

Jefferson County, Colorado

Reduces costs and creates opportunities for county planning that have never been explored before

Industry: Government (County Administration)

Product(s): BEA WebLogic® Enterprise Platform (BEA WebLogic Server™, BEA WebLogic Integration™)

Partner(s): Insevo

Summary

Jefferson County chose the BEA WebLogic Enterprise Platform to utilize a common framework and tools that ease integration among disparate systems. It decreased system administration costs by replacing point-to-point connections between applications with a single integration hub.

Problem: Complexity of different applications

It was extremely difficult to ensure connectivity and data integrity with 160 different applications, while keeping mission-critical systems running.

Solution: Integration platform

BEA platform reduces integration complexity, freeing the IT staff to concentrate on adapter development and the business analysts to focus on business logic

Results

- The county saved a considerable amount on integration costs. “We reduced by 65% the cost of integrating our ERP system.”
- “We were able to integrate systems [for one project] in 3 days, without affecting the day-to-day running of our production environments.”
- “We can provide information online so that people have less of a need to visit county offices.”

Benefits

- “Decreases costs by replacing point-to-point connections between applications with a single platform.”
- “Enables a best-of-breed strategy. We can deploy the best systems and applications, while BEA ensures compatibility and interoperability.”
- “Increases our enterprise agility by enabling the addition and modification of applications as needed and as technology evolves.”



THE BUSINESS CHALLENGE

Jefferson County, Colorado is a thriving suburban business, industrial and residential community of about 520,000 west of Denver, where the great plains meet the Rocky Mountains — including some of the most magnificent scenery in the U.S.

The land is important to the county residents, and each parcel of this 774-square mile county is mapped, photographed (including satellite imagery), and recorded. Further information about everything from zoning and collecting taxes to snow plowing and fighting fires are recorded and attached to parcel data. An address management system links all county addresses to parcel information. The Sheriff's office uses it for crime enforcement and analysis of crime patterns. Voter registration is also based on it. All the information that moves through county systems and applications is tied to parcel addresses, which is why the system is the most critical piece of IT infrastructure for the county.

“Our biggest challenge is the fact that our county staff has remained static for eight years, with population growing 20 percent annually,” said David Gallaher, Director of IT for Jefferson County. “The staff has to be able to produce more with existing resources. If we can automate processes, we can make staff more efficient, especially if we could cut down on the need for people to visit county offices.”

“We used WebLogic Integration as the hub, managing the integration with all the applications, saving time and money.”

One aspect of this challenge is solving the recurring problems the county has with integrating systems developed in-house and packaged applications. Integration problems have become increasingly complex as fewer new applications are being developed for the IBM AS/400 computing environment, and older computer languages are rarely used for new development.

Through the years, the AS/400-based address management system developed symptoms of corruption, in that some functions improperly handled data and allowed users to attach data to improper addresses, leading to the association of parcels, and other county records, to incorrect or invalid information. In many cases the system required additional manual entry of data that was not propagated automatically. This resulted in unforeseen expenditures of additional staff resources and time in researching and fixing data problems.

Synchronization of spatial and address management databases was yet another issue. Weekly “snapshot” updates were susceptible to occasional failure due to the variety and nature of the disparate hardware, networking, operating system, database, and programming components in place, as well as the additional complexities of incorporating geographic information systems (GIS) functionality into legacy systems containing traditionally purely-tabular data.

“Part of the challenge with integrating all these disparate systems is finding a cost-effective solution which enables our systems to talk to each other,” said James Lindauer, Technical Manager of IT for Jefferson County. “We are constantly dealing with the issue of hardware, operating system and application changes making it extremely difficult to ensure connectivity and data integrity across our infrastructure while keeping our mission-critical systems running.”

THE BUILT ON BEA™ SOLUTION

The county chose the BEA WebLogic Enterprise Platform, including WebLogic Server and WebLogic Integration, in order to utilize a common framework and tools that ease integration among disparate systems.

“The integration platform decreases system administration costs by replacing point-to-point connections between applications with a single platform,” said Gallaher. “The county currently has 160 applications, and if every single application had to interact with every other application, it would be unmanageable. We’d be spending all our time trying to integrate, and the cost of integration would be ten-fold the cost of what it costs to build the application. So we used WebLogic Integration as the hub, managing the integration with all the applications, saving time and money. With WebLogic Integration, we only have to do this once.”

“We can deploy the best systems and applications, while the BEA platform ensures compatibility and interoperability.”

The county can purchase off-the-shelf Java Connector adapters or custom-build them to provide integration to the various subsystems. Once these adapters are created, business analysts can use “views” with BEA WebLogic Integration’s business process management (BPM) tools, to specify functions and parameters necessary for the interface into the subsystem.

This ability reduces the complexity associated with software integration, allowing the IT staff to concentrate on adapter development and the business analysts to focus on incorporating business rules. “It also increases our enterprise agility by enabling the addition and modification of applications and information sources as needed and as technology evolve,” said Gallaher.

The county investigated other application servers, including IBM WebSphere. “While WebSphere is a nice product, some proprietary components made us apprehensive about running it on various platforms,” said Gallaher. “There were also issues of performance, and WebLogic Server performed better.”

WebLogic Integration was chosen over WebMethods and its JD Edwards integration product, JDE XPI. “Something that’s only partially fitting to the standard is not what we want,” said Gallaher. “WebLogic enables a best-of-breed strategy. We can deploy the best systems and applications, while the BEA platform ensures compatibility and interoperability.”

Jefferson County performed a thorough evaluation before choosing BEA over solutions from vendors such as Borland, SilverStream, Allaire, CrossWorlds, IBM, and Oracle. The criteria included proven scalability and manageability, Java 2 Enterprise Edition (J2EE) certification, compatibility with third-party vendors, open source code with easy integration, documentation and adequate support, proven enterprise solution, and the vendor’s financial outlook and strategic plans. The specific criteria for the integration solution included adapter compatibility, and adherence to the J2EE standard and to Java Connector Architecture (JCA).

“We were able to actually integrate our systems in three days, without affecting the day-to-day running of our production environments.”

BEA WebLogic Server provides an excellent infrastructure for innovation within the constraints of time-to-market. “We’re very keen on feature-driven development, to the point that we can roll features out in weeks or a couple of months rather than six to nine months,” said Gallaher. “Last year we were able to roll out 15 significant new projects.”

THE RESULT

The county saved a considerable amount on integration costs. “We reduced by 65 percent the cost of integrating our ERP system from JD Edwards, so that it talks to our Oracle-based application,” said Gallaher.

Another project, integrating the JD Edwards system with custom applications on the AS/400, went from decision to completed implementation in less than 30 days. “We were able to actually integrate our systems in three days, without affecting the day-to-day running of our production environments,” added Gallaher.

Jefferson County expects to see significant savings and time reductions in follow-on projects. The county has committed to making every application work on the Web. “While this is useful for the residents of Jefferson County, it is even more useful as a way to reduce administration costs,” said Gallaher. “We can provide information online so that people have less of a need to visit county offices.”

The linking of all information to the parcel address, and then augmenting that information with historical data, also presents new opportunities for county planning that have never been explored before.

“You can see the entire history of any parcel,” said Gallaher. “This helps us build predictive models based on what happened in the past. Citizens can go back and look at the history of any parcel before buying it. Police can look into the histories of parcels adjacent to a parcel where a crime was committed. If you know the past, you can make strong predictions about the future.”

Copyright © 2002, BEA Systems, Inc.

BEA Systems, Inc. BEA, WebLogic, and BEA Tuxedo are registered trademarks, and BEA WebLogic Platform, BEA WebLogic Server, BEA WebLogic Portal, BEA WebLogic Integration, BEA WebLogic Workshop, and BEA WebLogic Enterprise Platform are trademarks of BEA Systems, Inc. All other company and product names are the property of their respective owners.



BEA Systems, Inc.
2315 North First Street
San Jose, CA 95131
Telephone: +1.408.570.8000/Facsimile: +1.408.570.8901
www.bea.com