InterSystems Health Connect (HC) / Outpatient Pharmacy Automation Interface (OPAI) 1.0

PSO*7*522

Deployment, Installation, Back-Out, and Rollback Guide



March 2019
Department of Veterans Affairs (VA)
Office of Information and Technology (OIT)

Revision History

Date	Revision	Description	Author
03/06/2019	1.0	Final DIBRG Release Document.	VA Tech Writer: TB
02/27/2019	0.12	Updated TBD dates for IOC/National release on pg 6 and 9, updated date in footer and cover page.	Halfaker
12/18/2018	0.11	Updated sections at 5 and 6.	Halfaker
12/10/2018	0.10	Tech Edit Review and Updates: • Accepted all changes to date.	VA Tech Writer: TB
		 Missing dates in Section <u>3.3.4</u>. 	
11/27/2018	0.9	Reviewed prior edited sections by contractor, since last VA tech writer review. Accepted all changes and removed flagging comments with exceptions shown in next bullet.	VA Tech Writer: TB
		 Updated Sections: 3.2 (see reviewer comment/question), 3.2.1, 4.1.1, 4.1.1.1 (new Header); Figure 5 (see reviewer comment/question), 5.2.2, 5.3, and 5.4. 	
09/12/2018	0.8	Updated the following sections: <u>3.2</u> , <u>3.2.1</u> , <u>3.2.3</u> , <u>4.2</u> , <u>5.2.1</u> , <u>5.2.2</u> , and <u>6.1</u> .	Halfaker: SM
09/05/2018	0.7	Added Section <u>4.1.1</u> , " <u>Pre-Install VistA</u> <u>Check</u> ."	Halfaker: TJ
08/09/2018	0.6	 Halfaker Review of Reviewer Edits: Corrected acronym to reflect "Health Connect" in Section 1.1. Removed diagram in system architecture in Section 3, Figure 1. Provided elaboration on Section 4.3, Figure 8. Provided elaboration on Appendix A Section 7.1.2, item 6. Provided elaboration on Appendix B Section 7.2, item 1e. Updated Appendix B Section 7.2, item 2a to reflect OPAI. Updated Appendix B Section 7.2, item 3a to reflect OPAI. 	Halfaker PM: LM

Date	Revision	Description	Author
		 Updated Appendix B Section <u>7.2</u>, item 5d to reflect "e.g." 	
07/24/2018	0.5	 Accepted all vendor documentation changes to date. 1: Updated content based on contractor review/edits. 2: Updated Table 1 for "FM24" project entry. 3: Added "OPAI" throughout to clarify when content was specific to OPAI messages. Also, replaced "Palo Alto, CA" site with "Oklahoma City, OK." 3.2.2: Listed current IOC sites. 3.2.3: Updated Table 2. 3.3: Updated resource bullet list. 3.3.1: Facility Specifics, updated text. 3.3.2: Hardware, updated text. 4.3: Reformatted procedural steps. Added boldface to patch IDs, file names, etc. throughout. Minor formatting updates throughout. 	VA Tech Writer: TB
06/11/2018	0.4	 VA Tech Edit Review. Accepted all vendor documentation changes to date: Updated Figure 7, Figure 8, and Figure 10. Corrected "Rollout Procedure" V1 and P1 steps in Section 3. Added site information to Table 2. Updated XML file reference in Section 3.3.3. Updated Section 4.6. Corrected sample operation names in Section 7.2, Step 2a and Step 4d. 	VA Tech Writer: TB
06/06/2018	0.3	Halfaker Review of Tech Edits:	Halfaker CM: MT

Date	Revision	Description	Author
		 Architect (DE) and developer(GS) addressed as many items as possible at this time. 	
		 Updated revision and sent back for VA TW review. 	
05/17/2018	0.2	VA Tech Edit Review:	VA Tech Writer: TB
		 Reformatted document to follow current OIT documentation standards and style guidelines. 	
		 Removed intranet links (inside the VA firewall), since this document will be located on the internet (outside the VA firewall). 	
		 Reviewed and edited document for Section 508 conformance (e.g., added alternate text to all images). 	
05/07/2018	0.1	Initial document based on the Veteran- focused Integration Process (VIP) Deployment, Installation, Back-Out, and Rollback Guide template Version 2.2, released on March 2016.	Halfaker: DE

Table of Contents

		History			
		gures			
		ables			
1	Introduction				
	1.1	Purpose	1		
	1.2	Dependencies	1		
	1.3	Constraints			
2	Ro	les and Responsibilities	2		
3	De	ployment	3		
	3.1	Timeline	6		
	3.2	Site Readiness Assessment	6		
	3.2.	.1 Deployment Topology (Targeted Architecture)	7		
	3.2	.2 Site Information (Locations, Deployment Recipients)	7		
	3.2	.3 Site Preparation	8		
	3.3	Resources	8		
	3.3	.1 Facility Specifics	9		
	3.3	.2 Hardware	9		
	3.3				
	3.3				
		3.3.4.1 Deployment/Installation/Back-Out Checklist			
4	Ins	stallation	10		
	4.1	Pre-installation and System Requirements	10		
	4.1.	.1 Pre-Install VistA Check			
		4.1.1.1 Narrative Validation			
	4.2	Platform Installation and Preparation			
	4.3	Download and Extract Files			
	4.4	Database Creation			
	4.5	Installation Scripts			
	4.6	Cron Scripts			
	4.7	Access Requirements and Skills Needed for the Installation			
	4.8	Installation Procedure			
	4.9	Installation Verification Procedure			
	4.10	System Configuration			
_	4.11	Database Tuning			
5		ck-Out Procedure			
	5.1	Back-Out Strategy	16		

	5.2	Back-Out Considerations	16
	5.2	1 Load Testing	16
	5.2	2 User Acceptance Testing	16
	5.3	Back-Out Criteria	16
	5.4	Back-Out Risks	16
	5.5	Authority for Back-Out	16
	5.6	Back-Out Procedure	17
	5.7	Back-Out Verification Procedure	17
6	Ro	Ilback Procedure	18
	6.1	Rollback Considerations	18
	6.2	Rollback Criteria	18
	6.3	Rollback Risks	18
	6.4	Authority for Rollback	18
	6.5	Rollback Procedure	19
	6.6	Rollback Verification Procedure	20
7	Аp	pendices	21
	7.1	Appendix A—Health Connect Production Namespace Configuration and	d
	Depl	oyment	21
	7.1		
	7.1.		
	7.2	Appendix B—Configuring a Health Connect Production	22
	7.3	Appendix C—Starting and Stopping a Health Connect Production	24
	7.3		
	7.3	2 Stopping Health Connect Production	24
		List of Figures	
	_	Current VIE Architecture for OPAI	
	_	IOC Rollout Breakdown for OPAI (Interim Architecture)	4
		VIE, Health Connect, and OPAI Deployment Architecture and Rollout	_
		reOPAI Deployment Topology	
	_	Sample Narrative Validation—Narrative Non-Refillable RX parameter (NOTE	
		otions have been skipped to save room for the example.)	
		Management Portal (MP)—Deployment Options	
		SM—Selecting Deployment File: OPAI	
		SM—Deploy Production Changes Screen: OPAI	
		Rollback Procedure from OPAI Messaging on Health Connect Back to VIE	
Fi	gure 1	0: InterSystems HealthShare—Production Configuration Screen: OPAI	23

List of Tables

Table 1: Roles and Responsibilities	2
Table 2: Site Preparation	8
Table 3: Deployment/Installation/Back-Out Checklist (Print Out When Needed)	9

Introduction 1

This document describes the deployment, installation, back-out, and rollback instructions for the migration of Outpatient Pharmacy Automation Interface (OPAI) 1.0 from the Vitria Interface Engine (VIE) to InterSystems Health Connect (HC).

HC will replace VIE; currently in production, for the routing of OPAI messages.

This document includes information about:

- System support
- Issue tracking
- Escalation processes
- Roles and responsibilities involved in all activities

It provides clients, stakeholders, and support personnel with a smooth transition to Health Connect. It describes how to deploy and install the Health Connect in production as well as how to back out the product and roll back to a previous version or data set.



NOTE: In cases where you are installing a *non*-developed commercial-off-the-shelf (COTS) product, you can use the vendor-provided user guide and installation guide. However, if those guides do not include a back-out recovery and rollback strategy, you must retain that information in this document.

1.1 **Purpose**

The purpose of this guide is to provide a single, common document that describes how, when, where, and to whom the Health Connect (HC) will be deployed and installed; as well as how it is to be backed out and rolled back, if necessary. The guide also identifies resources, communications plan, and rollout schedule. Specific instructions for deployment, installation, back-out, and rollback are included in this document.

1.2 Dependencies

VIE supports the routing of messages from several applications. Health Connect product will ultimately be replacing VIE. During the transition phase both products will be running concurrently.

Constraints 1.3

HC is an approved product as per the VA's Technical Reference Model (TRM). Defining the controls and constraints need to be determined.

Roles and Responsibilities

Table 1: Roles and Responsibilities

ID	Team	Phase / Role	Tasks	Project Phase (See Schedule)
	FM24 PMO	Deployment	Plan and schedule deployment (including orchestration with vendors).	
			Determine and document the roles and responsibilities of those involved in the deployment.	
	Operations and End-User	Deployment	Test for operational readiness.	
	Site and Operations	Deployment	Execute deployment.	
	Operations	Installation	Plan and schedule installation.	
			Ensure authority to operate and that certificate authority security documentation is in place.	
			Validate through facility POC to ensure that IT equipment has been accepted using asset inventory processes.	
	InterSystems	Installations	Coordinate training.	
	Development	Back-Out	Confirm availability of back-out instructions and back-out strategy (what are the criteria that trigger a back-out).	
	Operations/Development/ InterSystems	Post Deployment	Hardware, Software, and System Support.	

3 Deployment

<u>Figure 1</u> depicts the current VistA Interface Engine (VIE) architecture for OPAI:

Current VIE architecture

Region 1 through 4

VISTA
systems

VIE

OPAI
Dispensing
Machine

Figure 1: Current VIE Architecture for OPAI

A parallel deployment of Health Connect (HC) is planned at a regional level. The VIE OPAI functionality will remain in place at each region. At Region 1, the OPAI Health Connect Production will run concurrently with VIE, replacing only the VIE OPAI functionality for the following Initial Operating Capabilities (IOC) sites:

- Tucson, AZ
- Oklahoma City, OK

VIE will stay online until the migration of all sites to Health Connect is complete. Should a failback be required, VIE will be online to serve that purpose.

VIE will continue to process messages for applications that have *not* yet been migrated. The Health Connect OPAI production will process OPAI messages.

This section provides the schedule and milestones for the deployment.

<u>Figure 2</u> depicts the interim VIE and Health Connect architecture during the IOC rollout for OPAI:

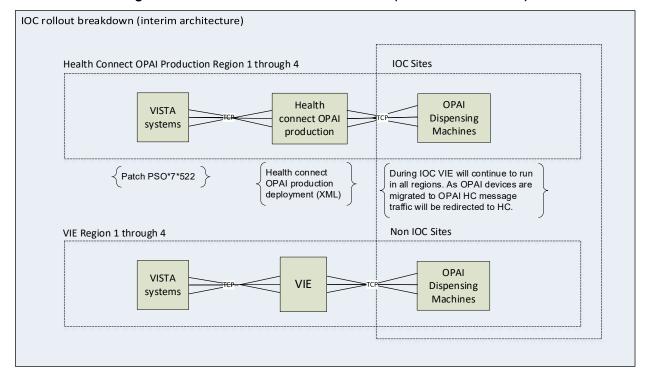


Figure 2: IOC Rollout Breakdown for OPAI (Interim Architecture)

In summary, the IOC sites and Health Connect operations support will provide the port addresses for OPAI message traffic. As the VIE will be running on the old ports, Health Connect will use new ones. When an OPAI server transitions to the new ports, the message traffic is redirected through Health Connect. The informational patch **PSO*7*522** instructs the Veterans Health Information Systems and Technology Architecture (VistA) system administrators to change the logical link to redirect OPAI messages to the new Health Connect port and will no longer direct OPAI messages to VIE.



REF: For details on how a OPAI production is deployed and configured, see <u>Appendix</u> A—Health Connect Production Namespace Configuration and Deployment.

On completion of the port configuration update for OPAI server and VistA logical link, the OPAI message traffic will be rerouted through the OPAI Health Connect production (see <u>Figure</u> 3):

Current VIE architecture Region 1 through 4 Sites OPAI VISTA VIE Dispensing systems Machines OPAI transition architecture Region 1 through 4 Sites Health **OPAI** Dispensing systems Connect Machines Other Applications plus systems remaining OPAI servers Rollout process Region 1 through 4 Sites Health OPAI cabinets Connect VISTA systems VIE OPAI cabinets

Figure 3: VIE, Health Connect, and OPAI Deployment Architecture and Rollout Procedure

Rollout Procedure

This is a First-In-First-Out (FIFO) interface. This means that when rolling out OPAI from the VIE to the Health Connect interface, the outstanding OPAI VIE messages should be processed prior to starting the processing of messages through the Health Connect interface:

V1 (Figure 3; Rollout Process: VistA System to Health Connect):

- Ensure the Health Connect OPAI operation(s) is switched off (**disabled**).
- Change the OPAI VistA logical link to point to the VistA listener on Health Connect.
- Verify that all OPAI messages are processed through VIE before OPAI messages are sent from Health Connect.
- Verify the OPAI messages are waiting to be processed through the Health Connect OPAI operation (**disabled**).
- Once verified, the Health Connect OPAI operation is switched on (enabled).

P1 (Figure 3; Rollout Process: Health Connect to OPAI IOC Application Servers):

- Ensure the Health Connect VistA operation is switched off (**disabled**).
- Change the OPAI server to point to the OPAI listener on the Health Connect server.
- Verify that all OPAI messages are processed through VIE before OPAI messages are sent from Health Connect.
- Verify the OPAI messages are waiting to be processed through Health Connect VistA operation (**disabled**).
- Once verified, the Health Connect VistA operation is switched on (enabled).

3.1 Timeline

Deployment timeline of **four** (4) hours has been allocated for IOC.

3.2 Site Readiness Assessment

Regional Health Connect locations will need a site readiness assessment prior to deployment. OPAI servers will need to be pointed to those servers. Once sites are determined, site readiness assessments will need to be scheduled to prepare for deployment:

- IOC testing performed in mirror accounts:
 - O Tucson: completed on 06/21/2018.
 - Oklahoma City: completed on 08/10/2018.
- Line of sight testing was scheduled and performed prior to deployment:
 - o Tucson: line of sight testing performed on 08/24/2018.
 - Oklahoma City: line of sight testing performed on 08/29/2018.

3.2.1 Deployment Topology (Targeted Architecture)

The OPAI deployment topology is depicted in Figure 4:

Health Connect Queue VAMC Main Server VistA trigger event InterSystems Health Connect ←Interface → Regional DC Mail Error messages **OPAI** Trigger **Event** VistA Database ✓ Interface > * Blue Indicates VA equipment * Grey indicates equipment purchased for OPAI **OPAI Server** OPAI Cabinet Local VAMC

Figure 4: OPAI Deployment Topology

3.2.2 Site Information (Locations, Deployment Recipients)

IOC sites:

- Tucson, AZ
- Oklahoma City, OK

3.2.3 Site Preparation

<u>Table 2</u> describes preparation required by the site prior to deployment.

Table 2: Site Preparation

Site/Other	Problem / Change Needed	Features to Adapt/Modify to New Product	Actions/Steps	Owner
Tucson, AZ	Establish IP communication	Not Applicable (N/A)	Ensure listener is enabled and ACL allows HealthShare servers IP range to connect	Local IT Admin or Dispenser Admin
	Standard acknowledgme nt (ACK) for RDS_O13 transmitted from ScriptPro server	Vendor provides patch to be installed on ScriptPro server	Vendor installs patch on ScriptPro server	Vendor
Oklahoma City, OK	Establish IP communication	N/A	Ensure listener is enabled and ACL allows HealthShare servers IP range to connect	Local IT Admin or Dispenser Admin
	Innovation devices need transmit standard RRD_O14 response	Vendor provides patch to be installed on Innovation server	Vendor installs patch on Innovation server	Vendor

3.3 Resources

The following support resources will be available with OPAI:

- Pharmacy Personnel
- Pharmacy Automation Data Processing Application Coordinator (ADPAC)
- Health Connect Support Operations Team
- VistA HL7 Support, VistA Patch Installer
- OPAI Equipment Vendor Support

3.3.1 Facility Specifics

This section does *not* apply to HL7 Health Connect and OPAI. Virtual meetings can be used to assist sites; similar to what was used for IOC testing sessions.

3.3.2 Hardware

There are no special hardware requirements for sites using HL7 Health Connect and OPAI.



REF: For details about who is responsible for preparing the site to meet these hardware specifications, see <u>Table 1: Roles and Responsibilities</u>.

3.3.3 Software

The OPAI software deployment is made up of the following:

- OPAI Health Connect Production Extensible Mark-up Language (XML) file (e.g., Export-HCM_Production_HL7RouterProduction_OPAIv1.xml)—The Health Connect XML file will be delivered from the Community Resource and Referral Center (CRRC) development/test environment.
- Informational **PSO*7*522** is available on FORUM.



REF: For details about who is responsible for preparing the site to meet these software specifications, see <u>Table 1: Roles and Responsibilities</u>.

3.3.4 Communications

Communications and notification activities include:

- Kick Off meetings:
 - o IOC Kick Off: 06/12/2018
 - o National Release Kick Off Planned for: 3/25/2019
- Cutover to IOC Production Tucson, AZ: 03/05/2019
- Cutover to IOC Production Oklahoma City, OK: 09/06/2018

3.3.4.1 Deployment/Installation/Back-Out Checklist

For rollback procedures, see Section 6, "Rollback Procedure."

Table 3: Deployment/Installation/Back-Out Checklist (Print Out When Needed)

Activity	Day	Time	Individual Who Completed Task
Deploy			
Install			

Activity	Day	Time	Individual Who Completed Task
Back-Out			

4 Installation

4.1 Pre-installation and System Requirements

The **HCM** namespace for the Health Connect production needs to be created for every deployment of Health Connect.

4.1.1 Pre-Install VistA Check

The following word-processing fields of the OUTPATIENT SITE (#59) file may contain "blank lines" with control characters that may cause incorrect HL7 message termination during processing:

- NARRATIVE FOR COPAY DOCUMENT (#59.01004) field
- NARRATIVE REFILLABLE RX (#59.01005) field
- NARRATIVE NON-REFILLABLE RX (#59.01006) field

To correct this by removing blank lines from these fields, follow the steps in the "Narrative Validation" section. (Also, see the "Performing the Implementation" section in the Outpatient Pharmacy Automation Interface Installation Guide.)

4.1.1.1 Narrative Validation

To remove blank lines from fields, do the following:

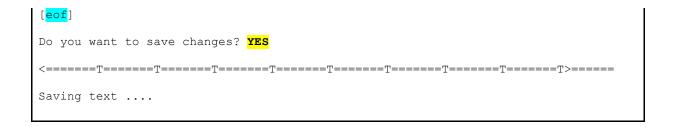
- 1. Check the following fields in the OUTPATIENT SITE (#59) file:
 - NARRATIVE FOR COPAY DOCUMENT (#59.01004)
 - NARRATIVE REFILLABLE RX (#59.01005)
 - NARRATIVE NON-REFILLABLE RX (#59.01006)

These are word-processing fields, containing information from the site regarding the procedures for the patient to follow; information may include telephone numbers, mailing addresses, etc. Information in these parameters may incorporate "blank lines" with control characters that may cause incorrect HL7 message termination during processing.

- 2. Edit the fields in Step 1 as necessary to remove "blank lines" with control characters.
- 3. Save changes to the edited fields.

Figure 5: Sample Narrative Validation—Narrative Non-Refillable RX parameter (NOTE: Some options have been skipped to save room for the example.)

NARRATIVE REFILLABLE RX NARRATIVE REFILLABLE RX:. . . machinery.\.sp\May cause dizziness\.sp\May cause blurred vision\.sp\Call your doctor immediately if you have mental/mood changes like confusion, new/worsening feelings of sadness/fear, thoughts of suicide, or unusual behavior.\.sp\Do not take aluminum or magnesium antacids within 2 hours of taking this medication.\.sp\It is very important that you take or use this exactly as directed. Do not skip doses or discontinue unless directed by your doctor.\.sp\Read the Medication Guide that comes with this medicine|Drug Warning Narrativevisit http://www.va.gov/healthbenefits/cost/copay rates.asp. Edit? NO// YES ==[WRAP]==[INSERT]======< NARRATIVE REFILLABLE R[Press <PF1>H for help]==== May cause drowsiness. Alcohol and marijuana may intensify this effect. Use care when operating a vehicle, vessel (e.g., boat), or machinery.\.sp\May cause dizziness\.sp\May cause blurred vision\.sp\Call your doctor immediately if you have mental/mood changes like confusion, new/worsening feelings of sadness/fear, thoughts of suicide, or unusual behavior.\.sp\Do not take aluminum or magnesium antacids within 2 hours of taking this medication.\.sp\It is very important that you take or use this exactly as directed. Do not skip doses or discontinue unless directed by your doctor.\.sp\Read the Medication Guide that comes with this medicine|Drug Warning Narrativevisit http://www.va.gov/healthbenefits/cost/copay rates.asp. [eof] <=====T====T====T=====T>=====T=====T=====T=====T>=====T>===== NARRATIVE REFILLABLE RX modified: ==[WRAP]==[INSERT]======< NARRATIVE REFILLABLE R[Press <PF1>H for help]==== May cause drowsiness. Alcohol and marijuana may intensify this effect. Use care when operating a vehicle, vessel (e.g., boat), or machinery.\.sp\May cause dizziness\.sp\May cause blurred vision\.sp\Call your doctor immediately if you have mental/mood changes like confusion, new/worsening feelings of sadness/fear, thoughts of suicide, or unusual behavior.\.sp\Do not take aluminum or magnesium antacids within 2 hours of taking this medication.\.sp\It is very important that you take or use this exactly as directed. Do not skip doses or discontinue unless directed by your doctor.\.sp\Read the Medication Guide that comes with this medicine | Drug Warning Narrative visit http://www.va.gov/healthbenefits/cost/copay rates.asp.



0

REF: For deployment steps, see <u>Appendix A—Health Connect Production Namespace</u> <u>Configuration and Deployment</u>.

4.2 Platform Installation and Preparation

Platform installation and preparation steps are outlined in the sections that follow.

4.3 Download and Extract Files

The deployment of the OPAI production is achieved by extracting a Health Connect deployment file (HCM_Production_HL7RouterProduction-Deploy1.1.xml) through the Health Connect Menu.

To download and extract the files, do the following:

1. Access the **Deploy** option:

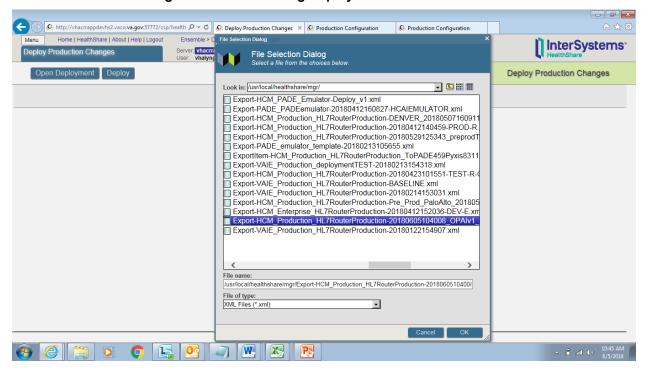
Management Portal (MP) → Ensemble → Manage → Deployment Changes → Deploy

↑ http://vhacrrappdevhs2.vaco.va.gov:57772/csp/sys/%. 🍳 🕈 d 🕈 HS1 - Home InterSystems* ^ lcome, vhalyngeorgs Search: Management Portal Configure » Purge Management Data System Information Home Build » Auto-Start Production Histo Navigate to this item. View » Local Archive Manager System Up Time 67d 4h 21m List » Workflow » **HealthShare** Monitor » Publish & Subscribe **Ensemble Productions** Manage » Deployment Changes » DeepSee Interoperate » system Demo.HL7.MsgRouter.Production Test » Ensemble VAIE.Production.HL7RouterProd in HCAI Running View details **System Operation** PADE.PADEemulator in HCAIEMULATOR Running View details System Explorer HCM.Enterprise.HL7RouterProd System Administration

Figure 6: Management Portal (MP)—Deployment Options

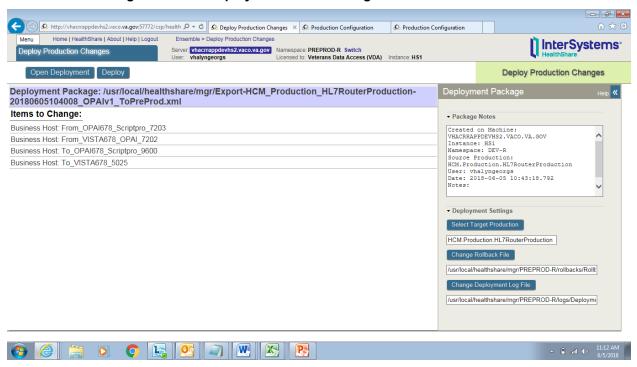
Select the OPAI deployment file (e.g., Export-HCM_Production_HL7RouterProduction-20180605104008_OPAIv1.xml):
 Open Deployment → Select Deployment file → Ok

Figure 7: SM—Selecting Deployment File: OPAI



3. When you select **Deploy** (Figure 7), the Deploy Production Changes screen is displayed, as shown in Figure 8:

Figure 8: SM—Deploy Production Changes Screen: OPAI



REF: For deployment steps, see Appendix A.

4.4 Database Creation

Database created by infrastructure team as part of IOC deployment. The Health Connect HL7 Messaging Production Operations Manual (POM; **HC-HL7_Messaging_1_0_POM.pdf**) provides database details.

REF: The HC-HL7_Messaging_1_0_POM.pdf document is stored on the EHRM FM24 Documentation Jazz RTC repository.

4.5 Installation Scripts

There are no installation scripts for this installation.

REF: For deployment steps, see Appendix A.

4.6 Cron Scripts

Cron Scripts do *not* apply to the Health Connect/OPAI deployment.

4.7 Access Requirements and Skills Needed for the Installation

Users require **Administration** privileges to create a database for every installation of InterSystems Health Connect (HealthShare). Subsequent deployments should *not* require this level of access, as the latest Health Connect production deployment will be done through the Health Connect menu.



REF: For deployment steps, see Appendix A.

4.8 Installation Procedure

For deployment steps, see Appendix A.

4.9 Installation Verification Procedure

For installation and verification procedure, see <u>Step 10</u> under the <u>deployment procedure</u> in <u>Appendix A</u>.

4.10 System Configuration

To start the OPAI Health Connect production, follow the steps in <u>Appendix C</u>.

Once the production is running, the OPAI production business services, operations, and routers should be enabled (See Appendix B).

4.11 Database Tuning

Currently, no database tuning is expected or required for OPAI on HL7 Health Connect.

5 Back-Out Procedure

5.1 Back-Out Strategy

Since this is a first time install, the only back-out option is to un-deploy Health Connect (HC) and repoint OPAI to VistA Interface Engine (VIE) last known software configuration and platform settings.

The back-out process will repoint OPAI servers and the VistA logical links back to the VIE instance. This process will identify unsent OPAI messages on Health Connect and resend to OPAI/VistA.

The configuration and operational support will be in place as the VIE platform will still be in production, providing message routing for other applications. Coordination with each site and the operations teams (if VIE and Health Connect use different resources) for server configuration and VistA logical link update will be key to a successful back-out.

5.2 Back-Out Considerations

VIE (for remaining supported applications) and Health Connect (for migrated OPAI and other sites) will be running in parallel (see <u>Figure 3</u>).

The repointing of OPAI servers and VistA systems would need to be coordinated with site point of contact (POC), VIE, and Health Connect operations.

5.2.1 Load Testing

Not applicable (N/A).

5.2.2 User Acceptance Testing

User acceptance testing was performed in IOC mirror testing. Execution results are attached in Section 3.2, "Site Readiness Assessment."

5.3 Back-Out Criteria

Back-Out criteria will be any impact to patient care.

5.4 Back-Out Risks

Back-Out risks are to the schedule of the Health Connect (HC) / VistA Interface Engine (VIE) migration project.

5.5 Authority for Back-Out

Authority for back-out will be determined by the following:

- Ken Leonard (FM24 Project Manager)
- Annette Parsons (HC Operations Project Manager)

5.6 Back-Out Procedure

Back-out procedures are determined to be the same for this initial deployment of OPAI on HL7 Health Connect.

5.7 Back-Out Verification Procedure

The following group will determine if messages are passing on VIE server if back out required: VIE National Admins (VIENational Admins@va.gov)

6 Rollback Procedure

6.1 Rollback Considerations

The rollback option is to un-deploy Health Connect (HC) and repoint the OPAI devices to the VistA Interface Engine (VIE) last known software configuration and platform settings.

Secondly, the VistA logical links need to point back to the VIE instance. This process will identify unsent OPAI messages on Health Connect and resend to OPAI/VistA (see <u>Figure 9</u> for rollback procedure).

The repointing of OPAI servers and VistA systems would need to be coordinated with the site point of contact (POC), VIE, and Health Connect operations, the site's outpatient pharmacy department, OPAI vendor(s) and OIT HL7 Support Analyst.

Migration to Health Connect is occurring during off-hours when no prescription dispense requests will be transmitted. Test messages will be sent to confirm successful migration to Health Connect and would *not* be needed to be resent in case a rollback is required. Any production messages (*not* test messages) that might be submitted during migration and would require resubmission and would need to be coordinated with the site point of contact, VIE operations, and Health Connect operations.

6.2 Rollback Criteria

Rollback criteria will be any impact to patient care.

6.3 Rollback Risks

Rollback risks are to the schedule for the Health Connect (HC)/VistA Interface Engine (VIE) migration project.

6.4 Authority for Rollback

Authority for rollback will be determined by the following:

- Ken Leonard (FM24 Project Manager)
- Annette Parsons (HC Operations Project Manager)

6.5 Rollback Procedure

This is a First-In-First-Out (FIFO) interface, which means that when rolling back from the Health Connect (HC) interface, the Health Connect messages should be processed prior to processing messages through the VistA Interface Engine (VIE) interface.

<u>Figure 9</u> depicts the rollback procedure from OPAI messaging on Health Connect back to VIE:

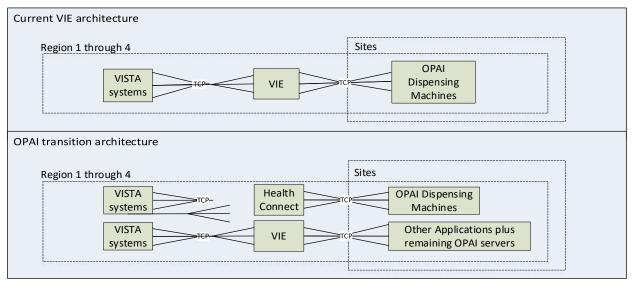
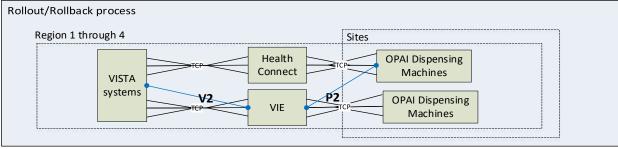


Figure 9: Rollback Procedure from OPAI Messaging on Health Connect Back to VIE



V2 (<u>Figure 9</u>; Rollback Process: VistA System to VIE):

- Ensure the Health Connect VistA listener is switched off (**disabled**).
- Verify that all OPAI messages are processed through Health Connect to OPAI before OPAI messages are sent from VIE.

Once verified, the OPAI logical link in VistA is pointed to VIE. Here are the steps involved for repointing the VistA logical link IP address and port back to the VIE IP address and port:

- Stop the PSO DISP Logical Link with HL7 Menu option: Start/Stop Links
- Edit the PSO DISP Logical Link with HL7 menu option: Link Edit.
- Edit the HL LOGICAL LINK for PSO DISP and replace the existing TCP/IP ADDRESS and existing TCP/IP PORT with the VIE IP address and port.

• Once it has been confirmed that VIE is ready to process messages, start the PSO DISP Logical Link using the Start/Stop Links option.

P2 (Figure 9; Rollback Process: VIE to OPAI IOC Application Servers):

- Ensure the Health Connect OPAI listener is switched off (**disabled**).
- Verify that all OPAI messages are processed through Health Connect to VistA before OPAI messages are sent from VIE.
- Once verified, the OPAI server is configured to point to VIE.

6.6 Rollback Verification Procedure

The following group will verify the rollback when it determines that messages are passing successfully on the VIE server, and if a rollback is required:

VIE National Admins (<u>VIENationalAdmins@va.gov</u>)

7 Appendices

7.1 Appendix A—Health Connect Production Namespace Configuration and Deployment

7.1.1 Creating a New Namespace

To create a new namespace in Health Connect Production, do the following:

1. Open the following:

System Administration → Configuration → System Configuration → Namespace

- 2. Click Create New Namespace.
- 3. Enter the Name of the namespace **HCM**.
- 4. Create new database.
- 5. Enter the name of your database **HCM**.
- 6. Click on **browse** next to **Create your directory** and create a folder with the name of your database **HCM**.
- 7. Click **Next** on the bottom of the screen; use the default settings or the ones recommended by the site administrator.
- 8. Click **Next** and select the default.
- 9. Click Finish.
- 10. Click on the dropdown **Select an existing database for Routines** and select the database folder created in <u>Step 6</u> HCM.
- 11. Click Save.
- 12. Namespace **HCM** will be added to the list of namespaces.

7.1.2 Deploying a Health Connect Production

To deploy a Health Connect Production, do the following:

1. Copy the deployment file (e.g., **Export-HCM_Production_HL7RouterProduction_Deploy1.0.xml**) to a path and directory in HealthShare. For example:

/tmp/

- 2. On the "Health Connect" page, click on the switch that brings a window of all the namespaces.
- 3. Click on **HCM**. Verify the namespace value is now changed to **HCM**.
- 4. Click on Ensemble \rightarrow Manage \rightarrow Deployment changes \rightarrow Deploy.
- 5. Click on **Open Deployment** and select the directory in Step 1.

- 6. Select the Deployment file (e.g., **Export-HCM_Production_HL7RouterProduction_Deploy1.0.xml**).
- 7. The "Deployment Production Changes" screen will display the artifacts that were brought in as part of the **xml** file.
- 8. Click on the **Deploy** tab.
- 9. Deployment will begin. This will take a few minutes.
- 10. Go to the following:

Ensemble → List → Select HCM.Production.HL7RouterProduction

7.2 Appendix B—Configuring a Health Connect Production

To configure a Health Connect Production, do the following:

- 1. Configure connection details on Business Services:
 - a. Select a business service (e.g., From DU459 OPAI).
 - b. Click on the **Settings** tab on the right.
 - c. Select the Enabled checkbox.
 - d. Enter the designated port.
 - e. Verify the **Stay Connected** setting is set to a value of **-1**.
 - f. Click Apply.
- 2. Configure connection details on Business Operations:
 - a. Select a business operation (e.g., To_OPAI678_Scriptpro_9600, EMailAlert.OperationOPAI, and BadMessageHandlerOPAI).
 - b. Click on the **Settings** tab on the right.
 - c. Select the **Enabled** checkbox (uncheck to **disable**).
 - d. Enter the IP address of the OPAI Dispensing Device
 - e. Enter the designated port.
 - f. Click Apply.
- 3. Enable the business process:
 - a. Select business process related to OPAI (e.g., **OPAI_InRouter**, **OPAI_OutRouter**, **OutRouter**, **InRouter**, and **Ens.Alert**).
 - b. Click on **Settings** tab on the right.
 - c. Select Enabled checkbox.
 - d. Click **Apply**.

- 4. The Point of Reference is Vista and all messages send out from Vista will have the OPAI device details in the Outbound table. The Inbound table will have the Vista Domain names since these are messages coming into Vista.
- 5. To Update **Inbound** and **Outbound** tables:
 - a. Go to the following:

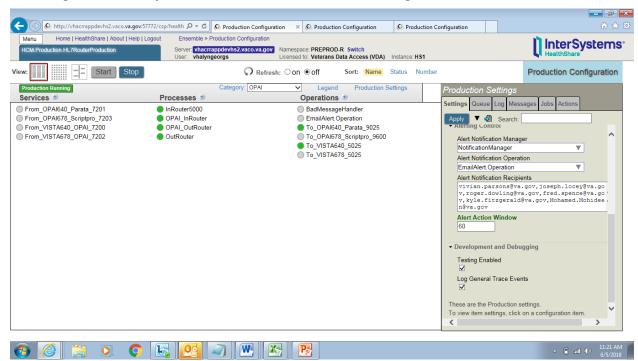
Ensemble → **Configure** → **Data Lookup Tables**

b. Go to the following:

Open \rightarrow HCM \rightarrow OutboundRouter \rightarrow Table

- c. Enter **Key** [e.g., this is **MSH(6.2)** segment receiving institution from the HL7 Message].
- d. Enter Value (e.g., To OPAI678 Scriptpro 9600 operation).
- 6. Start the Health Connect Production by clicking the **Start** button in the "Production Configuration" screen (see <u>Figure 10</u>).

Figure 10: InterSystems HealthShare—Production Configuration Screen: OPAI



7.3 Appendix C—Starting and Stopping a Health Connect Production

0

REF: For details on what occurs when you start or stop a production, see the InterSystems book *Managing Ensemble Productions*.

7.3.1 Starting Health Connect Production

To **start** a Health Connect Production, do the following:

- 1. Log in to the Management Portal.
- 2. Change to the appropriate namespace.
- 3. Go to the "Production List" page:

Ensemble → **List** → **Productions**

- 4. Find the **production** in the list and click it.
- 5. Click the **Open** button at the top of the list.
- 6. On the resulting "Production Configuration" page, click **Start** to display a dialog box.
- 7. In the dialog box, click **Open**. The system displays a new dialog box with the name of the **production**, its startup status, and any associated messages.
- NOTE: The system may also open Terminal windows. Do *not* close these windows. Click the **OK** button when it is displayed in the dialog box.

7.3.2 Stopping Health Connect Production

To **stop** a Health Connect Production, do the following:

- NOTE: During this process ensure the Health Connect operation is **disabled** (see Appendix B, Step 2, "Configure connection details on Business Operations").
 - 1. Log in to the HealthShare **Management Portal** (Cache Cube).
 - 2. Change to the appropriate namespace.
 - 3. Go to the "Production List" page:

Ensemble → **List** → **Productions**

- 4. Find the **production** in the list and click it.
- 5. Click the **Open** button at the top of the list.
- 6. On the resulting "Production Configuration" page, click **Stop** to display a dialog box.

- 7. In the dialog box, click **OK**. The system displays a new dialog box with the following:
 - Name of the production.
 - Shutdown status.
 - Any associated messages.
- NOTE: The system may also open Terminal windows. Do *not* close these windows. Click the **OK** button when it is displayed in the dialog box.