Technical Story Number: TS008.01.1
Technical Story Name: Use MVI getCorrespondingIDs for CCP Data Retrieval
Priority: High
ClearQuest Number: DAS_CR395
Author: David Ellis / Developer

Story: As a consuming application, I want to send a query to the Virtual Lifetime Electronic Record (VLER) Data Access Services (DAS) for Care Coordinator Profile data on a patient identified by ICN (Integration Control Number), a national VA patient ID, so that VLER DAS can use the MVI (Master Veteran Index) getCorrespondingIDs service to obtain a corresponding EDIPI (Electronic Data Interchange Personal Identifier), a national DoD service member ID, by which DAS can retrieve the requested data from the appropriate producers and return it to me.

Revision History

<table>
<thead>
<tr>
<th>Date</th>
<th>Version</th>
<th>Description</th>
<th>Author</th>
</tr>
</thead>
<tbody>
<tr>
<td>01/30/2013</td>
<td>v0.01</td>
<td>Original.</td>
<td>David Ellis</td>
</tr>
<tr>
<td>02/06/2013</td>
<td>v0.02</td>
<td>Architect reviewed and associated revisions.</td>
<td>George Ludgate</td>
</tr>
<tr>
<td>02/21/2013</td>
<td>v0.03</td>
<td>Use Acceptance Criteria from updated User Story.</td>
<td>David Ellis</td>
</tr>
<tr>
<td>02/25/2013</td>
<td>v0.04</td>
<td>Peer Review</td>
<td>David Ellis</td>
</tr>
<tr>
<td>02/25/2013</td>
<td>V1.0</td>
<td>Approved</td>
<td>Cam Moore</td>
</tr>
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</table>

Reference Documentation

1. User Story US008.01, IdM MVI Get Corresponding IDs, v2.0.
3. IdM WSDL (Web Services Description Language) specification from MVI group. Packaged as separate file (TS008.01.1_IdmHl7v3_wsd1.xml) accompanying this Technical Story document. 


Overview

This Technical Story implements the Business Requirements listed in the following User Stories:

1. US008.01 – IdM MVI Get Corresponding IDs.

<table>
<thead>
<tr>
<th>User Story Requirement ID</th>
<th>Description</th>
<th>Technical Story Coverage (Yes/No/Partial)</th>
<th>Sprint # (for Yes or Partial)</th>
</tr>
</thead>
<tbody>
<tr>
<td>US008.01.01</td>
<td>VLER DAS sends the ICN for the Veteran/Service Member to the MVI to get the EDIPI required by the producing applications, in response to a request for Care Coordinator Profile information from a consuming application that uses ICN.</td>
<td>Yes</td>
<td>Transformers_15</td>
</tr>
<tr>
<td>US008.01.02</td>
<td>VLER DAS sends the request with EDIPI to the producing applications to identify the Veteran/Service Member.</td>
<td>Yes</td>
<td>Transformers_15</td>
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<tr>
<td>US008.01.03</td>
<td>VLER DAS sends the requested Care Coordinator Profile information to the consuming application.</td>
<td>Yes</td>
<td>Transformers_15</td>
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</table>

For the existing and currently planned consumers and producers served by VLER DAS, the only case where invocation of the MVI getCorrespondingIds service is needed is when a consumer requests Care Coordinator Profile data from the producer systems, and the patient is identified by ICN. In this case, the MVI is used to obtain the corresponding EDIPI.

Actors

The following applications collaborate to meet the business requirements:

1. Consumer
2. VRS (VLER Read Service)
3. MVI (Master Veteran Index)
4. Producers (VTA, FCMT, AWCTS)
Preconditions

1. All actors must be running.
2. The Consumer must have network access to VRS over the Internet.
3. VRS must have network access to MVI over the VA Wide Area Network (WAN).
4. VRS must have network access to Producers over the VA Wide Area Network (WAN).

Detailed Flow within System

**Detailed Flow through Consumer.**

The Consumer makes a First Pass request to VRS for Care Coordinator Profile data. This is done through the following steps:

1. The Consumer issues a REST request to VRS with a URL specifying Care Coordinator Profile data and with a patient ID that may be either an ICN or EDIPI.
2. The Consumer receives back an Atom Feed as a First Pass response to the request. The Atom Feed includes URL links to the actual data (Subject Documents) gathered from all available Producers. Each link contains the appropriate patient ID (possibly translated from the first pass request) needed by the producer system identified in the link.

**Note:** All internal processing by the Consumer is outside the scope of this Technical Story.

**Detailed Flow through VRS**

The REST request is routed to a business process in VRS that requests Care Coordinator Profile data from all available Producers.

The business process in VRS performs the following steps:

1. Receives a First Pass REST request in the form of a URL from a consumer.
2. Checks whether the patient ID in the request is ICN or EDIPI. If EDIPI, skip to step 6.
3. Creates a SOAP getCorrespondingIds request to MVI requesting all patient IDs corresponding to the ICN.
4. Sends getCorrespondingIds request to MVI and receives a synchronous response. The SOAP response from MVI contains a list of all patient IDs known by the MVI that correspond to the given ICN.
5. Creates a modified REST request for each producer, substituting the EDIPI, obtained from the MVI response, in place of the ICN.
6. Sends the REST request (updated in step 5 if necessary) to the Producers.
7. Aggregates responses from the Producers into a single Atom Feed.
8. Returns the Atom Feed to the Consumer.
Steps 2 through 5 add support for invoking the MVI getCorrespondingIDs service to the existing VLER DAS business process for retrieving Care Coordinator Profiles from the Producers.

**Detailed Flow through MVI.**

The MVI request and response conform to References 2 and 3.

MVI performs the following:

1. Receives a SOAP getCorrespondingIDs request from VRS containing a patient ID, in this case an ICN. An example request is shown in Appendix A.
2. Constructs a SOAP response containing a list of all the IDs by which the patient is known to MVI. This list is expected to contain the EDIPi for the patient. An example response is shown in Appendix B.
3. Returns the response to VRS.

**Note:** All MVI internal processing is outside the scope of this Technical Story.

**Detailed Flow through Producers.**

Each producer performs the following steps:

1. Receives a First Pass REST request from VRS.
2. Retrieves Care Coordinator Profile data and forms an Atom Feed.
3. Returns the Atom Feed to VRS.

**Note:** All internal processing within the producers is outside the scope of this Technical Story.

**Post Conditions**

1. All the preconditions
2. The consumer has received a response from VRS to their First Pass request for Care Coordinator Profile data.

**Alternate Flow**

None

**Alternate Flow Post Conditions**

N/A
Detailed Listing of Acceptance Criteria

<table>
<thead>
<tr>
<th>Requirement ID</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>TS008.01.1.01</td>
<td>VRS receives a First Pass REST request for Care Coordinator Profile data from a consumer. The PID on the request must specify an ICN or EDIPI.</td>
</tr>
<tr>
<td>TS008.01.1.02</td>
<td>VRS sends a SOAP request to MVI to translate an ICN to EDIPI (if necessary).</td>
</tr>
<tr>
<td>TS008.01.1.03</td>
<td>VRS receives a SOAP response from MVI (if necessary).</td>
</tr>
<tr>
<td>TS008.01.1.04</td>
<td>VRS sends a First Pass REST request to producers with EDIPI as PID.</td>
</tr>
<tr>
<td>TS008.01.1.05</td>
<td>VRS receives first pass Atom Feed results from producers.</td>
</tr>
<tr>
<td>TS008.01.1.06</td>
<td>VRS returns an Atom Feed to the consumer. The links on the URLs in the Atom Feed pick list will have EDIPI as needed by the Producers to handle Second Pass requests.</td>
</tr>
</tbody>
</table>

Dependencies and Assumptions

Any changes to the WSDL, associated schema or the Interface Control Document (ICD) may be regarded as changes to the requirements for MVI requests. If the requirements change, that may necessitate additional future work to change our code and documentation accordingly.
Appendix A: Sample request sent to MVI

This Appendix shows the contents of a sample getCorrespondingIds request sent to MVI as the payload within a SOAP envelope. The ICN identifying the patient is highlighted in yellow.

```
<ps:PRPA_IN201309UV02 ITSVersion="XML_1.0" xmlns="urn:hl7-org:v3"
 xmlns:ps="http://vawww.oed.oit.va.gov"
 xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance" xsi:schemaLocation="urn:hl7-org:v3 ../../schema/HL7V3/NE2008/multicacheschemas/PRPA_IN201309UV02.xsd">
 <id extension="MCID-7d8aa634-4d6a-47e0-b952-f07c6e1fefcd" root="2.16.840.1.113883.4.349"/>
 <creationTime value="20130207083832"/>
 <interactionId root="2.16.840.1.113883.1.6"/>
 <processingCode code="T"/>
 <processingModeCode code="T"/>
 <acceptAckCode code="AL"/>
 <receiver typeCode="RCV">
   <device classCode="DEV" determinerCode="INSTANCE">
     <id root="2.16.840.1.113883.4.349"/>
   </device>
 </receiver>
 <sender typeCode="SND">
   <device classCode="DEV" determinerCode="INSTANCE">
     <id extension="200DAS" root="2.16.840.1.113883.4.349"/>
   </device>
 </sender>
 <controlActProcess classCode="CACT" moodCode="EVN">
   <code code="PRPA_TE201309UV02" codeSystem="2.16.840.1.113883.1.6"/>
   <queryByParameter>
     <queryId extension="MCID-7d8aa634-4d6a-47e0-b952-f07c6e1fefcd" root="2.16.840.1.113883.4.349"/>
     <statusCode code="new"/>
     <responsePriorityCode code="I"/>
     <parameterList>
       <patientIdentifier>
         <value extension="1008523188V166602^NI^200M^USVHA^A" root="2.16.840.1.113883.4.349"/>
         <semanticsText>Patient.Id</semanticsText>
       </patientIdentifier>
     </parameterList>
   </queryByParameter>
 </controlActProcess>
</ps:PRPA_IN201309UV02>
```
Appendix B: Sample response from MVI

This Appendix shows the contents of the response expected from the MVI to the sample getCorrespondingIds request in Appendix A. The EDIPI, highlighted in yellow, is provided in one entry in the list of patient IDs returned by the MVI.

```xml
<idm:PRPA_IN201310UV02 ITSVersion="XML_1.0" xsi:schemaLocation="urn:hl7-org:v3 ../../../schema/HL7V3/NE2008/multicacheschemas/PRPA_IN201310UV02.xsd" xmlns="urn:hl7-org:v3" xmlns:idm="http://vaww.oed.oit.va.gov">
  <id extension="MCID-1211281018569130410592011" root="2.999.999.999.999.2"/>
  <creationTime value="20130207083833-0500"/>
  <interactionId extension="PRPA_IN201310UV02" root="2.16.840.1.113883.1.6"/>
  <processingCode code="T"/>
  <processingModeCode code="T"/>
  <acceptAckCode code="NE"/>
  <receiver typeCode="RCV">
    <device determinerCode="INSTANCE" classCode="DEV">
      <id extension="200DAS" root="2.16.840.1.113883.4.349"/>
    </device>
  </receiver>
  <sender typeCode="SND">
    <device determinerCode="INSTANCE" classCode="DEV">
      <id root="2.16.840.1.113883.4.349"/>
    </device>
  </sender>
  <acknowledgement>
    <typeCode code="AA"/>
    <targetMessage>
      <id extension="MCID-7d8aa634-4d6a-47e0-b952-f07c6e1f6efcd" root="2.16.840.1.113883.4.349"/>
    </targetMessage>
  </acknowledgement>
  <controlActProcess classCode="CACT" moodCode="EVN">
    <code code="PRPA_TE201310UV02"/>
    <subject typeCode="SUBJ">
      <registrationEvent classCode="REG" moodCode="EVN">
        <id nullFlavor="NA"/>
        <statusCode code="active"/>
        <subject1 typeCode="SBJ">
          <patient classCode="PAT">
            <id extension="100001888^PI^500^USVHA^A" root="2.16.840.1.113883.4.349"/>
            <id extension="1008523188V166602^NI^200M^USVHA^P" root="2.16.840.1.113883.4.349"/>
          </patient>
        </subject1>
      </registrationEvent>
    </subject>
  </controlActProcess>
</idm:PRPA_IN201310UV02>
```
<id extension="1606258387^NI^200DOD^USDOD^A" root="2.16.840.1.113883.3.364"/>

<id extension="100001875^PI^553^USVHA^A" root="2.16.840.1.113883.4.349"/>
<id extension="523375862^PI^523^USVHA^A" root="2.16.840.1.113883.4.349"/>
<id extension="0000001008523188V166602000000^PI^200ESR^USVHA^A" root="2.16.840.1.113883.4.349"/>

<statusCode code="active"/>

<patientPerson determinerCode="INSTANCE" classCode="PSN">
  <name nullFlavor="NA"/>
</patientPerson>
</patient>

<subject1>
  <custodian typeCode="CST">
    <assignedEntity classCode="ASSIGNED">
      <id root="2.16.840.1.113883.4.349"/>
    </assignedEntity>
  </custodian>
</registrationEvent>

<queryAck>
  <queryId extension="MCID-7d8aa634-4d6a-47e0-b952-f07c6e1fefcd"
    root="2.16.840.1.113883.4.349"/>
  <queryResponseCode code="OK"/>
</queryAck>

<queryByParameter>
  <queryId extension="MCID-7d8aa634-4d6a-47e0-b952-f07c6e1fefcd"
    root="2.16.840.1.113883.4.349"/>
  <statusCode code="new"/>
  <responsePriorityCode code="I"/>
  <parameterList>
    <patientIdentifier>
      <value extension="1606258387^NI^200DOD^USDOD^A"
        root="2.16.840.1.113883.3.364"/>
      <semanticsText>Patient.Id</semanticsText>
    </patientIdentifier>
  </parameterList>
</queryByParameter>
</controlActProcess>

</idm:PRPA_IN201310UV02>