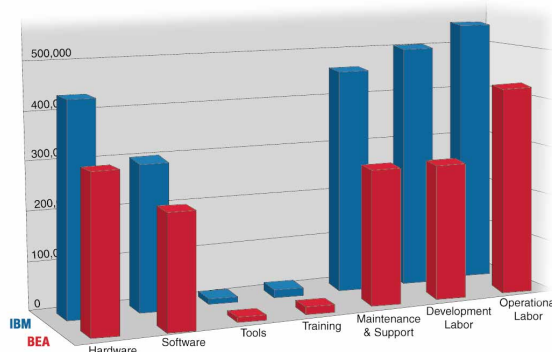


Total Cost of Ownership Case Study: Enterprise Data Unification System

THIS TCO STUDY EVALUATES TWO ENTERPRISE DATA UNIFICATION SYSTEM IMPLEMENTATIONS THAT BRIDGE AND MANIPULATE THE DATA FROM DISPARATE SYSTEMS ACROSS THE ENTERPRISE. WE COMPARE THE BEA WEBLOGIC ENTERPRISE PLATFORM™ TO AN IBM WEBSHERE INSTALLATION OVER THREE YEARS. PROJECTIONS SHOW **IBM TCO IS 33 PERCENT HIGHER THAN BEA. THE DIFFERENCE IS \$543K.**

Realistic TCO Projection Drives Cost Control

Of the many factors contributing to the selection of the best platform for your e-business application infrastructure, Total Cost of Ownership (TCO) is key because it elicits, from the vendor and the buyer, identification of future cost surprises. Whether you are looking to increase revenues with faster entry into new markets and reduced customer churn, or you are seeking to lower costs with streamlined operational efficiency, you will need a platform you can trust and support over time to future-proof your business. Working with your solution provider to estimate costs beyond the hardware and software (such as tools, training, maintenance and support, development and operational labor), provides this important visibility.



By evaluating project costs that are auxiliary to the base platform price, TCO projections acknowledge the powerful role that technology plays in driving related expenditures over time. The multi-faceted cost comparisons that TCO enables provide a domain for reasonable discussion and analysis of the trade-offs that are inherent in strategic application infrastructure investments. A well-reasoned technology evaluation that both describes immediate cost arrays and enables oversight for controlling future costs will drive consensus for the best decision, and the informed commitment that brings accountability and success to the initiative.

What is TCO?

TCO comprises initial and ongoing costs for application infrastructure hardware, software, tools, training, maintenance, support, development and operational labor. In this study we project costs for a system to bring data together from across the enterprise; an object switch enterprise data unifier. This system was selected for TCO analysis because it is a real-world example requiring good, symmetric, multi-processing. The system is housed within the corporate data center and accessible only to the largest central servers, not to normal users. One large multi-processor high-end system is used for the production server with a mirror system that serves multiple roles. A likely single-tier e-business solution would require:

- > Web/Application Server — This tier runs a few dozen Enterprise Java Beans to link disparate enterprise systems
- > Large Central Object Switch — With special business rules; not used for reporting or data entry, just to link up to other systems' data
- > Polls other systems and is also launched asynchronously by client triggers

Linking and aligning these requirements to core TCO categories for application infrastructure can be revealing.

In the TCO cost categories described here, the benefits of working with BEA over working with IBM are quickly discernible. By examining each cost category, in tandem with its linkage to the business requirement, the project's technology evaluators can discuss the cost/benefit trade-offs competitively and in the context of the specific business objectives to be met. After describing key assumptions, a discussion concerning the divergence of vendor costs and a summarizing chart follow.

Assumptions — One Tier

Assumptions on pricing and labor allocation are as follows:

1. Pricing reflects most recent catalog and list prices publicly available.¹
2. Labor allocation for Software/Hardware — 40%; Labor — 60%.²

Costs by Category — One Tier

Total Cost - Three Years One Tier Platform TCO		
	BEA	IBM
Hardware	329,016	421,140
Software	240,000	289,176
Tools	15,000	15,000
Training	20,000	20,000
Maintenance & Support	292,057	441,096
Development Labor	293,043	478,587
Operational Labor	450,000	517,500
Total	\$1,639,116	\$2,182,499

Hardware Architecture — The cost of hardware required to run IBM WebSphere Application Server are 128 percent that of the hardware needed to run BEA WebLogic Server™ because of BEA's proven performance advantages³ in this scenario. The subsequent complexity of implementing a solution on the hardware required by WebSphere drives higher labor costs.

Software Architecture — Because the application is relatively small, this scenario is sensitive to software discounting. Notice that the BEA WebLogic Enterprise Platform software is able to achieve the proper framework and foundation for this kind of next generation SOAP function at 80 percent the cost of IBM. IBM sometimes does discount their software

¹ BEA Pricing Catalog 2001; IBM Pricing Catalog 2001

² Gartner Research, "CRM Project Management: ESP/SI Selection and the RFP" Sep. 2000

³ BEA WebLogic Server TRADE 2 Challenge Benchmark, 2001

www.bea.com/products/weblogic/server/performance_ibm.shtml

dramatically, though not in this scenario. When IBM does such radical discounting, however, their strategy is to recoup lost software fees through downstream revenues in many other parts of their business (such as IBM Global Services), ultimately creating a higher TCO.

Tools — Although costs here are similar, the parity is affected by the productivity gains attributed to the more elegant application development environments supported by BEA. These best-of-breed components integrate smoothly with most tools and outperform IBM's less elegant integration tool. Although the cost of tools is a small component of TCO, more developers, independent software vendors, application service providers, and system integrators build on the BEA WebLogic Enterprise Platform which drives enormous indirect savings not tallied in this analysis. A larger pool of available talent eases labor rates and technology adoption, resulting in fewer delayed projects and fewer missed business opportunities.

Training and Education — Costs here are related only to fees for courseware and other learning vehicles. Because WebSphere is comprised of multiple products, there is more material to be taught and mastered. The extent of training indirectly drives greater costs (e.g., opportunity cost of trainee absence, reduced information retention). Greater required knowledge (e.g. MQ Series) further reduces the pool of available talent for successful system maintenance, support, and operation. The risk of project failure, catastrophic delays, and production outages persists despite a fully-trained staff. Certainly both organizations offer world-class service with BEA providing greater best-of-breed training choices for best cultural and organizational fit.

Maintenance and Support — This is a classic continuing cost. IBM's costs here are 150 percent the costs for BEA, because most support agreements are based on a percentage of the initial expenditures on software and hardware. Associated with IBM's higher maintenance costs is greater reliance on services outside the contract, for unique system administration issues and nonstandard configurations. Maintenance and support issues will inhibit business objectives, resulting in indirect opportunity costs.

Development Labor — The IBM costs here are 160 percent of the costs for BEA. Initial and ongoing costs for development, modifications, and updates can focus resources away from business opportunities and higher-order problem solving.

Operational Labor — This factor is mission critical for narrow margin businesses. In our scenario, the lower cost for BEA is due largely to a lack of “operational friction.” The IBM WebSphere family of software is much more labor-intensive than most other application servers, including BEA WebLogic Server. The additional overhead, network and computing resources required of a separate web server add to the inefficiency. These factors are among the drivers of IBM's “operational friction” cost.

Conclusion — One Tier

TCO analysis “follows the money” to clarify the trade-offs between low initial costs and other continuing costs. For instance, this scenario identified an architectural weakness that led to costs appearing in various labor areas. It also identified speed and scalability drawbacks as well as benefits in the maintenance and support area that were driven by software interoperability. The lower the TCO, the better it is for your organization's longer term success. The TCO lens can help detect the land mines and the buried treasure hidden in your application infrastructure choice, enabling your business to focus on its objectives of delivering the best products and services for increased profitability.

"FROM A MARKETING PERSPECTIVE, IBM IS INVESTING MASSIVELY IN UNIFYING ITS WHOLE E-BUSINESS MIDDLEWARE RANGE UNDER THE WEBSphere UMBRELLA NAME . . . THIS BRANDING STRATEGY REFLECTS THE MARKETING REQUIREMENT TO SIMPLIFY A DISPERSED ARRAY OF PRODUCT NAMES BY FOCUSING MARKETING INVESTMENTS TOWARD A SINGLE POWERFUL AND RECOGNIZABLE TRADEMARK."

— GARTNER RESEARCH, "WILL IBM BE THE E-BUSINESS MIDDLEWARE '800 POUND GORILLA?"; FEB. 20, 2001

"BEA IS LEVERAGING ITS POSITION AS THE LEADER IN THE APPLICATION SERVER MARKET. THE BEA WebLogic Server HAS A J2EE CONNECTOR ARCHITECTURE, WHICH ENABLES APPLICATIONS (INCLUDING LEGACY APPLICATIONS) TO 'PLUG-AND-PLAY' WITH EACH OTHER, WITHOUT REQUIRING A SEPARATE APPLICATION-INTEGRATION PRODUCT. THE PRODUCT ALSO SIMPLIFIES E-BUSINESS ARCHITECTURE, AND IT INCREASES SOFTWARE REUSABILITY."

— CURRENT ANALYSIS, OCTOBER 23, 2001

About Crimson Consulting

Crimson provides marketing strategy and implementation consulting to technology companies.

Crimson can manage client engagements and take responsibility for their successful completion, or our clients can manage our expert consultants directly. Many engagements focus on one of our specialized practice areas:

- > Market Assessment - evaluating markets, competitive analyses, gathering intelligence
- > Partner Programs - identifying optimal partners, providing best practices
- > Strategic Sales Tools - developing ROI models, TCO tools, and decision-making maps

For situations where the client would like to manage the consultants directly, we provide interim marketing VPs, Directors, and Managers in the areas of product marketing, product management, channel marketing, marketing communications, market research, etc.

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