AberdeenGroup

Linux and IBM's eServer Integrated Platform for e-business Give Users a Competitive Advantage

An Executive White Paper

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Executive Summary

The need for businesses to enhance their competitiveness and respond to customers' needs while maintaining their profitability and growth is more important than ever. To meet this challenge, enterprises usually must put an e-business infrastructure in place that gets the company up and running quickly, with the ability to scale as business grows. Many companies do not have the expertise in-house to create such an infrastructure. As a result, IBM has developed a solution — the IBM eServer Integrated Platform for e-business.

The eServer Integrated Platform for e-business enables customers and IBM Business Partners to rapidly deploy e-business solutions using industry-leading IBM software, tools, documentation, and sizing guides. The Integrated Platform, a common Linux-based e-business deployment platform, is available on IBM eServer iSeries, pSeries, xSeries, and zSeries servers. It includes WebSphere Application Server and IBM Directory Server. Options include DB2, external storage from IBM, and third-party firewall hardware.

IBM developed the eServer Integrated Platform for e-business to:

1. Enable and facilitate rapid deployment of e-business solutions.

2. Provide a proven production-ready infrastructure for e-business solutions.

3. Leverage the benefits that Linux can provide to customers, including lower cost, strong security features, and the foundation for e-business on-demand capabilities.

4. Provide customers and partners with a platform that they can trust for deployment of e-business on-demand solutions.

The targeted customer base starts with small and medium-sized businesses (SMBs) with 100 to 1,000 employees and extends to large enterprises. IBM is supporting a broad customer spectrum by offering the Integrated Platform across its eServer platforms. Typical Integrated Platform customers are either beginning the early stages of e-business adaptation or looking for a simple means of extending their e-business capabilities. Most customers will acquire the Integrated Platform to use as a deployment platform for ISV e-business solutions. A wide range of solutions from ISVs is available in support of IBM's Integrated Platform offerings. IBM highlights some of these at its Integrated Platform Web site (http://www.ibm.com/servers/solutions/linux/integrated/) and its Linux solutions portal (http://www.ibm.com/linux/solutions).

In this Aberdeen *Executive White Paper*, the discussion focuses on:

- Linux market trends (Linux is ready for e-business and is at the core of IBM's on-demand computing strategy.)

- What constitutes an eServer Integrated Platform for an e-business solution
- The eServer Integrated Platform value proposition
- How and to whom eServer Integrated Platform is marketed
- The comprehensive range of e-business solutions that are available for eServer Integrated Platform
- What customers have to say about using eServer Integrated Platform
- How customers buy eServer Integrated Platform and how much it costs

Linux Market Trends

Today, Linux has good traction in the areas of Web serving, file and print serving, edge computing in general, high-performance computing, financial services, government/public sector, business integration, and in a number of SMBs. It is also beginning to gain traction in large enterprises as a host for business- and mission-critical applications and for database management systems. Linux servers are about a $4 billion segment, and Linux is growing at a 30% to 35% rate year over year.

Linux provides depth of hardware coverage that no other operating system platform can offer. Its platform coverage ranges from one-processor machines to eight- and 16-way machines to mainframes. This hardware platform coverage gives businesses (small and large) a range of options for hardware purchases along with a wide selection of hardware vendors from which to choose. In addition, Linux itself can be acquired from a number of distributors.

Most of the important infrastructure ISVs, such as Oracle, BEA, CA, BMC, IBM (with middleware such as WebSphere, DB2, Tivoli, Lotus, and Rational), already run on Linux platforms. The combined market share for Oracle and DB2 represents about 60% of database management system sales. CA, Tivoli, and BMC represent about 60% to 65% of systems management sales. The same types of statements can be made about the market segments for the other infrastructure ISV applications that have already been ported to Linux.

Many of the business ISVs, with SAP leading the way, have moved, or are in the process of moving, their applications to Linux. Some of the newer ISVs are starting with Linux as their primary or only platform. There are two primary reasons that have prevented many of the established business ISVs from moving to Linux more quickly. First, many of the business applications require infrastructure applications to be in place, such as database management systems, before the ISVs can move their business applications to Linux. Second, ISVs wait for market demand before offering/supporting their business applications on Linux. Demands for applications such as those offered by PeopleSoft, J.D. Edwards, and SAS on Linux are be-

ing made by end-users, as evidenced by the recent increase in the number of business applications being ported to Linux.

Large companies (e.g., e*Trade, Amazon, Google, Menasha Corp., Supervalu, Credit Suisse First Boston, Merrill Lynch, Morgan Stanley Group, Goldman Sachs Group, and NYFIX) have moved and/or are moving their business operations to Linux.

Large systems vendors such as HP and IBM, most notably IBM, heavily influence Linux market trends. Today, Linux plays a key role in just about every IBM initiative, program, and product, including enterprise computing, high-performance computing, grid computing, autonomic computing, on-demand solutions, and infrastructure simplification. In some cases, Linux holds center stage. Linux runs on all IBM eServer platforms and is supported across IBM's storage portfolio. IBM is speeding up the movement of its extensive middleware offering to Linux across each of its eServer platforms. This strategy is significant because it enables business applications to move faster onto Linux.

Another factor that is aiding Linux adoption is the development of a strong ecosystem of IBM Business Partners that have expertise in Linux. IBM has developed a number of go-to-market programs to make it easier for IBM Business Partners to sell Linux-based solutions with IBM products. In addition, several Linux Centers are available around the world to assist IBM Business Partners and users with Linux issues. IBM is partnering with the Chinese government and Chinese businesses to help them improve Red Flag Linux and Linux security. IBM has recently opened Linux Centers in Beijing and Moscow, and it will open several others world wide over the next few years.

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The IBM eServer Integrated Platform for e-business
IBM eServer Integrated Platform for e-business is part of IBM's strategy to help businesses enjoy the Linux potential with minimized risks. It is an offering from IBM that provides a pre-engineered and rigorously tested infrastructure ready for the deployment of e-business applications. It was designed and optimized for Java J2EE applications and Web services.

Integrated Platform Blueprints
A near turnkey solution is made possible by IBM's validated blueprint approach, enabling IBM's large network of Business Partners and ISVs to build solutions that unite all the components that make up the Integrated Platform with their own

value-added business solutions and services. In building its blueprint, IBM has leveraged its "Patterns for e-business" (www.ibm.com/developerworks/patterns), a set of proven reusable assets, based on industry best practices, that help speed the process of developing Web-based applications. The Patterns leverage the experiences of IBM architects who have been building e-business solutions for customers of all sizes.

The architecture is implemented on SUSE Linux Enterprise Server (SLES) with IBM eServer hardware and middleware that supports this Linux distribution. IBM has been updating the blueprint to stay current with new versions of the various components. The software stack is installed and tested in multiple configurations. Using a proven architecture and a set of software products that have been tested together speeds the deployment of Web-based applications. Offering multiple configurations helps ensure that the customer's solution requirements can be met.

There are two solution topologies — Internet or Intranet; two sizes — low end, and high end; and a database option. DB2 UDB is available as an option for customers who choose to have a database server in their configuration. IBM eServer zSeries customers also have the option of using DB2 Connect to connect to DB2 for z/OS. Customers may also opt to go with a non-IBM database system.

The Integrated Platform blueprint provides configuration details, tools, and installation documentation. It also provides guidance on what hardware and software are required to support the Integrated Platform based on the customer's environment. In addition, it offers guidance (for zSeries implementations) on how to implement additional virtual Linux servers, performs a solutions readiness review to help ensure that the value of the Integrated Platform will be met, and offers assistance with ordering the hardware, software, and support required for the Integrated Platform.

Available Platforms
The IBM eServer Integrated Platform for e-business is available on all of IBM's eServer platforms. Additional variations of the Integrated Platform that are part of IBM's Express portfolio are currently available on the xSeries platform. There are six Integrated Platforms offerings:

1. IBM Integrated Platform Express

2. IBM Integrated Platform Express for Employee Workplace

3. IBM eServer Integrated Platform for e-business on iSeries

4. IBM eServer Integrated Platform for e-business on pSeries

5. IBM eServer Integrated Platform for e-business on xSeries

6. IBM eServer Integrated Platform for e-business on zSeries

Although there may be slight variations in the makeup of the Integrated Platform offerings across the different hardware platforms, the overall objectives of the offering — simplify e-business deployment, shorten the time to solution, and provide a common e-business deployment platform — is the same for each Integrated Platform offering.

Integrated Platform Components
The eServer Integrated Platform for e-business integrates a number of software components:

- IBM WebSphere Application Server
- WebSphere Application Server - Express (for Integrated Platform Express)
- WebSphere Portal Express (for Integrated Platform Express for Employee Workplace)
- IBM HTTP Server (for the non-Express products)
- IBM Directory Server
- IBM DB2 UDB (an optional component)
- IBM DB2 UDB - Express (an optional component of Integrated Platform Express)
- IBM DB2 Connect (an optional component of the Integrated Platform on zSeries)
- SUSE Linux Enterprise Server
- IBM z/VM (required for the Integrated Platform on zSeries)
- An optional third-party firewall
- IBM Linux Support Line (an optional service offering)

In addition, customers can opt for external storage to support the functionality of the platform. Different IBM storage components have been tested with each one of the Integrated Platform for e-business platforms, matching the needs of the targeted segments in terms of functionality and cost. These vary from simple external SCSI disk on the xSeries platform all the way to the IBM TotalStorage Enterprise Storage System (ESS) for the zSeries platform.

Integrated e-business Middleware
WebSphere Application Server, DB2, and IBM Directory Server are the three core software components of the eServer Integrated Platform for e-business. Express versions of WebSphere and DB2 are provided in the Integrated Platform Express offering, and WebSphere Portal Express is the key software component for the Integrated Platform Express for Employee Workplace.

IBM's WebSphere Application Server is one of the market-leading Web application servers that enable deployment of dynamic Web sites, utilizing Web services, Java, and J2EE (Java 2 Enterprise Edition)-based applications. It supports dynamic e-business solutions with high transaction requirements, along with requirements to extend back-end business data and applications to the Web.

IBM's DB2 database software is full-featured, robust, scalable, and easy to use. As one of the leading databases in the market, DB2 provides the foundation of information on demand. DB2 was specially designed and priced to meet the needs of large or small businesses.

IBM has expanded the Integrated Platform concept by creating Integrated Platform Express to assist SMBs where there is a need for Linux-based e-business applications.

IBM Directory Server provides a powerful Lightweight Directory Access Protocol (LDAP) identity infrastructure for identifying enterprise resources, controlling access to networked systems, and securely deploying Web services. It is the foundation for deploying comprehensive identity management applications and advanced software architectures like Web services.

Integrated Platform Express
IBM has expanded the Integrated Platform concept by creating Integrated Platform Express to assist SMBs where there is a need for Linux-based e-business applications. The Integrated Platform Express offering includes WebSphere Application Server – Express, DB2 – Express, and xSeries servers. WebSphere – Express is well suited for building and managing Web sites, and DB2 – Express is IBM's lowest priced full-function relational database, designed to meet the needs of small and medium-sized businesses.

Integrated Platform Express for Employee Workplace
Integrated Platform Express for Employee Workplace is a foundation that enables SMBs and departments within larger companies to more easily deploy sophisticated employee portals. These portals provide a user interface for customization of portal pages, personalization of portal content using business rules, single sign-on, instant messaging, and team rooms.

The target audience for solutions based on Integrated Platform Express for Employee Workplace are medium-sized companies in the retail, wholesale, banking/finance, insurance, telecommunications/media, government, manufacturing, health-care, and travel market segments. The offering is aimed at companies that are experiencing a lack of employee productivity because they do not have a single point of access for information. In addition, it is aimed at users whose Web site costs are increasing and at sales staff whose sales revenue is stagnant.

Integrated Platform Express for Employee Workplace reduces the cost to SMBs for responding to changing business needs and dynamic changes in the marketplace. It provides them with the capability to be agile and implement new ideas quickly and inexpensively. Specifically, it enables businesses to reduce costs for building portals, increase employee collaboration, and report and chart Web site visitor trends.

Who Are the Targeted Customers for eServer Integrated Platform for e-business?
The primary market for the eServer Integrated Platform for e-business offerings on iSeries, pSeries, and xSeries are midmarket customers who are in the early stages of e-business adaptation. These customers tend to have fewer than 1,000 employees. The eServer Integrated Platform on zSeries is targeted at larger enterprises and service providers, but may also be suitable for some midmarket customers.

By itself, the Integrated Platform is an e-business infrastructure that is suitable for customers in virtually all industries. The Integrated Platform takes on an industry focus as it is combined with ISV solutions to address the needs of a particular industry. Linux has shown the strongest growth in retail, communications, banking, life sciences, and public sector. Cross-industry solutions, along with industry-specific solutions, have become readily available on Linux.

Integrated Platform for e-business Value Proposition
The key value propositions for the Integrated Platform for e-business include:

- It yields a fast return on investment.
- It enables enterprises to quickly and easily order, install, and deploy a robust starter infrastructure for e-business applications.
- It reduces the time spent on pre-implementation planning because IBM has already defined a set of standard configurations and tested them to ensure that they work together successfully.
- It provides customers with a single vendor interface for their e-business needs.
- It satisfies a wide range of business requirements by offering a common e-business architecture; leveraging industry-leading middleware products, including WebSphere and DB2; and spanning across IBM's eServer hardware models.
- It leverages the benefits of Linux reliability, cost-effectiveness, and security.

- It includes a wealth of solutions from ISVs because the integrated platform offerings have the key components for e-business solutions that ISVs require, and IBM supplies them with a range of enablement and marketing support.

- It provides storage options to help support customers' growing needs for continuity and efficiency.

Support

The Integrated Platform leverages existing IBM software and hardware support organizations and processes. This support includes the IBM Linux Support Line that provides world-class IBM support for Linux to IBM customers.

What Types of e-business Solutions Run on the Integrated Platform?

The Integrated Platform supports a wide range of e-business solutions. Virtually any Java-based application that needs to be deployed as a Web-based solution can leverage the Integrated Platform. IBM has already signed up many ISVs with a wide range of solutions in areas such as e-commerce, CRM, ERP, content and document management, contract management, expense management, GIS/spatial analysis, and industry solutions related to telecommunications, banking, retail, public sector, and others.

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IBM has included the Integrated Platform as part of its branch transformation strategy for the banking industry. The Integrated Platform provides a base infrastructure that enables banks to extend the range of services that bank branches can offer, as well as enable banks to roll out new services more quickly to meet their customers' needs.

What Do ISVs/Users Have to Say About Integrated Platform?

Many IT managers at SMBs who are trying to keep up with the competition find that their business processes are out-of-date or that they are unable to handle peak loads when they occur. With much shopping now being done online, a company's response to user requests when ordering items must be a few seconds or the shopper will move onto a competitor's online site. When any one of these problems occurs, business suffers, and it is not possible to recover what was lost. SMBs that have had these problems have often sought help from IBM via its eServer Integrated Platform for e-business.

One online business encountered all of the aforementioned problems. It got help from IBM in the form of an Integrated Platform for e-business. IBM selected one of its Business Partners to help this company streamline its business processes and update its business model to speed online purchasing. The Business Partner provided the software and utilized WebSphere Application Server and DB2 to redo the company's Web site. The cost of performing an online transaction dropped by about 60% to 70%, and the company saved several hundred thousands of dollars a year. The company's new solution is built on Integrated Platform for e-business on xSeries servers running SUSE Linux.

Another company provides debit and credit card processing applications to its customers in the financial and retail markets. The applications are developed using Integrated Platform for iSeries and zSeries. The company's customers own the hardware on which the debit and credit card applications run. These applications used to run on Stratus/Tandem fault-tolerant proprietary platforms. The company decided to migrate from proprietary platforms to Linux on zSeries. The company owns a small IBM mainframe and will buy an iSeries machine later. In the meantime, it is developing and testing its software for Integrated Platform on iSeries via IBM's Test Drive program, which is provided free to IBM partners. Integrated Platform provides a solid horizontal platform on which to deploy vertical applications.

A document-processing company develops its applications on a xSeries server with Integrated Platform Express. The company develops on xSeries and then runs the applications on all other eServer platforms with no additional work. It works with IBM to deliver both hardware and its software packaged with Integrated Platform to customers. If the customer does not need hardware, then the company delivers the document-processing applications with Integrated Platform middleware components. It utilizes Express versions of DB2 and WebSphere to reduce user costs because the SMB customers often do not need full DB2 or WebSphere. The company said that its saves testing time by building its applications on the Integrated Platform. When the customer gets a system, it is already tested and ready to run.

How Do Customers Buy eServer Integrated Platform for e-business, and How Much Does It Cost?
Although IBM's engineering and expertise have gone into designing and optimizing the solution, it relies primarily on its Business Partners to take orders, build, and deliver the solution to customers — either directly, or via trained solution providers. Resellers can order Integrated Platform configurations for their customers via their IBM value-added distributor and obtain preassembled configurations that are built according to IBM's specifications. They may also choose to order the parts, and assemble it themselves, using an IBM blueprint. IBM Business Partners may also work directly with ISVs to build an Integrated Platform configuration for

their customer that is tailored for a particular application. Customers also have the option of ordering implementation services from IBM or separately ordering the components from the blueprint and assembling eServer Integrated Platform for e-business themselves.

The cost of the eServer Integrated Platform for e-business is determined by the specific configuration ordered, and pricing starts as low as $4,000 for an Integrated Platform Express-based configuration. IBM has defined a wide range of configurations, with several costing less than $50,000, along with a range of solutions priced at $200,000 and higher, to meet a wide variety of e-business requirements.

Aberdeen Conclusions

The IBM eServer Integrated Platform for e-business serves as a base for IBM to launch new solution offerings. It has developed offerings based on the Integrated Platform to be marketed as part of its Express portfolio — a set of offerings designed with small to midmarket customers in mind. These offerings are exactly what SMBs require — low cost with the functionality that they need to run their businesses.

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Integrated Platform and its related "Express" offerings allow IBM resellers, solution providers, and ISVs to add a wide range of e-business solutions (e.g., e-commerce, enterprise resource planning (ERP), customer relationship management (CRM), content management, vertical industry solutions, etc.) to an integrated set of hardware and software components.

The Integrated Platform enables IBM Business Partners to quickly create a low-cost platform that they can use to test and deploy new Linux applications or Web services and then sell them to customers as an inexpensive Linux-based solution. Customers can respond to market demands more quickly because they get integrated hardware and software components using blueprint designs derived from IBM's Patterns for e-business.

The blueprint approach is based on IBM's significant experience in putting together e-business solutions for several years. This approach provides flexibility by allowing the addition of optional components, enabling IBM Business Partners and customers to modify the configurations to suit each customer's individual needs. The blueprint approach also enables IBM Business Partners to provide value-add or system integration service to their customers.

No other Linux-based vendor has integrated Linux into its offerings to the degree that IBM has, and in many cases, Linux is the centerpiece of the offerings such as

Integrated Platform. It is Aberdeen's perspective that IBM, with its ability to integrate Linux across its platforms and move its middleware to Linux to support ISV applications, is responsible for much of the traction that Linux is gaining in the enterprise. In addition, IBM, with its worldwide Linux Centers and its internal Linux Technology Center, is also helping to speed Linux into the enterprise. These efforts are partially responsible for the increasing numbers of applications being ported to and written to Linux.

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Aberdeen Group is a computer and communications research and consulting organization closely monitoring enterprise-user needs, technological changes, and market developments.

Based on a comprehensive analytical framework, Aberdeen provides fresh insights into the future of computing and networking and the implications for users and the industry.

Aberdeen Group performs projects for a select group of domestic and international clients requiring strategic and tactical advice and hard answers on how to manage computer and communications technology. This document is the result of research performed by Aberdeen Group that was underwritten by IBM. Aberdeen Group believes its findings are objective and represent the best analysis available at the time of publication.