



For Web and Wireless Solutions, Lutris* Delivers Robust, Java/XML Application Servers on Intel® Architecture

<p>WHO</p> <p>Lutris* Technologies of Santa Cruz, Calif., is a leading provider of J2EE/XML application servers for ISVs delivering enterprise Web and wireless solutions. Before developing its application server technology, Lutris was a Web consulting firm, giving it real expertise on the business and technology needs of developers and end customers. This history also helped Lutris understand the needs of systems integrators (SIs), consultants, value-added resellers (VARs) and independent software vendors (ISVs), the only channel it sells through today.</p>	<p>WHAT</p> <p>Lutris EAS 4.0, the company's flagship Internet application server, uses Java* 2 Enterprise Edition (J2EE), the eXtensible Markup Language (XML) and a unique Services Architecture as a standards-based platform for developing efficient and modular enterprise Web applications, including wireless. Lutris Enhadra* 3.5 is a lightweight Java/XML Internet application server with strong support for wireless applications.</p>
<p>WHY</p> <p>Companies today demand fast implementation and ROI from their Web and wireless applications, with the flexibility to change and evolve over time. Lutris EAS provides a J2EE/XML server environment that helps solution providers meet these needs. Strong partner profits result from competitive pricing, high developer productivity, and a Services Architecture that extends the capabilities of Java.</p>	<p>WHY INTEL</p> <p>Running Lutris EAS on scalable Intel® Xeon™ and Intel® Itanium™ processor-based servers allows fast implementation of Web applications with impressive performance, scalability, reliability and availability—what every e-Business needs. Solution providers benefit from the broad market for Intel® architecture products, higher profit margins, a standards base, and a building-block approach that's right for today and tomorrow.</p>

Value Proposition

WEB APPLICATION SERVERS MEAN REAL E-BUSINESS

Despite the dot-com downturn, companies continue to leverage Internet standards as the backbone of their IT infrastructure and application deployment. Using Web-based applications that integrate front- and back-office systems, employees can easily access information assets from any Web-enabled PC or mobile device. Web standards such as XML lay the groundwork for collaborative e-Commerce, customer management and supply chain management among every member of the value chain. The payback, if done correctly, is efficiency gains and the chance to grow revenues and profits.

In today's tough economic climate, however, many companies are shying away from long-term, diffuse Web projects. They're moving toward strategic implementations that bring fast ROI by solving a particular business problem, such as boosting sales-staff productivity or automating a manual process. These solutions demand rapid implementations that deliver user-friendly performance, scalability to grow as the business grows, and the reliability and availability needed for "always on" operation.

This raises the bar for the SIs, consultants, VARs and ISVs who develop such applications. Aside from meeting basic customer requirements, they must develop applications quickly and efficiently to maximize their profitability. They also must be sure current applications meet future needs, such as adding new Web service capabilities, managing hardware and software upgrades and laying the groundwork for mobile and voice applications. They also require flexible applications that work on different hardware platforms.



Web application servers based on Java 2 Enterprise Edition (J2EE) can meet all these requirements. "Once a company decides to do e-Business and integrate Web applications with existing applications or data sources, the J2EE Web application server is the fastest, safest, most cost-effective way to develop those applications," says David Young, chief evangelist for Lutris Technologies*.

Standing as the middleware between back- and front-office systems, the J2EE application server offers a powerful, "write once, run anywhere" Web applications environment. For example, a J2EE application written for Intel® Pentium® III Xeon™ processors can be easily ported to the 64-bit Intel® Itanium™ processor, since both run the Java Virtual Machine to execute Java code. Standards-based J2EE application servers also help developers simplify database connectivity, create Web sessions without cookies, and provide secure Web communications and transactions—all imperative for fast and responsive solutions.

About Lutris Technologies*

J2EE/XML APP SERVERS FOR SOLUTION PROVIDERS ONLY

J2EE's generic benefits apply to many Java Web application servers. Only Lutris Technologies offers Lutris EAS 4.0, a J2EE/XML application server that provides unique end-user benefits while meeting solution providers' business needs. Lutris provides a channel-centric approach to Web development, deployment and support by delivering a flexible, extensible J2EE platform coupled with a comprehensive suite of partner services.

Lutris was founded in 1995 in Santa Cruz, Calif., as an IT consulting and network integration company. It soon evolved into Web consulting and integration. "We were 'in the trenches' at that time and saw the problems enterprises had in developing new e-Business applications and processes and linking them to legacy systems," says Young. "We discovered what they needed in a Web application server even before the term was coined."

This knowledge led Lutris from consulting to developing Enhydra, an open source Web application server that has become popular in the open-source community (see www.enhydra.org). Today, enterprise-class Lutris EAS uses some open-source technology from Enhydra, but incorporates additional, proprietary technologies developed by Lutris. The company is true to its roots by making EAS' source code available to customers, giving developers added control and flexibility.

Having itself been a Web consultant and integrator, Lutris understands the needs of its channel partners. EAS maximizes developer productivity and performance, creating lean and flexible Web applications beyond what other J2EE Web servers can accomplish. And Lutris offers a complete Solution Partner Program with all the education and support needed for success.

Solution Overview

LUTRIS EAS 4: J2EE APP SERVER THAT EXTENDS THE POWER OF J2EE

If J2EE is an Internet standard, what competitive advantage does Lutris EAS offer? Originally, J2EE was designed for typical Web applications, such as e-Commerce storefronts with shopping carts—a simple user request-response model. J2EE in EAS handles that perfectly, but extends the power of J2EE by facilitating other application models, such as extended transaction processing; threads and sockets for real-time control; daemons; and any application that requires more control than the request-response model.

Other Web server companies may try to solve this problem by shipping two servers: one J2EE and another for non-J2EE applications. Lutris EAS simplifies things by incorporating both models via its unique Services Architecture. Running an always-on, operating-system-like kernel, EAS Services Architecture implements J2EE as modular, pluggable components on top of the kernel. "With this approach, solution providers can have their cake and eat it too, because they can install their own applications, Web services, and new J2EE services as additional services alongside current J2EE services, and they can deploy just the J2EE services they need," says Young. "This offers more functionality and flexibility than other J2EE Web servers."

Lutris EAS also offers broad support for wireless functionality—key for solution providers because of the widespread interest in developing Web solutions for the mobile workforce. Since EAS' architecture separates business logic from the presentation layer, it's a simple matter to write client applications for all the major wireless standards. Lutris wireless support is unusually complete, including development tools from major partners and a complete tutorial with sample code.

Lutris EAS also meets solution providers' need for fast development and deployment—both to meet customer expectations and to boost their own productivity and profits. Features that speed development and deployment

include the Services Architecture, support for Web standards and diverse databases, hot deployment and configuration, and the complete wireless development kit. Rapid, efficient development also saves time, letting solution providers focus on other profitable services such as business consulting. Pricing of \$4995 per CPU can also boost solution providers' profits, since other J2EE Web application servers cost far more.

Combine these benefits with the high performance, scalability and reliability that comes from running Lutris EAS on the open, building-block approach provided by Intel® architecture, and you have a win-win for solution providers and their customers.

A Closer Look

BROAD SUPPORT AND A FOCUSED PARTNER PROGRAM

A large part Lutris EAS' appeal on Intel architecture stems from its support for Web standards and key industry players. Lutris EAS supports all J2EE APIs, implemented as pluggable platform services. These include Enterprise Java Beans* (EJB* 1.1), Java Management Extensions* (JMX*), Java Authentication & Authorization* (JAAS*) and Java Messaging Service* (JMS*). EAS can present all Internet markup languages, and the extensible XML architecture supports XML, Document Object Model (DOM), eXtensible Style Language Transformation (XSLT), and new standards and schemas as they become available. Lutris EAS optimizes presentation development via a native, open-source XML engine, the XML Compiler* (XMLC*), that cleanly separates layout from dynamic content and increases application performance.

EAS seamlessly integrates with Borland* Jbuilder* and Sun* Forte* for Java integrated development environments, and is compatible with IBM* VisualAge*, Oracle* Jdeveloper* and WebGain* VisualCafe*. In addition, Lutris EAS includes PostgreSQL* and Java Instant DB* databases. Lutris EAS offers driver support for Java Database Connectivity* (JDBC*) and is certified for leading commercial and open-source databases. Wireless standards cover Java 2 Platform Micro Edition* (J2ME*), i-mode*, Wireless Access Protocol (WAP), Voice Extensible Markup Language (Voice XML), and other client protocols. EAS also includes a wireless development suite with tools from Motorola*, Sun, Nokia*, Nextel* and Cingular*.

Lutris' success is tied to that of its solution partners. Lutris' technology is available through Lutris' Solution Partner Program, founded on Lutris' promise that it will not compete with channel partners by selling applications

of its own. "Though Lutris still has a services arm, it is designed to help channel partners with highly-focused fix or targeted, short-term services," says Yancy Lind, president.

Partner support services include education, giving partners the opportunity to develop deep technical expertise with Lutris. The company also provides comprehensive development and technical support. Marketing benefits include financial incentives, inclusion in the Lutris Solutions Catalog and custom joint marketing opportunities. And Lutris' products are always developed in conjunction with channel partners. Every Solution Partner can participate in the EAS Community Process to develop software functionality relevant to its exact needs.

The Intel Advantage

FAST, SCALABLE JAVA PLATFORM OFFERS BUSINESS-CRITICAL AVAILABILITY

As the Web puts immense and unpredictable demands on business infrastructure, companies depend more than ever on its power and reliability. By deploying Lutris EAS on Intel® Xeon™ and Itanium processor-based servers, solution providers enable quick and flexible infrastructure growth for their end-user customers. Customers can scale out, increasing performance and availability using multiple affordable servers, or scale up using fewer, more powerful systems. Hardware investments can be closely aligned with application and business requirements, providing powerful, scalable, reliable server solutions.

Lutris EAS Java/XML Application server on Intel architecture allows customers to dramatically enhance their Web applications at a reduced cost. Customers also enjoy a steep improvement curve, since EAS applications developed on Intel Pentium III Xeon processor-based servers can easily migrate to powerful, 64-bit Intel Itanium processor-based systems.

FAST PERFORMANCE FOR DEMANDING APPLICATIONS

Lutris has found that the combination of Intel architecture and the Linux* operating system leads to performance gains in page serving, dynamic creation of pages, integer logic, database retrieval and calculations, as well as graphics display and rendering.

To study EAS' performance on Intel architecture, Lutris worked with Intel® Solution Services, which ran tests on a simulated business-to-consumer commercial Web site. The test configuration utilized a variety of configurations of Intel Pentium III Xeon processor-based servers—four

two- and four-processor systems running at 700 and 800 MHz. Software included Red Hat® Linux, Apache Web servers, Lutris Enhydra 3.5.2, and an Oracle® database.

The results were outstanding, demonstrating a solution that can handle the requirements of a rapidly growing e-Business. A configuration using a three-tier architecture with two 2-way servers at the front end, two 4-ways at the mid tier, and a 4-way for the database showed exceptional performance and scalability:

Concurrent users	800+
User response time	<3 seconds
Hits per second	3,500+
Data processed	5 MB per second

RELIABLE AND HIGHLY AVAILABLE SYSTEMS

Intel-based scalable clusters ensure nonstop availability without the expense of traditional fault-tolerant technologies. Two-way, four-way and eight-way Intel Xeon and Itanium processor-based servers are the building blocks of these highly available solutions.

Lutris EAS on Intel architecture offers availability features that take advantage of the modularity of Intel architecture. EAS Director provides a safe, scalable architecture through cluster support, load balancing and server-level failover. To ensure reliability, if one server stops responding, EAS Director automatically directs requests to another available server. EAS also supports session-level failover, ensuring that users always stay connected.

For more information on IOS' Lutris Enhydra performance tests, see *Lutris Enhydra 3.5 Java/XML Application Server Solution Sizing Guide*.

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