Enterprise Messaging Infrastructure

Vitria Interface Engine

Health Data Repository

Service Integration Design Document



Department of Veterans Affairs

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# Introduction

The Health Data Repository (HDR) Enterprise Messaging Infrastructure (eMI) application stores clinically relevant Veteran data at an enterprise location. Clinical activities, such as entering a prescription, entering vital statistic measurements, and entering a drug or allergy reaction, trigger the Health Level 7 (HL7) messages from the Department of Veterans Affairs (VA) Veterans Health Information System and Technology Architecture (VistA) to be sent to the HDR. The eMI HDR application facilitates the exchange of HL7 messages from the VistA system to the HDR, located at the Austin Information Technology Center (AITC) in Austin, Texas.

## Purpose

The purpose of this document is to describe the interface specifications of the eMI HDR interface to the VistA systems and the HDR system. This document also provides the detailed design of the eMI HDR message flow and includes protocol, transformation, broker patterns, happy path, and exception details.

## Scope

The scope of this document is to describe the message flow between the VistA systems and the HDR system. This document defines requirement and design specifications for the HDR message flow.

The eMI HDR application receives HL7 messages from the VistA system via Socket for transmission to the HDR. VistA sends the HL7 messages to the Regional Data Center (RDC). The RDC validates the Message Header (MSH) and sends a Commit Acknowledge (CA) or Commit Reject (CR) to VistA. The RDC then transfers the messages to the Enterprise, which routes the messages to HDR based on content-based routing rules. The eMI HDR application transforms these HL7 messages to Java Message Service (JMS) and publishes the received messages to the HDR JMS queues. HDR receives approximately three million messages per day, averaging five-kilobyte (kb) messages per payload.

Scope items in this document include, but are not limited to:

1. Message Types
2. Validation
3. Ports and Protocol
4. Transformation
5. Error Handling
6. Routing
7. Security

The following sections describe the details of the above. The common architectural specifications that apply to all VistA Interface Engine (VIE) message flows, such as security, logging, exception handling, etc. are defined in eMI Software Design Document (SDD).

The definitions of the HL7 messages that are generated by VistA, to be sent to HDR, are not in the scope of this document. Details of the IBM Enterprise Service Bus architecture (eMI), physical addresses, and system specification are not in the scope of this document.

## Audience

This document provides implementation details for project owners and serves as a blueprint for managers, architects, developers, and testers building the system. It is assumed that the readers have a moderate knowledge of Message Broker and HL7.

## References

eMI SDD document on the Department of Veterans Affairs (VA) eMI SharePoint site.

# Interface Requirement

Table 1 lists the software interfaces implemented.

Table 1: Software Interfaces

| Application | Interface |
| --- | --- |
| VistA 🡪 eMI | Utilizes Socket to push the HL7 messages to eMI |
| eMI 🡪 HDR | Utilizes JMS to push the HL7 messages from VistA to HDR |

## Business Unit

Data moves from the VistA to the HDR. Table 2 and Table 3 list the points of contact (POCs) for those systems.

Table 2: VistA Business Unit

| VistA Business Unit | |
| --- | --- |
| Agency | VA |
| Sending Application | VistA |
| POC Name |  |
| Title | VistA Testing Co-ordinator |
| Address |  |

Table 3: HDR Business Unit

| HDR Business Unit | |
| --- | --- |
| Agency | VA |
| Receiving Application | HDR |
| POC Name |  |
| Title | Application Manager |
| Contact Info |  |

## Service Level Agreement Metrics

Table 4 lists the Service Level Agreement (SLA) metrics that HDR will be expected to meet.

Table 4: SLA Metrics

| SLA Type | SLA Data |
| --- | --- |
| Number of messages/day | Average of three million/day (not including CAs) |
| Average Message size | 5kb |
| Data Type | HL7 v 2.4 |
| Throughput | 52 messages per second |

## Message Type Metrics

Table 5 lists the message metrics based on message types.

Table 5: Message Type Metrics

| HDR Message Type | Count | Description |
| --- | --- | --- |
| HDRPRES | 42954864 | Less than 5kb |
| HDRVTLS | 21487312 | Less than 5kb |
| HDRPREF | 6019351 | Less than 5kb |
| HDRPRES | 1032901 | Between 5kb and 10kb |
| HDRPREF | 308770 | between 5kb and 10kb |
| HDRALGY | 237255 | Less than 5kb |
| HDRPPAR | 134048 | Less than 5kb |
| HDRADAS | 69780 | Less than 5kb |
| HDRALGY | 17303 | between 5kb and 10kb |
| HDRPPAR | 5516 | between 5kb and 10kb |
| HDRALGY | 5283 | between 10kb and 30kb |
| HTAPPL-ADL | 4545 | Less than 5kb |
| HTAPPL-CENSUS | 176 | greater than 60kb |
| HDRPPAR | 102 | between 10kb and 30kb |
| HDRPRES | 95 | between 10kb and 30kb |
| HDRPREF | 20 | between 10kb and 30kb |
| HDRALGY | 8 | between 30kb and 60kb |
| HDRPPAR | 3 | greater than 60kb |
| HDRPRES | 2 | greater than 60kb |
| HTAPPL-CENSUS | 1 | between 10kb and 30kb |

## Logical System Overview

Figure 1: HDR eMI Logical System Overview



1. The VistA initiates the transfer of an HL7 message via Socket.
2. The eMI validates the MSH and sends an Accept Acknowledgement (CA or CR) back to the VistA.
3. The eMI forwards the message from the RDC to the enterprise system.
4. The eMI at the enterprise system sends the message to one HDR queue.
5. The eMI identifies the JMS queue to which it publishes the message for HDR.

## Logical Deployment Overview

The eMI Message Broker hosts the message flow that listens on a configurable port for HL7 messages, from the VA VistA, using Minimal Lower Layer Protocol (MLLP) over Transmission Control Protocol (TCP)/Internet Protocol (IP) and routes these messages to the HDR systems. Figure 2 shows the boundaries, gateway, and locations of the sending and receiving systems.

Figure 2: HDR eMI Deployment Overview



## eMI Interface Requirements

REQ 1: The eMI system shall receive incoming HL7 messages via Socket from VistA. The eMI system is expected to receive HL7 messages related to clinical activities.

REQ 2: The eMI system shall route the message received from VistA to the HDR and JMS queues respectively based on the routing rules provided in Table 6.

Table 6: HDR Queue Routing Table

| End System | Sending Application (MSH-03) | JMS Queue |
| --- | --- | --- |
| HDR | HDRVTLS | jms/cds/VitalsQueue |
| HDRPRES | jms/cds/PharmacyFullQueue |
| HDRPPAR | jms/cds/PharmacyPartialQueue |
| HDRALGY | jms/cds/AllergiesQueue |
| HDRPREF | jms/cds/PharmacyRefillQueue |
| LA7LAB | jms/cds/LabQueue |
| HDRADAS | jms/cds/AllergyAssessmentQueue |
| When sending application id is not one of the above then the message is published to the default queue. | jms/cds/DefaultQueue |

REQ-3: The eMI system shall externalize the above routing rules to the Operational Decision Management (ODM) so that they can be updated without requiring the eMI HDR application to redeploy to the IBM Integration Broker.

REQ-4: The eMI system shall be able to deliver the message received from VistA to its respective HDR JMS queue. The JMS queue name is identified as defined in the routing rules table (Table 6). During the process, monitoring events will be generated simultaneously.

REQ-5: The eMI system shall create JMS Header Properties, JMS Properties, and the JMS Body as follows:

Table 7: JMS Header Properties

| Property | Value |
| --- | --- |
| JMSDeliveryMode | Persistent |
| JMSExpiration | 0 |
| JMSPriority | 4 |

Table 8: JMS Properties

| Property | Value |
| --- | --- |
| Message\_Id | MSH-10 |
| Message\_Type | MSH-09 |
| Sending\_Application | MSH-03 |
| Sending\_Site | MSH-04 |
| Receiving\_Application | MSH-05 |
| Receiving\_Site | MSH-06 |

The JMS Body is of bytes type and contains the HL7 message.

REQ-6: In the event the eMI HDR application is unable to publish the message to HDR JMS queues, it will try for a configurable number of times and each time monitoring events will be generated.

# Detailed HDR Message Flow

Figure 3 shows the message flow between the VistA and HDR systems using the eMI.

Figure 3: VistA to HDR Sequence



1. The VistA initiates the transfer of an HL7 message via Socket.
2. The eMI validates the MSH.
3. The eMI returns a CA if it does not encounter an error during validation. Otherwise, it returns a CR.
4. The eMI RDC pushes the event to the eMI AITC. This push occurs as part of the Message Queue (MQ) cluster.
5. The eMI publishes events to HDR queues.
6. The eMI uses ODM to identify the JMS queue.
7. The eMI creates the JMS message.
8. The eMI publishes the message to the HDR to the JMS queue identified in  
   Step ‎6.

Error Flow: For any type of anticipated exception that the message flow encounters, the eMI triggers monitoring event and retries for specified number of times and send the message to Maxretried queue if delivery of the message is unsuccessful in each retry.

# HDR Design

The following sections address HDR design aspects.

## Architecture Deviations

The HDR message flow uses an HL7-to-HL7 Data Format Description Language (DFDL) pattern. Instead of using the HL7DFDLInput node, the HDR message flow uses the source of the HL7DFDLInput node as a sub-flow. Modifications ensure that the message flow meets VA specific requirements for validation. There is no known impact on performance or functionality.

## Pattern

The HDR message flow is an instance of an HL7-to-HL7 DFDL pattern. The following options are specified in the tool configuration due to the requirements of the interface requirements.

* No sequencing
* No journaling
* Unchecked canonical feed, report remainders, check duplicates
* Publish to queue

## Protocol

The HDR integration service uses the protocols described in Table 9 and Table 10 to interface with the sending and receiving systems.

Table 9: VistA to eMI Interface

| VA VistA to eMI | |
| --- | --- |
| Protocol: | MLLP over TCP/IP |
| Message Type: | HL7 |
| VistA hostname: | VistA applications |
| eMI hostname: | RDC Load balancer |

Table 10: eMI Interface to HDR

| eMI To HDR | |
| --- | --- |
| Protocol: | JMS |
| Message Type: | HL7 |
| eMI hostname: | AITC Message Brokers |
| HDR hostname: | HDR WebLogic instance |

## Message Routing

Content based routing is utilized for the HDR. Depending upon the value of the sending application (MSH-03), the messages are routed to various JMS destination queues via the HDR application. Table 6 provides the mapping of the routing queues.

## Transformation

The following sections document the various transformations for the HDR message flow.

### Protocol Transformation

Table 11 lists the various protocol transformations that will occur in HDR.

Table 11: Protocol Transformation in HDR

| Application | Interface |
| --- | --- |
| VistA 🡪 eMI RDC | Vista utilizes HL7/MLLP protocol to send data to RDC |
| eMI RDC 🡪 eMI | MQ Secure Sockets Layer (SSL) channel protocol is used to transfer HL7 data securely to enterprise |
| eMI 🡪 HDR | Utilizes JMS to push the HL7 messages from eMI to HDR |

### Data Transformation

Data transformation is not applicable to the HDR message flow.

# Implementation Details

For HDR, there are two components. One component runs on the RDC, which receives messages from VistA instances, and the other runs at the enterprise system, which sends the messages that it receives from VistA instances to the HDR.

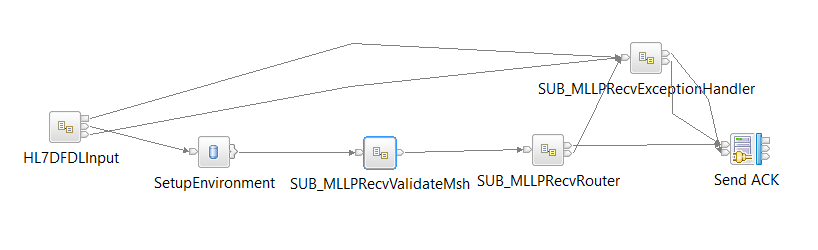
## HDR VistA Interface

This component is deployed at all of the RDCs. An HL7 message is received from the VistA using MLLP over TCP/IP and publishes the HL7 message to the queue.

### HDR VistA Receiver

The HDR VistA Receiver message flow receives HL7 messages from the VistA using MLLP over TCP/IP. The flow performs basic validation of the MSH segment and sends a CA back to the VistA. The flow, shown in Figure 4, translates the received message to an MQ DFDL HL7 message and publishes it to the enterprise HDR queue.

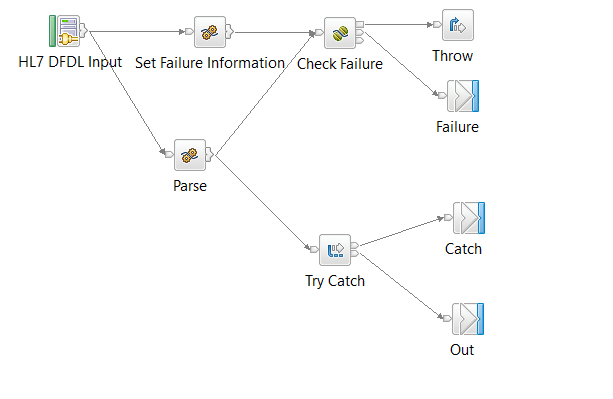
Figure 4: VistA Receiver Flow



As Figure 4 shows, the receiver flow of the HL7-to-HL7 DFDL pattern is updated in the following manner to support additional requirements:

* Updated ‘Receiver Flow’ of the HL7-to-HL7 DFDL pattern to:
  + Update the MSH field validation
  + Update to support return of Accept Acknowledgements, which are CA and/or CR, to VistA instances.
* Replaced HL7DFDLInput node with HL7DFDLInput message sub-flow. This suppresses validation of HL7 segments in the received HL7 messages against the HL7v251 message definition set. Figure 5 shows the HL7DFDLInput message sub-flow.

Figure 5: HL7 Input Sub-Flow



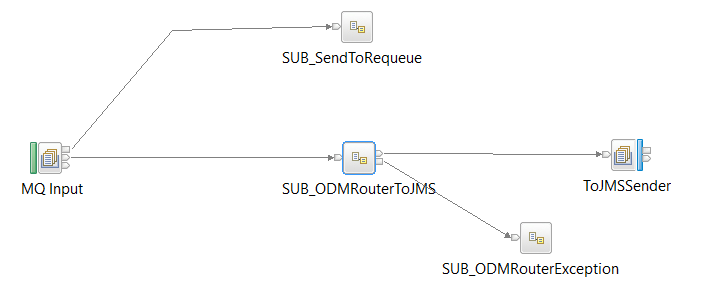
## HDR

This component is deployed at all of the enterprise systems. It subscribes to the queue for HL7 messages that are sent by various VistA sites at the RDCs, translates the messages to JMS, and publishes them to the HDR.

### HDR VistA Sender

The HDRRouterMain message flow subscribes to the queue for HL7 messages that are sent by various VistA sites at the RDCs. It publishes the same messages to the HDR queue to deliver it to the system, as shown in Figure 6.

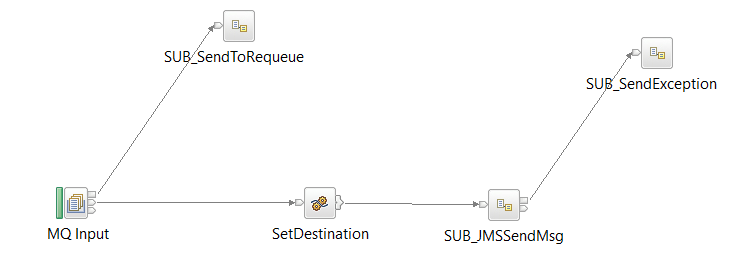
Figure 6: HDR Router Main Flow



### HDR Sender

The HDRSender message flow subscribes to messages intended to be delivered to the HDR. It first identifies the JMS queue destination and then prepares JMS messages to be sent to the HDR (Figure 7). When routing information is not identified or routing rules are not defined, the flow sends messages to a default queue.

Figure 7: HDR Sender Message Flow



A JMS message has three parts: a header, properties, and a body. The HDR expects each of the three parts of a message to adhere to the following format. The provider populates most of the header properties. Table 7 already lists the JMS header properties.

Properties are application specific. Table 8 already lists the remaining JMS properties.

The JMS message is of bytes type and contains the HL7 message in the body of the message.

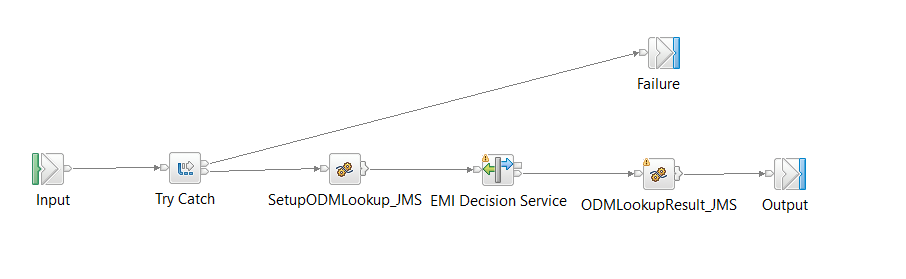
If there is an unexpected exception, then the message flow sends an email notification with the exception details to an administrator.

If the eMI system is unable to deliver the message, then it uses the backout threshold (BOTHRESH) property on the queue to keep retrying the message. When an exception is encountered, the message flow will sleep for a configurable amount of time (30 seconds) and retry the message. After all the configured number of retries are exhausted, the message is placed back to the re-queue flow to re-publish the message back to the HDRSender flow.

### Identify Routing

The IdentifyRouting flow determines the destination JMS queue information based on the sending application (MSH-03). The routing rules are defined in the decision table in the ODM. The flow uses the decision service to connect to ODM to retrieve and execute the rules. It also caches them in the memory. Figure 8 shows the message flow used to load the configuration.

Figure 8: Identify Routing Information Message Flow (HDR)



The decision table, Table 6, maps the sending application (MSH-03) to the destination queue for the HDR. ODM defines and maintains this decision table.

If there is an unexpected exception, then the message flow sends an email notification with the exception details to an administrator.

If the eMI system is unable to deliver the message, it uses the backout threshold (BOTHRESH) property on the queue to keep retrying the message. When an exception is encountered, the message flow will sleep for a configurable amount of time (30 seconds) and retry the message. After all the configured number of retries are exhausted, the message is placed back to the requeue flow to re-publish the message back to its respective IdentifyRouting flow.

## Error Handling for HDR Message Delivery

If the JMS provider is unavailable because the HDR is unavailable, then the flow uses the re-queuing mechanism. Undelivered messages are published to the retry queue and retried for delivery at a configurable interval until they are delivered successfully.

## Project Configuration File

Table 12 lists the details of the project configuration file that are environment specific or that control the flow of messages.

Table 12: Project Configurable Parameters

| Property | Default Value | Purpose |
| --- | --- | --- |
| healthcare.HDRVistAReceiver#HL7DFDLInput.connectionDetails | localhost | Port on which eMI would listen for messages coming from VistA |
| router.HDRRouter#HDRRouterRetryWaitTime | 3000 | Wait time in milliseconds between each retry to identify routing information for HDR messages |
| senders.HDRSender#HDRRetryWaitTime | 3000 | Wait time in milliseconds between each retry to publish JMS message to HDR |
| requeue.Requeue#delay | 30 | Wait time in seconds between each retry for all the re-queued messages |
| requeue.Requeue#retryCount | 13 | Number of retries |

## Queue Details

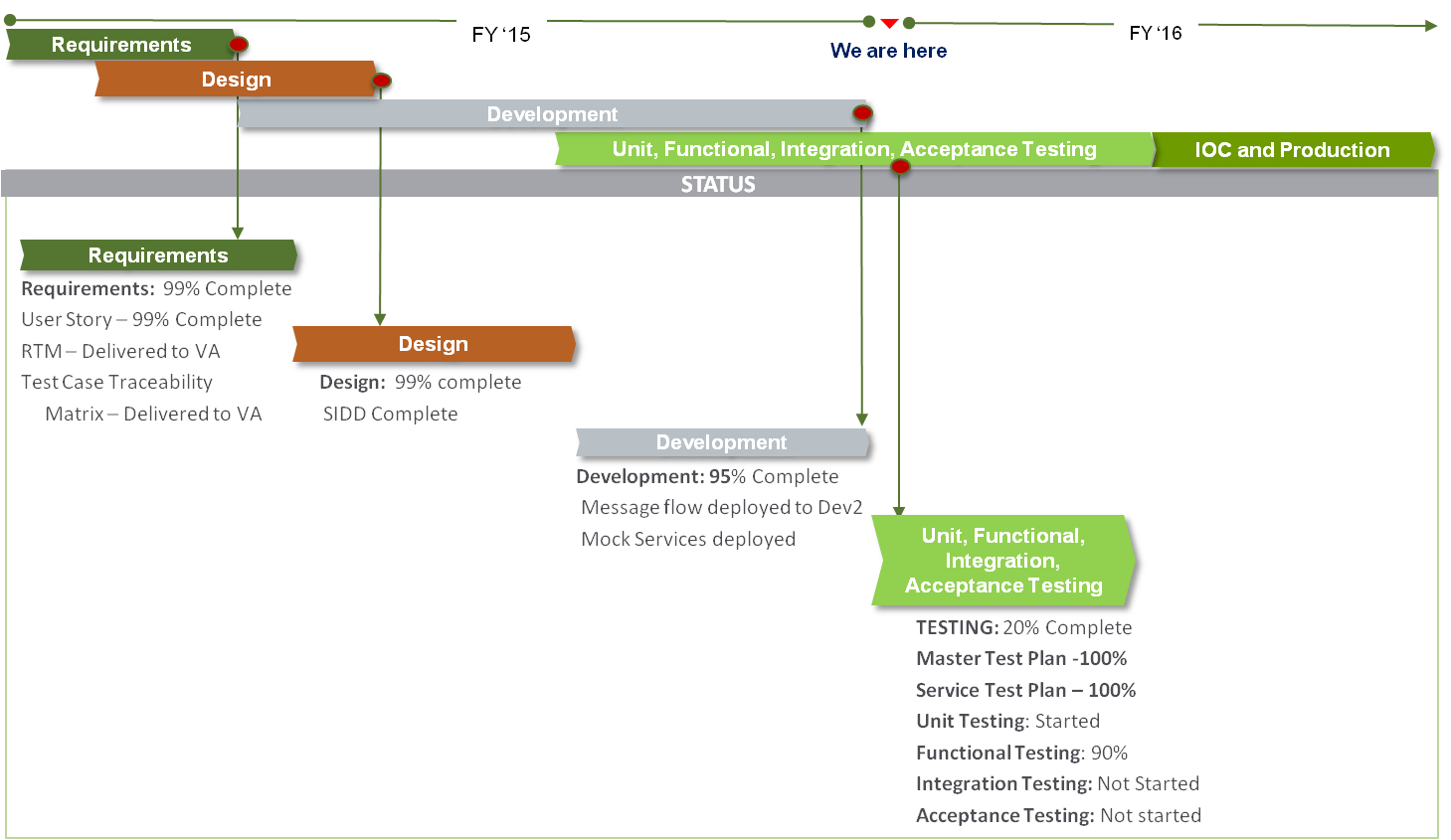
Table 13 lists the queues that the HDR message flows uses.

Table 13: Queues

| Queue Name | Purpose |
| --- | --- |
| VIE.HDR.VISTATOHDR.SRC.RDC.C | The queue for messages that are coming from VistA |
| VIE.HDR.VITARECEIVER.ERROR.RDC.L | The queue for messages that are coming from VistA that cannot be processed correctly |
| VIE.HDR.VISTATOHDRROUTER.TAR.ENT.L | The queue for messages are coming from VistA and are to be sent to the HDR Router to determine routing rules |
| VIE.HDR.REQUEUE.RETRY.ENT.L | The queue for messages to be retried |
| VIE.HDR.REQUEUE.MAXRETRIED.ENT.L | The queue for messages placed for retries that cannot be processed correctly |

# Timeline

Figure 9: HDR Timeline



# Acronyms

Table 14: Acronyms

| Acronym/Term | Definition |
| --- | --- |
| AITC | Austin Information Technology Center |
| CA | Commit Acknowledgement |
| CR | Commit Reject |
| DFDL | Data Format Description Language |
| DoD | Department of Defense |
| eMI | Enterprise Messaging Infrastructure |
| HDR | Health Data Repository |
| HL7 | Health Level Seven |
| IP | Internet Protocol |
| JMS | Java Message Service |
| kb | Kilobit |
| MLLP | Minimal Lower Layer Protocol |
| MQ | Message Queue |
| MSH | Message Header |
| POC | Point of Contact |
| RDC | Regional Data Center |
| SLA | Service Level Agreement |
| SSL | Secure Sockets Layer |
| TCP | Transmission Control Protocol |
| VA | Department of Veterans Affairs |
| VIE | VistA Interface Engine |
| VistA | Veterans Health Information System and Technology Architecture |

# Appendix A. Architecture Design Decisions

HDR has not deviated from any recommended or standard patterns defined by IBM or Enterprise Shared Service.

# Appendix B. Messages

B.1. Message Type:

HL7 v2.4 messages

B.2. Sample Messages:

Sample Message 1

MSH^~|\&^HDRADAS^992~CHYSQA52.xx-xxxx.xxx.xx.xxx~DNS^GMRA VDEF IE SIDE^200HD~XXX.XXX.XX.XXX~DNS^20150526110943-0400^^ORU~R01^99222544411^T^2.4^^^AL^NE^USA

PID^1^1012135986V581377^1012135986V581377~~~USVHA&&0363~NI~xx FACILITY ID&200M&L|899320506~~~USSSA&&0363~SS~XX FACILITY ID&992&L|""~~~USDOD&&0363~TIN~XX FACILITY ID&992&L|""~~~USDOD&&0363~FIN~XX FACILITY ID&992&L|7207241~~~USVHA&&0363~PI~xx FACILITY ID&992&L|9923005485V617731~~~USVHA&&0363~NI~ FACILITY ID&992&L~~20140611^^HDRSAM~FIFTYSIX~~~~~L^FIFTYSIX~~~~~~M^19601231^F^^""^""~""~""~""~""~""~P~""~""|~~""~""~~~N^""^""^""^^""^""^^899320506^^^""^""^N^^^^^""^^

OBR^1^^7207241~992\_120.86^ASSESSMENT~~L^^^20150526110728-0400^^^^^^^^^^^^^^^^^^F^^^^^^^520651556&xxxx&xxxxx&&&&VistA200

OBX^1^CE^ASSESSMENT^^4501003~NO KNOWN ALLERGIES~99VA8985.1^^^^^^F^^^20150526110728-0400^^520651556~xxxxxxx~xxxx~~~~~VistA200

Sample Message 2:

MSH^~|\&^HDRALGY^613~MARTSQA2.xx-xxxx.xxx.xx.xxx~DNS^GMRA VDEF IE SIDE^200HD~ XXX.XXX.XX.XXX ~DNS^20150526132538-0500^^ORU~R01^61362113198^T^2.4^^^AL^NE^USA

PID^1^1012125468V965229^1012125468V965229~~~USVHA&&0363~NI~XX FACILITY ID&200M&L|666110101~~~USSSA&&0363~SS~xx FACILITY ID&613&L|""~~~USDOD&&0363~TIN~VA FACILITY ID&613&L|""~~~USDOD&&0363~FIN~VA FACILITY ID&613&L|201121~~~USVHA&&0363~PI~VA FACILITY ID&613&L|6130048147V267343~~~USVHA&&0363~NI~VA FACILITY ID&613&L~~20100604^^HDRIISOCKET~JBPATONE~V~~~~L^""^19410101^F^^""^32 ~""~ xxx~xx~xxxx~""~P~""~""|~~""~""~~~N^""^""^""^^A^""^^666110101^^^""^""^^^^^^""^^

OBR^1^^62294~613\_120.8^ALLERGY~~L^^^201505261322-0500^^^^^^^^^^^^^^^^^^F^^^^^^^65301&XXXXX&XXXX&&&&XXXX&VistA200^^65301&XXXXX&CCCC&&&&WARTHOG&E~201505261322-0500|65301&BRUUXXXX&XXX&&&&XXXXX~20150526132325-0500|65301&XXXXXX&XXXX&&&&XXXXX&CM~20150526132331-0500^^^^^^^^^^^^^4500975~HISTORICAL~99VA8985.1

OBX^1^CE^AGENT^^DOGS^^^^^^F^^^^613~MARTINSBURG VAMC~L

OBX^1^CE^ALLERGY TYPE^^O~OTHER~L^^^^^^F^^^^613~MARTINSBURG VAMC~L

OBX^1^CE^GMR ALLERGY^^4637285~DOGS~99VA120.82^^^^^^F

OBX^1^CE^MECHANISM^^4501004~ALLERGY~99VA8985.1^^^^^^F

OBX^1^CE^REACTION^^4691091~NAUSEA AND VOMITING~99VA120.83^^^^^^F^^^20150526^^65301~XXXXXX~XXXXXX~~~WARTHOG~VistA200

Sample Message 3:

MSH^~|\&^HDRPRES^613~MARTSQA2.FO-BAYPINES.XXX>XX>XXX>XXX~DNS^PSO VDEF IE SIDE^200HD~ XXX.XXX.XX.XXX ~DNS^20150526132517-0500^^RDE~O11^61362113196^T^2.4^^^AL^NE^USA

PID^1^1012125468V965229^1012125468V965229~~~USVHA&&0363~NI~XX FACILITY ID&200M&L|666110101~~~USSSA&&0363~SS~XX FACILITY ID&613&L|""~~~USDOD&&0363~TIN~xx FACILITY ID&613&L|""~~~USDOD&&0363~FIN~xx FACILITY ID&613&L|201121~~~USVHA&&0363~PI~xx FACILITY ID&613&L|6130048147V267343~~~USVHA&&0363~NI~xx FACILITY ID&613&L~~20100604^^HDRIISOCKET~JBPATONE~V~~~~L^""^19410101^F^^""^xx~""~P~""~""|~~""~""~~~N^""^""^""^^A^""^^666110101^^^""^""^^^^^^""^^

ORC^RE^15245431~613\_52\_39.3^6002330~613\_52\_.001^^CM^^~~~20150526~20150625~~FILL/EXPIRATION|~~~~20150526~~ISSUED|~~~20150526~20150526~~DISPENSED/LAST DISPENSED^^20150526132503-0500^65301~xxxxx.xxxx~~~~xxxxxx~VistA200^^65301~xxxx-xxx~~~~xxxx~RE^CCS/HOME VISIT~2559^^^^xxx~xxxxxx~xx\_52\_20~5005423~xxx VAMC~NCPDP^^^^xxxx^^^^4500659~ACTIVE~99VA\_52\_100

RXE^2&10MG~~~20150526~20150625~~FILL/EXPIRATION^4010150~SIMVASTATIN 5MG TAB~99VA\_52\_6~00006-0726-82~~NDC^0^^20~MG~613\_52\_6^63~TAB~613\_50.7\_.02^~TAKE~613\_52.0113\_8|~TABLETS~613\_52.0113\_3|~BEDTIME-21~613\_52.0113\_7|~TO LOWER CHOLESTEROL~613\_52\_114|~TO LOWER CHOLESTEROL~613\_52\_115^~~~~~WINDOW^^6^^0^^^7133452^^^^^^TAKE TWO TABLETS BY MOUTH AT BEDTIME TO LOWER CHOLESTEROL~~613\_52\_10.2^D3^^^^^^^^^11238~SIMVASTATIN 5MG TAB~613\_50\_.01|S0023~~613\_50\_27

RXR^163~BY MOUTH~613\_52.0113\_6

FT1^1^^^20150526^^CG^1657~SIMVASTATIN~613\_52\_39.2^^^^^0.194^^^^^^EMP^^65301~xxxx-xxxx~~~~xxxx~613\_52\_38

OBX^1^CE^WAS THE PATIENT COUNSELED^^4500630~NO~99VA\_52\_41^^^^^^F

# Appendix C. Message Mapping

None

# Appendix D. Outstanding Issues

Table 15: Outstanding Issues

| Issue # | Raised  By | Description |
| --- | --- | --- |
| 1. 1 |  | Lab messages currently do not go through the local VIE. Based on my research, the logical link points directly to the HDR database so it is completely bypassing the interface engine, local, and enterprise. Probably need to confirm that, and also it should be noted as an application architecture decision. Perhaps it would be prudent to send the Lab message, VDEF4, through the RDC to correspond with the other messages which are generated through VDEF1-3. |
| 9 |  | Update to issue #1 (07/27/2015)  It was decided that the baseline for HDR is limited to the migration of VDEF1, 2, and 3 and does not include VDEF4. This was approved by the eMI IT. However, during the analysis with the HDR team, it was found that the interface for VDEF4 is similar to VDEF1, 2, & 3. This assumes there will be no code changes and no performance issues due to the inclusion of VDEF4. After VDEF1, 2, & 3 are migrated, if it is determined that VDEF 4 can be migrated without impact, then the decision will be reconsidered at that time. |

Open PMR: The following are the open PMRs that are not yet resolved.

* PMR #: 00466 442 000
  + Brief Description about the problem: Unable to authenticate user credentials when publishing message to WebLogic JMS queue.
  + Status: So far received two patches both did not work. Sent updated trace logs yesterday to L3 support.
  + Work Around solution: None identified yet.
  + Updated Status: Received Patch from IBM and tested in Version 9.0.0.3. Issue is now resolved
  + Latest update date: 02/29/2016
* PMR #: 14104 442 000
  + Brief Description about the problem: JMSOutput node caching queue information.
  + Status: Need to provide additional proof that messages are indeed being published to same queues. Based on the service trace messages are being published to the correct queue.
  + Work Around solution: Create separate flows for each JMS queue.
  + Updated Status: Received Patch from IBM and Problem is resolved. Now with one flow, messages are routed to different JMS Queue based on sending application id(MSH-03)
  + Latest update date: 02/29/2016
* PMR #:30667.442.000
  + Brief Description about the problem: Unable to secure IIB -> WODM database connection.
  + Current Status: Escalated to L3 support on 09/04/2015.
  + Work Around solution: Using local version of WODM ruleset, rather than retrieving from WODM.
  + Updated Status: Received Patch from IBM and tested in Version 9.0.0.3 and it is working fine. Issue is now resolved
  + Latest update date: 02/29/2016

# Approval Signature

REVIEW DATE:

Signed: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Integrated Project Team (IPT) Chair Date

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Business Sponsor Date

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IT Program Manager Date

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Project Manager