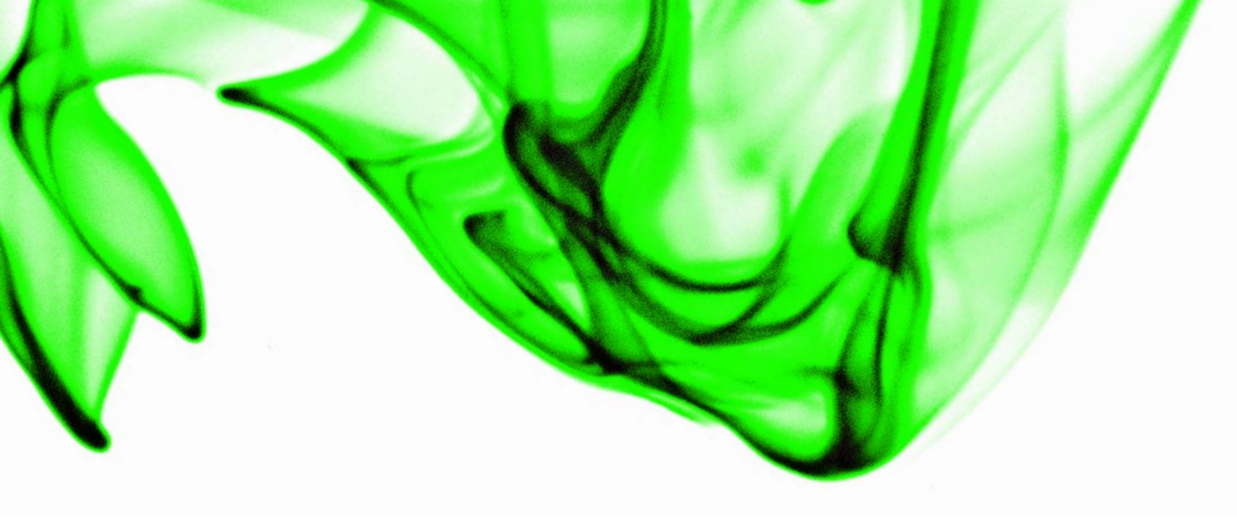

Customer Case Study

Tours Regional University Hospital (CHRU)

Joined-up patient care in France.

Solution:
Enterprise Application Integration

Products:
BEA WebLogic Server® 8.1
BEA WebLogic Integration™ 8.1

Industry:
Healthcare

Partner:
Capgemini

Country:
France

Business Challenge

Hospital information systems increasingly difficult to manage, owing to point-to-point application links, resulting in reduced performance and little scalability. Three goals: deploy shared management applications, integrate existing data and guarantee scalability and interoperability.

Solution

Deployed BEA WebLogic Integration 8.1 and BEA WebLogic Server 8.1 to create a common integration platform based on open and interoperable standards. New platform enabled Tours CHRU to rebuild an identical environment for the main management programs and optimize lists management and maintenance.

Results

Leveraged new application services, including patients' medical records, patient summary and extranet services. The CHRU is experiencing a modern and open system, with a flexible and scalable architecture to improve collaboration with external partners.

Customer Brief

With a capacity of more than 2,000 beds, Centre Hospitalier Régional Universitaire de Tours (CHRU)–or Tours Regional University Hospital admits up to 400 patients each day and 900 more for consultations. The hospital is one of the main employers in the central region of France, with 7,000 staff. CHRU carries out 33,000 surgical operations each year (90 per day), delivers 2,900 births and conducts up to 18,000 scanner examinations. Tours' CHRU has established a strong reputation for the quality of its medical and surgical services, including cancer treatment, pediatrics heart surgery and burns treatment, and also for its preventive operations and the quality of its research.

Business Process Challenge

Developed over a number of years, Tours CHRU's information systems were more and more difficult to manage. Valérie Gaillard, Suppléant Director of the Finance and IT Department of CHRU, takes up the problem. "First, each new application was integrated via a point-to-point link, which offered reduced performance and minimal scalability," she said. "Also, our main Symphony-based medical and administration applications were no longer supported, and we were ready for more innovative technologies, to open our data to relevant health professionals and streamline the healthcare process altogether."

"Considering the scope of the project, we decided to start with the foundations of a new administration platform, which would address three major issues: the deployment of core features shared by all management applications, the integration of existing data and the guarantee of scalability and interoperability."

Valérie Gaillard, Suppléant Director of the Finance and IT Department of CHRU

She continues, "Considering the scope of the project, we decided to start with the foundations of a new administration platform, which would address three major issues: the deployment of core features shared by all management applications, the integration of existing data and the guarantee of scalability and interoperability." The new system needed to prepare the CHRU for its future challenges, such as the implementation of an activity-based rating system, shared health records and distribution of digital images. It also needed to break down application boundaries and information silos. The final objective was to deploy patient-oriented processes to improve the entire value chain of the CHRU.

Built progressively over time, Tours' CHRU information system became more and more difficult to manage–each new application being implemented via point connections. Its main administrative application being no longer supported, the hospital was looking for a more innovative technology in order to open its information assets to all relevant health professionals, to streamline its care process with patient-oriented procedures, and to improve its entire value chain. The new system should also prepare the CHRU for its future challenges (implementation of an activity-based rating system, shared health records, distribution of digital images, etc.) and break down application boundaries and information silos.

Solution

Working closely with BEA, HP, and McKesson, Capgemini created a common integration platform based on open and interoperable standards. This consolidates the information system around core application features. Based on a common database for all management applications, the new platform enabled Tours CHRU to rebuild an identical environment for the main management programs, to optimize lists management and maintenance, and to prepare for a global process reengineering. The application bus, based on BEA WebLogic Integration 8.1, publishes both reusable basic business services and more sophisticated services used in medical applications–a true Service-Oriented Architecture (SOA).

"Capgemini, with the help of BEA, HP, and McKesson, suggested a common integration platform based on open and interoperable standards which would

consolidate the information system around core application features provided by McKesson," commented Laurent Baumard and Michel Caniard, Architect and Project Director at Capgemini. "Based on a common database for all management applications, the new platform allowed us to rebuild an identical environment for the main management programs and to prepare for a global process reengineering."

"Capgemini and its partners have provided the ideal answer to our three main issues, through the implementation of a standard application bus (IHE compliant) which handles all data exchanges and breaks down application barriers," added Miss Gaillard. "Furthermore, their methodology was adapted to our project scope and relatively tight schedule. After a few additional presentations, including a visit to a BEA customer reference site, we chose Capgemini and their partners to conduct our project." The system was fully operational only 11 months after the project started. Capgemini has provided comprehensive assistance through the project realization, including the delivery of Project Management, Methodology and Knowledge Transfer. Crucially they also built the EAI architecture.

"BEA provided several benefits. Primarily, Mc Kesson's core features and therefore all the business services were originally built on BEA Tuxedo®. Furthermore, BEA WebLogic Integration 8.1 provides a unified and standard-based integration platform spanning J2EE, XML, JCA, and JMS to protect our investments. Its robust architecture and performance ensure 24x7 availability and its Workshop Development Kit is user-friendly."

Laurent Baumard and Michel Caniard, Architect and Project Director, Capgemini

"We have developed a quality relationship with our partners, which was of significant help in integrating the core application features and the Reference APIs into our new platform," added Baumard and Caniard. McKesson provides the core application features, which are hosted on a HP-UX cluster. Built on BEA WebLogic Server 8.1, BEA WebLogic Integration 8.1 is the core engine of the new system. The integration platform is also hosted by the HP-UX cluster, within a production server. The new platform integrates three major application domains used every day by 2,000 users: Human Resources, Patient Administration, and Economical & Financial Management. The healthcare sector represents about fifty applications integrated into the platform. The forthcoming integration of a new IHE-compliant radiology system will also be carried out transparently.

Results

"BEA provided several benefits. Primarily, Mc Kesson's core features and therefore all the business services were originally built on BEA Tuxedo®. Furthermore, BEA WebLogic Integration 8.1 provides a unified and standard-based integration platform spanning J2EE, XML, JCA, and JMS to protect our investments. Its robust architecture and performance ensure 24x7 availability and its Workshop Development Kit is user-friendly. The BEA solution integrates perfectly with the CHRU business services while providing hospital connectors (HL7, HIPPA). The application bus, based on BEA WebLogic Integration 8.1, allows us to publish both reusable basic business services and more sophisticated services used in medical applications," added Mr. Baumard and Mr. Caniard.

Tours CHRU is now equipped with a unified integration platform to leverage its new application services, including patients' medical records, patient summary

and extranet services. These are federated in a single framework (for traceability purposes) with standards-based application exchanges (IHE, HPRIM, Web Services). The CHRU is experiencing the full benefits of a modern and open system, with a flexible and scalable architecture to improve collaboration with external partners. After the completion of its critical management applications, the CHRU is now starting the second phase of its modernization program dedicated to medical IT assets. The objective is to reduce the gap between medical and management tasks by positioning the patient at the center of all processes. The integration platform will facilitate the progressive replacement of applications and the implementation of new solutions without downgrading existing features.

“We opted for a future-proof environment. The CHRU is now equipped with an excellent tool that we will continue to improve,” commented Valerie Gaillard. “Even if the system is too new for a precise benefit evaluation, the reuse of application components has ensured substantial time savings in development. We have also streamlined the management of integration and maintenance tasks.”

“We have implemented global traceability features thanks to the flow management capabilities of the system,” added Patrick Mercier, Project manager at the CHRU, who is in charge of the core business features and integration. “All the necessary applications have been integrated into the core business platform on schedule. This is a major achievement. Our EAI platform is now fully functional for all the workflows we had planed to migrate.” At the same time, Capgemini introduced the new system to about 1,500 staff members.

The users have been introduced to the system locally, by specifically trained staff members. Knowledge transfers have occurred throughout the development process and continue today. “In response to increasing economical pressures, hospital IT systems have to migrate from a vertical approach (T2A, silos, medical records, PACS, healthcare network) to a more flexible, integrated and open architecture, such as the one developed for the CHRU to address the latest requirements within the healthcare industry,” added M. Baumard and M. Caniard, from Capgemini.

At the planned release date, the CHRU was equipped with an integration platform geared to leveraging new application services–medical records, patient summary, and extranet services. “Tours CHRU now has a modern, open and cost-efficient system, Its flexible architecture facilitates further changes and collaboration with third parties.” Miss Gaillard concluded, “After the successful integration of management applications, we are launching the second phase of our modernization program with the medical sector. We want to reduce the gap between medical and management tasks by positioning the patient at the center of all processes.”

About BEA

BEA Systems, Inc. (NASDAQ: BEAS) is a world leader in enterprise infrastructure software, providing standards-based platforms to accelerate the secure flow of information and services. BEA product lines–WebLogic®, Tuxedo®, and the new AquaLogic™ family of Service Infrastructure–help customers to improve business agility and efficiency. For more information please visit bea.com.

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