

# LANSA Case Study

## Apria uses LANSA two-way XML to integrate heterogeneous business systems

Apria Healthcare is America's leading provider of integrated home healthcare products and services, including respiratory and home medical equipment and pharmacy services. The company employs over 9,500 healthcare professionals and operates via 370 wholly-owned branch offices. Apria used LANSA Integrator to build a fast two-way XML interface between its business systems and the heterogeneous systems of its business partners, as well as its externally hosted eCommerce Web site.



APRIA HEALTHCARE®

**George Suda**, Executive Vice President, Information Services, says "With LANSA we built an XML plug-in connection engine that allows us to communicate to anything out there, without having to change our existing business systems. We call it the Apria Commerce Engine."

### The Challenge

Apria has a longstanding need to communicate with heterogeneous systems of insurance companies, credit card companies and suppliers. These systems include HP9000, iSeries, NT, Unix and mainframes. Another communication requirement came about more recently, when Apria decided to use an outside company to host their eCommerce front-end for ordering home medical products. Apria would provide all the back-end processing for the transactions sent from that Web site.

George Suda explains, "Response time was critical, because these Web transactions involved 2-way communications."

"Basically we needed a communication infrastructure that would allow us to talk to any system. Also, any system that we use internally we wanted to be able to extend to external parties over the Web. We should not need to build separate systems for internal or external deployment."

"Communicating directly to a database would not be flexible enough. We were already using some messaging and EDI communications. But EDI has complexities in its format with headers and details and is rather difficult and expensive to implement."

"We viewed and still view XML (eXtensible Markup Language) as a very open way of data communication. This is because of the flexibility XML offers by separating the definition of data from its presentation. And because XML is supported by a growing number of solution vendors."

*"With LANSA we can implement new XML formats without having to reconstruct our existing business systems."*

"But our back-end systems already had predefined interfaces, which could not understand incoming XML or produce outgoing XML. A solution was needed to interface XML transactions with our back-end systems."

"We have used LANSA since 1999 for our newly built 5250, Web and Windows solutions (find out more about these system) and also for enhancements to our existing Synon and RPG systems. LANSA has all the platform components we need in one tool. We like the architecture and LANSA helps us to enforce our controls. So we approached LANSA for an XML solution."

### The Solution

"With LANSA Integrator, and MQ Series as a transport mechanism, we built an XML plug-in connection engine that allows us to communicate to anything out there, without having to change our existing business systems. We call it the Apria Commerce Engine or ACE. By 'commerce' I mean anything where applications talk to one another," continues George.

Kevin McLatchie, manager IS technology and planning, explains "Incoming messages from our Web arrive in XML format, but messages from other sources arrive in a variety of formats and are converted into XML by the engine. The XML messages are transported around our company to any of our CPUs and get parsed into DB2 by the engine which integrates directly with our back-end systems and database files."

"For outgoing messages the reverse process happens. ACE converts messages to our hosted Web site into XML, and into EDI, XLS or any other required format to insurance and other companies we deal with."

"We now use ACE for eligibility verification with insurance companies, for credit card transactions and for communication with any other system."

"We use the same communication infrastructure for taking Web orders. We have two Web ordering systems. A secure in-house Web pharmacy site developed in LANSA that allows authorized physicians to order respiratory



**LANSA**

ADVANCED SOFTWARE MADE SIMPLE

solutions for their patients. And a WebSphere® based public consumer eCommerce site, developed and hosted by Ceira Technologies, Inc. Both these eCommerce solutions use fast LANSAXML transactions to integrate with our iSeries back-end.”

“With XML we are also ready to meet the new HIPAA (Health Insurance Portability and Accountability Act) regulations, which requires you to send certain transactions in a specific format by October 2002. We are now looking at switching over to those formats with some insurance companies that are interested in using XML.”

### The Benefits

Kevin explains “It is a really neat process. LANSAXML Integrator allows us to implement new XML formats without having to reconstruct our backend business applications. LANSAXML Integrator also helps us to leverage the Java and WebSphere® technologies.”

“And we can add transactions types gradually. We just make new transaction types known to ACE and we’re done. ACE will parse the XML transactions into the business systems that already exist.”

“One of our systems that uses ACE is our internal insurance verification system. This system processes thousands of transactions each day. That means we now make less phone calls and the insurer has less phone calls to answer – both sides saving money.”

“The beauty of using XML for insurance verification is that for our online Web ordering systems we can reuse the same solution that we built for our internal system.”

“What I like most about LANSAXML,” continues Kevin “is its flexibility between different platforms and its single skill set approach. Because we can use the same LANSAXML skills for 5250, Windows, Web and XML solutions, we can develop most solutions with our own IT staff. LANSAXML insulates the developer from the technology and allows us to focus on the business requirements of the systems.”

“Once developers have learned LANSAXML, they are no longer limited to just 5250 applications. They can now be moved between different platform projects. For the developer this means greater job satisfaction because LANSAXML gives the variety of working in Windows, 5250, Web and next, maybe wireless environments. Otherwise they would be back using RPG or Synon.”

### Company and System Information

- Apria Healthcare’s information systems department was named in Information Week’s 1999 top 500 list of the most innovative users of information technology and to the top 10 in the healthcare industry.
- Apria’s LANSAXML built solutions include an XML conversion engine, a LANSAXML for the Web online secure commerce site for physicians, several iSeries and Web based applications for credit card transactions and insurance checks, a Visual LANSAXML sales commission system, a Visual LANSAXML and LANSAXML Client regional statistics system.
- Apria’s LANSAXML built solutions integrate with a Synon based order processing and billing system, a MAGIX based infusion system, a WebSphere® online order system using LANSAXML XML transactions, Domino for static information Web publication, SAP HR payroll for benefit zip code assignments, JD Edwards for Inventory and General Ledger, and WebSphere® SE for Web serving.
- Apria’s branch offices connect using frame relay to two identical iSeries model 840 12-Way, mirrored using Vision solutions. There are another two mirrored models 730 for communications. There are 12 model 400s and 31 model 620s in the field, but Apria is planning a CPU consolidation into four Logical Partitions on an 840 for these during 2002 and 2003.
- LANSAXML Integrator consists of the LANSAXML Java Service Manager, the XML translator and a LANSAXML Repository with DTDs (Document Type Definitions). Apria, one of the first users of the Java Service Manager, uses MQ Series as a transport mechanism. More recent versions of the Java Service Manager support direct transport mechanisms.
- Apria has about 150 IT staff, including 60 programmers, analysts, project managers and contractors. About 10 development staff are trained to use LANSAXML. For more information visit [www.apria.com](http://www.apria.com)

“We have about 5,000 internal users and a large number of external users as well. We need the reliability and scalability of the iSeries. A couple of our branches run on a very small PC size iSeries, while our corporate system is more a mainframe size iSeries. Still, all the applications run on the same operating system.”

*“LANSAXML helped to reduce costs, add value and enhance service delivery.”*

### Conclusion

Kevin says, “Early next year we are planning to rewrite our main ACIS business system in LANSAXML. ACIS has been growing over a period of 12 years and consists of about 13 to 15 million lines of Synon code and 2000 files. ACIS allows us to take and process customer orders, send invoices, manage accounts receivable and it has an inventory piece which hooks into JD Edwards.”

“Although it is easy to integrate LANSAXML enhancements with our legacy Synon system, it has come to the point where we feel that it would be easier to start from scratch and redesign the database. The ACIS rewrite will probably be in a combination of LANSAXML for iSeries, Visual LANSAXML and LANSAXML for the Web. That is the beauty of LANSAXML, that we can mix-and-match. LANSAXML is one product rather than four.”

George Suda concludes, “LANSAXML is rapidly moving forward and is always willing to listen to our suggestions. In fact, because we were one of the early adopters of LANSAXML Integrator, parts of the tool were built with our requirements in mind.”

“With the help of LANSAXML we have implemented technologies to reduce costs, add value and enhance service delivery, giving Apria a competitive strength. We were the first in the homecare industry to offer paperless order intake, confirmation and billing of homecare orders for some of America’s top payors (insurance companies).”

“Architecting the right infrastructure is important. You have to think about how external systems can interface to your business processes. You cannot just throw a fancy screen on the Internet. We have a significant infrastructure here with probably over 400 routers. We are taking LANSAXML very seriously and developed our processes around this tool. I think LANSAXML is a great tool, we made the right choice and we’re committed to it.”