It’s no secret that open source software costs less to buy—the software is free, in fact. But until recently, many enterprise datacenter managers considered open source software too risky for mission critical applications, regardless of the price. Organizations often lacked the in-house expertise to deploy the solutions and implement enterprise-class enhancements. But the world of open source has matured so much today that open source software can lower companies’ risk profiles by reducing vendor dependence, resource requirements, and upgrade costs, all while maintaining top performance, reliability, and security.

As a result, it’s now possible to run Infor® LN, the most powerful, flexible ERP solution available for complex manufacturing, on an open source technology stack and gain access to the growing advantages of open source software. Infor LN customers can reduce total costs by up to 80%, while moving up to the latest and most powerful version of the application.

Infor LN users on the open source-based technology stack also now have access to a vast and growing community of expert users and consultants who support major open source solutions, ensuring a level and variety of support options that sometimes eclipse those of proprietary products. Concerns over the supply of expertise to ensure consistent operation and maintenance of open source had prompted many IT managers to avoid the technologies.

Experts agree that open source has become a secure, reliable option for the enterprise and in many cases, a competitive imperative. Even the most conservative IT organizations, which have typically regarded cost and risk mitigation as primary concerns, are deploying open source solutions, even in mission-critical scenarios.
Moving up the software stack

As open source software matures, it is increasingly seen at higher and higher levels in the tech stack, beginning with operating systems, then moving to middleware, and now, to the database tier. That’s the level at which cost savings become most striking. The license fees, maintenance charges, and administrative costs of a proprietary relational database management system (RDBMS) have become so high they have limited growth. Now that open source RDBMS software can effectively supplant proprietary solutions, IT managers can consider switching to open source. As early as 2009, leading DBMS analyst Noel Yuhanna of Forrester Research, said: “Open source databases are mature and capable of supporting at least 80% of enterprise applications.”

It’s easy to understand why IT managers tend to resist adopting a new RDBMS—it’s the foundation of the data infrastructure. Even minor difficulties with that infrastructure can cause major problems throughout the enterprise.

There’s no denying that any enterprise-grade RDBMS system requires significant investments to implement, operate, and maintain. While the largest RDBMS solutions are standards-based, they each have proprietary data types, SQL extensions, semantic conventions, and operational utilities. Application developers use these proprietary features extensively, and they often feel wedded to a selected RDBMS product and vendor because of application and knowledge lock-in. CIOs are understandably resistant to changing vendors—doing so would increase technology risks and reduce developer productivity.

Benefits to ERP customers

The benefits of open source software, already well known to the general user, have extra pertinence to ERP customers. Infor LN has long distinguished itself by allowing customers to use it on any commercial database, i.e. Oracle®, SQL Server, as well as on all of the most widely used commercial operating systems and hardware platforms. But now that it’s possible to run Infor LN entirely on an open source-based tech stack, customers gain an even greater range of benefits, including:

- **Cost savings**—By eliminating costly license and maintenance fees for operating systems, middleware, and databases, companies realize large immediate cost savings.

- **Reduced vendor dependence**—Entrenched incumbent database vendors have enormous leverage over customers and little incentive to negotiate on costs. Now that a compatible open source database offers comparable performance at a vastly lower cost, there’s no reason for a company to bind itself to unfavorable database software contracts.

- **Increased flexibility and innovation**—Companies that operate at multiple sites, especially those that add sites through corporate acquisition, often need to get consistent results from an ERP solution, while running on a different database or operating system at each location. By supporting an open source-based tech stack, Infor LN now gives companies greater deployment flexibility.

It’s not surprising that large database vendors often put a higher priority on advancing their own corporate strategies than on meeting the needs of their customers—it’s a business, after all. But open source technology gives customers a new degree of choice about whether and when to work with a large database vendor or to choose independence with open source technologies.

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Factors driving open source in the data center

Decreasing the cost and complexity of technology would be reason enough for companies to switch to open source solutions, but rapid changes in the business environment make the issue even more pressing. Some of those issues include:

**Big Data**

Some argue that the term “Big Data” is a misnomer—it’s really fast, fragmented data that needs to be addressed holistically in all its variety and diversity. The most promising new approach to harnessing the value of Big Data is to adopt technologies that better match the qualities of today’s heterogeneous, large volume, highly distributed data environment. A great deal of new development regarding Big Data is emerging from the open source community, including Hadoop, Apache, and many others.

To take full advantage of Big Data, companies need flexible integration at scale and technologies suited for collecting, sharing, storing, and analyzing data of many different types from many different sources. That, in turn, allows critical, large volume data to be used by many different kinds of systems in a wide variety of ways, including:

- Forecasting
- Cost analysis
- Budgeting
- Field service
- Advanced analytics and reporting

When data originates in hundreds of forms from billions of sources, it needs to be analyzed as an intelligent whole without standardizing it so much that the original meaning is discarded. The flexibility of open source solutions can help companies generate more useful, actionable information and drive better results. The lower cost of open source also allows companies to divert budget to strategic data initiatives.

**Cloud**

Cloud technologies offer such easy deployment, broad scale, and low cost that the preponderance of new technologies now rely on them to one degree or another. Open source operating systems and databases are key elements of many cloud solutions, because of their low cost, high reliability, and absence of license restrictions. For ERP customers, cloud technologies can also offer the flexibility of hybrid deployment, combining on-premise instances with cloud-based implementation to help companies that have many locations dispersed over a wide geographic area. Since many of the licensing and implementation issues typical to commercial databases are difficult to manage and provide no benefit in the cloud environment, open source technologies make far more sense from a practical perspective.
Virtualization

Open source virtualization technologies have matured in parallel with open source database technologies. Between open source KVM and the virtualization capabilities built into the Linux kernel, enterprise users gain a whole new range of powerful advantages, including:

- **Improved reliability**—Virtualization helps prevent system crashes due to common problems such as device driver conflicts or configuration errors.
- **Load balancing**—When a virtual machine is over utilizing server resources, it’s helpful to be able to move that process to an underutilized server. Virtualization makes it possible to shift applications rapidly between different physical machines.
- **Disaster recovery**—The ability to rapidly re-image a virtual machine on a different physical server can be a lifesaver in a disaster recovery scenario. There’s no reason to take operational and financial risks due to unexpected events when virtualization software can reduce those risks.
- **Server consolidation**—Companies can use virtual machines to run multiple server-based applications on a single physical machine. It’s not uncommon to achieve 10 to 1 virtual to physical machine consolidation, while accommodating varying technical specifications and operating environments, including legacy application and old OS configurations.

Also, the ability to run software in a virtual machine has value in an on-premise scenario, as well as in the cloud. That fact offers increased flexibility for firms that need to run the same application on premise at some locations but in the cloud for others.

An open source database alternative—Postgres

Until now, a leading reason to rely on a proprietary database solution was to reduce the risk resulting from the complexity associated with implementing, running, and administering the kinds of sophisticated, high performance databases required for enterprise level tasks, especially in support of ERP solutions. The cost was high, but it seemed worthwhile in light of the perceived risk. IT managers could also take comfort in the idea that a large database vendor could provide extensive support, and customers also had access to large pool of expertise available to administer the software.

PostgreSQL, also known as Postgres, has emerged as the leading open source relational database alternative to proprietary vendors. Some of the world’s largest brands have deployed PostgreSQL with enterprise-class performance, security, and manageability enhancements. IT managers can now take comfort in the fact that a top-tier open source RDBMS solution enjoys the support of large, deeply experienced software vendors and service providers, as well as the support of a growing population of independent database experts—who already have the experience to keep an open source RDBMS implementation running at top performance.

With a strong, independent community driving rapid innovation, PostgreSQL is widely regarded as the most mature open source RDBMS available, with enterprise-class features that compare favorably with Oracle, DB2, or SQL Server. Experienced Oracle database administrators need no retraining to learn to work with PostgreSQL. PostgreSQL is SQL-standards based and, having been originally designed from the same research that produced Oracle, is sufficiently comparable to Oracle that many DBA skills transfer.
An enhancement to Postgres, called Postgres Plus Advanced Server from EnterpriseDB, the largest Postgres software and services provider, also adds Oracle compatibility to simplify migration from Oracle to Postgres to an unprecedented degree. Users have completed database migrations in hours or a couple of days. Postgres is a highly extensible database, designed to support many different plug-ins such as procedural languages (e.g. PL/Java, C/C++, Python and more), index types, and authentication schemes.

This solution provides popular Oracle data types and catalog views and a procedural language that executes Oracle PL/SQL and understands Oracle SQL extensions and syntax. As a result, organizations can migrate from Oracle to Postgres and continue to utilize much of their investment in applications, tools, and training.

Infor LN open source partners

To bring Infor LN customers the benefits of the open source tech stack, Infor has partnered with two of the most widely respected firms in the open source community, firms that are known for expertise and reliability. They are:

Red Hat

Red Hat is the world’s leading provider of open source software solutions, using a community-powered approach to reliable and high-performing cloud, Linux, middleware, storage, and virtualization technologies. Red Hat also offers award-winning support, training, and consulting services. As the connective hub in a global network of enterprises, partners, and open source communities, Red Hat helps create relevant, innovative technologies that liberate resources for growth and prepare customers for the future of IT. Learn more at www.redhat.com.

EnterpriseDB

The largest worldwide provider of Postgres software and services, EnterpriseDB allows enterprises to successfully deploy Postgres to reduce their reliance on costly proprietary solutions. With powerful performance and security enhancements for PostgreSQL, sophisticated management tools for global deployments, and Oracle compatibility, EnterpriseDB software supports both mission and non-mission critical enterprise applications. More than 2,500 enterprises, governments, and other organizations worldwide use EnterpriseDB software, support, training and professional services.

By combining the efforts of these three firms, Infor LN customers who choose to move or upgrade their Infor LN implementation to an open source tech stack can count on global support, cutting-edge expertise, and top performance.

Conclusion

Open source technology has now reached the stage where many Infor LN customers would benefit from migrating their ERP infrastructure to an open source tech stack. With dramatically lower running costs—in many cases more than 80% lower—and performance comparable to expensive proprietary solutions, Infor LN Open Source can offer increased agility, reduced risk, and a rapid payback. Now that many of the world’s largest and most successful companies trust open source for their most mission-critical functions, it’s time for customers of all ERP solutions to consider Infor LN Open Source as a valuable alternative to entirely proprietary solutions.
About Infor

Infor is fundamentally changing the way information is published and consumed in the enterprise, helping 70,000 customers in more than 200 countries and territories improve operations, drive growth, and quickly adapt to changes in business demands. To learn more about Infor, please visit www.infor.com.

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