

Novell & Ness

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Novell.

Free Software - תוכנה חופשית

Think - *free speech* or *free trade* , not free beer !

It's a matter of *freedom*, not price.

Definition : a program is Free Software only when there are 4 Freedoms for the public :

1. Freedom to run the program, for any purpose
2. Freedom to study how the program works, and adapt it to your needs
3. Freedom to redistribute copies
4. Freedom to improve the program, and *release* your improvements

- open source קוד פתוח

- Free Redistribution
- Source Code
- Derived Works
- Integrity of The Author's Source Code
- No Discrimination Against Persons or Groups
- No Discrimination Against Fields of Endeavor
- Distribution of License
- License Must Not Be Specific to a Product
- The License Must Not Restrict Other Software
- The License must be technology-neutral



SUSE LINUX Enterprise Server 9 Overview

A secure, reliable platform for Linux and open-source computing in the enterprise:

- **Unmatched manageability** lowers the cost of ownership
- **Strongest security capabilities** ensures data privacy
- **Industry leading scalability and reliability** enables mission-critical deployments
- **Robust application support** for third party and line of business applications
- **Backed by Novell** empowering businesses to deploy Linux with confidence





Linux and Open Source Leadership: Novell®, SUSE® and Ximian®



Greatest number of dedicated engineers working on Linux-related and open source projects

#1 Contributor to GNOME

#1 Contributor and maintainer of KDE

#1 Contributor and maintainer of Mono™

#1 Contributor and maintainer of Ximian Evolution®

#2 Contributor to Mozilla* and OpenOffice*

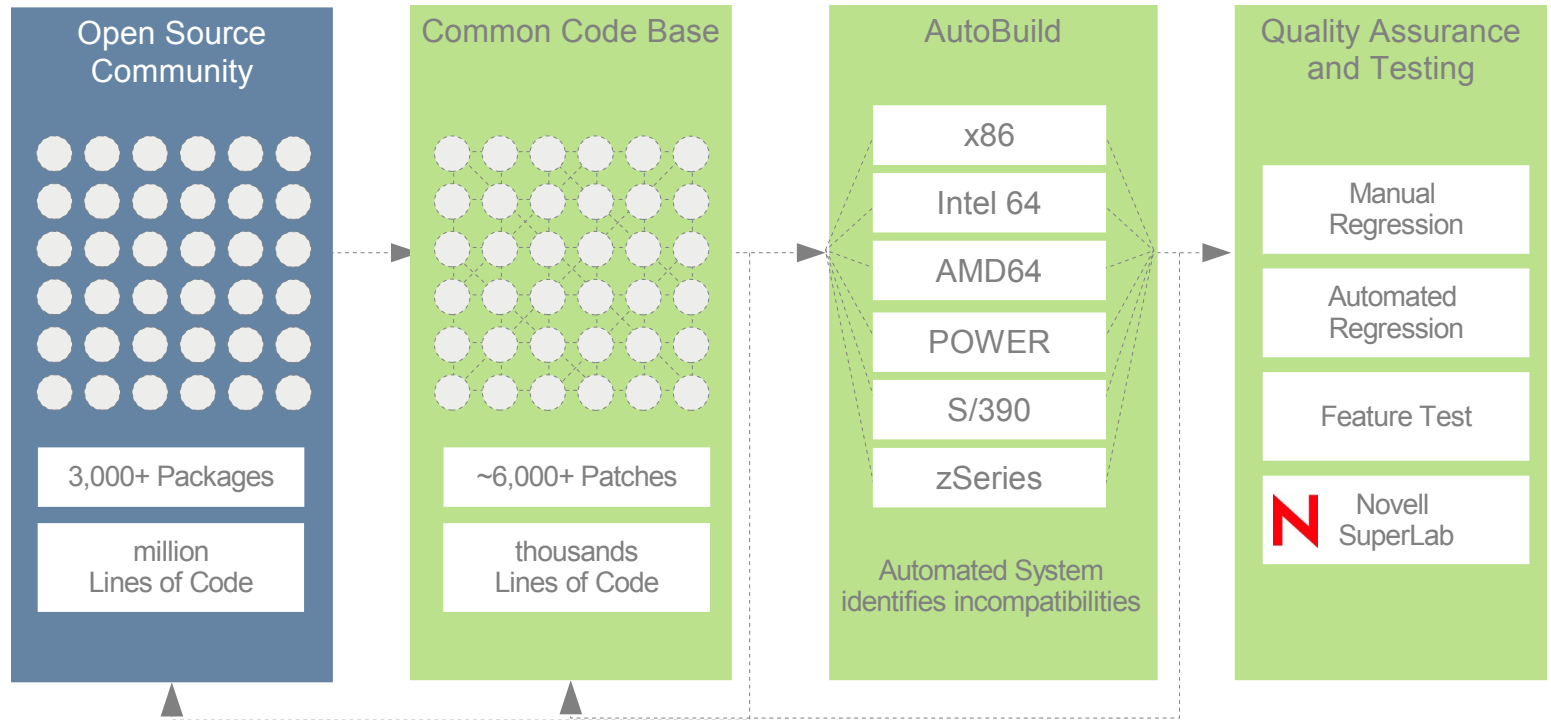
Key contributors to Linux* kernel

OSDL Board; GNOME board representation

Apache Foundation committee member



SUSE LINUX Development Process



Competition

SUSE® LINUX Enterprise Server 9

VS.

*
Red Hat Enterprise Linux 3/4

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Kernel 2.6

Virtualization and Performance

- User Mode Linux / UML
- SUSE-driven kernel enhancements and patches
- Enhanced scalability features lead to performance gains

Flexible and pluggable I/O schedulers

- Four available schedulers: CFQ, NOOP, Deadline or Anticipatory schedulers fitting best your needs

Various I/O Characteristics

- Raw I/O and Async I/O to provide e.g. high bandwidth (used e.g. for databases)
- Multipath I/O: multiple paths to storage increases data throughput



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UML Offers Native Virtualization

User Mode Linux (UML) enables system administrators to run multiple instances of Linux* on a single physical machine

- Enables more efficient use of existing infrastructure
- Works for sandboxing, development & testing
- Lowers costs – fewer people, less hardware, less space
- Compartmentalize users into own environments
- Provide extra systems in labs, testing environments or hosting providers
- Serves as an excellent secondary firewall

Only available on SUSE® LINUX Enterprise Server 9

- Red Hat Enterprise Linux 3.0 currently cannot process UML





SuSE Support module

Installation Support
include 145 issues
*non-change or
recompiled package

Premium Service:
24X7X365
*support Red Hat
Enterprise Server

Consulting
Support



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תמיכה: המודל של נובל

- לכל רשיון קיים instalation support , לרמת השרתים מדובר בשנה, לרמת התחנות 60-90 יום.
- בתמיכה זו כלולים נושאי התקנה וקונפיגורציה על שורה של רכיבים בתוך המערכת.
- בנוסף לכך קיימות מספר תוכניות תמיכה במוסיפות על הנושאים הנתמכים בתמיכה זו.



- קיימות מספר תוכניות תמיכה, כל התוכנית מגיעות לרמה של 24X7 עם זמן תגובה של עד 4 שעות.
1. תוכנית premium לכל מוצרי נובל
 2. תוכנית SBS במידה ואני כלקוח צריך רק תמיכה בלינוקס.
 3. תוכנית "תמיכת לינוקס" למצבים בהם אני צריך תמיכה לרמה של שרת בודד או מספר מצומצם של שרתים.
 4. תוכנית לבקרה ותמיכה מרחוק.

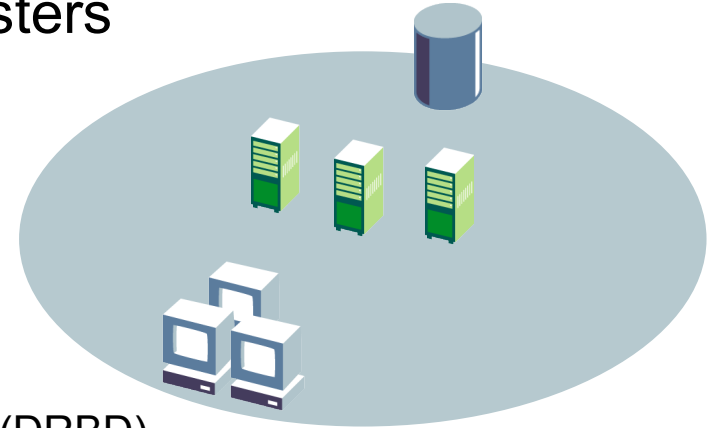


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High Availability Features

Fail-over and load balancing clusters

- Heartbeat infrastructure
- Hotplug services
- Automated fail-over
- Cluster IP Alias
- Linux Virtual Server
- Multipath I/O
- Distributed Replicated Block Device (DRBD)
- Enterprise Volume Manager (EVMS)



Database clusters

- Certified base for IBM DB2 ICE (Integrated Cluster Environment)
- Certified base for Oracle including Cluster Filesystem (OCF)



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Manageability via YaST

Easy to deploy, manage, secure and update Linux

- YaST for configuration of the OS
- YaST for configuration of services (e.g., Mail-, File&Print Server)
- SLP (service location protocol) for automated client configuration
- YOU/YaST Online updates for software updates
- AutoYaST for zero-administration deployment
- Open APIs
- CIM Enabled



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AutoYaST Makes Life Easier

Automates the process of installing highly replicable server loads

- Easy to use graphical admin tool via YaST
- Clone current system config to speed control file creation
- Create various classes to address multiple types of hardware
- Import Kickstart scripts, thus speeding migration
- Fully integrated into YaST
- Control file based on XML
- Perform back-up and system restore during install

Kickstart in Red Hat* Enterprise Linux 3.0 currently does not offer any similar features

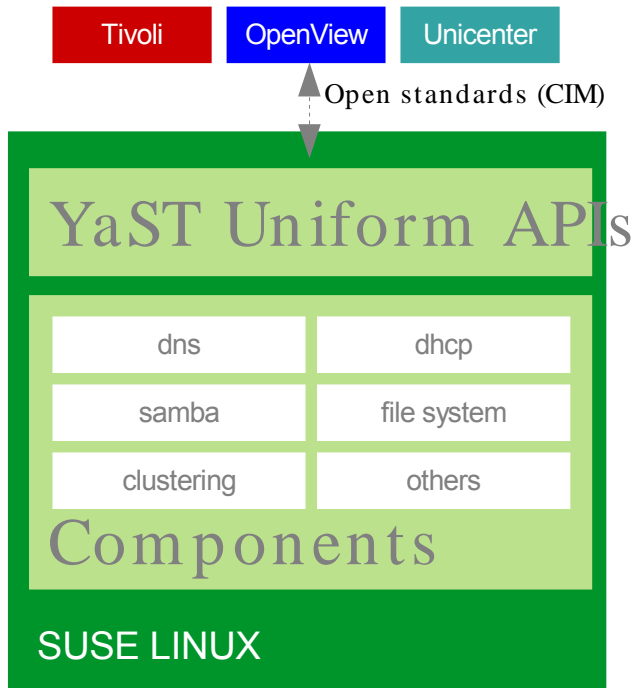


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CIM Enabled

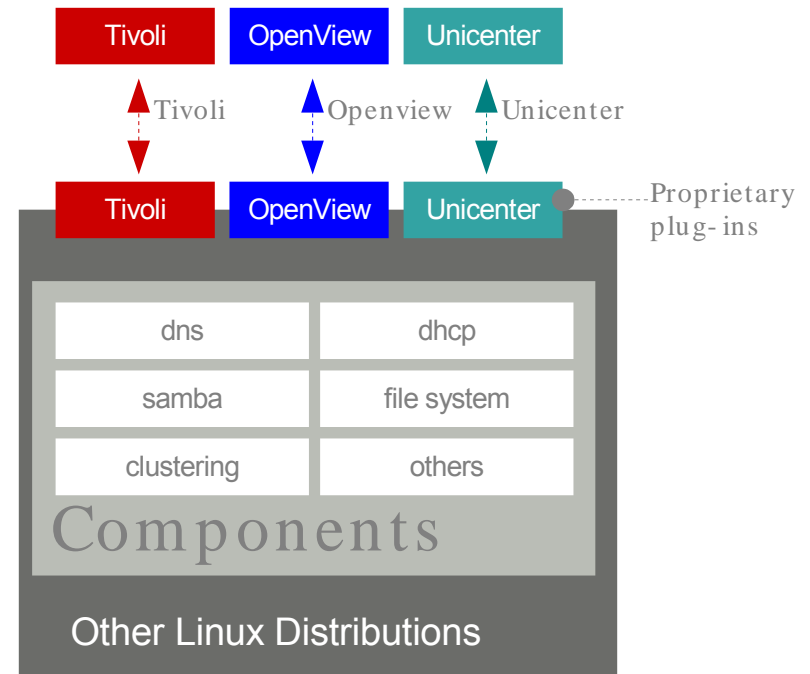
SUSE LINUX Enterprise Server

- Compatible with any CIM system
- Flexible architecture
- Eases IT change



Other Linux Distributions

- Proprietary solutions
- Brittle architecture
- Implementation-specific APIs



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Advanced Management Features

Enterprise Volume Management System (EVMS)

- Cross-node storage management
- Supports resizing and alteration at runtime

Class-based kernel resource management (CKRM)

- Mainframe-like resource allocation and management
- Co-developed with IBM

SLP - Service Location Protocol

- Client and server interact automatically to set configuration data

Simple Network Management Protocol (SNMP)

- Centralize management of network workstation and servers, routers, bridges
- Widely accepted standard



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CKRM Gives You More Control

Class-based Kernel Resource Management offers mainframe-like resource allocation & management

- Allows system administrators to provide differentiated service at a user or job level
- Mitigates denial of service attacks
- Increases the accuracy of resource consumption metering
- Stops rogue users from taking over all system resources

Background

- Co-developed with IBM*
- Requires 2.6 kernel
- Currently not available on Red Hat* Enterprise Linux 3.0



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Security Capabilities

- Virtual Private Networking
- Rich Access control lists (ACL)
- Secure network connections with 128-Bit SSL, IPSec, SSH/Secure Shell, Kerberos 5 auth. ...
- Robust certificate management
- Built-in monitoring
 - File manipulation monitoring
 - Intrusion Detection
 - Linux Audit System (LAuS)
- Support for encrypted file system
- SUSE LINUX Firewall and Proxy Suite
 - configuration frontend for security related rules and NAT



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EAL Certification

SUSE LINUX Enterprise Server 8 is the first EAL3+ certified Linux platform

- EAL3+ is an internationally accepted security certification standard important for security sensitive markets (e.g. government, finance sector)

“Evaluation Assurance Level” is documented by “Common Criteria” ISO standard (ISO 15408)

- Audit subsystem for SLES
- security evaluated development processes

SLES 9 meets all of the requirements for EAL4+

- Certification on track



Common Criteria

Benefits to Customers

- Backing of independent, objective certification body
- Worldwide acceptance by 14 nations
- Easy comparison and measurement of functionality and procedure background
- Linux buyer's job insurance



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Built-In Application Services

File and print services

- samba 3, NFS, CUPS
- supporting Linux, UNIX, Windows and Macintosh clients
- OpenAFS



E-Mail Services

- Postfix, IMAP, etc.



Databases

- MySQL
- PostgreSQL



Middleware services

- Apache Web Server and PHP Support
- **Java, Tomcat, JBoss**



- DNS
- DHCP
- OpenLDAP
- NTP
- SLP
- Ipv4, Ipv6
- SNMP
- Proxy
- FTP
- PXE



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Technology Advantages Over Red Hat

	RedHat RHES 3	Novell SLES 9
# of CPUs	16	512
# of Devices	65,536	4,294,967,296
SCSI Disks	256	32,768
File System	2 TB	16 TB
PIDs	32,768	2,147,483,648



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Technology Advantages Over Red Hat

- Lacks large-scale systems expertise and experience
- Different code base across products more difficult to manage
- No uniform management capabilities
- RHN Expensive and difficult to maintain for system updates
- Inadequate security capabilities

- SUSE LINUX the undisputed leader in 64-bit and mainframe Linux
- Common code base across 7 platforms
- Open, management layer across the OS and services
- ZENworks offers much lower TCO
- Strongest security capabilities in the industry



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Business Advantages Over Red Hat

- Lacks enterprise scale
- Bundled support licensing results in vendor lock-in
- A Linux-only company
- Warranty protection

- A global partner for enterprise support
- Flexible technical support options
- A company that provides and supports cross-platform solutions
- Indemnification



Linux with Novell®: Value-Added Software Up the Stack



Why Choose SUSE® LINUX?

SUSE LINUX Enterprise Server 9 delivers a robust, enterprise-ready OS:

- First enterprise-class Linux* built on 2.6 kernel
- Industry-leading performance, scalability and clustering capabilities for large-scale Linux deployments
- Received the highest level of security and operations certification ever reached in the Linux market, Common Criteria Evaluation Assurance Level (EAL) 3+
- Offers the industry's most comprehensive installation, updating and monitoring services
- Includes core open source functionality, support for 3rd party applications and tools for delivering applications on Linux
- Unique 5-suite testing in a large-scale setting covers thousands of individual tests and ensures product quality



Why Choose Novell® for Linux?

Novell delivers a complete Linux ecosystem

- More than 800 Linux-trained support personnel around the world, available 24x7x365
- Cross-platform support for Linux*, NetWare®, Windows* & UNIX*
- Defined methodology and support to assist with migration from proprietary operating systems
- Training options developed for everyone involved in an organization -- end-user to developers to IT help desk support
- Aggressive movement of our own IT infrastructure to Linux in the datacenter and on every employee's desktop
- An indemnification program to protect your Linux investment

A global company with more than \$1 billion in cash and 20+ years of delivering enterprise-class software, services and support.



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An Extensive Partner Universe

Application Support



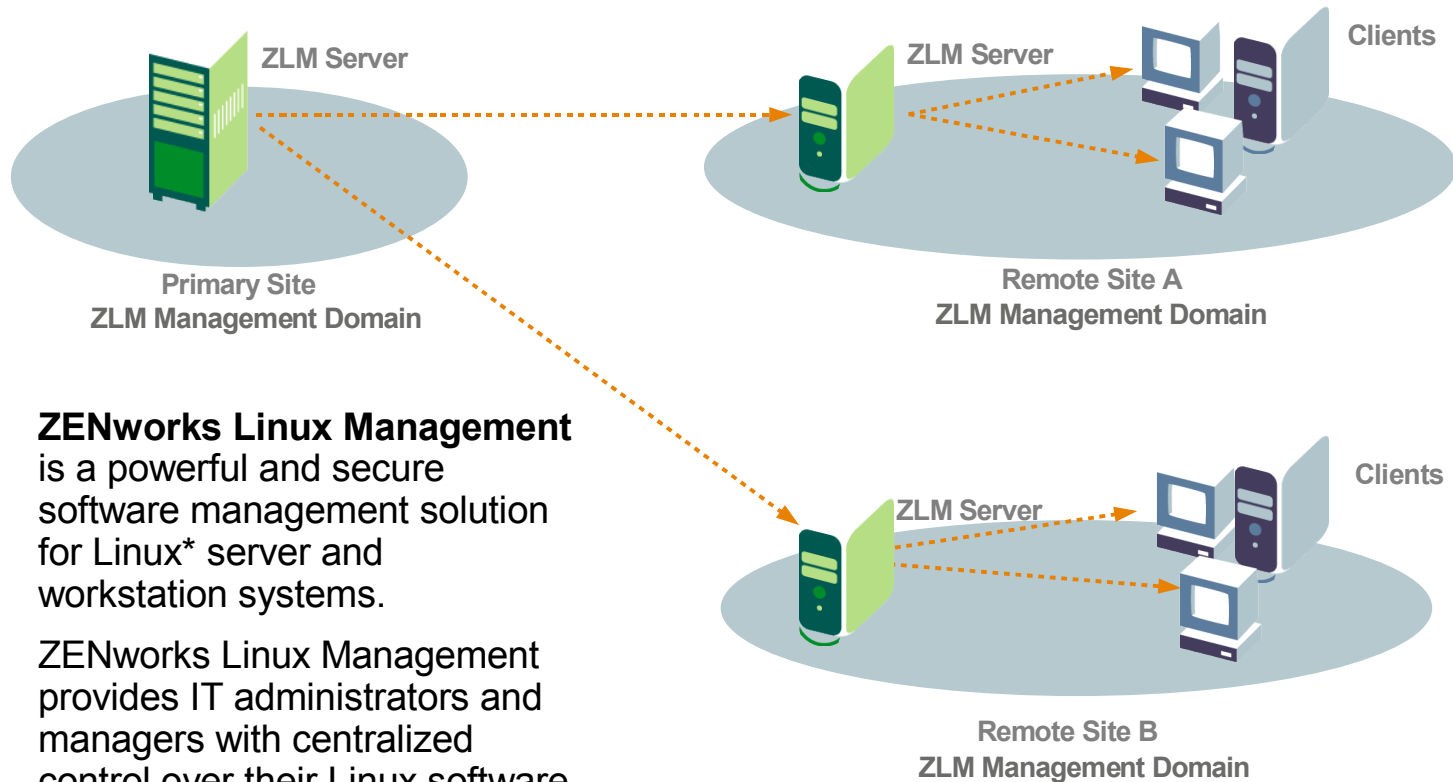
Hardware Support



Linux with Novell®: Value-Added Software Up the Stack



Novell® ZENworks® Linux Management



ZENworks Linux Management is a powerful and secure software management solution for Linux* server and workstation systems.

ZENworks Linux Management provides IT administrators and managers with centralized control over their Linux software configurations across their organization.



ZENworks® Linux Management: Better to Buy Than Build

-  Flexibility
ZENworks Linux Management is designed to change with your business. No need for a “redesign”
-  Keep up with RPM
We have a team dedicated to keeping up with the state-of-the-art in software management
-  Lower Cost
Free up support resources to work on moving business forward, not just maintaining it
-  Better Scalability
Can administer any Linux* machine on your network - not just your departments. Flexible and scalable
-  Multiple Administrators
ZENworks Linux Management lets you assign discrete administrators to either channel (software) or group management
-  Free Software
Many parts of ZENworks Linux Management are free software, other parts are easily incorporated into your own scripts
-  Multiple Platforms
ZENworks Linux Management can handle many types of systems, not just servers (or desktops)



ZENworks® Linux Management is Superior to the Red Hat Network

-  Lower Cost Save 45% on a deployment of 1000 systems with a ZENworks Linux Management subscription vs. a Red Hat* Network subscription model ***
-  Ease of Install 30 Minute Server install vs. Professional Services
-  Desktop and Server Options Users can update their own systems with Red Carpet Client in addition to unattended operation
-  Better Scalability ZENworks Linux Management client-side dependency analysis and resolution minimizes server overhead
-  Broad Linux Support ZENworks Linux Management supports Red Hat, SUSE®, Mandrake*, Debian* and more
-  Low Cost Database Architecture Red Hat Network Satellite and Proxy requires an Oracle* Software License
-  Customizable Channels Out-of-the-Box organization for internal software standards – no professional services required

*** Based on available MSRP data and known discounts

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Additional Open Enterprise Server Benefits



Simplified Management

- Browser-based management
- Integrated management of open source components (Apache farm management)
- Manage mixed environments



Enhanced Security

- Role-based identity management—eDirectory™
- Identity integration
- NMAS® (smart cards, certificates, biometrics)
- Granular file permissions



Scale Linux* for the Enterprise Customer

- Clustering
- Business continuance
- Easily support thousands of users

Novell®