

IBM and Novell: Investing in an Open Source Future

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Executive Summary

This report explains how Novell and IBM are investing in open source technology. These companies have chosen to invest in open source because; Linux has the quality and potential to be equal to commercial alternatives; open source adds competition between other vendors since it can be customized to fit specific needs, security features, and cut costs. The two companies are showing their dedication by donating funds and focusing on improving open source technology.

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Introduction

This report addresses the benefits of using open source technology as it pertains to the focus companies, IBM and Novell. This report will:

- Familiarize the readers with open source, IBM, and Novell.
- Help the readers understand why these two companies are indeed investing in open source and the methods they are taking to invest in the future of open source.
- Inform those interested as to how these changes affect the computing industry and every day computing.

no need to hedge here.

Open source ^{is} can be defined as a method for software licensing, ~~and~~ distribution, ^{and development} that allows users to copy the source code and modify it freely.

"and development"

International Business Machines Corporation (IBM) is an information technology (IT) company. They provide numerous services that include business transformation consulting and software/hardware research. These services are "combined to provide business insight and solutions in the enterprise computing space. IBM's clients include many different kinds of enterprises, from sole proprietorships to large organizations, governments and companies, representing every major industry and endeavor." (GuruNet)

Novell was founded in 1981 and initially manufactured terminals for IBM mainframe (GuruNet: Novell). A few years later the company focused on developing its NetWare operating system, which by the early 1990s became the most widely used server operating system for PC networks (GuruNet: Novell). Novell's software applications provide business solutions that work across multiple platforms. Important functions include securing and empowering the networked world, helping organizations solve complex business challenges, simplifying systems and processes, and capturing new opportunities. Novell supports highly distributed network solutions and capitalizes on the growth of the Internet.

The paper will discuss more details about open source and the two companies.

Why move to open source

IBM and Novell are making this change to open source because they believe there is a need for it in the market. Businesses realize the benefits of investing in this new technology and the opportunities that will arise. "The remarkable potential of Linux has become obvious to anyone who is paying attention. Industry experts and analysts agree that Linux represents the next major disruptive technology in our industry, and many businesses are looking to expand their use of Linux and open source technology in mission-critical environments."(Novell)

Investing in open source will keep Novell and IBM ahead of the competition as the world of technology enters a new era. "Sam Palmisano, Chairman and CEO of IBM Corporation has declared that we have entered an 'On Demand' era, where companies the employ open IT tools to stay flexible and adaptive will have an edge over those that are rigid and inflexible." (IBM) Taking a chance on this new software may seem like a big risk, but, "many companies find the quality of mainstream open source products like Linux to be equal to that of commercial alternatives."(Fortune Magazine)

When analyzing open source, many aspects can be potentially beneficial, such as its building of choice in the market, low-cost, and tough security. It is important in any

economy to avoid monopolistic situations where one vendor has control of the market. Open source adds competition to the market, reducing vendor dependency. “Open source cuts costs by lowering licensing and maintenance fees and by enabling deployment on less expensive hardware platforms. As a result, open source alternatives—and Linux in particular—are becoming more attractive to IT professionals.” (Novell)

Open source operates around the concept of peer review: “Open source permits and encourages collaborative development by tens of thousands of developers around the world, resulting in fast resolution of problems.” (Novell) This vast community helps keep open source secure; with the source code available to the public, anyone who catches vulnerabilities has the access to fix them quickly. This access also allows for customized changes that can fit a businesses' specific need. This is what helps Novell and IBM stay more flexible than those companies that rely on a closed system, which can be less secure and adaptable to fast changes.

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IBM's Commitment to Open Source

It wasn't until recently that companies like Hewlett Packard, Compaq, and Sun Microsystems began turning their attention to Linux and other open source software. IBM has been involved with open source technology since 1998 and began using it on a larger scale about 4 years ago. This has put them at the forefront of its development.

In June of 1998, IBM needed a web server to support its WebSphere Suite, a software platform that runs and manages Java applications by providing a "centralized infrastructure for application integration and business process automation within companies." (IBM) “IBM chose the Apache Webserver to support and bundle with the software.” (Open Source Initiative)

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In late 2000, IBM chief executive Louis Gerstner announced that his company would spend \$1 billion on Linux during 2001. This would include "bringing the Unix clone to its full line of servers, bringing its broad software portfolio to Linux, training its services and consulting personnel, and placing advertisements such as full-page ads in major daily newspapers." (Shankland) In late January 2002, IBM reported that it had already recouped nearly all the \$1 billion it had spent the prior year, showing signs that the transition to Linux would be worthwhile and a positive investment. It should be noted, however, that IBM's figures did not specify exactly which investments the profits came from. IDC analyst Dan Kusnetzky warns that they may have “included investments they made in other operating systems as well as software.”(Shankland) Analysts believe, however, that due to IBM's investment, “they have placed themselves in the first tier above its competitors.” (Shankland)

"IBM is making the commitment, Gerstner said, because it 'is convinced that Linux can do for business applications what the Internet did for networking and communications'--make computing easier and free from proprietary operating systems." (Wilcox) According to IBM, by having a “dependence on proprietary operating systems and solutions, it creates inflexibility in the technology and in the technology vendor. With Linux there is no dead-end application migration or integration scenarios, no vendor lock-in that can interfere with execution and business goals.” (IBM Linux in the On Demand

Era)

IBM's Contributions to the Open Source Community

In an effort to increase the development of open source programs, IBM recently made significant contributions to the open source community. These contributions include “releasing the code of various runtime and tool components to the open source community, and giving speech mark-up editors to the [Eclipse Foundation](#), an open source software development platform.” (Marson) The code will help web developers “add speech-recognition capability to Web applications, write standards-based speech applications and make it easier for people with disabilities to use a computer” (Marson).

Also among IBM's contributions is “more than half a million lines of its software code, valued at \$85 million, to an open source software group, the [Apache Software Foundation](#), who will hold the licensing and intellectual property rights.” (Lohr) IBM's hope is that by releasing the code, it will increase the number of Java applications written, which are run and managed by their own WebSphere, a rival to Microsoft's software platform .Net. If this does in fact lead to an increased development of Java then IBM will only seek to gain from this. The more Java applications that are developed the more potential uses there are for WebSphere. (Marson) With WebSphere managing more applications on the market, IBM would be in a position to compete better with Microsoft. (Lohr)

Open Source Software and Applications

The main open source focus for IBM is Linux, an operating system for which they support every major distributor, such as Red Hat and UnitedLinux, SuSE, Conectiva, and Turbolinux. “Each of these distributions provides a unique geographic strength and targets specific market segments. The strategy is to partner with each of these distributions in its area of strength.” (D.H. Brown) IBM has made Linux standard on its entire line of servers and in order to appeal to a broad range of customers, “IBM has positioned all its middleware on Linux and is building “Express” versions targeting the small and medium-sized business market.” (D.H. Brown) In addition to its full line of Linux compatible servers, IBM has also made a large portion of their software also available for Linux, either through their product lines or their donations to the open source community. In order to promote the continued development of Linux, “IBM offers a comprehensive development environment and tool set for Linux to enable Independent Software Vendor and corporate application development on all its platforms.” (D.H. Brown)

The way the sentence is phrased, sounds like IBM is supporting all those distributions?

Spreading Open Source Throughout the World

According to Stacey Quandt, an analyst at the Robert Frances Group "The greatest opportunity for the growth of open-source software and Linux will be outside North America.” (Kanellos) IBM has already initiated a plan to implement Linux and open source technologies in Brazil. In September 2004, IBM announced it would "spend more than \$1 million to help fund a Linux technology center in Brazil. The center, created in conjunction with the Brazilian government, aimed to train 700 public service

professionals on the use of Linux by year's end." (McMillan) According to a recent press release the plan was a great success and IBM signed a deal in November of 2004 to provide training in Linux and open-source software to 980 employees in the Brazilian state of Sao Paulo. (Shankland IBM Signs Brazilian Training Pact)

After the success in Brazil, IBM has taken more steps to spread open source technologies around the world. The company announced that "it is working with India's National Informatics Center (NIC), their government's premiere consulting organization in the field of Informatics Services and Information Technology applications, to deliver open solutions to India." (IBM Press Release)

IBM reported that the County of Essex, Canada's southernmost county, "moved its financial applications to a Linux system running DB2 and Red Hat." Essex is one of Canada's most agriculturally productive areas and is using the Linux system to manage 5,000 MB worth of general ledger, accounts payable, accounts receivable and financial reporting data. (IBM Press Release)

The United States has already and will continue to utilize open source technologies, as well. IBM will be deploying a massive Linux-based supercomputer for the U.S. Army at the Army research Laboratory Major Shared Resource Center in Aberdeen, Maryland. The computer "is slated to be among the top ten fastest Linux-based supercomputers in the world. It will be the largest Linux supercomputer in use by the military to date." (IBM) The purpose of the computer will be "to speed the research and development of advanced military systems." (IBM)

Couldn't this be paraphrased? Look for more on your own. Make the paper less quote heavy.

The State of Hawaii has recently given IBM access to implement Linux based solutions to its financial applications within the Department of Accounting and General Services. By adopting IBM's Linux based solution, the State of Hawaii will "benefit from software cost savings and stability by using DB2 and Linux as its strategic database." (IBM Press Release)

The State of Oklahoma's Department of Human Services is also turning to a Linux based solution in hopes of improving crucial services. By moving these crucial services to an IBM mainframe that runs in Linux, the Department of Human Services will be able to "improve services by providing more timely responses to its citizens, simplify the management of its IT infrastructure, and reduce its overall IT costs." (IBM Press Release) Such services that the Department performs include Child Welfare services, specifically child abuse cases and other services that would require an instant access to information. (IBM Press Release)

Novell's commitment to open source

In 2003 Novell began to focus on open source software. Early that year, Novell acquired Ximian, a developer of applications that run on Linux. In addition, the company discontinued the NetWare brand of operating system and announced the Open Enterprise Server, a combination of the original NetWare kernel (NetWare7) and open-source Linux software (SuSE Linux Enterprise Server 9) (Greenemeier). Later that year, Novell purchased SUSE, a prominent supplier of Linux operating systems to large corporations.

Their investment of the two Linux vendors totaled more than \$250 million and through the acquisition of SUSE, Novell formed a partnership with IBM, who, according to the Linux Beacon website, “has invested \$50 million with Novell for SUSE and open source development.” (Woodie) Novell's involvement in open source also includes the contribution of some of its software code to the open source community to spur development of software that would utilize Novell products.

Providing an open source environment

Novell offers the DeveloperNet Program, a team of Novell support professionals who solve problems encountered by Novell developers; and the “Novell Forge” website, where developers can access, share, and modify code released by the company.

According to the Linux Beacon website, “the company announced that more than 10,000 developers have signed on with its DeveloperNet program in the last year,” while “registration on its website has increased by 60 percent since the SUSE acquisition officially closed in January.” (Woodie)

Novell announced in February 2005, at the LinuxWorld Conference and Expo, of the formation of a new community project, named Hula, whose objective will be to create an open source collaboration server. “The server will provide innovative calendar and mail functionality, filling a major void among open source offerings.” (Novell) Although Novell already has a high-end groupware program, GroupWise. Novell and other Linux-based companies believe that users need a lightweight collaboration server such as Hula. Novell does not plan on terminating GroupWise. In fact, they are releasing Sequoia, an updated release of the program, in 2005. They also plan on releasing two other updates in the future.

Open source software and applications

Part of Novell’s new strategy is realizing the profit potential in the software and services that are used by operating systems, instead of concentrating on the operating systems themselves. According to the Information Week website, “Novell introduced several open source initiatives ... at its annual BrainShare conference in a move to regain market relevance while demonstrating it has learned from past mistakes.” (Greenemeier) One such initiative is the OES, or the “Open Enterprise Server”, which is a combination of "NetWare 7 and SuSE Linux Enterprise Server 9, as well as networking services designed to interoperate between the systems." (Greenemeier) In the words of Novell chief executive, chairman and president Jack Messman, “As Linux enters the marketplace with momentum, it is bringing with it a decline in hardware pricing, which opens up additional funds for software and services spending” (Woodie).

Like IBM, Novell is competing with Microsoft, but rather than pushing its own rival operating system, Novell is contributing to the open-source Linux operating system as an alternative to Microsoft Windows. As Novell's CEO puts it, “We're merely giving the community software and services to make Linux easier for the CIO to use. We contribute to the code, but we're not in charge of the open-source community.”

Although Novell’s focus has shifted more towards the potential of software and services,

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the company announced that it has no intentions to cut out its operating system development. According to the InternetWeek.com website, Chris Stone, Novell Vice Chairman, said that the move to buy Ximian and SUSE Linux “was not intended to replace Novell’s longstanding investment in the NetWare operating system, but rather complement it.” (Montalbano)

Novell believes that open source may not work for every company. But they believe for the companies whom it does help, “acquisition costs, lower total cost of ownership, and expanded hardware and software choice” are the three main ways (Schadler). Because of Novell’s well known name, customers are becoming more interested in using their Linux-based platform. “Large Hardware vendors are also looking to Novell as a partner with strong growth potential” (Smith). Linux is becoming larger and more demanded lately than it has in the past. “In 2003 sales of Linux servers rose 48 percent, while sales of Windows servers grew only 11 percent” (Unlocking the Full Potential of Linux, novell.com).

To increase demand for its products and services centering on Linux, Novell has partnered with vendors including HP, IBM, and Oracle to help customers move their applications to Linux. Novell and others are looking to capitalize on businesses' interest in adopting Linux to reduce costs. “[W]e now also have huge growth in Linux and the operating system market. Customer interest is massive in open source technology and the cost benefits it can mean to their business,” says Novell New Zealand manager Matthew Christie (Wyk). A survey by Forrester Research indicates that 60 percent of large companies have already adopted or plan to adopt open source technology (Novell..Role Open Source).

Novell has been licensing open source technology to companies to run on the NetWare platform and try to make NetWare run more like Linux. In 2002 it established an Open Source Review Board to embrace Linux and its new platform that is not as NetWare dependent. Kris Magnusson, a member of the board said that “Our job is to review all of the open-source activities that take place inside Novell. We also ensure that our open-source activities don't put the company at risk and that we're making sure that whenever it's required and appropriate we give back modifications to the community” (Galli). Novell plans to adopt a lot more open-source code in the future and right now it is mainly focusing on Web developers.

Sharing with the open source community

Novell also hopes to give their customers a larger role in development in the new technology. According to the Server Pipeline website, Novell said it will “contribute both SUSE’s ‘YAST’ (Yet another Setup Tool) Linux systems-management tool and Novell’s iFolder personal storage and filing application to the open source community.” (Greenemeier) These tools make it easier for developers to use Linux and help them develop new innovations to existing open source applications, as well as new applications altogether.

Novell employs several professionals in Linux and open source. Many are significant contributors to open source projects such as the Linux kernel, the Reiser file system,

Have they contributed these yet?

YaST, Mono™, GNOME and KDE desktops, Evolution™, Mozilla and OpenOffice.org (Novell..Why choose).

Novell's contributions of development tools to the open source community are vital to the development of open-source software. “Developer tools are especially well represented, because without open source programming tools, open source software would require proprietary tools to build and maintain it” (Open Source Initiative).

Conclusion

In conclusion, ~~through the use of news and internet articles,~~ it can be seen how and why IBM and Novell are investing in open source technology. These two companies are investing in an open source future because it appears to be the right choice for business, and ~~a main reason is~~ because it is cost effective and efficient. Only time can answer the question of whether or not open source is truly the future of business.

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