

Your Mission-critical  
Applications on SUSE®  
Linux Enterprise



**Novell.**

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# Mission-critical Applications



**“SUSE Linux Enterprise Server was incredibly easy to install and configure. Linux also gives us the flexibility to run on low-cost hardware, configure it any way we want and avoid big hardware and software contracts. Running Linux on Intel-based machines has reduced our dependence on proprietary hardware vendors. Users in our stores have also noticed a significant performance improvement with zero unexpected downtime in the past year.”**

**Edwin Idema**  
Manager of Operations  
Etos

Applications are the lifeblood of today’s businesses. Your company’s success depends on applications—whether they are for enterprise resource management, supply chain management, customer relationship management, or any of the other mission-critical functions that fuel your success.

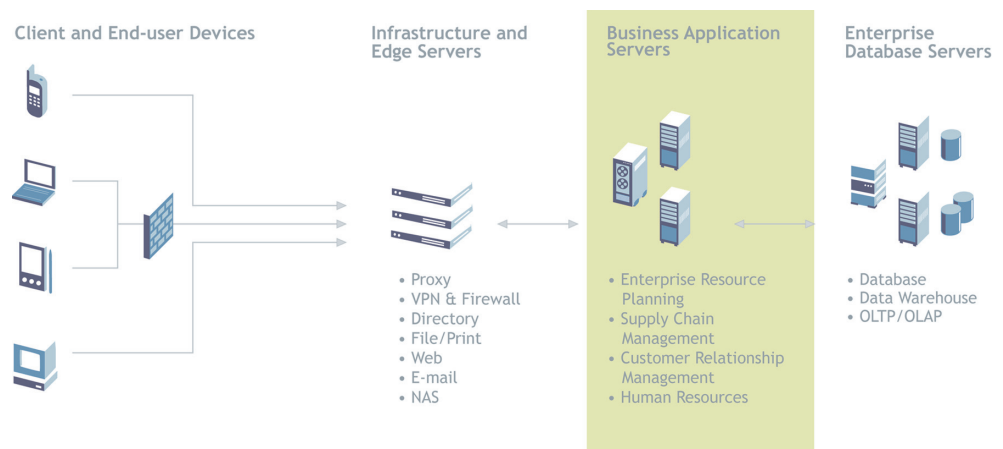
If your enterprise is like most, you have a multi-year investment in a number of key applications. Many of your IT decisions are made with the goal of ensuring that they continue to run reliably and securely. Historically, to achieve the performance and scalability required by many of these applications, organizations deployed them on UNIX\*. Unfortunately, the reliability and security of UNIX deployments came at a high price in terms of software and hardware acquisition and maintenance costs. In today’s enterprise, UNIX systems have among the highest cost of ownership relative to their performance.

With the maturation of Linux\* into an enterprise-class operating system, IT executives now have a better alternative that lowers software licensing costs and allows deployment on

commercial off-the-shelf (COTS) server platforms. Linux has been successfully deployed in enterprises of all sizes around the world, on all manner of enterprise topologies, including server farms, clusters and grid environments. For new enterprise application deployments, Linux is often the preferred operating system. It is a proven choice for mission-critical workloads due to its reliability, security and scalability.

Running Linux on servers based on COTS Intel® architecture delivers mainframe-class reliability and scalable performance without compromise and at a fraction of the cost.

Today, Linux is supported for most major commercial applications, including those from vendors such as SAP\*, Oracle\* and IBM\*, as well as hundreds of others. For many major software creators, Linux has become the reference platform for database development; this means that new releases are developed first for Linux and then ported to other platforms. In addition, many internal IT organizations are now deploying their application development environments on



**Figure 1.** Linux Deployment in the Enterprise

Linux because of the flexibility and cost savings Linux offers on COTS hardware.

It's no surprise that because of the expenses associated with maintaining UNIX deployments, savvy IT directors everywhere are adopting Linux on low-cost, enterprise-ready, multi-core, architecture-based servers from Intel. By migrating their application infrastructure to Linux systems, IT directors get the levels of performance, reliability, scalability, and security they need at a much lower cost. Savings of up to 80 percent for hardware, maintenance and software expenses are not uncommon.

In many cases, the effort involved with switching to Linux on Intel architecture is trivial, because most software vendors now deliver Linux versions of their applications. For specialized in-house or heavily customized applications, the similarity of Linux to UNIX helps to reduce the complexity of application porting. And the skill set needed to move applications from UNIX to Linux has become mainstream, making qualified technical staff and consultants widely available.

Many companies are now considering a refresh of their ERP and similar systems. As you consider this type of refresh, it is also a good time to examine the underlying operating system and hardware. You can save significant money on both software and hardware by switching to SUSE® Linux Enterprise Server running on servers based on Intel® Xeon® or Itanium® processors.

If you switch to SUSE Linux Enterprise Server from Novell, you'll be able to replace your expensive infrastructure with rugged enterprise-class COTS hardware running a rock-solid Linux operating system that delivers industry-leading reliability, scalability and security. Best of all, SUSE Linux Enterprise Server is backed by Novell® and optimized for Intel multi-core processors through a long-standing engineering relationship between the two companies. With global scale and a wealth

of enterprise experience, this combination of software and hardware has an established track record of success in the data center.

## Run Your Applications on SUSE Linux Enterprise Server

Backed by the extensive Novell support infrastructure and partner network, SUSE Linux Enterprise Server is a secure, reliable platform for open source computing in the enterprise. SUSE Linux Enterprise Server offers unmatched performance and scalability, comprehensive open source functionality, and support for a broad range of hardware platforms and software applications. SUSE Linux Enterprise Server also provides open application programming interfaces (APIs) and other development tools that simplify Linux integration and customization. As a result, organizations can lower operational costs across servers, increase computing utilization and improve business agility.

Servers with Intel Xeon and Itanium processors are power-efficient workhorses that bring out the best of SUSE Linux Enterprise Server in your data center. Enormous performance headroom lets you support enterprise workloads with fewer servers, saving on initial hardware costs, supporting infrastructure, and ongoing operational costs. The ability to squeeze more work out of every watt of power builds continuing cost-of-ownership advantages over the long haul.

SUSE Linux Enterprise Server offers rich software development capabilities through built-in network services and protocols, including CUPS, DNS, DHCP, IMAP, NTP, SLP, Postfix, PXE, Proxy, Samba, SNMP, SMTP and many others. It also includes open source application and database services such as Apache Tomcat, MySQL\* and PostgreSQL.

## Improve Data Security

Applications drive your enterprise. That means security and data privacy are critical to any operating system that you choose.

## What Will I Save?

Because every organization is different, it's difficult to predict exact expense reductions or ROI that will result from a Linux implementation. However, an August 2005 study from the Robert Francis Group shows that migrating a UNIX database solution to Linux on x86 machines can reduce hardware costs by up to 51 percent and reduce software costs by up to 62 percent. When comparing a Linux solution on x86 hardware to Microsoft Windows on x86, the same study showed that Linux offers a 43 percent hardware savings and a 45 percent software savings over Windows.

### Robert Frances Group

*TCO for Application Servers:  
Comparing Linux with Windows  
and Solaris  
August 2005*

SUSE Linux Enterprise Server from Novell is optimized for Intel® multi-core architecture. With global scale and a wealth of enterprise experience, this combination of software and hardware has an established track record of success in the data center.



**“Based on our testing, we decided to move business-critical applications to Linux on Intel. The end users are absolutely astounded at the difference in speed. What once were long-running jobs are now done in just a couple of minutes. In fact, our operators came to us saying that the jobs must have aborted for it to run that fast. But no, it’s just that Intel dual-core is that much faster.”**

**Geoff Shorter**  
IT Infrastructure Manager  
The Charlotte Observer

<sup>1</sup> Intel® Virtualization Technology requires a computer system with a processor, chipset, BIOS, virtual machine monitor (VMM) and applications enabled for virtualization technology. Functionality, performance or other virtualization technology benefits will vary depending on hardware and software configurations. Virtualization technology-enabled BIOS and VMM applications are currently in development.

## Lower Management Costs

With an array of easy-to-use management features, SUSE Linux Enterprise Server is simple to deploy, configure and maintain across your enterprise.

The acclaimed YaST management toolset—a comprehensive installation, configuration and administration suite—gives administrators a common foundation for managing not only operating system components, but also accompanying services and third-party applications. Novell ZENworks® Linux Management complements YaST by enabling IT administrators to centrally control how they deploy and update systems inside the firewall. With YaST and ZENworks Linux Management, IT professionals can easily install, configure, update, secure and manage SUSE Linux Enterprise Server.

## Built for Virtualization

With SUSE Linux Enterprise, Novell offers the first enterprise-class Linux platform to support Xen\* 3.0 for virtualization. The Xen hypervisor and management tools ship as part of SUSE Linux Enterprise Server, and the embedded virtualization features in Intel processors let you take maximum advantage of them. With Xen, you can run multiple network infrastructure applications on the same piece of hardware with minimal performance impact, getting optimal benefit from the latest Intel multi-core processors.

Intel® Virtualization Technology (Intel® VT)<sup>1</sup> offers IT the flexibility to make more efficient use of the data center, offering peak load responsiveness for newly virtualized applications. By removing the need for resource-intensive, software-based translation between the Xen hypervisor and the server hardware, Intel VT helps you optimize server utilization, reduce server sprawl and lower costs.

Novell is deeply committed to ensuring the security of its products and services. As part of that commitment, Novell strongly supports the Common Criteria Evaluation and Validation Scheme (CCEVS), which creates a reliable, internationally recognized way for customers to evaluate and gain confidence in the security of IT products. By defining clear, robust security standards and establishing an independent security evaluation process, CCEVS promotes the benefits and efficiencies that secure computing environments can provide to individuals, businesses, and governments. SUSE Linux Enterprise Server is certified to be compliant with Common Criteria (CC) Controlled Access Protection Profile (CAPP) at Evaluation Assurance Level 4+ (EAL4+).

Moreover, SUSE Linux Enterprise Server builds on the inherent security of Linux by integrating a wide range of essential security capabilities, including encryption, firewalls, certificate creation and management, authentication, access control, and proxy management.

You can further secure your Linux deployments with AppArmor® an effective and easy-to-use Linux application security system included with SUSE Linux Enterprise Server. This open source offering protects the operating system and applications from the harmful effects of internal or external attacks, malicious applications, and viruses. As a result, you can protect mission-critical data, reduce system administration costs, and help ensure compliance with government regulations.

## Choose Novell for Linux

When you choose the SUSE Linux Enterprise platform, you get an extraordinarily well-engineered Linux distribution from a vendor who can deliver a global ecosystem to surround it. When you choose Novell, you get:

- *Technical support available 24x7x365 from hundreds of support technicians*
- *A consulting organization and global network of partners to support you from design through implementation*
- *Training that can bring your IT staff up-to-speed on the latest technologies)*

Most of the leading ISVs provide software applications that run on SUSE Linux Enterprise Server:

- Arkeia
- BEA
- BMC Software
- Computer Associates
- Egenera
- IBM Cognos
- IBM Lotus
- IBM Tivoli
- IBM WebSphere
- Legato
- Lutris
- Metrowerks
- MySQL
- Oracle
- PolyServe
- Progress Software
- Quadratec
- SAP
- Sendmail
- Software AG
- SteelEye
- SugarCRM
- Sybase
- Symantec/Veritas
- Teamware
- TIBCO

- *Indemnification to give you peace of mind*
- *Applies the appropriate business rules lists Austin as Wilkes' work location.)*

Novell has more than a 20-year history of delivering the support and services that an enterprise expects from its vendor. When you make the move to Linux, it's important to select a vendor that will be your partner every step of the way.

Contact us today to learn more. Visit [www.novell.com/linux](http://www.novell.com/linux) or call 1-800-529-3400 to set up a meeting with a Novell sales representative.

- Trend Micro
- Virtual Iron
- VMware

To see if your application runs on SUSE Linux Enterprise, visit: [www.novell.com/partnerguid](http://www.novell.com/partnerguid)

### Supported Hardware Vendors

- AMD
- Dell
- EMC
- Fujitsu Siemens Computers
- HP
- IBM
- Network Appliance
- SGI
- SUN
- Unisys

### Supported Chip Architectures

- AMD 64
- Dual and multi-core processors
- IBM POWER
- IBM S/390
- IBM System z
- Intel Itanium
- Intel64
- x86 32-bit

## When Is the Best Time to Move?

The sooner you move to Linux on Intel architecture, the sooner you'll enjoy the savings that these deployments can bring to your organization. However, for most organizations, the logical time to make the move to Linux is during a major IT milestone. Typically, an operating system upgrade makes the most sense at the time of a planned hardware upgrade, a renewal of software or hardware maintenance, or when a major software application is upgraded. Because hardware purchase and maintenance costs are often the largest contributors to an IT organization's expenses, migrating to Linux on servers with the latest Intel Xeon or Itanium processors may deliver the most savings.

### Why Linux? Why Now?

Linux has become the operating system of choice for deploying mission-critical applications in the enterprise. Highly scalable and extremely secure, Linux delivers UNIX-like performance, scalability, and reliability without the need to purchase and maintain expensive and specialized hardware. Today's multi-core Intel processors deliver mainframe-class reliability and scalable performance that are unprecedented from COTS servers. Running Linux on Intel architecture delivers superior results at mainstream prices.

[www.novell.com](http://www.novell.com)



Contact your local Novell Solutions Provider, or call Novell at:

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1 801 861 1349 Worldwide  
1 801 861 8473 Facsimile

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