



HIPS

Evaluation Guide

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1 Introduction

1.1 Purpose

The information in this guide is provided to assist with the evaluation of HIPS within a test environment and should not be followed when implementing into a production environment.

1.2 Intended audience

This document is intended for implementers seeking to evaluate the HIPS product in a controlled software test environment before determining the appropriateness of HIPS for their own organisation.

1.3 Scope

This guide covers the HIPS Demo Harness tool and other tools that can be used to evaluate the HIPS product suite.

This guide does not cover all of the HIPS functions, web services, methods, or the User Interface Web Application. These details are provided in separate documents included in the HIPS 7.0 documentation package.

1.4 Assumptions

The following assumptions have been made in the development of this profile:

- Any HL7 messages used in the Demo Harness tool are configured as per the HL7 profile documents for HIPS to accept them.
- The Demo Harness tool is provided “as is” and is only to be used for HIPS evaluation purposes.

2 Testing

HIPS is supplied as both binary and sample code. HIPS has undergone conformance assessments including Notice of Connection (NOC) for both HI Service and My Health Record, CCA for Healthcare Identifiers, and My Health Record conformance test cases applicable to the functionality of HIPS.

Before connecting to the My Health Record system, implementers of HIPS must undergo conformance assessments for functionality and processes outside the scope of HIPS. Documentation of conformance assessments is available from the Agency Help Centre at help@digitalhealth.gov.au or by phoning 1300 901 001.

3 Evaluation Prerequisites

This section outlines the major prerequisites that participating organisations will need to obtain for successful evaluation, integration and CCD testing of HIPS.

3.1 Registration to HI Service Vendor Environment

DHS issues test Medicare Australia Location Certificates that are to be used for access to the HI Service vendor environment. Each organisation implementing HIPS may request a test certificate from DHS and request the OTS Liaison to allow HIPS access using that certificate.

The product detail that are used to identify this version of the HIPS to the HI Service can be found in the *HIPS 7.0 - Initial and Clean Installation Guide (Core)* document.

3.2 Registration to My Health Record SVT Environment

DHS issues a pack of NASH-compliant HPI-O Test Certificates that are to be used by an organisation for their integration and CCD testing. Each organisation implementing HIPS may request a pack from DHS and request the National Infrastructure Operator (NIO) to configure the My Health Record SVT Environment to allow HIPS access using the certificates in their pack. Additionally, if local identifiers for document authors are to be used in a CDA document then permissions are required from the NIO to allow access to the restricted templates for uploading documents with a local ID in place of an HPI-I to identify the author.

The product detail that are used to identify this version of the HIPS to the My Health Record system can be found in the *HIPS 7.0 - Initial and Clean Installation Guide (Core)* document.

4 HIPS Demo Harness

4.1 Overview

The HIPS Demo Harness can be used to demonstrate and test a subset of HIPS functionality.

The demo harness connects to the HIPS application server using the HTTP web service bindings of the following services:

- Database Loader Service – to submit HL7 messages from PAS for patient registration, update patient demographics, to admit, transfer, or for discharge events.
- IHI Service – to retrieve the validated IHI information for a patient record for use in a clinical document to be uploaded to the My Health Record service.
- Consent Service – to withdraw consent to upload documents for an episode of care, to disclose existence of a digital health record, or to query patient participation status.
- PCEHR Service – to check whether a digital health record is advertised, to upload or supersede, to remove, to gain access, to get a document list, to retrieve, or to get change history.

The demonstration application also makes a direct connection to the HIPS Core database, to show available patients and episodes, to show the information that is stored as a result of the IHI search and the audit records that are created.

4.2 Limitations

The demo harness does not expose all features and operating modes of the HIPS application server.

The demo harness operates with the following limitations:

- Test patients must be registered and admitted via HL7 messages.
- The demonstration HL7 messages have hospital codes that must be changed to match the hospital codes you have configured for HIPS.
- Each IHI must be obtained from the HI Service vendor environment using the Medicare Number or DVA number, so test patients for which the Medicare or DVA number is unknown cannot be used.
- HIPS services are invoked using MRN identifier, not using State Patient ID or Validated IHI.
- Some HIPS services are not exposed in the demo harness (in particular: Get Operation Status, Reload Reference Data, Get Hospital Details, Check Consent and Check Disclosure, Assisted Registration, Prescription and Dispense View, Health Record Overview, Medicare Overview, Pathology Report View, Diagnostic Imaging Report View, HPI-I Search).

In order to evaluate the usage of HIPS with the Validated IHI parameter, an alternative web service testing tool, such as SoapUI, is required: See Section 5 for details.

4.3 HIPS Demo Harness Configuration

The files for the HIPS Demo Harness can be found in folder “HIPS-DemoHarness”.

HIPS Demo Harness configuration options are held in the file “HIPS.DemoHarness.exe.config”. At a minimum, the highlighted items must be replaced with applicable values for the installation.

4.4 SQL Connection Strings

Name	Changes Required
PcehrDataStoreConnectionString	<p>Change the value <code>{HIPS.Core.Database.Server}</code> to the database server name</p> <p>Change the value <code>{HIPS.Core.Database.Name}</code> to the database name</p> <p>If it is necessary to use SQL Server Authentication instead of Windows Authentication, change “Integrated Security” to false and add “User ID” and “Password” items.</p>
HIPS.DemoHarness.Properties.Settings. PcehrDataStoreConnectionString	Apply the same changes to this connection string as were applied in the first connection string.
HIPS.DemoHarness.Properties.Settings. HL7DatabaseConnectionString	No Changes Required.

4.5 Endpoint Addresses

Six endpoints must be configured for each HIPS environment, being the Database Loader Service, IHI Service, PCEHR Service, PCEHR Service V2, CDA service and Consent Service.

Multiple endpoints are configurable, using an underscore to separate the environment from the service. For example, the name “Development_DatabaseLoaderService” refers to the Database Loader Service for the development environment, while the name “SystemTest_ConsentService” refers to the Consent Service for the System Test environment.

Replace `{HIPS.Core.AppServer.Name}` with the HIPS application server name and `{HIPS.Core.Web.Ports[HTTP]}` with the corresponding HTTP port for each of the endpoints in the demo harness configuration file.

Demo harness also requires the configuration settings to be configured for the HIPS UI URL, such as “Local Service Host_HIPS_UI_URL”. The environment name “Local Service Host” is the part before the first underscore, this must match the environment name in each client endpoint name. Replace the host (if applicable) and `{HIPS.UI.Web.Ports[HTTP]}` with the HIPS UI HTTP port.

Section	Suggested Value	Description
Endpoints named Database Loader Service	http://hostname:port/HIPS.Service.DatabaseLoaderService.svc/HIPS.Service.DatabaseLoaderService	The test harness will connect to the HIPS Database Loader Service using the web service at this URL.
Endpoints named IHI Service	http://hostname:port/HIPS.Service.IHIService.svc/HIPS.Service.IHIService	The demo harness will connect to the HIPS IHI Service using the web service at this URL.

Section	Suggested Value	Description
Endpoints named PCEHR Service	http://hostname:port/HIPS.Service.PCEHRService.svc/HIPS.Service.PCEHRService	The demo harness will connect to the HIPS PCEHR Service using the web service at this URL.
Endpoints named PCEHR Service V2	http://hostname:port/HIPS.Service.PCEHRService.svc/HIPS.Service.PCEHRServiceV2	The demo harness will connect to the HIPS PCEHR Service V2 using the web service at this URL.
Endpoints named CDA Service	http://hostname:port/HIPS.Service.CdaService.svc/HIPS.Service.CdaService	The demo harness will connect to the HIPS CDA Service using the web service at this URL.
Endpoints named Consent Service	http://hostname:port/HIPS.Service.ConsentService.svc/HIPS.Service.ConsentService	The demo harness will connect to the HIPS Consent Service using the web service at this URL.
Endpoints for Web UI URL	http://hostname:port/	The demo harness will connect to the HIPS Web UI module using the web address at this URL.

4.6 Use of Demo Harness

4.6.1 Authentication Tab

Upon starting the Demo Harness, it will show the Authentication tab. The Authentication tab can be used to select which of the environments in the configuration file will be used for the web service calls to HIPS, and to select which user role and details to assert to HIPS.

The screenshot shows the 'HIPS Demo Harness' application window. The 'Authentication' tab is active. The 'Environment' dropdown menu is set to 'HIPS System Testing'. Under the 'User Role' section, the 'Interactive User' radio button is selected. The 'User Name' field is filled with 'simon', the 'User Login' field is filled with 'simon', and the 'User Domain' field is filled with 'SIMONBIBER0406'. The top of the window features a menu bar with options: Authentication, Register or Update Patient, Check for PCEHR, Record Consent, Upload or Supersede Doc, Remove Doc, Gain Access, List Docs, Download Doc, Change History, PCEHR View, and Upload PDF.

Figure 1 - Selecting an application environment and user role

4.6.2 Register or Update Patient Tab

Paste HL7 Message below, or select one from this list: **ALEXANDER DUNCAN (IHI 8003603456799528)**

MSH|^~^&HIPS|SAH|ADTIRAH|20120801070340|U4VX|ADT^A01|4200016|PI2.3.1||ALINE|AU|ASC|I|EN
EVN|A01|20120801070339.74||DS|U|ALEE
PID||TEST-CCA_13~^FMC^MR~59500730912~^MC|DUNCAN^ALEXANDER~^LI20090505|MI|1^Aboriginal but not Torres Strait Islander origin^ISAAC|26 CCA FAITH
ST~PARAMATTA~NSW~2150~H||WPN^PH~0884251461||8407^Cuba^ABS|Y||

Message Response
MSH|^~^&HIPS|SAH|ADTIRAH|20140620122744+0930|U4VX|ADT^A01|TorrFCKE|kqprv|CqsEyl|PI2.3.1||ALINE|AU|ASC|I|EN
MSA|AA|4200016

PCEHR Data Store Results

Name	ALEXANDER DUNCAN	IHI	8003603456799528
Date Of Birth	05/05/2009	IHI Record Status	Verified
Sex	Male	IHI Status	Active
Medicare	5950073091	PCEHR is Advertised	
DVA		Date Last Validated	20/06/2014 12:27

IHI Lookup Audits

SequenceNumber	Request	Response	IhiNumber	IhiStatus	IhiRecordStatus	FamilyName	GivenName	Sex
4	<s:Envelope xmlns...	<soap12:Envelop...	8003603456799...	1	1	DUNCAN	ALEXANDER	1

Buttons: Add Episode, Send PAS, Send Pathology, Format XML (checked)

Figure 2 - Choose test PAS message from list or copy from another source

The Register or Update Patient tab of the demo harness can be used to submit HL7 messages to the Database Loader Service to register patients and demonstrate the automatic IHI lookup and digital health record advertised check.

Participating Organisations evaluating HIPS should use this tab to register a patient whose demographics match a test patient from their My Health Record Vendor Pack, and admit the patient to create an episode.

This can be achieved by replacing the highlighted portions of the following message as indicated. Dates should be entered as yyyyMMddHHmmss, for example 20121231001122 for 12:11:22am on 31/12/2012.

The hospital code “LMH” must be replaced with a hospital code that is configured for a hospital in the HIPS database.

```

MSH|^~\&|ADT|LMH|HIB|HIB|20121123072334||ADT^A01|2012112307233417184242|P|2.3.1||
|AL|NE|AU|ASCII|EN
EVN|A08|20121123072334
PID||StatePatientId^^^^SAUHI|MedicalRecordNumber^^^^LMH^MR~MedicareCardNumberWithI
rn^^022015^LMH^MC||FamilyName^FirstName^MiddleNames^^Title^^L^A||DateOfBirth|SexC
ode|TESTSURN^TESTFORE^TESTMDL^^^^A^A|4^Neither Aboriginal or TSI^ISAAC^0C^No
Client^LMH|10 Address
St^^Suburb^SA^5012^^H||^PRN^^^^0412123123|^ORN^CP^^^^0412234234|1201^English^ABS
^EN^ENGLISH^LMH|2^Married/De facto^ISAAC^2^^LMH|7010^No Religion, nfd^ABS^NIL^NO
RELIGION^LMH|439598-1|MedicareCardNumber^IRN||||1100^Australia (includes External
Territories) (nfd)^ABS^ABS1100^^LMH
NK1||TestPerson^^^^^^L^A|^PARTNER^LMH^M^Spouse^STAN|10 ADDRESS
ST^^BLAKEVIEW^SA^5114|^PRN^^^^0412345678
PV1||I^Inpatient^ISAAC|Ward^^Bed^0027^^OBST^0027^^WH-WOMEN'S HEALTH UNIT|4^Not
applicable^ISAAC^4^NOT
APPLICABLE^LMH|30019236^^^^MB||128^ProviderOneSurname^ProviderOneFirstName^^PROF
^^^^ADT&LMH^L^^^^INTERNAL^LMH~234567F^ProviderOneSurname^ProviderOneFirstName^^PRO
F^^^^ADT&LMH^L^^^^PROVIDER^LMH|1269^ProviderTwoSurname^ProviderTwoFirstName^^^^AD
T&LMH^^^^INTERNAL^LMH~123456VJ^ProviderTwoSurname^ProviderTwoFirstName^^^^ADT&L
MH^^^^PROVIDER^LMH|128^ProviderOneSurname^ProviderOneFirstName^^PROF^^^^ADT&LMH^L
^^^^INTERNAL^LMH~234567F^ProviderOneSurname^ProviderOneFirstName^^PROF^^^^ADT&LMH^
L^^^^PROVIDER^LMH|OBST||||5^Outpatient Department^ISAAC^5^^LMH||||1^Overnight
Stay^ISAAC^1^1 OVERNIGHT
STAY^LMH|30019236^^^^MB|1||||||||||||1^Home^ISAAC^1^^LMH||||0027||||Admission
Date
PV2||||^LABOUR|||||20121122000000

```

4.6.2.1 Workaround if IHI Search Not Possible

If the information supplied for the patient does not include a Medicare card number or DVA file number, then HIPS will be unable to automatically obtain the IHI of the patient. In this case it is possible to work around by inserting a row into PatientMasterIhi with the required IHI. If the date last validated is more than the configured period (e.g. 24 hours) in the past, HIPS will validate the IHI before using it in any call to the My Health Record system.

This can be achieved by replacing the highlighted items in the following SQL command. The first is the primary key value of the newly created item in the PatientMaster table.

```

INSERT INTO hips.PatientMasterIhi (PatientMasterId, Ihi, IhiStatusId,
IhiRecordStatusId, RegisteredGivenName, RegisteredFamilyName, RegisteredSexId,
DateLastValidated, DateCreated, UserCreated, DateModified, UserModified) VALUES
(n, '800360nnnnnnnnnn', 1, 1, 'Given Names', 'Family Name', 1, '2012-11-01',
GETDATE(), 'TestUser', GETDATE(), 'TestUser')

```

4.6.3 Check for PCEHR Tab

HIPS Demo Harness - hipstest.chamonix.net.au

Authentication | Register or Update Patient | **Check for PCEHR** | Record Consent | Upload or Supersede Doc | Remove Doc | Gain Access | List Docs | Download Doc | Change History | PCEHR View | Upload PDF

Patient: BELL, MABEL

Required Data for Web Service Call

Hospital Code System: pasFacCd

Hospital Code: RKH

Medical Record Number: TEST-SAH_7

Date of Birth: 21/08/1957

Get Validated IHI

Service Return Status: OK

IHI: 8003608166708487

IHI Status: Active

IHI Record Status: Verified

Last Validated Date/Time: 20/06/2014 12:29

Given Names: MABEL

Family Name: BELL

Sex: Female

Check PCEHR Status

Service Return Status: OK

Advertised Status: Yes, an advertised PCEHR exists.

Access Status: Your organisation has already gained access to this PCEHR.

Status: OK

Figure 3 - After registering a patient, the patient may be selected from the database

The Check for PCEHR tab demonstrates the services that allow clinical systems to:

- **Get Validated IHI:** Retrieve a validated IHI for a patient, such as for use in a clinical document. The IHI retrieval will be immediate if it has been less than 24 hours (or the configured period) since the IHI was obtained or last validated.
- **Check PCEHR Status:** Check the digital health record existence / access status for a patient at the healthcare provider organisation of a hospital.

The services demonstrated on this page and subsequent pages can accept any of the supported types of patient identifier, but only the MRN type is demonstrated in this application. The supported types are:

- Medical Record Number (MRN) allocated by the hospital,
- State/Territory Patient Identifier allocated by the Enterprise Master Patient Index (EMPI),
- Validated Individual Healthcare Identifier (IHI) including validation information, and
- Patient Master ID, being the internal primary key in the SQL database used by HIPS.

4.6.4 Consent and Participation Tab

HospitalCode	Mm	ParticipationStatus	StatePatientId	ValidatedIhi
RKH	TEST-SAH_7	PcehrAdvertised		IHI 80036081667...
RCH	TEST-CCA_13	PcehrAdvertised		IHI 80036034567...

Figure 4 - Choose a patient and episode to record consent, or just a patient to disclose their digital health record

The Consent page demonstrates the services that allow clinical systems to:

- **Record Upload Consent:** Record when a patient withdraws their consent to upload clinical documents for a particular episode of care, or reinstate this consent, or check the consent status for an episode.
- **Record PCEHR Disclosure:** Record when a patient who has chosen to hide the existence of his/her digital health record nonetheless discloses the existence to a healthcare provider organisation and expects that documents should be uploaded, or rescinds this disclosure.
- **List Recent Patient Participation:** Query for a list of all patients who have changed participation status since a given point in time.
- **Check Single Patient Participation:** Query for a particular patient whether that patient is participating in the My Health Record (either having an advertised digital health record or having disclosed its existence to the organisation).

For the Record Upload Consent Service, the episode must be identified. For the operating mode using the MRN parameter, HIPS identifies the Episode using the admission date/time.

4.6.5 Upload or Supersede Document Tab

Figure 5 - Choose a patient and episode, select a CDA document and click 'Upload or Supersede

This tab demonstrates the service that allows a clinical system to submit a CDA document (XML and attachments) to be uploaded to the My Health Record service. Key points from the business logic are demonstrated here:

- HIPS will sign the CDA document using the NASH certificate of the healthcare provider organisation to which the discharging hospital belongs, and package the supplied document (as CDA_ROOT.XML), generated signature (as CDA_SIGN.XML) and any other supplied attachments, together with the logo for the hospital (as LOGO.PNG).
- If the patient has withdrawn consent to upload documents for the specified episode, then HIPS will refuse to queue the document for uploading.
- If HIPS has already uploaded a document instance for the same episode, with the same Set ID, then this version will supersede the previous version uploaded.
- If the document set had been removed from the My Health Record with Withdrawn reason, then the upload of a new version in the set will cause all previous versions to become visible again.

For the Upload or Supersede Document service, the episode must be identified. For the operating mode using the MRN parameter, HIPS identifies the episode using the admission date/time. Note that the Validated IHI parameter (not usable in the demo harness) will create episode stubs that are identified using the document set ID.

4.6.6 Remove Document Tab

The screenshot shows the 'Remove Document' tab in the HIPS Demo Harness. The interface includes a top navigation bar with tabs: Authentication, Register or Update Patient, Check for PCEHR, Record Consent, Upload or Supersede Doc, Remove Doc (selected), Gain Access, List Docs, Download Doc, Change History, PCEHR View, and Upload PDF.

On the left, there are dropdown menus for Patient (BERMAN, JAKE), Episode (20/01/2014 3:36 AM), Document (2.25.82044956024876136710785997064039562), and Reason (Withdrawn). Below these is a 'Remove Discharge Summary' button and a 'Status' field set to 'OK'.

On the right, there is a section titled 'Required Data for Remove Document Web Service Call' with fields for Hospital Code System (pasFacCd), Hospital Code (RCH), Medical Record Number (TEST-NOC_17), Admission Date (20/01/2014 03:36:00), Document Set ID (2.25.82044956024876136710785997064039562297), and Reason Code (Withdrawn).

At the bottom, there is a table titled 'PCEHR Audits' with columns: PcehrAuditId, PatientMasterId, ServiceName, ServiceMessage, Request, Response, Ihi, HpiO, and User. The table contains two rows of data.

PcehrAuditId	PatientMasterId	ServiceName	ServiceMessage	Request	Response	Ihi	HpiO	User
463	1	Does PCEHR Exist	OK	<soap:Envelope xmlns:soap="http://schemas.xmlsoap.org/soap/envelope/"><body><ns1:DoesPCEHRExist/></body></soap:Envelope>	<soap:Envelope xmlns:soap="http://schemas.xmlsoap.org/soap/envelope/"><body><ns1:DoesPCEHRExistResponse/></body></soap:Envelope>	8003608000002519	8003621566687292	simon
470	1	Remove Document	OK PCEHR_SU...	<soap:Envelope xmlns:soap="http://schemas.xmlsoap.org/soap/envelope/"><body><ns1:RemoveDocument/></body></soap:Envelope>	<soap:Envelope xmlns:soap="http://schemas.xmlsoap.org/soap/envelope/"><body><ns1:RemoveDocumentResponse/></body></soap:Envelope>	8003608000002519	8003621566687292	simon

Figure 6 -Choose a patient, episode and previously uploaded document to remove

This tab demonstrates the service that allows a clinical system to 'remove' a document set that HIPS previously uploaded to the My Health Record service. When removed, a document set remains visible to the authoring healthcare provider organisation but becomes invisible to the consumer and other healthcare provider organisations. If the reason for removal is Withdrawn, it can be reinstated by uploading a new version of the document. One of two acceptable reasons for removal must be supplied (withdrawn by provider or incorrect identity).

4.6.7 Gain Access Tab

Figure 7 - Choose a patient, check for their digital health record existence and gain access to the digital health record

This tab demonstrates the services that allow a clinical system to:

- Check for PCEHR Status:** Determine whether the health provider organisation has already gained access to the digital health record of the selected patient, or if not, whether a code is required to gain access.
- Gain Access with Code:** Gain access to a digital health record by supplying an access code. If the patient gives his/her Record Access Code (RAC) then general access will be granted for 3 years. If the patient gives his/her Limited Document Access Code (LDAC) then restricted access will be granted, giving access to both general documents and restricted documents for 3 years.
- Gain Access without Code:** Gain access to a digital health record without supplying an access code, thus gaining general access for 3 years.
- Gain Emergency Access:** Gain emergency access to a digital health record, giving access to both general and restricted documents for 5 days.

4.6.8 List Documents Tab

Authentication | Register or Update Patient | Check for PCEHR | Record Consent | Upload or Supersede Doc | Remove Doc | Gain Access | **List Docs** | Download Doc | Change History | PCEHR View | Upload PDF

Patient: BELL, MABEL

Select zero or more Statuses: **Approved**
Submitted
Deprecated
Deleted

Creation Start Date/Time: Friday, 20 June 2014
Creation End Date/Time: Friday, 20 June 2014
Service Start Date/Time: Friday, 20 June 2014
Service End Date/Time: Friday, 20 June 2014

Get Documents

Required Data for Web Service Call

Hospital Code System: pasFacCd
Hospital Code: RKH
Medical Record Number: TEST-SAH_7
Date of Birth: 21/08/1957

	Download	History	AuthorInstitution	AuthorInstitutionName	AuthorPerson	AuthorPersonFamily	AuthorPersonGiven	AuthorPersonName	CreationTime	DocumentClassCoc
▶	Send info to Tab...	Send info to Tab...	8003624900018...	MEDTESTORGS...	Dr. Good Vendor	Vendor	Good	Dr.	24/02/2012 7:50...	18842-5
	Send info to Tab...	Send info to Tab...	8003621566687...	DHSITESTORG...	SIGHT BIGHT	BIGHT	SIGHT		15/06/2014 1:24...	18842-5
	Send info to Tab...	Send info to Tab...	8003621566687...	DHSITESTORG...	a a	a	a		16/06/2014 3:55...	18842-5

Status:OK

Figure 8 - Choose a patient and filter the list by document status and optionally by date range

This page demonstrates the services that allow a clinical system to retrieve the metadata of clinical documents available to download from a patient's digital health record.

In order to download one of the documents in this tab, click the button in the Download column. This will copy the Document Unique ID and Repository ID to the appropriate places in the Download Doc tab.

In order to retrieve the list of all versions of one of the documents, click the button in the History column. This will copy the Document Unique ID to the appropriate place in the Change History tab.

NOTE: NOC requirements state that the Change History service must be invoked using the Document Entry UUID as the parameter, not the Document Unique ID. Although the demo harness still works using the Document Unique ID, be sure to use the Entry UUID when integrating HIPS with your clinical system.

4.6.9 Download Document Tab

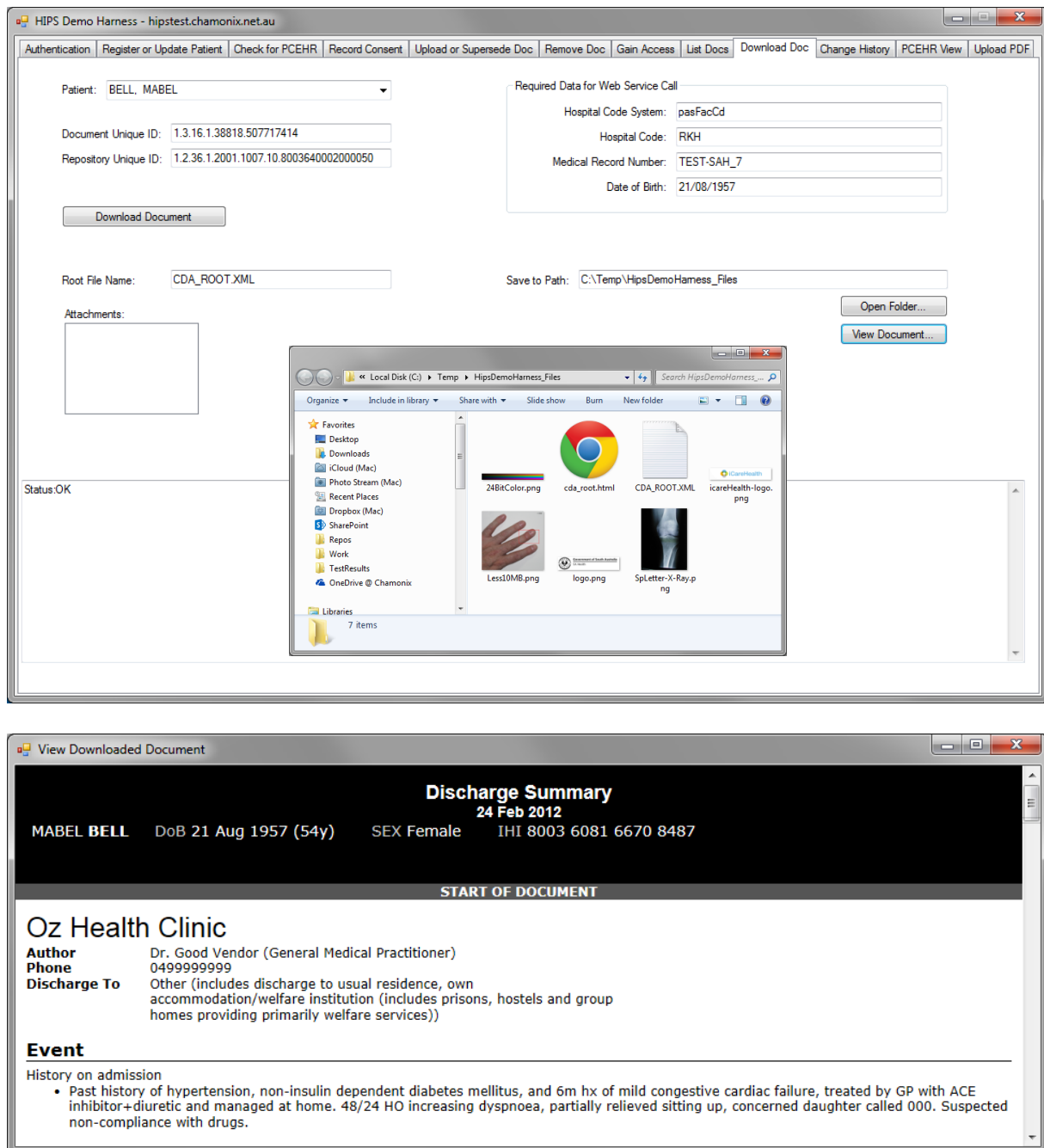


Figure 9 - Choose a patient and enter the Unique ID and Repository ID of a document to download

This page demonstrates the service that allows a clinical system to download a clinical document using the Unique ID and Repository ID that appear in the list. The CDA document and any attachments will be saved into the local file system at the path specified.

4.6.10 Change History Tab

AuthorInstitution	AuthorInstitutionName	AuthorPerson	AuthorPersonFamilyName	AuthorPersonGiven	AuthorPersonNamePrefix	CreationTime	DocumentClassCode	DocumentClassName
8003623233353555	DHSITESTORGD9	Biber Simon	Simon	Biber		20/09/2012 4:42 AM	18842-5	Discharge Summary
8003623233353555	DHSITESTORGD9	Biber Simon	Simon	Biber		20/09/2012 4:42 AM	18842-5	Discharge Summary

status:OK

Figure 10 - Choose a patient and enter the ID of a document to list all versions

This page demonstrates the service that allows a clinical system to check for updated versions of a document that has been downloaded. Given the Entry UUID of any document instance, the service retrieves the metadata of all instances within the same document set.

NOTE: NOC requirements state that the Change History service should be invoked using the Document Entry UUID as the parameter, not the Document Unique ID. Although the demo harness still works using the Document Unique ID, be sure to use the Entry UUID when integrating HIPS with your clinical system.

4.6.11 PCEHR View Tab

HELLER, AUGUSTUS CIS 28-Feb-1996 Male 354455022

User Preference Log Out

Gain Access

Health Record Overview Medicare Overview Pathology Report Diagnostic Imaging Report Prescription & Dispense View

Health Record Overview

This is not a complete view of the individuals health information. For more information about the individuals health record or data, please consult the individual or other healthcare professional as needed.

Documents available on the My Health Record since the last Shared Health Summary 4 Items

This is the patient's first admission to this facility.
Excluded document type is: e-Referral

Show Event Summaries Only (with Clinical Synopsis if available) ☐

Search: Type to search...

First Previous 1 Next Last

Showing 1 to 4 of 4 entries

Document Date	Document Type	Author Name	Author Role	Organisation Name
24-Jan-2014	Discharge Summary	Fred Flintstone	Child Care Centre Manager	DHS3424
23-Jan-2014	Discharge Summary	Ely Black	Child Care Centre Manager	DHS3424
22-Nov-2013	Discharge Summary	Bevan Turnbull	Health Professionals nfd	DHSITESTORG151
19-Sep-2013	Event Summary	RN Jenine LEGAN	Not Available	MEDTESTORGSC1581

Figure 11 - Choose a patient and show the embedded My Health Record viewer

This page demonstrates the Patient Landing Page feature of HIPS UI that allows a clinical system to embed the HIPS My Health Record Overview Viewer as a component of an existing clinical application. It is also possible to check the other sections such as Medicare Overview, Pathology Report, Diagnostic Imaging Report and Prescription and Dispense View.

4.6.12 Upload PDF Tab

The screenshot shows the 'Upload PDF' tab in the HIPS Demo Harness. The interface includes a top navigation bar with tabs: Authentication, Register or Update Patient, Check for PCEHR, Record Consent, Upload or Supersede Doc, Remove Doc, Gain Access, List Docs, Download Doc, Change History, PCEHR View, and Upload PDF. The main form is divided into several sections:

- Patient:** A dropdown menu showing 'BELL, MABEL'.
- Encounter Period:** Two date/time pickers. 'Admission Date/Time' is '12 / 11 / 2013 10 : 20' and 'Discharge Date/Time' is '20 / 06 / 2014 12 : 41'.
- Document Author:** Fields for 'Family Name' (Windsor), 'Given Name' (Mary), 'Title' (Princess), 'Suffix' (of Scots), and 'Identifier' (maryofscots). The 'Type' is set to 'Local Identifier'.
- Discharge Summary:** A section for document metadata. 'Select PDF' shows 'DischargeSummary.pdf (4465401 bytes)'. 'Document Status' is 'Final'. 'Creation Date/Time' is '19 / 06 / 2014 12 : 41'. 'Clinical Specialty' is 'Oncology'. 'Mode of Separation' is 'Self Discharge'. There are 'Add Attachment...' and 'Remove Attachment' buttons.
- Attachments:** A table listing uploaded files.

Name	Size
logo.png	13.375 bytes
asthma_fact_sheet_en.pdf	126.416 bytes
- Status:** A text area showing 'Status: OK', 'Document ID: 1.2.36.1.2001.1005.49.1.8003621566687292.29^29', and 'Document Set ID: 1.2.36.1.2001.1005.49.2.8003621566687292^2'.
- Buttons:** 'Upload or Supersede' and 'Add Attachment...'.

Figure 12 - Generate and upload a CDA Level 1A Discharge Summary with PDF body

This page demonstrates the web service “Upload Discharge Summary Level 1A” that allows a clinical system to provide a PDF document and minimal metadata to allow that document to be uploaded to the My Health Record system.

5 Invoke HIPS services with SoapUI

SoapUI is an open source, cross-platform application for testing web services.

Open SoapUI, create a new SoapUI project, and copy the URL of the WSDL into the “Initial WSDL/WADL” box.

For My Health Record services (e.g. IsPcehrAdvertised or UploadOrSupersedeDocument) use:

- <http://hostname:50500/HIPS.Service.PCEHRService.svc?wsdl>

For IHI services (e.g. GetValidatedIhi) use:

- <http://hostname:50500/HIPS.Service.IHIService.svc?wsdl>

For Consent services (e.g. RecordDisclosure, RecordConsent or GetPatientParticipationStatus) use:

- <http://hostname:50500/HIPS.Service.ConsentService.svc?wsdl>

For HL7 Interface services (e.g. NotifyPasEvent) use:

- <http://hostname:50500/HIPS.Service.DatabaseLoaderService.svc?wsdl>

5.1 Adding WS-Addressing Header

All of the HIPS services require a “wsa:Action” header. The following checkboxes must be checked **on** in the “WS-A” tab at the bottom of the SoapUI request window for each request that you create, otherwise an exception will be returned:

- Enable WS-A addressing
- Add default wsa:Action

NOTE: Previous version of HIPS also required that the “Add default wsa:To” checkbox be checked on. This is no longer a requirement.

5.2 Specialising the Patient Identifier Base

Most of the HIPS services take a patientIdentifier parameter which is declared as the abstract base class PatientIdentifierBase, with specialisations of Mrn, StatePatientId, PatientMasterId or ValidatedIhi.

SoapUI assumes that you will pass in the declared type for all parameters, so you will need to manually modify the request to specify a subclass of PatientIdentifierBase and provide values for all the properties in the subclass.

For services that take a patientIdentifier parameter, you will need to specialise the class by adding a namespace declaration for XML Schema Instance:

- `xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"`

Then specify the type of patient identifier using an xsi:type attribute on the patientIdentifier:

- `xsi:type="hips:ValidatedIhi"`

Then add the remaining properties in the order declared in the XSD for the PatientIdentifier namespace, which can be retrieved from:

- <http://hostname:50500/HIPS.Service.PCEHRService.svc?xsd=xsd2>

5.3 Example Call to IsPcehrAdvertised

If you already know the IHI for the patient and just want to check whether the patient has an advertised digital health record, you can call IsPcehrAdvertised with a patient identifier of type "hips:ValidatedIhi". This is illustrated below for the test patient Augustus Heller with IHI 8003 6080 0001 2245.

5.3.1 Request

```
<soap:Envelope xmlns:soap="http://www.w3.org/2003/05/soap-envelope"
  xmlns:ns="http://schemas.HIPS/Services/2012/01"
  xmlns:hips="http://schemas.datacontract.org/2004/07/HIPS.CommonSchemas.Pati
entIdentifier"
  xmlns:hips1="http://schemas.datacontract.org/2004/07/HIPS.CommonSchemas"
  xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance">
  <soap:Header/>
  <soap:Body>
    <ns:IsPcehrAdvertised>
      <ns:patientIdentifier xsi:type="hips:ValidatedIhi">
        <hips:HospitalCode>FMC</hips:HospitalCode>
        <hips:HospitalCodeSystem>pasFacCd</hips:HospitalCodeSystem>
        <hips:DateOfBirth>1996-02-28</hips:DateOfBirth>
        <hips:FamilyName>Heller</hips:FamilyName>
        <hips:GivenName>Augustus</hips:GivenName>
        <hips:Ihi>8003608000012245</hips:Ihi>
        <hips:IhiLastValidated>2013-04-02T01:00:00Z</hips:IhiLastValidated>
        <hips:IhiRecordStatus>Verified</hips:IhiRecordStatus>
        <hips:IhiStatus>Active</hips:IhiStatus>
        <hips:Sex>Male</hips:Sex>
      </ns:patientIdentifier>
      <ns:dateOfBirth>1996-02-28</ns:dateOfBirth>
      <ns:user>
        <hips1:Domain>DOMAIN</hips1:Domain>
        <hips1:Login>ssmith</hips1:Login>
        <hips1:Name>Simon Smith</hips1:Name>
        <hips1:Role>InteractiveUser</hips1:Role>
      </ns:user>
    </ns:IsPcehrAdvertised>
  </soap:Body>
</soap:Envelope>
```

5.3.2 Response

In this response, the value “WithCode” indicates that the patient has an advertised digital health record to which the organisation has not gained access, and that a Record Access Code will be required to gain access. However, keep in mind that you can upload documents to this My Health Record service without needing to gain access first.

```
<s:Envelope
  xmlns:s="http://www.w3.org/2003/05/soap-envelope"
  xmlns:a="http://www.w3.org/2005/08/addressing">
  <s:Header>
    <a:Action s:mustUnderstand="1">

      http://schemas.HIPS/Services/2012/01/IPCEHRService/IsPcehrAdvertisedResponse
    </a:Action>
  </s:Header>
  <s:Body>
    <IsPcehrAdvertisedResponse
      xmlns="http://schemas.HIPS/Services/2012/01">
      <IsPcehrAdvertisedResult

        xmlns:b="http://schemas.datacontract.org/2004/07/HIPS.PcehrSchemas"
        xmlns:i="http://www.w3.org/2001/XMLSchema-instance">
          <b:AccessCodeRequired>WithCode</b:AccessCodeRequired>
          <b:HipsResponse
            xmlns:c="http://schemas.datacontract.org/2004/07/HIPS.CommonSchemas">
              <c:HipsErrorMessage i:nil="true"/>
              <c:ResponseCode i:nil="true"/>
              <c:ResponseCodeDescription i:nil="true"/>
              <c:ResponseCodeDetails i:nil="true"/>
              <c:Status>OK</c:Status>
            </b:HipsResponse>
            <b:PcehrExists>true</b:PcehrExists>
          </IsPcehrAdvertisedResult>
        </IsPcehrAdvertisedResponse>
      </s:Body>
    </s:Envelope>
```

5.4 Example Call to NotifyPasEvent

If you have a patient with a Medicare card number or DVA file number, and want HIPS to use those to search for the IHI, you can call NotifyPasEvent with an HL7 message in the format below, then call GetValidatedIhi to retrieve the IHI.

The key information that should be changed for each message is highlighted in yellow, being:

- The sending facility (**FMC**) and message control ID (**4200018**) for identification of this message.
- The state/territory patient identifier (**12345**), identified with the code “SAUHI”.
- The MRN (**TEST-CCA_13**), identified with the code “MR”.
- The assigning hospital for the MRN (**FMC**), as configured in HospitalCode.Code where CodeSystem.Code is “pasFacCd”. This determines which HPI-O / certificate is used to connect to Medicare HI Service and My Health Record B2B Gateway.
- The Medicare card number with or without IRN (**59500730912**), identified by “MC”.
- The DVA file number (**N394932**), identified by “DVA”.
- The family name (**DUNCAN**).

- The given name (**ALEXANDER**).
- The date of birth (**20090505**) in YYYYMMDD format.
- The sex code (**M**) being one of M – Male, F – Female, O – Other or U – Unknown. These are mapped to M – Male, F – Female, I – Intersex or Indeterminate and N – Not Specified respectively.

Of these, the state/territory patient identifier, Medicare and DVA are optional; however, at least one of Medicare or DVA must be provided if an IHI search is to be performed.

5.4.1 Request

```
<soap:Envelope xmlns:soap="http://www.w3.org/2003/05/soap-envelope"
  xmlns:ns="http://schemas.HIPS/Services/2012/01"
  xmlns:hips="http://schemas.datacontract.org/2004/07/HIPS.CommonSchemas">
  <soap:Header/>
  <soap:Body>
    <ns:NotifyPasEvent>
      <ns:messageForm><![CDATA[MSH|^~\&|PMI|FMC|HIPS|NEHTA|20130402070340|J4VX|ADT^A28|
4200018|P|2.3.1|||AL|NE|AU|ASCII|EN
EVN|A01|20130402070339.74|||SBIBER
PID||12345^^^SAUHI|TEST-
CCA_13^^FMC^MR~59500730912^^^MC~N394932^^^DVA||DUNCAN^ALEXANDER^^^L||20090505
|M||1^Aboriginal but not Torres Strait Islander origin^ISAAC|26 CCA FAITH
ST^^PARAMATTA^NSW^2150^H|||^WPN^PH^^^0884251461|||||||8407^Cuba^ABS|Y|||||
]]></ns:messageForm>
      <ns:user>
        <hips:Role>AuthorisedEmployee</hips:Role>
      </ns:user>
    </ns:NotifyPasEvent>
  </soap:Body>
</soap:Envelope>
```

5.4.1 Response

The response contains an HL7 acknowledgement. Here the acknowledgement code is “AA” indicating that the message was processed successfully. You should get an “AA” acknowledgement regardless of whether an IHI was found or not.

```
<s:Envelope xmlns:s="http://www.w3.org/2003/05/soap-envelope"
  xmlns:a="http://www.w3.org/2005/08/addressing">
  <s:Header>
    <a:Action s:mustUnderstand="1">
      http://schemas.HIPS/Services/2012/01/DatabaseLoaderService/NotifyPasEventResponse
    </a:Action>
  </s:Header>
  <s:Body>
    <NotifyPasEventResponse xmlns="http://schemas.HIPS/Services/2012/01">
      <NotifyPasEventResult>
        MSH|^~\&|HIPS|SAH|ADT|RAH|20130402134634+1030|J4VX|ADT^A01|k6b5DsQHzEuSjkQPNm
nX|P|2.3.1|||AL|NE|AU|ASCII
MSA|AA|4200016
      </NotifyPasEventResult>
    </NotifyPasEventResponse>
  </s:Body>
</s:Envelope>
```

5.5 Example Call to GetValidatedIhi

After registering the patient using `NotifyPasEvent`, you can retrieve the IHI for use in a clinical document using the service `GetValidatedIhi`. Here, the patient identifier has type “hips:Mrn” with value “TEST-CCA_13” which matches the MRN in the HL7 message. The date of birth is a mandatory parameter to increase the chance that the intended patient record is matched.

5.5.1 Request

```
<soap:Envelope
  xmlns:soap="http://www.w3.org/2003/05/soap-envelope"
  xmlns:ns="http://schemas.HIPS/Services/2012/01"
  xmlns:hips="http://schemas.datacontract.org/2004/07/HIPS.CommonSchemas.Pati
entIdentifier"
  xmlns:hips1="http://schemas.datacontract.org/2004/07/HIPS.CommonSchemas"
  xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance">
  <soap:Header/>
  <soap:Body>
    <ns:GetValidatedIhi>
      <ns:patientIdentifier xsi:type="hips:Mrn">
        <hips:HospitalCode>FMC</hips:HospitalCode>
        <hips:HospitalCodeSystem>pasFacCd</hips:HospitalCodeSystem>
        <hips:Value>TEST-CCA_13</hips:Value>
      </ns:patientIdentifier>
      <ns:dateOfBirth>2009-05-05</ns:dateOfBirth>
      <ns:user>
        <hips1:Domain>DOMAIN</hips1:Domain>
        <hips1:Login>ssmith</hips1:Login>
        <hips1:Name>Simon Smith</hips1:Name>
        <hips1:Role>InteractiveUser</hips1:Role>
      </ns:user>
    </ns:GetValidatedIhi>
  </soap:Body>
</soap:Envelope>
```

5.5.2 Response

```
<s:Envelope xmlns:s="http://www.w3.org/2003/05/soap-envelope"
xmlns:a="http://www.w3.org/2005/08/addressing">
  <s:Header>
    <a:Action s:mustUnderstand="1">
      http://schemas.HIPS/Services/2012/01/IHIService/GetValidatedIhiResponse
    </a:Action>
  </s:Header>
  <s:Body>
    <GetValidatedIhiResponse xmlns="http://schemas.HIPS/Services/2012/01">
      <GetValidatedIhiResult

xmlns:b="http://schemas.datacontract.org/2004/07/HIPS.IhiSchemas.Schemas"
      xmlns:i="http://www.w3.org/2001/XMLSchema-instance">
        <b:HipsResponse
xmlns:c="http://schemas.datacontract.org/2004/07/HIPS.CommonSchemas">
          <c:HipsErrorMessage i:nil="true"/>
          <c:ResponseCode i:nil="true"/>
          <c:ResponseCodeDescription i:nil="true"/>
          <c:ResponseCodeDetails i:nil="true"/>
          <c:Status>OK</c:Status>
        </b:HipsResponse>
        <b:Mrn

xmlns:c="http://schemas.datacontract.org/2004/07/HIPS.CommonSchemas.PatientIdentifier"
          <c:HospitalCode>FMC</c:HospitalCode>
          <c:HospitalCodeSystem>pasFacCd</c:HospitalCodeSystem>
          <c:Value>TEST-CCA_13</c:Value>
        </b:Mrn>
        <b:StatePatientId

xmlns:c="http://schemas.datacontract.org/2004/07/HIPS.CommonSchemas.PatientIdentifier"
          <c:HospitalCode>FMC</c:HospitalCode>
          <c:HospitalCodeSystem>pasFacCd</c:HospitalCodeSystem>
          <c:Value i:nil="true"/>
        </b:StatePatientId>
        <b:ValidatedIhi

xmlns:c="http://schemas.datacontract.org/2004/07/HIPS.CommonSchemas.PatientIdentifier"
          <c:HospitalCode>FMC</c:HospitalCode>
          <c:HospitalCodeSystem>pasFacCd</c:HospitalCodeSystem>
          <c:DateOfBirth>2009-05-05T00:00:00</c:DateOfBirth>
          <c:FamilyName>DUNCAN</c:FamilyName>
          <c:GivenName>ALEXANDER</c:GivenName>
          <c:Ihi>8003603456799528</c:Ihi>
          <c:IhiLastValidated>2013-04-02T13:41:31.91</c:IhiLastValidated>
          <c:IhiRecordStatus>Verified</c:IhiRecordStatus>
          <c:IhiStatus>Active</c:IhiStatus>
          <c:Sex>Male</c:Sex>
        </b:ValidatedIhi>
      </GetValidatedIhiResult>
    </GetValidatedIhiResponse>
  </s:Body>
</s:Envelope>
```

5.6 Example Call to UploadOrSupersedeDocument

In this example, a CDA document is provided to HIPS for packaging and uploading to the My Health Record service. The full CDA document, encoded as Base64, must be provided – it has been omitted for space reasons here.

In SoapUI a CDA document may be inserted by right-clicking at the appropriate spot and selecting “Insert File as Base-64”.

5.6.1 Request

```
<soap:Envelope xmlns:soap="http://www.w3.org/2003/05/soap-envelope"
  xmlns:ns="http://schemas.HIPS/Services/2012/01"
  xmlns:hips="http://schemas.datacontract.org/2004/07/HIPS.CommonSchemas.Pati
entIdentifier"
  xmlns:hips1="http://schemas.datacontract.org/2004/07/HIPS.CommonSchemas"
  xmlns:hips2="http://schemas.datacontract.org/2004/07/HIPS.PcehrSchemas"
  xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance">
  <soap:Header/>
  <soap:Body>
    <ns:UploadOrSupersedeDocument>
      <ns:cdaDocument>
        PD94bWwgdmVyc2lvcj0iMS4wTiBlbmNvZGluZz0iVVRGLTgiPz4NCjxDbGluaWNhbERvY3Vt
        ...
        PC9jb2lwb251bnQ+DQo8L0NsaW5pY2FsRG9jdW11bnQ+
      </ns:cdaDocument>
      <ns:patientIdentifier xsi:type="hips:ValidatedIhi">
        <hips:HospitalCode>FMC</hips:HospitalCode>
        <hips:HospitalCodeSystem>pasFacCd</hips:HospitalCodeSystem>
        <hips:DateOfBirth type="xs:dateTime">1977-01-01</hips:DateOfBirth>
        <hips:FamilyName>BERMAN</hips:FamilyName>
        <hips:GivenName>JAKE</hips:GivenName>
        <hips:Ihi>8003608000002519</hips:Ihi>
        <hips:IhiLastValidated type="xs:dateTime">2013-04-
03</hips:IhiLastValidated>
        <hips:IhiRecordStatus>Verified</hips:IhiRecordStatus>
        <hips:IhiStatus>Active</hips:IhiStatus>
        <hips:Sex>Male</hips:Sex>
      </ns:patientIdentifier>
      <ns:user>
        <hips1:Domain>DOMAIN</hips1:Domain>
        <hips1:Login>ssmith</hips1:Login>
        <hips1:Name>Simon Smith</hips1:Name>
        <hips1:Role>InteractiveUser</hips1:Role>
      </ns:user>
      <ns:attachments>
      </ns:attachments>
      <ns:admissionDate>2013-04-02T16:01:00</ns:admissionDate>
    </ns:UploadOrSupersedeDocument>
  </soap:Body>
</soap:Envelope>
```

5.6.2 Response

The following response with status “OK” indicates that the request was successfully placed on the queue to be processed later. You can call `GetOperationStatus` to determine whether the document was uploaded.

```
<s:Envelope xmlns:s="http://www.w3.org/2003/05/soap-envelope"
xmlns:a="http://www.w3.org/2005/08/addressing">
  <s:Header>
    <a:Action s:mustUnderstand="1">
http://schemas.HIPS/Services/2012/01/IPCEHRService/UploadOrSupersedeDocumentRespo
nse</a:Action>
    </s:Header>
    <s:Body>
      <UploadOrSupersedeDocumentResponse
xmlns="http://schemas.HIPS/Services/2012/01">
        <UploadOrSupersedeDocumentResult
xmlns:b="http://schemas.datacontract.org/2004/07/HIPS.CommonSchemas"
xmlns:i="http://www.w3.org/2001/XMLSchema-instance">
          <b:HipsErrorMessage i:nil="true"/>
          <b:ResponseCode i:nil="true"/>
          <b:ResponseCodeDescription i:nil="true"/>
          <b:ResponseCodeDetails i:nil="true"/>
          <b>Status>OK</b>Status>
        </UploadOrSupersedeDocumentResult>
      </UploadOrSupersedeDocumentResponse>
    </s:Body>
  </s:Envelope>
```

5.7 Example Call to GetQueuedOperations

This service allows a calling system to query all queued operations (upload or remove), and any uploaded documents for a specified patient and episode.

5.7.1 Request

```
<soap:Envelope
xmlns:soap="http://www.w3.org/2003/05/soap-envelope"
xmlns:pceh="http://nehta.hips/2018/05/pcehr"
xmlns:ns="http://nehta.hips/2014/03"
xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance">
  <soap:Header/>
  <soap:Body>
    <pceh:GetQueuedOperationsRequest>
      <pceh:PatientIdentifier xsi:type="ns:Mrn">
        <ns:HospitalCode>REH</ns:HospitalCode>
        <ns:HospitalCodeSystem>pasFacCd</ns:HospitalCodeSystem>
        <ns:Value>000000001</ns:Value>
      </pceh:PatientIdentifier>
      <pceh>User xsi:type="ns:LocalUser">
        <ns:Domain>CHAMONIX</ns:Domain>
        <ns:FamilyName>Test</ns:FamilyName>
        <ns:GivenNames>Hips</ns:GivenNames>
        <ns>Login>Hips.Test</ns>Login>
      </pceh>User>
      <pceh:AdmissionDate>2018-04-16T15:31:38</pceh:AdmissionDate>
    </pceh:GetQueuedOperationsRequest>
  </soap:Body>
</soap:Envelope>
```

5.7.2 Response

In this response, the number of QueuedOperations is one. The contents of the MessageContent element have been truncated in the sample response. Because the operation is still pending, there is no content in the UploadedDocument and UploadedDocumentVersion elements.

```
<s:Envelope xmlns:s="http://www.w3.org/2003/05/soap-envelope"
xmlns:a="http://www.w3.org/2005/08/addressing">
  <s:Header>
    <a:Action
s:mustUnderstand="1">http://nehta.hips/2018/05/pcehr/IPcehrServiceV4/GetQueuedOperationsResponse</a:Action>
    </s:Header>
    <s:Body>
      <GetQueuedOperationsResponse xmlns="http://nehta.hips/2018/05/pcehr">
        <Status>OK</Status>
        <Messages xmlns:b="http://nehta.hips/2014/03"
xmlns:i="http://www.w3.org/2001/XMLSchema-instance"/>
          <Data
xmlns:b="http://schemas.datacontract.org/2004/07/HIPS.PcehrSchemas"
xmlns:i="http://www.w3.org/2001/XMLSchema-instance">
            <b:QueuedOperations
xmlns:c="http://schemas.datacontract.org/2004/07/HIPS.PcehrDataStore.Schemas">
              <c:QueuedPcehrOperation>
                <IsDirty
xmlns="http://schemas.datacontract.org/2004/07/HIPS.Base.Schemas">false</IsDirty>
                <DateCreated
xmlns="http://schemas.datacontract.org/2004/07/HIPS.Base.Schemas">2018-05-16T15:31:52.21</DateCreated>
                <DateModified
xmlns="http://schemas.datacontract.org/2004/07/HIPS.Base.Schemas">2018-05-16T15:31:52.21</DateModified>
                <Id
xmlns="http://schemas.datacontract.org/2004/07/HIPS.Base.Schemas">1</Id>
                <UserCreated
xmlns="http://schemas.datacontract.org/2004/07/HIPS.Base.Schemas">QueueConsumerTests/ef5dd9d6-a7c0-430d-ab00-4d58990ce962</UserCreated>
                <UserModified
xmlns="http://schemas.datacontract.org/2004/07/HIPS.Base.Schemas">QueueConsumerTests/ef5dd9d6-a7c0-430d-ab00-4d58990ce962</UserModified>
                <c:BatchIdentifier i:nil="true"/>
                <c:BatchOwner i:nil="true"/>
                <c:BatchTimestamp i:nil="true"/>
                <c:LeaseCount>0</c:LeaseCount>
                <c:LeaseExpiry i:nil="true"/>
                <c:LeaseIdentifier i:nil="true"/>
                <c:MessageContent>PFF1Z...</c:MessageContent>
                <c:MessageQueueID>1</c:MessageQueueID>
              </c:QueuedPcehrOperation>
            </b:QueuedOperations>
          </Data>
        </Messages>
      </GetQueuedOperationsResponse>
    </s:Body>
  </s:Envelope>
```



```
<d:Value>1.2.36.1.2001.1005.49.1.8003628233354453.1805161531^1805161531</d:Value>
  </d:KeyValueOfstringstring>
</c:Metadata>
<c:OrderKey i:nil="true"/>

<c:PartitionKey>1.2.36.1.2001.1005.49.2.8003628233354453^1</c:PartitionKey>
  <c:QueueName>Pcehr/Operation</c:QueueName>
  <c:AdmissionDateTime>2018-04-16T15:31:38</c:AdmissionDateTime>
  <c:CDAPackageSize>0</c:CDAPackageSize>
  <c:DocumentFormatCode i:nil="true"/>
  <c:DocumentFormatDescription i:nil="true"/>
  <c:DocumentTypeCode i:nil="true"/>
  <c:DocumentTypeDescription i:nil="true"/>
  <c:DocumentTypeId i:nil="true"/>
  <c:EpisodeId>1</c:EpisodeId>
  <c:FacilityId>2</c:FacilityId>
  <c:FacilityName>Royal Expose Hospital</c:FacilityName>
  <c:Ihi>8003604567901177</c:Ihi>

<c:MessageQueueLeaseStateCode>INACTIVE</c:MessageQueueLeaseStateCode>

<c:MessageQueueLeaseStateDescription>Inactive</c:MessageQueueLeaseStateDescription>
  <c:MessageQueueStateCode>PEND</c:MessageQueueStateCode>

<c:MessageQueueStateDescription>Pending</c:MessageQueueStateDescription>
  <c:PatientId>1</c:PatientId>
  <c:Request i:nil="true"/>
  <c:RequestSize>0</c:RequestSize>
  <c:Response i:nil="true"/>

<c:SourceSystemDocumentId>1.2.36.1.2001.1005.49.1.8003628233354453.1805161531^1805161531</c:SourceSystemDocumentId>

<c:SourceSystemSetId>1.2.36.1.2001.1005.49.2.8003628233354453^1</c:SourceSystemSetId>
  <c:SystemEventLogID i:nil="true"/>
  <c:SystemEventLogLevelCode i:nil="true"/>
  <c:SystemEventLogLevelDescription i:nil="true"/>
  <c:SystemEventLogMessage i:nil="true"/>
</c:QueuedPcehrOperation>
</b:QueuedOperations>
<b:UploadedDocumentVersions
xmlns:c="http://schemas.datacontract.org/2004/07/HIPS.PcehrDataStore.Schemas"/>
  <b:UploadedDocuments
xmlns:c="http://schemas.datacontract.org/2004/07/HIPS.PcehrDataStore.Schemas"/>
    </Data>
  </GetQueuedOperationsResponse>
</s:Body>
</s:Envelope>
```

5.8 Example Call to UploadOrRemoveImaging

This service allows a calling system to upload or remove a Diagnostic Imaging 3A Report. It is assumed the HIPS Core application has been configured with an Upload Directory for Diagnostic Imaging Reports, and a report named 'testdireport.pdf' exists in the directory.

The below request can be updated to make a call to the UploadOrRemovePathology by updating the soap:Body to be an UploadOrRemoveImagingRequest and to update the HL7Message to be a Pathology HL7 message.

5.8.1 Request

```
<soap:Envelope xmlns:soap="http://www.w3.org/2003/05/soap-envelope"
xmlns:pceh="http://nehta.hips/2017/09/pcehr"
xmlns:ns="http://nehta.hips/2014/03"
xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance">
  <soap:Header/>
  <soap:Body>
    <pceh:UploadOrRemoveImagingRequestV2>
      <pceh:HL7Message><![CDATA[MSH|^~\&|HIPS DEV^L|ROYAL CHAMONIX
HOSPITAL^RCH01^L|||20171017100000+0930||ORU^R01^ORU_R01|4442.3DI|P|2.4^AUS&&ISO^0
.9&&L|||AL||AUS
PID|1||2951051231^1^1^AUSHIC^MC~BOWDLE001^^^RCH01^PI||BOWDEN^LEONARDO^^^^L||1983
1017|M|Tester^Unit|9|139 King Street^^BUDERIM^QLD^4556^AUS^C|||||||9|AUS
PV1|1|O|SurgOP|||1234214^Jones^Steve^^Dr^^NWMI.SynapseRIS|239654^Smith^James^^D
r^^^NWMI.SynapseRIS||Surgical|||||||10458^^NWMI.SynapseRIS|||||||
||
ORC|RE||1726^NWMI^NWMI.SynapseRIS^L|10458^NWMI^NWMI.SynapseRIS^L|CM|||||||239654^
Smith^James^^^^NWMI.SynapseRIS|NWMI^^Northwest MedicalImaging|||||||
OBR|1||4442.3DI^NWMI^NWMI.SynapseRIS^L|CAPC^Abdomen / Pelvis
+(IV)CCT^NWMI.SynapseRIS|||20171017091434+0930|||||||239654^Smith^James^^Dr^^
NWMI.SynapseRIS|||||20171017092042+0930||RAD|P|^^^20111212000000+1000^R||||80
03611566666859&GRIGNON&ADRIAN&JAMES&&DR&&&AUSHIC^^^^^^^||112233&Marks&Bettie&
&&&NWMI.Synapse
OBX|2|RP|PDF^Display format in
PDF^AUSPDI||testdireport.pdf^^application^pdf|||||P|||20171017092042+1000||12342
14^Jones^Steve^^^^NWMI.SynapseRIS|Z^]]></pceh:HL7Message>
    <pceh:User xsi:type="ns:LocalUser">
      <ns:Domain>CHAMONIX</ns:Domain>
      <ns:FamilyName>Test</ns:FamilyName>
      <ns:GivenNames>Hips</ns:GivenNames>
      <ns:Login>Hips.Test</ns:Login>
    </pceh:User>
  </pceh:UploadOrRemoveImagingRequestV2>
</soap:Body>
</soap:Envelope>
```

5.8.2 Response

The UploadOrRemoveImagingRequest will return an HIPS OK Message if initial validation passed, or a validation error if initial validation failed. If an OK message is returned then the report is added to the PCEHR Queue and an application acknowledge message will be returned either through the Mirth Connect component or the HIPS Ack Service.

```
<s:Envelope xmlns:s="http://www.w3.org/2003/05/soap-envelope"
xmlns:a="http://www.w3.org/2005/08/addressing">
  <s:Header>
    <a:Action
s:mustUnderstand="1">http://nehta.hips/2017/09/pcehr/IPcehrServiceV3/UploadOrRemoveImagingResponse</a:Action>
  </s:Header>
  <s:Body>
    <UploadOrRemoveImagingResponseV2 xmlns="http://nehta.hips/2017/09/pcehr">
      <Status>OK</Status>
      <Messages xmlns:b="http://nehta.hips/2014/03"
xmlns:i="http://www.w3.org/2001/XMLSchema-instance"/>
        <Data xmlns:i="http://www.w3.org/2001/XMLSchema-instance">
          <AdmissionDateTime>2017-10-17T10:00:24.547</AdmissionDateTime>

<DocumentSetId>1.2.36.1.2001.1005.49.2.8003621566687292^5</DocumentSetId>
          <FillerOrderNumbers
xmlns:b="http://schemas.microsoft.com/2003/10/Serialization/Arrays">
            <b:string>4442.3DI</b:string>
          </FillerOrderNumbers>
          <Mrn xmlns:b="http://nehta.hips/2014/03">
            <b:AlternateOrganisationName i:nil="true"/>
            <b:HospitalCode>RCH01</b:HospitalCode>
            <b:HospitalCodeSystem>patientIdAuthCd</b:HospitalCodeSystem>
            <b:Value>BOWDLE001</b:Value>
          </Mrn>
        </Data>
      </UploadOrRemoveImagingResponseV2>
    </s:Body>
  </s:Envelope>
```

Appendix A Architecture

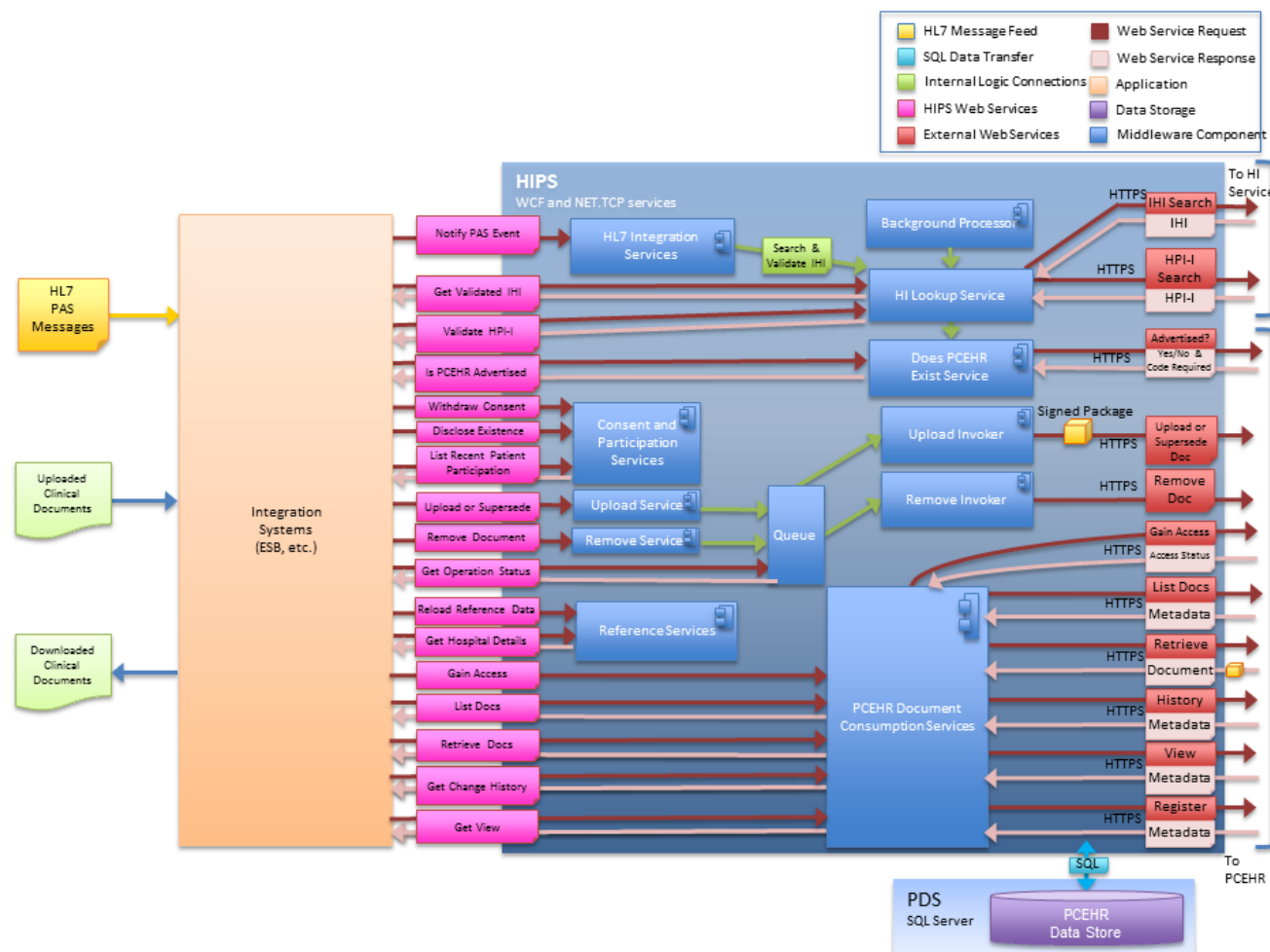


Figure 13 - HIPS architecture

Acronyms

Acronym	Description
ADT	Admission, Discharge, Transfer. Class of HL7 message types. HIPS accepts ADT messages via the interface described in the Patient Administration HL7 v2 Profile document.
DHS	Department of Human Services, the operator of the HI Service and NASH PKI. Responsible for registering new software vendors, issuing test certificates and test data for integrating with the HI Service and My Health Record.
ESB	Enterprise Service Bus
HI	healthcare identifiers
IHI	Individual healthcare identifier
LDAC	Limited Document Access Code
MRN	Medical Record Number
OPD	Outpatient Department
ORU	Unsolicited transmission of an observation. Class of HL7 message types. HIPS accepts ORU messages via the interfaces described in the Pathology Results HL7 v2 Profile and Diagnostic Imaging Results HL7 v2 Profile documents.
PMI	Patient Master Index
SOAP	Simple Object Access Protocol
SoapUI	Web service and web application testing method for service-oriented architectures (SOA) and representational state transfers (REST).

Glossary

Term	Meaning
Enterprise Patient ID	A unique healthcare identifier code used in PID-3 or PID-2 of ADT messages to identify the local Enterprise ID for the patient, which determines which PatientMaster the patient is attached to. HospitalPatient records will move from one PatientMaster to another if their Enterprise Patient ID changes. See the HIPS Merging profile for more details. It is common to operate HIPS using only the MRN and not to send in Enterprise IDs.
ESB	Integration hub for routing and transforming messages within and between healthcare facilities.
Medical Record Number	<p>A local patient identifier, with type code “MR” in PID-3. The Pathology and Diagnostic Imaging interfaces also accept type code “PI”.</p> <p>Ideally one MRN is allocated by each healthcare facility for each patient, though it is common to temporarily allocate a new MRN for new patients until their identity is confirmed. These temporary MRNs should be merged back to the original MRN for the patient using an A36 Merge MRN message.</p> <p>This number is stored in HospitalPatient.Mrn and is the primary identifier used to find the existing patient records in the HIPS database.</p>
Outpatient Department	Often used to describe an informal class of HL7 message types – such as appointment/booking/scheduling messages. OPD is also an Application Code used in MSH.3 and MSH.5.
Patient Master Index	Often used to describe an informal class of HL7 ADT messages – includes updates to patient demographics and merge/unmerge message types. PMI is also an Application Code used in MSH.3 and MSH.5.