

Applies to:

SAP Industry Solution Healthcare (IS-H) and SAP NetWeaver Process Integration 7.1 (EHP1). For more information, visit the [SOA Management homepage](#).

Summary

This document describes the healthcare integration problem and the SAP consulting solution for this problem: A new way to interact with HL7 applications directly from SAP NW PI.

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Author Bio



Vijendra Singh Bhanot started his carrier at SAP NL in 2008 as SOA Middleware consultant. He has huge interest in developing innovative solution for integration with SAP. He took the initiative of developing a PI adapter for healthcare integration in 2009. His main responsibility is to ensure quick and efficient implementation of healthcare integration for SAP Healthcare customers.

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Introduction

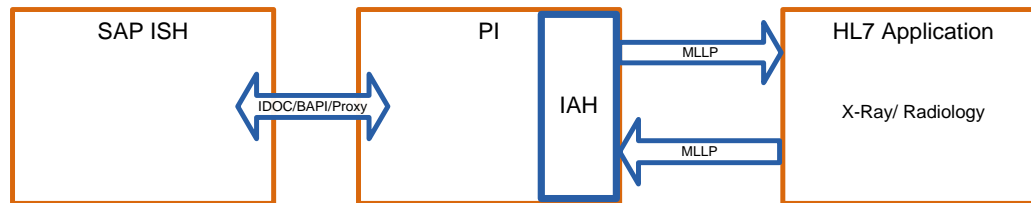
This Article enables you to understand the following:

- The new IAH (Integration Adapter for Healthcare) Adapter for SAP NW PI 7.11 (EHP1).
- Why IAH is useful for today's Healthcare Integration?
- The key benefits offered by IAH.

[HL7® is the registered trademark of Health Level Seven International, Inc](#)

IAH Overview

IAH (Integration Adapter for Healthcare) has been developed as part of SAP NL consulting solution. Before IAH there has been a huge gap for direct interactions with healthcare applications from within SAP products. With IAH, SAP NW PI can now do end-to-end integration.



IAH Capabilities

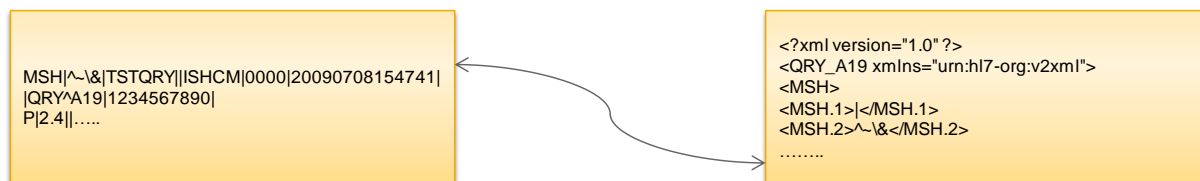
- Supports protocol MLLP.
- Communication between SAP PI and HL7 application is without a third box acting as bridge.
- Has support for HL7 version 2.x (i.e. 2.1, 2.2, 2.3, 2.3.1, 2.4, 2.5 & 2.6) messages.
- Monitoring of message exchange is done centrally at one location i.e. SAP NetWeaver Administrator.

Role of HAPI

- HL7 application programming interface (HAPI) is an initiative from University Health Network.
- HAPI is an open source, object-oriented HL7 2.x parser for Java.

Release 1.0 of IAH

- Is based on JCA 1.0 specification.
- Can be deployed on PI 7.11 central adapter engine. No need for additional box
- Supports Quality Of Service (QOS) Exactly Once (EO), Exactly Once in Order (EOIO) and Best Effort (BE).
- Is capable of converting 2.x flat HL7 message to 2.x HL7 XML and vice versa.



- Message delivery details are visible via Runtime Workbench Audit Logs.
- Supports for Original and Enhance Mode Acknowledgements
- Is capable of making re-connections incase of network failure.

IAH Channel Configurations

Sender IAH Adapter

- The Sender IAH is configured to send HL7 messages towards PI.
- HL7 applications can send HL7 version 2.x message to IAH via MLLP protocol.
- Sender adapter extracts the HL7 message from the MLLP wrapper and send it towards PI.
- You can configure the adapter to transform the flat HL7 pipe message into HL7 XML. This is helpful for performing mapping inside PI.

Receiver IAH Adapter

- The Receiver IAH is configured to send HL7 message to HL7 Application from PI.
- The message is send to HL7 applications using MPPL protocol.
- The HL7 XML is converted to Flat HL7 pipe format before it is send out.

IAH Monitoring Capabilities

The adapter is fully integrated with PI adapter framework and thus gets benefitted from monitoring features. The audit logs appear in the communication channel monitoring of runtime workbench. For detailed logging "How To" guide is available for configuration.

The screenshot displays the SAP IAH monitoring interface, divided into configuration and monitoring sections.

Configuration Section:

- Communication Channel:** Input Help
- Status:** All
- Adapter Type:** IAH
- Direction:** Receiver
- Party:** Input Help Com
- Configure Table Columns:** Communication Channels
- Communication Channels Table:**

Communication Channel	Status	Short Log
CC_HL7Receiver	Functioning	
CC_IAHReceiver	Functioning	
- Cluster Node Details for Channel CC_IAHReceiver:**

Status	Inactive	Adm
Functioning		
- Processing Details for Cluster Node Server 00_62924:**

Type	Time Stamp	Message ID
	7/16/10 3:43:22 PM	59a90406-e3e9-4b-fd-
	7/16/10 3:43:22 PM	59a90406-e3e9-4b-fd-

Message Display Tool (Detail Display) - Windows Internet Explorer:

Message Display Tool (Detail Display)

Message Data | Message Content | **Audit Log**

Audit Log for Message: 59a90406-e3e9-4b-fd-3896-c047b74e8864

Time Stamp	Type	Description
2010-07-16 15:43:22	Information	Received HL7 Message from PI: MSH ^~ ^ Sender2\Facility2\System2\UHN\200105231927\ADT^A01\22139266\P2_4 asd1234 EVN A01200105231927 PID 9999999999^ 2216506^ Duck^Donal ^MR^ 19720227 123 Foo ST.^TORONTO^ON^M6G 3E6^CA^H^~123 Foo ST.^TORONTO^ON^M6G 3E6^CA^M^ 1811(416) 11-1111 ^E^ENGLISH PATIENT DID NOT INDICATE 211004554^ PV ^ZFAST TRACK^WAITING^13 ^E^EMERGENCY 369^6^13^U EM EMERGENCY DEPARTMENT^ZFAST TRACK WAITING^FT WAIT 13^FT WAIT 13^FT WAITING^FT WAIT 13^MOUSE^MICKEY^M^DR^ MD SUR 211004554^ V 200105231927^ PV2 F P O APPENDICIAL ABSCESS IN 1 00100 1 OHP ACC
2010-07-16 15:43:22	Information	Received ACK AA: MSH ^~ ^ (system2\UHN\Sender2\Facility2 20100716154322 ACK 20100716154322 P2_4 MSA AA 22139266 Testing from Mirth AR
2010-07-16 15:43:22	Information	Async. message was forwarded successfully to the HL7 Application
2010-07-16 15:43:22	Information	Message was successfully processed by the JCA adapter.
2010-07-16 15:43:22	Information	The message was successfully delivered to the application using connection IAH_http://sap.com/xi/XH17.
2010-07-16 15:43:22	Information	The message status was set to DLVD.

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Contact

Related Content

[IHE Configuration Guide](#)

[Getting Started with HL7](#)

[HAPI on Sourceforge.net](#)

[Available Adapters and Adapter Modules for EHP 1 of SAP NetWeaver PI 7.1](#)

For more information, visit the [SOA Management homepage](#).

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