SOA SUITE FOR HEALTHCARE INTEGRATION

Technology by itself is not effective unless there is the realization of how it facilitates efficiency in the underlying business practice it was designed to advance. Keeping this in mind, “healthcare delivery” as a concept can be divided into two distinct categories: the “business of medicine” and the “art of medicine”. Technology has often been regarded as the primary catalyst that can bridge these two often competing interests in healthcare. Interoperability is the keyword here, as healthcare is slowly but surely entering an era where siloed departmental and hospital systems are being integrated into community-based collaborative platforms, and the overall longitudinal health management of the citizen is beginning to assume as much importance as the point of care treatment.

Oracle has the technology, applications, partnerships and experience to help organizations adopt and seamlessly use the technology needed to improve the quality, efficiency, and safety of patient-centered care, while adhering to the standards and specifications being set forth by the global communities.

Standards Based Interoperability and Information Exchange

Oracle provides standards-based solutions that enable simple, secure and scalable methods for sending authenticated and encrypted information directly to trusted recipients. Through the use of the Oracle SOA Suite and the Healthcare Adapter, Oracle helps organizations adopt and adhere to industry standards and initiative such as IHE (Integration the Healthcare Enterprise). The Healthcare Adapter allows senders and receivers to securely trade information using standard document protocols such as HL7 v2 & v3, HIPAA X12 (4010/5010), CCR/CCD and several more. For the US market, Oracle’s SOA Suite supports National Information Exchange Model (NIEM) processes to facilitate reuse, interoperability, security, and reliability with regards to implementing information exchanges. Oracle’s SOA Suite allows for real-time exchange of information and is scalable across multiple organizations allowing for health information to be quickly sent during emergency situations such as pandemics, natural disasters, or terror attacks.

The Oracle SOA Suite for healthcare integration solution can lower the complexity, management, and cost of local interfaces between providers, laboratories, pharmacies, hospitals, and patients through a web-based interface that allows for creation and monitoring of endpoints within your health information network. The product ensures that services are:

- Extensible, Reusable, and Maintainable
- Implemented in a loosely coupled manner
- Orchestrated with standards-based languages
Benefits

The SOA Suite for healthcare integration offers clear benefits to citizens by improving patient health quality through the provision of appropriate information to help guide medical decisions at the time and place of care. Medical errors can be prevented by improving the coordination of care and information amongst hospitals, laboratories, physician offices and other entities through an effective infrastructure for the secure and authorized exchange of health care information. Healthcare cost can be reduced by eliminating inefficiency, medical errors, inappropriate and duplicative care, and incomplete information.

To further highlight the importance of creating a standards based health information exchange infrastructure it is important to point out that many patients often lack the ability to manage their medical needs because of age, mental capacity or illness. In some cases the nature of their injuries or illness decreases their ability to manage complex situations or treatment plans. In many cases treatment may require the need for a transfer of care to other facilities and the subsequent transfer of medical record information. Continuity of care is often in jeopardy unless the patient or patient’s family makes an attempt to relay clinically significant information to new care providers. A system which permits the electronic transfer of standards-based health information would improve continuity of care and data quality.

Main Features

Healthcare Adapter Wizard

The Healthcare Adapter Wizard provides an enhanced declarative programming environment that provides developers the ability to create healthcare composite applications using ‘drag and drop’ methodologies to create endpoints, establish connections and mappings, and monitor and manage their environment.

Integrated User Experience for Endpoint Configuration

The SOA Suite for healthcare integration provides the ability for endpoint configuration through a web-based graphical user interface. The endpoints can be configured with a few clicks simply by specifying name, transport protocol, connection mode, host name and port. Endpoints are associated using the Document Definition.

Message Libraries and composite Templates

The document editor provides the ability to build healthcare message structures that include all of the healthcare standard message types, including HL7, X12, HIPAA, NCPDP, and CDR.
Message structure libraries are included for HL7 v2 and v3. Guidelines can be created from the supplied standards and Z-Segments can be easily added through customized guidelines. Additional capabilities consist of export guidelines in XSD form, the analyzer wizard to review data for errors and the ability to validate structures against sample data.

Monitoring Dashboards and Reporting
Monitoring dashboards and reporting are critical to ensuring the quality of service is being maintained and messages are being delivered without errors. The dashboard tool allows users to change characteristics of the view to best provide the exact information during the timeframe in which they are interested. Status of the messages can be viewed at a high level with color coded status, and each message can be interrogated for a more detailed view. Other information includes the rate at which messages are being processed, the average message size, the number of messages sent or received, and the number of errors. The reports function provides a report configuration bar and a graphical depiction of the message flow. Different views of the messages can be shown and reports can be run to show a summary of endpoint status to include details like running, idle, disabled or errors.

MapSet and Graphical Mapper
Because of the diversity of healthcare systems and message format types, it is necessary to map messages and transform them as they are sent and received from one system to another. MapSets can be created using the Oracle Document Editor and provide the ability to connect different endpoints and transform the data into the format that each endpoint requires.

MLLP HA and HL7 Batching Support
Oracle SOA Suite for healthcare integration provides support for Minimal Lower Layer Protocol (MLLP) in a high availability environment, including message sequencing. HL7 Batching is also supported allowing for a number of messages to be sent in a single file.

Summary
The SOA Suite healthcare integration provides essential capabilities required for doctors, hospitals, laboratories, pharmacies, and others involved in healthcare to share information in a standards-based way, thus promoting better quality healthcare at a lower cost. As the standards of health information exchange mature and their implementation becomes more ubiquitous, other benefits of an interoperable infrastructure are likely to emerge and Oracle will continue to provide and evolve the necessary technology to ensure these can be attained.

Contact Us
For more information about the Oracle SOA Suite for healthcare integration, visit oracle.com or call +1.800.ORACLE1 to speak to an Oracle representative.