-valid: Value `Not a valid
code` is not facet-valid with respect to pattern `[^\s]` for type `cs`. CCD Validation Error: lineNumber: 32; columnNumber: 153; cvc-
attribute.3: The value `Not a valid code` of attribute `code` on element `maritalStatusCode` is not valid with respect to its type, `cs`. CCD
Validation Error: lineNumber: 34; columnNumber: 202; cvc-pattern-valid: Value `Not a valid code` is not facet-valid with respect to pattern
`[^\s]` for type `cs`. CCD Validation Error: lineNumber: 34; columnNumber: 202; cvc-attribute.3: The value `Not a valid code` of attribute
`code` on element `religiousAffiliationCode` is not valid with respect to its type, `cs`. CCD Validation Error: lineNumber: 36; columnNumber:
151; cvc-pattern-valid: Value `Not a valid code` is not facet-valid with respect to pattern `[^\s]` for type `cs`. CCD Validation Error:
lineNumber: 36; columnNumber: 151; cvc-attribute.3: The value `Not a valid code` of attribute `code` on element `raceCode` is not valid
with respect to its type, `cs`. CCD Validation Error: lineNumber: 38; columnNumber: 175; cvc-pattern-valid: Value `Not a valid code` is not
facet-valid with respect to pattern `[^\s]` for type `cs`. CCD Validation Error: lineNumber: 38; columnNumber: 175; cvc-attribute.3: The
value `Not a valid code` of attribute `code` on element `ethnicGroupCode` is not valid with respect to its type, `cs`. "
errorCode="InvalidDocumentContent" severity="urn:oasis:names:tc:ebxml-regrep:ErrorSeverityType:Error"/>
      </ns3:RegistryErrorList>
    </ns3:RegistryResponse>
  </soap:Body>
</soap:Envelope>
```

Sample web service error message with multiple error types – patient match and multiple validation errors:

```
<?xml version="1.0" encoding="UTF-8"?>
<soap:Envelope xmlns:soap="http://www.w3.org/2003/05/soap-envelope" xmlns="urn:hl7-org:v3">
  <soap:Body>
    <ns3:RegistryResponse xmlns:ns3="urn:oasis:names:tc:ebxml-regrep:xsd:rs:3.0" xmlns:ns2="urn:oasis:names:tc:ebxml-regrep:xsd:rim:3.0" xmlns:ns4="urn:ihe:iti:xds-b:2007" xmlns:ns5="urn:oasis:names:tc:ebxml-regrep:xsd:lcm:3.0"
      xmlns:ns6="urn:oasis:names:tc:ebxml-regrep:xsd:query:3.0" status="urn:oasis:names:tc:ebxml-regrep:ResponseStatusType:Failure">
      <ns3:RegistryErrorList highestSeverity="urn:oasis:names:tc:ebxml-regrep:ErrorSeverityType:Error">
        <ns3:RegistryError codeContext="Unknown Patient Id [XXX] specified in request"
errorCode="XDSUnknownPatientId" severity="urn:oasis:names:tc:ebxml-regrep:ErrorSeverityType:Error"/>
        <ns3:RegistryError codeContext="The clinical document you submitted to the CDR on Fri Feb 15
10:56:36 PST 2019, , has failed the CDA R2 base standard conformance. To see the actual error validation content submit your document to
our CCDa validator at https://identity.onehealthport.com/EmpowerIDWebIDPForms/Login/VALIDATOR to get detailed error information.
The validation error(s) in your file follow: CCD Validation Error: lineNumber: 33; columnNumber: 153; cvc-pattern-valid: Value `Not a valid
code` is not facet-valid with respect to pattern `[^\s]` for type `cs`. CCD Validation Error: lineNumber: 33; columnNumber: 153; cvc-
attribute.3: The value `Not a valid code` of attribute `code` on element `maritalStatusCode` is not valid with respect to its type, `cs`. CCD
Validation Error: lineNumber: 35; columnNumber: 202; cvc-pattern-valid: Value `Not a valid code` is not facet-valid with respect to pattern
`[^\s]` for type `cs`. CCD Validation Error: lineNumber: 35; columnNumber: 202; cvc-attribute.3: The value `Not a valid code` of attribute
```

```

`code` on element `religiousAffiliationCode` is not valid with respect to its type, `cs`. CCD Validation Error: lineNumber: 37; columnNumber: 151; cvc-pattern-valid: Value `Not a valid code` is not facet-valid with respect to pattern `[\s]+` for type `cs`. CCD Validation Error: lineNumber: 37; columnNumber: 151; cvc-attribute.3: The value `Not a valid code` of attribute `code` on element `raceCode` is not valid with respect to its type, `cs`. CCD Validation Error: lineNumber: 39; columnNumber: 175; cvc-pattern-valid: Value `Not a valid code` is not facet-valid with respect to pattern `[\s]+` for type `cs`. CCD Validation Error: lineNumber: 39; columnNumber: 175; cvc-attribute.3: The value `Not a valid code` of attribute `code` on element `ethnicGroupCode` is not valid with respect to its type, `cs`. "
errorCode="InvalidDocumentContent" severity="urn:oasis:names:tc:ebxml-regrep:ErrorSeverityType:Error"/>
      </ns3:RegistryErrorList>
    </ns3:RegistryResponse>
  </soap:Body>
</soap:Envelope>

```

Other Errors encountered not specifically identified (599)

There are multiple other errors that could occur that have not been specifically delineated with a unique “500 range” number assignment. These will return as **599 errors**. Submitters in receipt of a 599 error response where they are unable to discern the underlying problem should contact OneHealthPort for assistance. The sample below shows a 599 error that generated when a required section of the ITI41 was missing from the web services transaction:

```

<soap:Envelope xmlns:soap="http://www.w3.org/2003/05/soap-envelope">
  <soap:Body>
    <ns3:RegistryResponse xmlns:ns6="urn:oasis:names:tc:ebxml-regrep:xsd:query:3.0"
      xmlns:ns5="urn:oasis:names:tc:ebxml-regrep:xsd:lcm:3.0" xmlns:ns4="urn:ihe:iti:xds-b:2007"
      xmlns:ns3="urn:oasis:names:tc:ebxml-regrep:xsd:rs:3.0" xmlns:ns2="urn:oasis:names:tc:ebxml-regrep:xsd:rsm:3.0"
      status="urn:oasis:names:tc:ebxml-regrep:ResponseStatusType:Failure">
      <ns3:RegistryErrorList highestSeverity="urn:oasis:names:tc:ebxml-regrep:ErrorSeverityType:Error">
        <ns3:RegistryError codeContext="Document Metadata is missing for a DocumentContent
with id[1A]" errorCode="XDSMissingDocumentMetadata" severity="urn:oasis:names:tc:ebxml-regrep:ErrorSeverityType:Error"/>
      </ns3:RegistryErrorList>
    </ns3:RegistryResponse>
  </soap:Body>
</soap:Envelope>

```