Test Level 7™ sandbox solves the challenges of HL7 development and testing for Harder Software Ltd

Interoperability is the key objective for e-Health initiatives across the country. Each provincial government is figuring out how best to implement a set of patient databases to which healthcare organizations contribute data.

Individual healthcare service providers – doctors, labs or pharmacies – will send data updates to these provincial databases through a message hub. HL7 is the key standard that defines the format and content of these messages.

Ian Harder of **Harder Software Ltd.** is an e-Health consultant working with a large, international retailer with a national pharmacy chain in Canada.

Harder's job was to build an adapter for their pharmacy system so that pharmacists could look up and record patient, prescription and medication information to and from the provincial Drug Information System (DIS) being built for Newfoundland.

The Opportunity

In order to develop and test transport-level interoperability with the Newfoundland Health Information Access Layer (HIAL), Harder needed to send SOAP messages to the Newfoundland test sandbox.

Transport-level interoperability required the implementation of several web services standards – WS Security, WS Addressing and others.

As with many complex implementations, the deployment and support of the Newfoundland test sandbox was delayed and response time for questions being answered could be as lengthy as several weeks. Harder's attempts to integrate with the Newfoundland HIAL were stymied by an authentication problem.

The test sandbox did not provide any meaningful error messages and no trace or log features were available to users of the sandbox. The "test sandbox" was nothing more than a non-production instance of their central message hub. No features were implemented to support the process of testing interoperability. Harder's work was essentially blocked by the authentication problem.

With the slow support response time, Harder risked having his project timelines derailed.

The Solution

To solve the authentication problem, Harder turned to Test Level 7™ (TL7™) from Intelliware – a healthcare systems interoperability testing platform. TL7 helps e-Health developers create and validate HL7 applications.

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TL7 was designed using standards defined by Canada Health Infoway (CHI), the pan-Canadian e-Health standards authority.

TL7 supports not only the generic Canadian standards, but also includes province-specific processing and business rules. TL7 provides extensive and comprehensive support for the Newfoundland jurisdiction.

The Outcome

Using TL7, Harder was able to finish his web services transport code on schedule and, most importantly, in time to make a critical checkpoint presentation to his client.

Using TL7, Harder was also able to learn that Newfoundland's implementation of WS Security was slightly non-compliant with the standards.

Taking this information into consideration, he resolved the authentication failure and proved that the code he wrote to work with TL7 also worked with Newfoundland's hub.

Test Level 7™ is a healthcare systems interoperability testing platform. TL7™ was developed by Intelliware, a custom software and product development firm.

www.testlevel7.com.

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