



IBM eServer J iSeries J

The Power of Linux on iSeries

Product Update

iSeries Customers

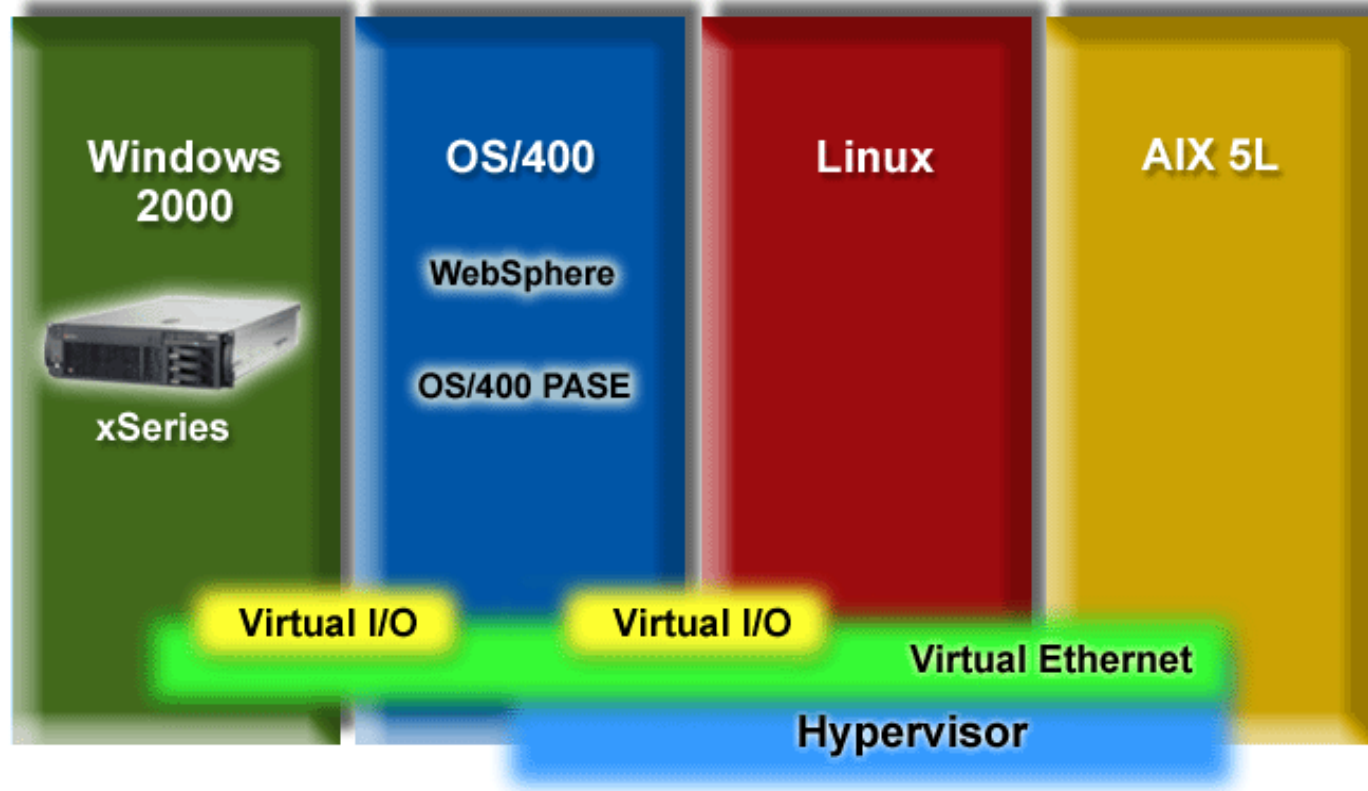
90+% of iSeries Customers Have Windows Servers

84% of iSeries Customers Have Less than 20 NT Servers

	% of Small Customers	% of Medium Customers	% of Large Customers
Windows	94	91	87
Linux	30	17	12
AIX	20	12	22
NetWare	9	23	27
HP-UX	5	5	38
Sun Solaris	8	8	23
SCO UnixWare	10	5	4

# of NT Servers	% of Customers
1-5	46
6-10	25
11-20	14
21-200	14
201+	1

iSeries Server Consolidation



iSeries offers application flexibility

iSeries innovative technology can lower cost of management

iSeries makes enterprise IT management simple

*Statement of Direction: This presentation contains IBM plans and directions. Such plans are subject to change without notice.

The Linux Uprising

Oct 21, 2002: *NewForge*
[Wall Street](#) Leans toward Linux

Feb 18, 2003: *Financial Times*
 Linux takes on the big boys.
[Alternative Operating System](#)

Apr 1, 2003: *SD Times*
 Linux Closer To Desktops in

May 28, 2003:
 City of Munich moves to Linux
[Government](#)



Why Linux*

1. Initial Price
2. Reliability/Availability
3. Issues with Microsoft Licensing
4. Ongoing Cost of Operations
5. Availability of Applications
6. Open Source Model
7. Linux features and functions
8. Reduce dependence on Current OS vendors

Windows Users Speak Out

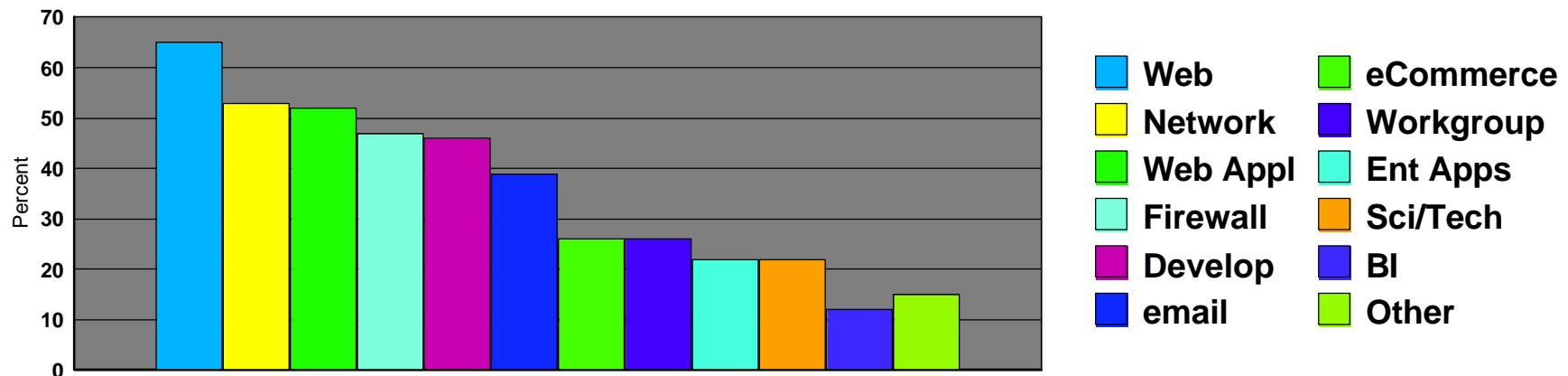
- Which do you consider the most important issue for Windows in the enterprise today?



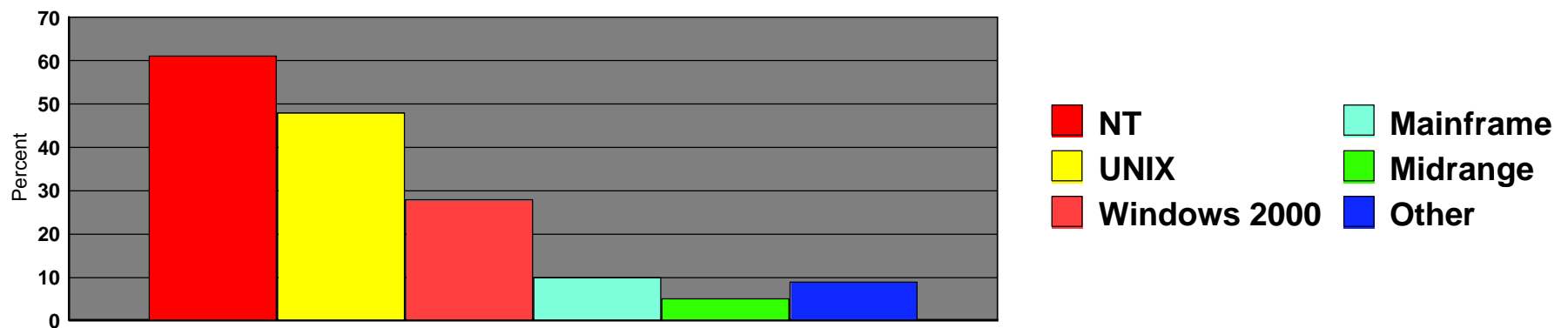
Source: Survey taken at Gartner's December 2002 Data Center Conferen

Linux Market

Linux Application Use



Platform of Origin for Linux Consolidation



Server Brand Image Tracking: 2Q02 G7 Countries

Linux and iSeries

- **What does Linux Bring to iSeries**
 - ▶ New Applications
 - Open Source
 - Solution Providers
 - ▶ New Resources and Skills
 - Virtual world-wide development team
 - Broad skill base
 - IBM investments in Linux

- **What does iSeries Bring to Linux**
 - ▶ On Demand Virtualization
 - ▶ Integration
 - ▶ Reliability
 - ▶ Easy Management
 - ▶ Low Cost of Ownership
 - ▶ Award Winning Implementation



IBM eServer iSeries Wins "Best of Show"

LinuxWorld San Francisco
August 2001

"Best Productivity Application Finalist"

Capacity on Demand
LinuxWorld, New York City
January 2003

"Best Systems Integration Finalist"

Integrated Platform for e-business
LinuxWorld, San Francisco
August 2003

iSeries Delivers ROI for Infrastructure Server Consolidation



- New IDC study finds SMBs that consolidated Intel-based infrastructure servers to iSeries using Linux or Windows achieved
 - ▶ Strong costs savings
 - ▶ 90% reduction in downtime
 - ▶ 22% increase in IS Productivity
 - ▶ Payback with 1 year

3 Year ROI for Server Consolidation per 100 Users	
Cost Savings	\$542,728
Net Present Value	\$302,052
Total Investment	\$141,227
ROI (NPV/Investment)	213.9%
Payback (Investment/Yr 1 Cashflow)	216 Days

Source: IDC White Paper:
 The Return on Investment of Windows / Linux
 Infrastructure Server Consolidation with iSeries.
 Case Studies in SMBs - July 2003

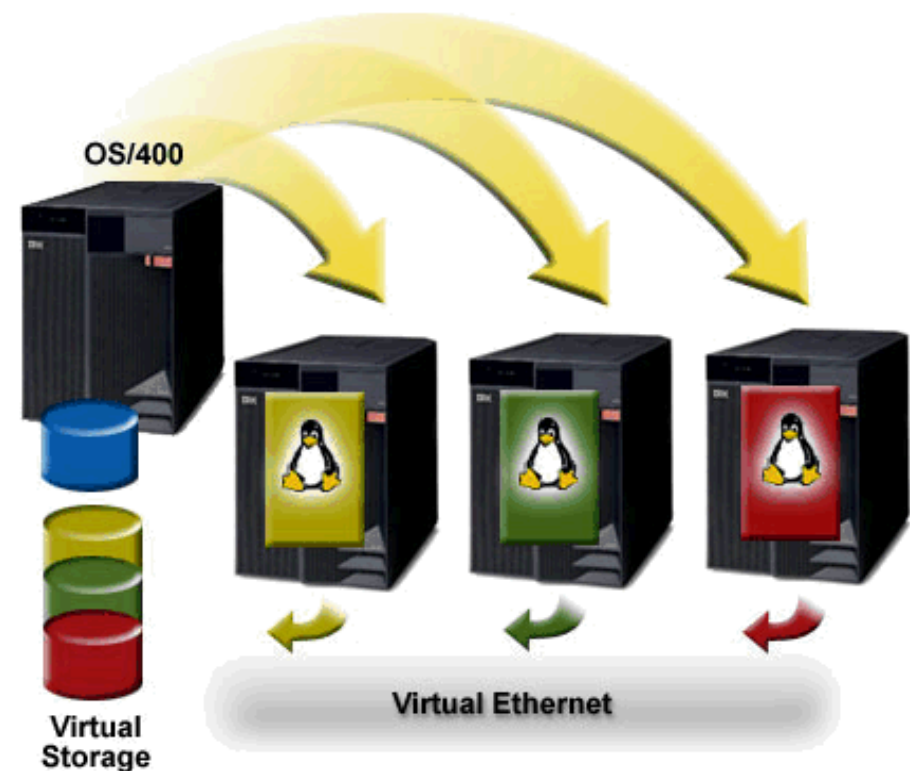
Linux on iSeries

■ On Demand Virtualization

- ▶ Up to 10 Partitions per Processor
- ▶ Dynamic resource movement
- ▶ Virtual Storage
- ▶ Virtual Ethernet
- ▶ Capacity on Demand

■ Integration

- ▶ Linux access to OS/400 Data and Applications
- ▶ Server and Storage Management



Linux and LPAR V5R2

■ Shared Processor Support*

- ▶ Linux shares processors with other OS/400 and Linux partitions
 - Up to 10 partitions per processor
 - Minimum 0.10 processor in a partition

■ Dynamic Resource Movement

- ▶ Shared Processor Units*
 - Minimum processor movement: 0.01
 - Moved to/from Linux or OS/400 V5R2 partitions
 - Immediate, scheduled, or under program control
- ▶ Virtual storage spaces
 - Added to Linux partitions

■ Independent Resource Movement

- ▶ Processor, Memory, and I/O
- ▶ Dedicated Processors, Memory and I/O
 - Requires the Linux partition to be stopped and restarted
 - Minimum memory movement: 1 MB

OS/400 V5R2 Primary Partition

# of Processors in Server	Maximum # of Linux Partitions*
1	9
2	19
3	29
4 and up	31

* Shared processor is supported on iSeries servers with SStar and Power4 processors. Servers with IStar processors require a dedicated processor for Linux

2003 iSeries Product Line

- **Support for new servers**
 - ▶ Shared processor, Dynamic movement
 - ▶ Virtual Storage and Ethernet
- **Capacity Upgrade on Demand**
 - ▶ Permanent and Temporary
- **Linux Processor Activation**
 - ▶ Included in Enterprise Edition for i870 and i890
 - ▶ Extra Processor Activation for Linux
- **Education Vouchers**
 - ▶ Included in Enterprise Edition for i825, i870, i890
 - ▶ Valid for Linux on iSeries Implementation Class
- **Service Vouchers**
 - ▶ Included in Enterprise Edition for i825, i870, i890
 - ▶ Valid for iSeries Linux Integration QuickStart

iSeries 800



- ▶ 1 Processor
- ▶ Up to 9 Linux Partitions

iSeries 810



- ▶ 1-2 Processors
- ▶ Up to 19 Linux Partitions

iSeries 825



- ▶ 3-6 Processors
- ▶ Up to 31 Linux Partitions

iSeries 870



- ▶ 8-16 Processors
- ▶ Up to 31 Linux Partitions

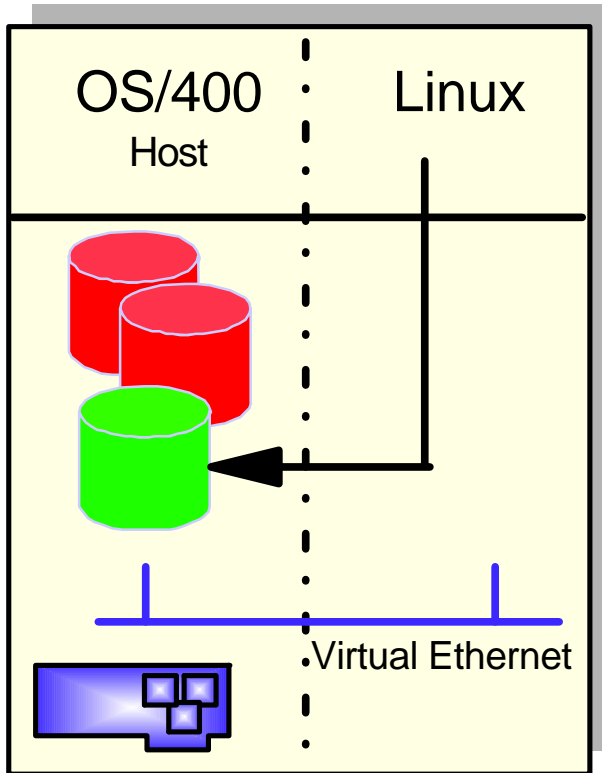
iSeries 890



- ▶ 16-32 Processors
- ▶ Up to 31 Linux Partitions

Linux I/O Flexibility

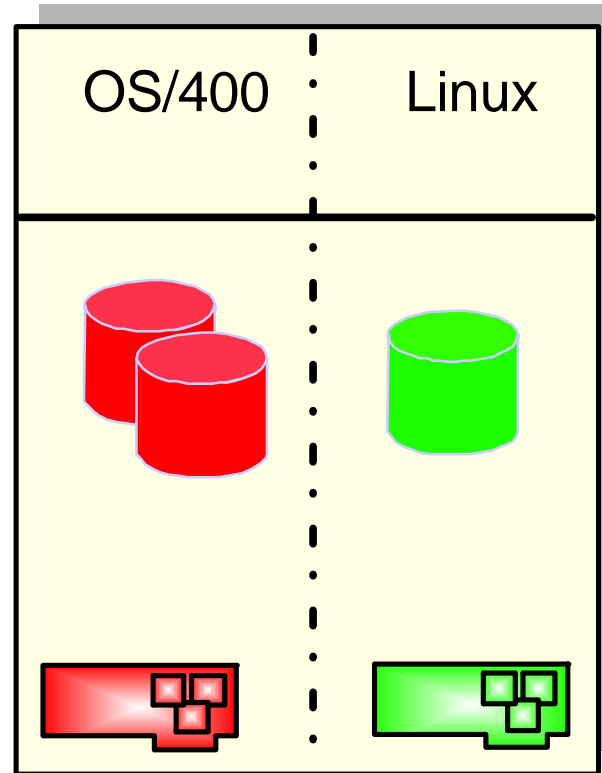
Virtual I/O



- ▶ SCSI Disk
- ▶ Fibre ESS
- ▶ Tape
- ▶ LAN
- ▶ CD, DVD

- Leverage iSeries resources
- OS/400 management

Direct I/O

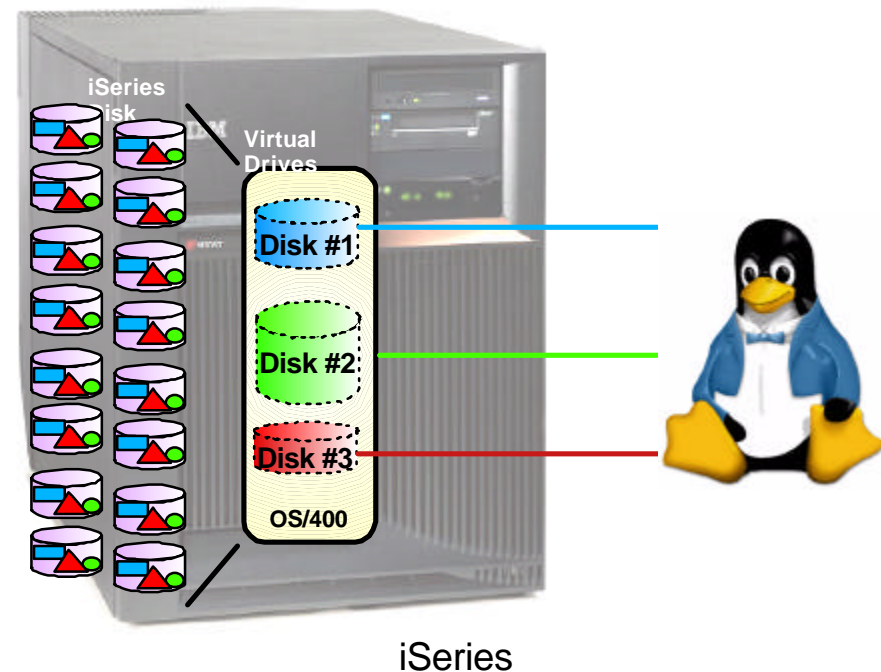


- ▶ SCSI Disk
- ▶ Fibre ESS
- ▶ Tape
- ▶ LAN
- ▶ WAN
- ▶ CD, DVD

- Dedicated resources
- Linux management

Storage Virtualization

- **Storage spaces created from OS/400**
 - ▶ 1 MB to 64 GB each
 - ▶ Up to 20 per Linux partition
- **Dynamically added to Linux**
 - ▶ Requires V5R2 Primary and Host
- **Shared Storage**
 - ▶ Storage spaces can be read from multiple partitions



- **Enables Linux to Leverage Advanced iSeries Storage Architecture**
 - ▶ Data automatically spread and protected
 - ▶ More disk arms for better performance
 - ▶ Consolidated Backup of OS/400 and Linux
 - ▶ Automatic balancing of storage across drives
 - ▶ Flexible Storage Management
 - ▶ Easy setup of multiple Linux environments

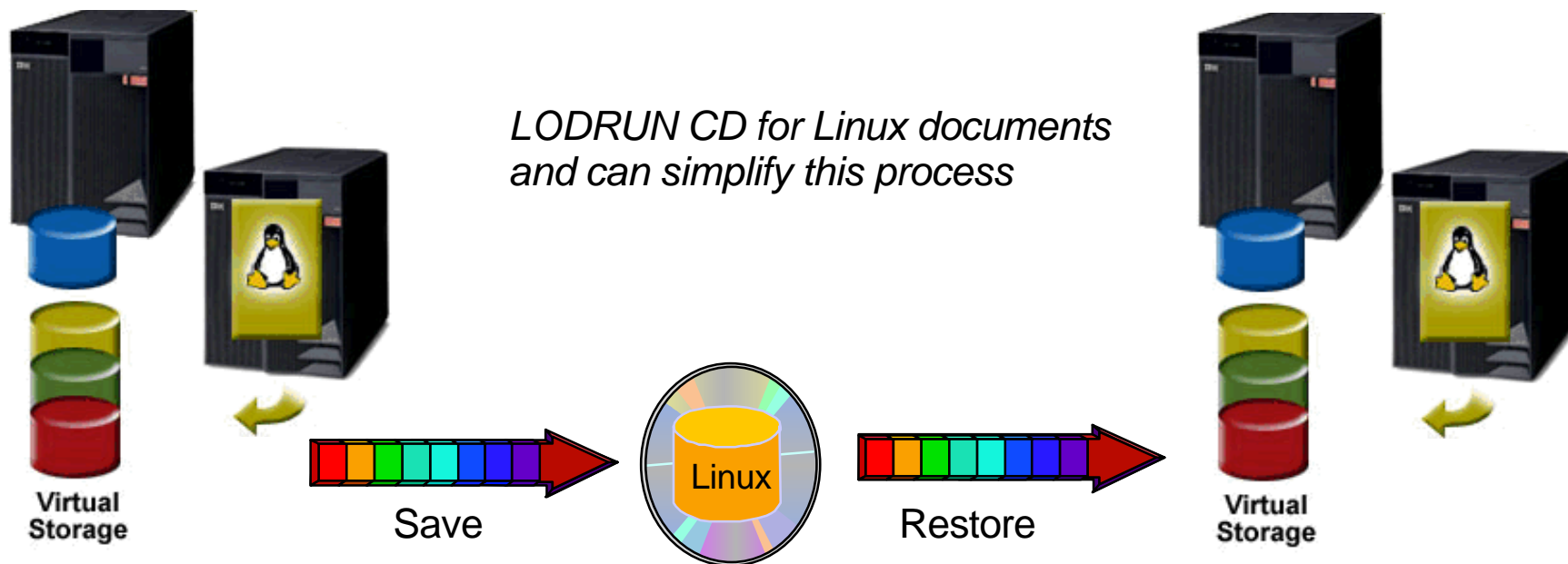
The Power of Virtualization

■ Virtual Storage

- ▶ OS/400 Virtual Storage Spaces are created for use by Linux partitions
- ▶ Storage spaces contain the entire Linux environment
- ▶ Linux environment can be saved and restored onto another system

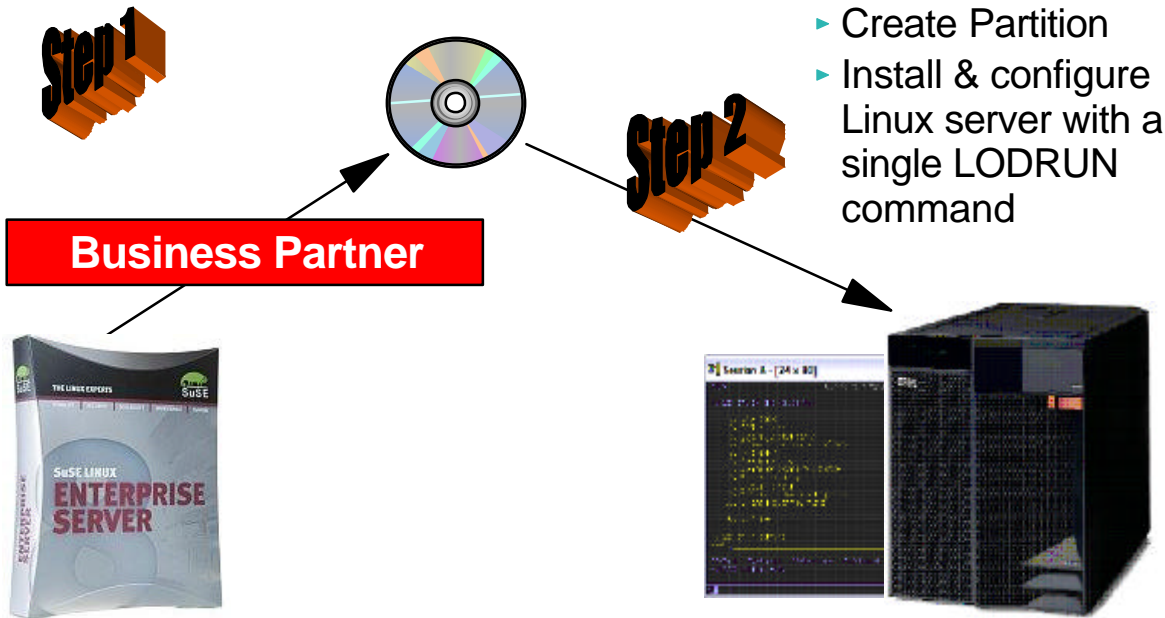
■ Virtual Ethernet

- ▶ Up to 16 virtual networks can be defined between partitions
- ▶ Linux partitions can communicate to internal and external networks without dedicated LAN adapters



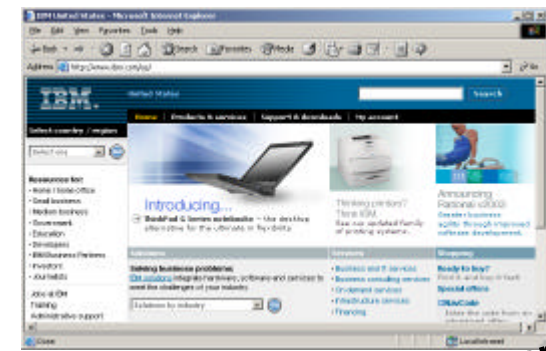
LODRUN CD for Linux on iSeries

From Zero to Productivity in 3 easy steps



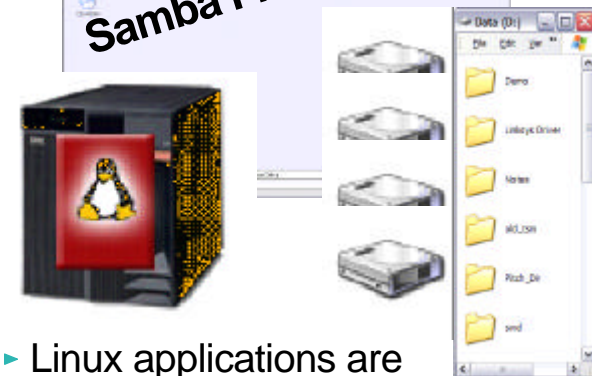
LODRUN CD for Linux

- ▶ Linux Server Image
- ▶ Configured & Tested
- ▶ Integrated Installation Process



Step 3

Apache Web Server
Samba File Server



- ▶ Linux applications are ready to go

LODRUN CD for Linux Advantages

- **Shorten Time required to Install and Configure Linux**
 - ▶ Can take the process from hours down to minutes

- **Reduce the skill required to Install and Configure Linux**
 - ▶ Can be used by a person with few Linux technical skills

- **Reduce the risk associated with a Linux installation from scratch**
 - ▶ Can provide a standard, tested environment

LODRUN Deliverables / Responsibilities

■ IBM

- ▶ Deliver LODRUN CD for Linux documentation
 - LODRUN CD Creation Guide
 - LODRUN CD Users Guide
- ▶ Deliver LODRUN CD Scripts
- ▶ Optional Service Offering to create LODRUN CD for Partners

■ Business Partner / ISV

- ▶ Purchase appropriate Linux Distribution
- ▶ Install Linux and create image to be duplicated
- ▶ Create LODRUN CD
- ▶ Use LODRUN CD to install Linux for customer
- ▶ Perform additional customization of Linux environment

■ Customer

- ▶ Purchase iSeries server that supports Linux
- ▶ Purchase appropriate Linux Distribution
- ▶ Purchase Service Offering from BP for Linux installation and configuration

Purchase Linux Distribution

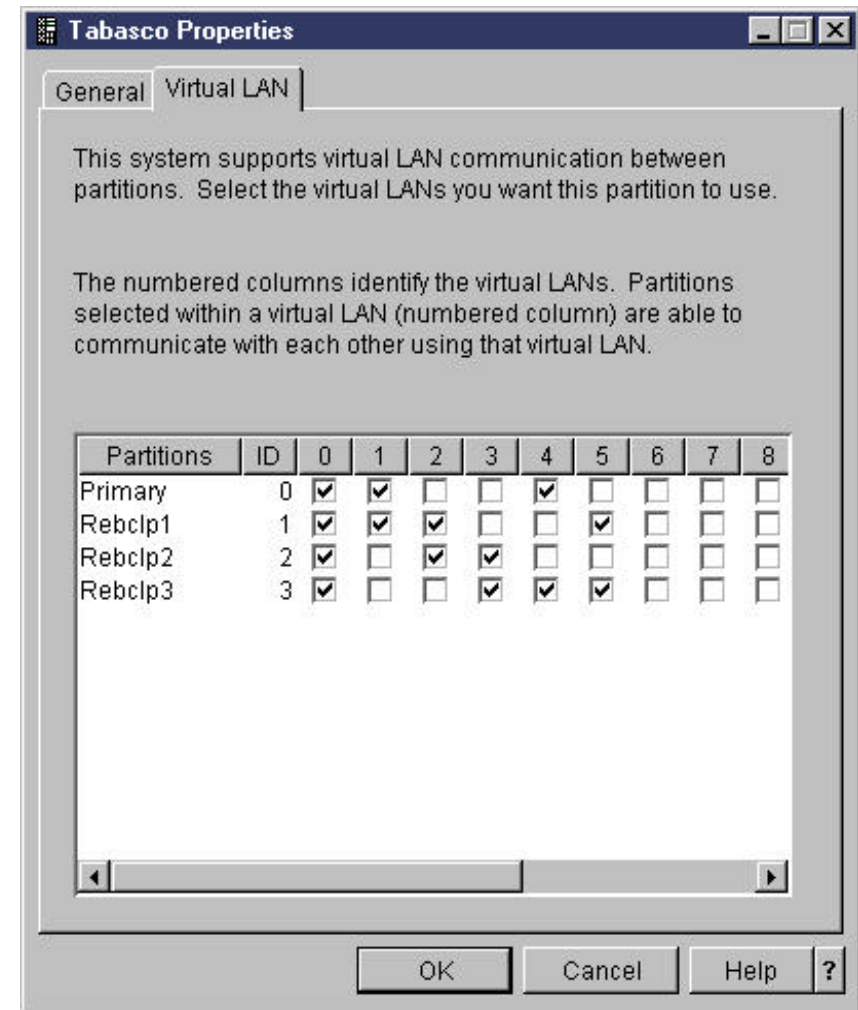
- ▶ To have a License to run Linux
- ▶ To receive the full Linux distribution and documentation
- ▶ To receive maintenance and support

Questions

Contact: Linux Center of Competency in the iSeries Technology Center at rchlinux@us.ibm.com

Virtual Ethernet

- **For fast, secure, reliable application communication between partitions**
- **Up to 16 high speed TCP/IP connections between partitions**
 - ▶ Emulates 1 Gb Ethernet Adapters
 - ▶ Selective communications paths between partitions
 - ▶ Utilizes iSeries memory bus
 - ▶ No additional hardware required
- **Supports communications between**
 - ▶ OS/400 to OS/400
 - ▶ Linux to OS/400
 - ▶ Linux to Linux
 - ▶ Linux to Windows
- **Included with OS/400 V5R1 and V5R2**



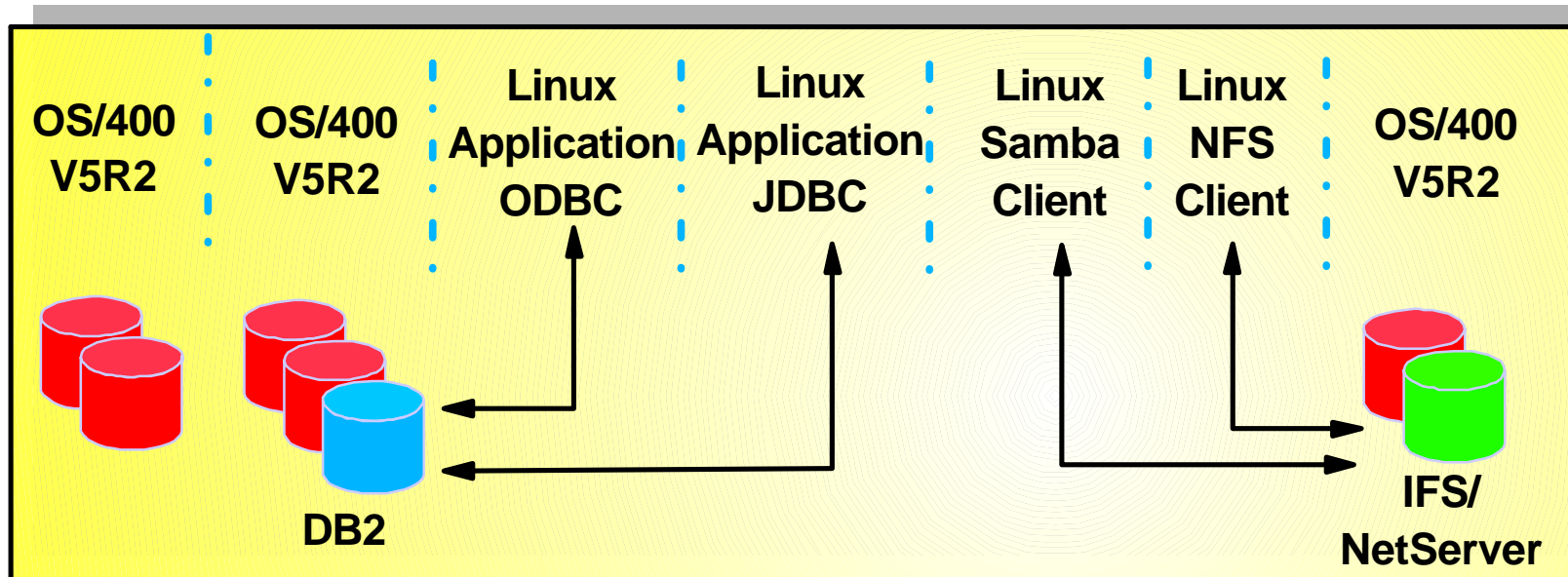
Linux and OS/400 Application Integration

■ Database Access

- ▶ Linux can access DB2 UDB for OS/400
 - JDBC (IBM Toolbox for Java)
 - ODBC for DB2 UDB for OS/400

■ File and Print Serving

- ▶ Linux can access OS/400 files
 - OS/400 NetServer Support for Samba
 - NFS
- ▶ Linux can print to OS/400 printers
 - OS/400 NetServer Support for Samba



Linux Partition Management

- V5R2 iSeries Navigator
 - ▶ Create Partition Wizard
 - ▶ Create, Delete Partitions
 - ▶ Move Processor Resources

Configure Logical Partitions - TPLXR01

File Edit View Help

1 minutes old

iSeries Navigator

- Physical System
 - Partitions
 - Unassigned Hardware
 - Primary (0)
 - Partion1 (1)
 - Partion2 (2)
 - Partion3 (3)
 - Linuxad (4)**

TPLXR01: Linuxad (4)

Hardware	Current	Pending
Linuxad (4)	New	
Dedicated Processors	0	
Shared Pool Processors		0.50
Memory	0 MB	1000 MB

1 - 4 of 4 objects

Move Processing Power

Move Processing Power

Move from logical partition "Primary (0)"

	Current	After Move
Shared processor pool:	1.70	1.40
Interactive performance:	50	50
Virtual processors:	3	<input type="text" value="3"/>

0 percent

Move to

Logical partition:

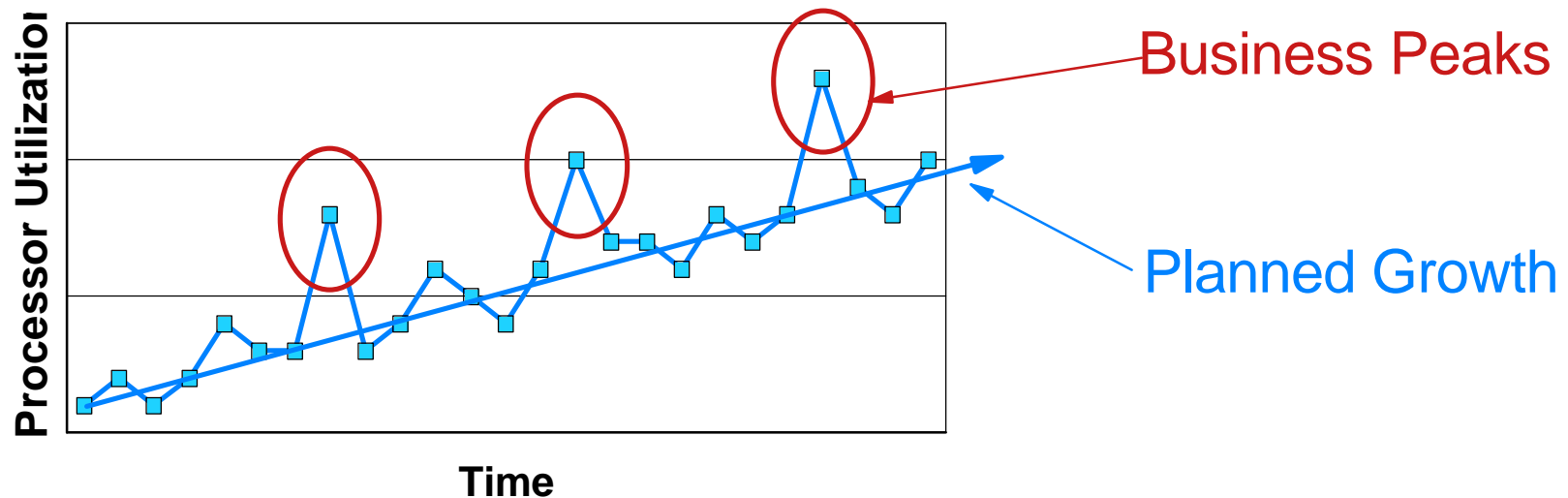
	Current	After Move
Shared processor pool:	0.25	0.55
Interactive performance:	0	0
Virtual processors:	1	<input type="text" value="1"/>

processing units

percent

OK Schedule... Cancel Help ?

Capacity Upgrade on Demand



- **Permanent**
 - ▶ Planned Growth (pay when purchased, no premium)
 - ▶ Can pay for Processor Activation without an OS/400 license
- **Temporary**
 - ▶ Business Peaks (pay after use, break even is ~20 days)
... **turn it on / off**
 - ▶ 14 bonus days included with Standard and Enterprise Packages
- **Available on i825, i870, and i890**

Linux Kernel



- **Linux consists of source tree that is compiled for a specific hardware platform to generate a kernel**

- **IBM has contributed modifications for the Linux PowerPC kernel**
 - ▶ 2.4, 64-bit and 32-bit Kernels
 - ▶ Architecture Independent Code - no changes
 - ▶ Architecture Dependent Code - some changes
 - Device drivers to direct and virtual iSeries I/O
 - Get Time of Day from iSeries
 - ▶ These kernel modifications are Open Source
 - ▶ These modifications are available on Linux PowerPC web sites
 - <http://linuxppc64.org/>
 - ▶ These modifications now included in the Linux kernel for PowerPC



Linux Distributors

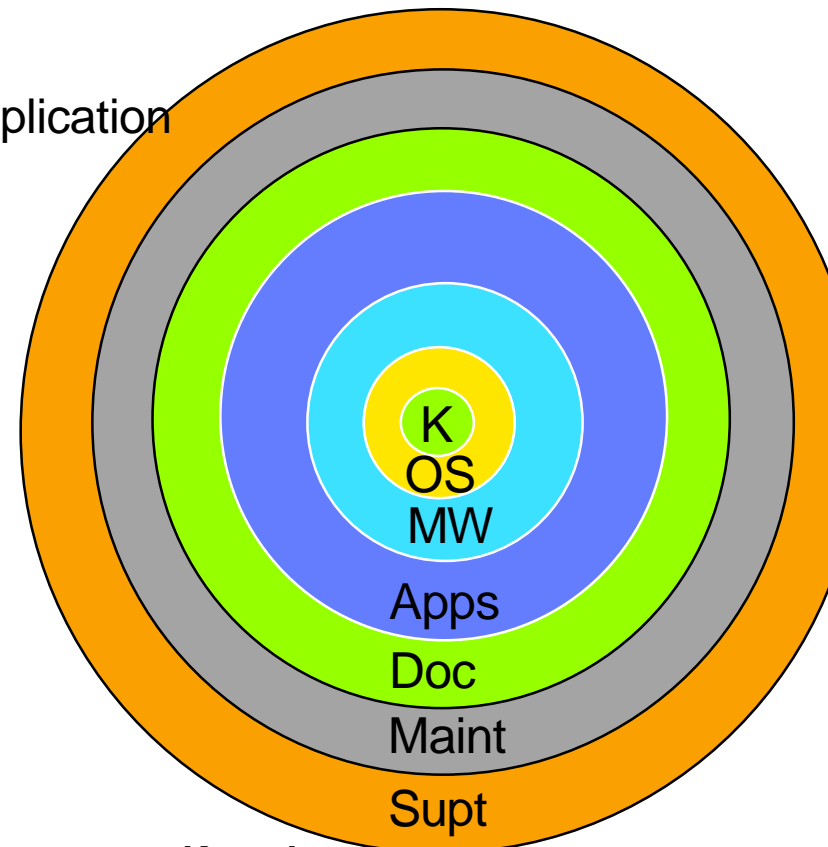
- ▶ Use PowerPC Linux kernel
- ▶ Add 100s of Operating System, Middleware, and Application components
- ▶ Add iSeries integration features
- ▶ Create Installation Documentation
- ▶ Offer maintenance and support

Functions included in Typical Distribution

Functions	Key Middleware and Applications
Web Serving	Apache, Tomcat
Mail Server	SMTP(postfix), POP3, IMAP, Sendmail MTA
Print Server	Samba
File Server	Samba, NFS
Proxy Server	Squid
Security	NetFilter firewall, VPN, OpenSSL
Name server	DNS, DHCP, WINS, FTP
Directory	OpenLDAP
Database	MySQL, Postgres
Languages	C, C++, PHP, Pearl, Java
Desktop	KDE, Gnome

The things that most people are using
Linux for come with the distribution

Distribution



Kernel +
 Operating System +
 Middleware +
 Applications +
 Documentation +
 Maintenance +
 Support =
 Distribution

Linux Distributions for iSeries

■ SuSE

▶ **SuSE Linux Enterprise Server 8**

- 64-bit kernel, 64 and 32-bit applications
 - Available December, 2002



■ Turbolinux

▶ **Turbolinux Enterprise Server 8 for iSeries**

- 64-bit kernel, 64 and 32-bit applications
 - Available April 2003



■ Red Hat

▶ **Red Hat Linux 7.1 for iSeries (64-bit)**

- 64-bit kernel, 32-bit applications
 - Available, January 2003



Support for Linux on iSeries

- **Support is available for Linux on iSeries from distributors**
 - ▶ SuSE
 - ▶ Turbolinux
 - ▶ Red Hat

- **Support for Linux on iSeries from IBM Global Services**
 - ▶ IBM Support Line provides answers to usage questions and suspected Linux code defects (Level 1 and Level 2 Support)
 - ▶ Requires Linux SupportLine contract
 - ▶ Can purchase Linux distribution through IGS

- **Support for the Integration of iSeries, OS/400 and Linux on iSeries**
 - ▶ Asking questions regarding OS/400 logical partitioning and reporting suspected defects in the OS/400 implementation of logical partitions are included within the IBM Support Line OS/400 offering contract.
 - ▶ The OS/400 Support Line representative will attempt to answer basic Linux on iSeries installation questions.

IBM Software for Linux on iSeries

WebSphere® software

- ▶ WebSphere Application Server
- ▶ IBM Developer Kit for Linux, Java 2
- ▶ VisualAge C++ Compiler
- ▶ XL FORTRAN

Tivoli® software

- ▶ Tivoli Storage Management (client)
- ▶ Tivoli Monitoring (client)
- ▶ Tivoli Configuration Manager (client)
- ▶ IBM Directory Server

DB2® Data Management Software

- ▶ DB2 UDB V8.1

Lotus® software

DB2 for Linux on iSeries and pSeries

■ DB2 Universal Database 8.1

- ▶ IBM's relational database management system for AIX, Linux, HP-UX, Sun, and Windows.
- ▶ New support for Linux on IBM's PowerPC-based servers

■ Product Availability

- ▶ eGA on May 30, GA on June 20, 2003
- ▶ DB2 UDB V8.1 Workgroup Server Edition
- ▶ DB2 UDB V8.1 Enterprise Server Edition
- ▶ DB2 UDB V8.1 Developers Edition



■ iSeries Requirements

- ▶ OS/400 V5R2 or V5R1
- ▶ SuSE Linux Enterprise Server 8 for iSeries or Turbolinux Enterprise Server 8 for iSeries

■ Supports iSeries Innovations

- ▶ Dynamic Logical Partitioning with Shared Processor Support
- ▶ Virtual Storage Management
- ▶ Virtual Ethernet LAN

■ Benefits of DB2 UDB on Linux

- ▶ Provides an industry leading database management solution on Linux
- ▶ New DB2 UDB based applications from Solution Providers
- ▶ Leverage Linux market place: skills and OpenSource software
- ▶ Provides DB2 Connect support to DB2 on OS/400
- ▶ Added Flexibility for Porting
 - Oracle, SQL Server, Sybase Migration Toolkits <http://www-3.ibm.com/software/data/db2/migration/mtk/>




















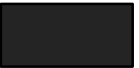

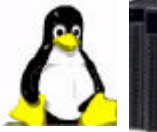
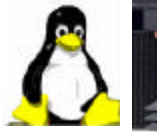


■ iSeries Enterprise Edition

- ▶ DB2 UDB Workgroup Edition is included with the i810, i825, i870, and i890 Enterprise Edition

WebSphere for Linux on iSeries and pSeries

- **WebSphere Application Server**
 - ▶ IBM's web application server for multiple platforms
 - ▶ New support for Linux on IBM's PowerPC-based servers
- **Product Availability**
 - ▶ eGA July 15, GA August 11
 - ▶ WebSphere Application Server V5.0.2
 - ▶ WebSphere Application Server Network Deployment V5.0.2
 - ▶ WebSphere Application Server Enterprise V5.0.2
- **iSeries Requirements**
 - ▶ OS/400 V5R2 or V5R1
 - ▶ SuSE Linux Enterprise Server 8 for iSeries or Turbolinux Enterprise Server 8 for iSeries
- **Supports iSeries Innovations**
 - ▶ Dynamic Logical Partitioning
 - ▶ Shared Processor Support
 - ▶ Virtual Storage Management
 - ▶ Virtual Ethernet LAN
- **Benefits of WebSphere on Linux on iSeries**
 - ▶ Provides a Linux based e-business infrastructure for transaction-based web solutions
 - ▶ New WebSphere based applications from Solution Providers
 - ▶ Supports IBM Toolbox for Java™ to access DB2 and applications on OS/400
 - ▶ Leverage Linux market place: skills and OpenSource software
 - ▶ WebSphere Application Server Enterprise support is new for iSeries

Configuration Alternatives (there are many more)

	Line of Business	WebSphere	Firewall	Web Server	Firewall
Competitive Infrastructure	OS/400 	Intel 	Intel 	Intel 	External 
2nd iSeries for WebSphere	OS/400 	OS/400 	Intel 	Intel 	External 
2nd OS/400 Partition for WebSphere	OS/400 	OS/400 	Intel 	Intel 	External 
Multiple OS/400 Partitions and IXS	OS/400 	OS/400 	Windows - IXS 	OS/400 	External 
3 Linux Partitions (Integrated Platform)	OS/400 	Linux 	Linux 	Linux 	External 

Integrated Platform is designed to simplify a complex process: design, order, install, config, test

▶ Can cut implementation time by 75%

Integrated Platform for e-business on iSeries

■ Integrated Platform Delivers

- ▶ Blue Print (Planning and Installation Guide)
- ▶ Installation scripts

■ Blue Print Configurations

- ▶ i825 - additional 1 or 2 processors for Linux/WebSphere workloads
- ▶ i810 - 2 way - standalone solution

■ Configuration Components

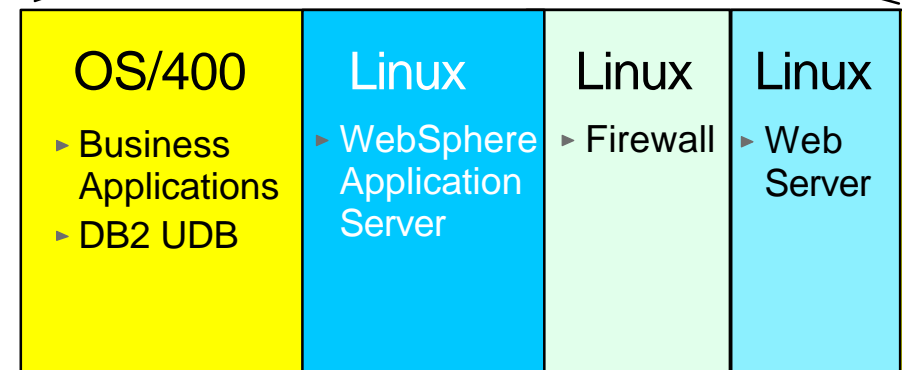
- ▶ 3 Linux partitions for WebSphere, Firewall, and Web Server
- ▶ Connections to OS/400 applications and data

■ Delivered Via Service Offerings

- ▶ Integrated Platform Planning and Blue Print
- ▶ Integrated Platform Implementation (optional)
- ▶ Available starting September 8, 2003

■ iSeries i825, i870, i890 Enterprise Edition

- ▶ Services Voucher valid for Integrated Platform Service Offerings



Tivoli Storage Manager for Linux on iSeries and pSeries

■ Tivoli Storage Manager

- ▶ IBM's backup and recovery software for multiple platforms
- ▶ New support for Linux on IBM's PowerPC-based servers

■ Product Availability

- ▶ GA June 27
- ▶ Tivoli Storage Manager V5.2 client

■ How to order

- ▶ Passport Advantage: <http://www-3.ibm.com/software/tivoli/howtobuy/>

■ iSeries Requirements

- ▶ OS/400 V5R2 or V5R1
- ▶ SuSE Linux Enterprise Server 8 for iSeries or Turbolinux Enterprise Server 8 for iSeries

■ Supports iSeries Innovations

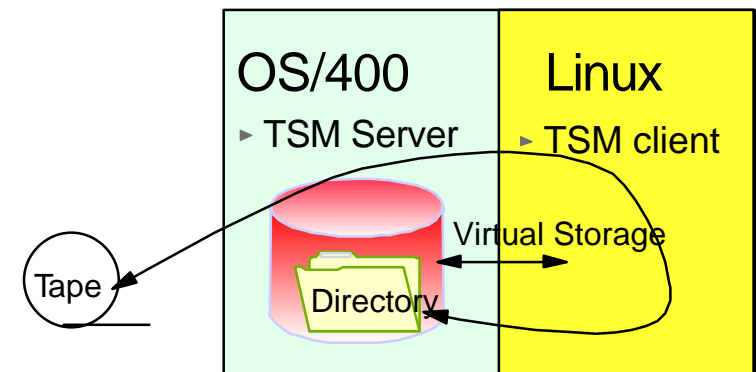
- ▶ Dynamic Logical Partitioning
- ▶ Shared Processor Support
- ▶ Virtual Storage Management
- ▶ Virtual Ethernet LAN

■ Benefits of TSM client on Linux on iSeries

- ▶ Provides file/directory level backup for Linux
- ▶ Centralized storage protection via TSM on OS/400
- ▶ Leverage high speed tape drives in OS/400 partition

■ Enterprise Edition

- ▶ i825, i870, i890 Enterprise Edition includes TSM for OS/400, 5 TSM clients and 1 year of support



Application Sources

- **Linux Distributions**
 - ▶ Contain popular Open Source Applications
 - Apache, Samba, Sendmail MTA, Netfiler
- **Open Source Applications**
 - ▶ Download and compile for PowerPC
 - Tomcat for Java Servlets and Java Server Pages
<http://java.sun.com/products/jsp/tomcat/>
 - OpenOffice - Productivity Suite www.openoffice.org
- **PowerPC Linux applications**
 - ▶ Will run out of the box
 - ▶ iSeries, pSeries, Apple PowerBook,,,
- **Intel Linux applications**
 - ▶ Need to be compiled for PowerPC
- **ISVs**
 - ▶ PartnerWorld is working with ISVs to enhance iSeries application portfolio

100+ Solutions for Linux on iSeries

Infrastructure	e-Business	Industry
        	    	    

300+ More in the Pipeline

More<http://www-1.ibm.com/servers/eserver/iseries/linux/apps.html>

Linux for iSeries Scenarios

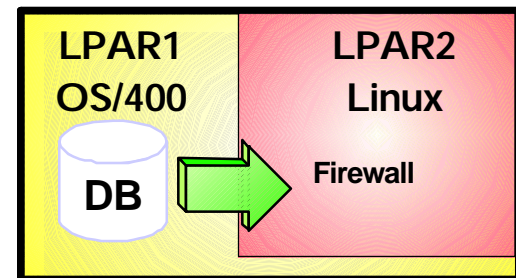
■ Consolidation

- ▶ Replace Windows or Linux Infrastructure servers
- ▶ Run multiple Linux servers in partitions



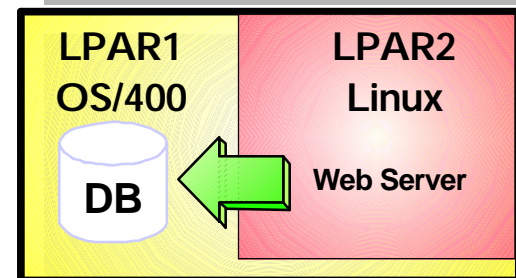
■ Solution Component

- ▶ Linux application included with new solution
- ▶ Run Linux application on same server as OS/400



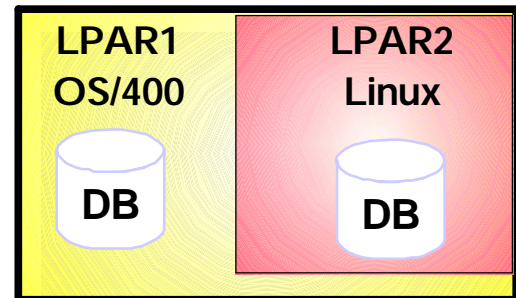
■ Integration

- ▶ Extend OS/400 applications with Linux Applications
- ▶ Run Linux applications on same server as OS/400



■ Application Flexibility

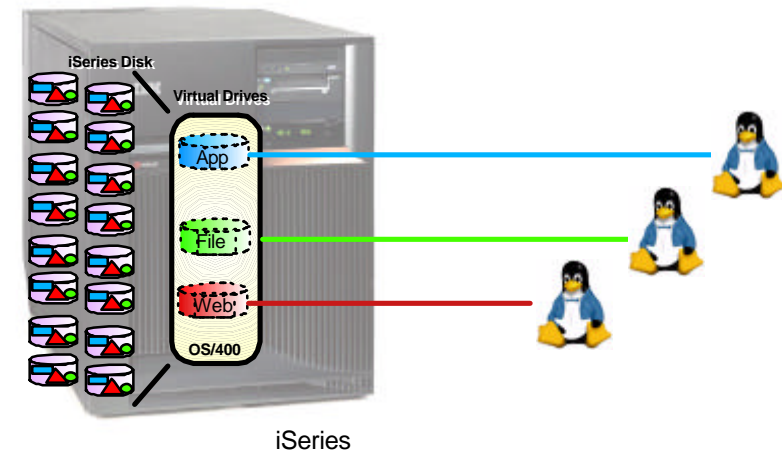
- ▶ Leverage Linux LOB application portfolio
- ▶ Run Linux applications on iSeries



Linux on iSeries Advantages

- **Run multiple Linux images on one Server**
 - ▶ Up to 31 Linux partitions
- **Dynamic Resource Movement**
 - ▶ 1/100th of a processor
 - ▶ Virtual storage spaces
 - ▶ Capacity Upgrade on Demand
- **Storage Virtualization**
 - ▶ Linux shares resources with OS/400 and other Linux partitions: disk, tape, CD, DVD
 - ▶ Simple to duplicate servers
- **Virtual Ethernet for safe/fast communications**
 - ▶ Up to 16 networks under the covers
- **Linux to OS/400 Application Integration**
 - ▶ ODBC and JDBC access to DB2/400
 - ▶ Samba and NFS for file access
- **Management Integration**
 - ▶ LPAR and Storage

# of Processors in Server	Maximum # of Linux Partitions*
1	9
2	19
4 and >	31



iSeries Customers Using Linux



GHY International

- **Background:**
 - ▶ International customs and trade services group
- **Objectives:**
 - ▶ Handle application growth with current staff
- **Options**
 - ▶ One iSeries or 9 Intel servers
- **Solution**
 - ▶ Implemented iSeries 820 with 9 Red Hat Linux partitions

"We selected Linux on the iSeries because it was such a compelling alternative to the cost and complexity of managing nine separate Intel-based servers."

Nigel Fortlage, Vice President of IT

iSeries 820

0	GHY820 OS/400		0.50 768M
1	DOCIMG		0.20 256M
2	INTRANET		0.10 256M
3	LANAPPS Samba/DHCP/sendmail/SSH		0.50 256M
4	FIREWALL Firewall / Squid		0.20 256M
5	L2TPVPN		0.10 256M
6	IPSECVPN		0.10 256M
7	INETAPPS Sendmail Gateway/DNS/SSH		0.30 256M
8	WEBSRV		0.20 256M
9	TESTLNX		0.1 256M

Bandai France

■ Background

- ▶ Subsidiary of the Japanese Bandai group, one of the three world leaders in the toy market

■ Objective

- ▶ Secure and protect daily electronic exchanges with the parent company in Japan and partners in Asia and Europe

■ Solution

- ▶ iSeries 820
- ▶ OS/400 Financial Management solution
- ▶ Linux based Firewall and file server
- ▶ A second i820 provides duplicate environment



"The installation of a software Firewall under Linux in a partition on the iSeries was a safe and secure solution and was also inexpensive. I have every confidence in this platform. Its simplicity, reliability and running costs beat an NT server hands down!"

Benoit Roux, IT Director

Brenntag Nordic



■ Background

- ▶ Brenntag Nordic is part of Brenntag, a leading global player in the distribution of chemicals and raw materials

■ Objective

- ▶ Resolve problems with 49 server Windows-based network
- ▶ Consistent, open and easy-to-manage infrastructure
- ▶ Give employees the same access to information and services regardless of their location
- ▶ Provide a more reliable service to the business
- ▶ To do all this at lower cost, by reducing the number of physical systems

■ Solution

- ▶ Linux-based infrastructure applications on iSeries 825 and xSeries
- ▶ Domino on OS/400



“The iSeries has enabled Brenntag Nordic to replace our Windows servers with Linux. The partitioning flexibility and the storage consolidation provided by the iSeries, has provided a more stable and manageable solution. We calculated that over five years, total cost of ownership of Linux on iSeries would be 35% lower than an Intel-based option.”

Michael S. Langborg, Financial Director

Hindustan Motors

■ Background

- ▶ Power Plant Division in India manufactures off-highway automatic/power-shift transmissions

■ Business Need

- ▶ Extend its ERP applications to suppliers and large international customers to streamline business processes and reduce costs

■ Solution

- ▶ iSeries Model 270
 - Red Hat Linux for email
 - OS/400 for ERP
 - WebSphere for ebusiness
 - Integrated xSeries Server for Antivirus
- ▶ Replaced Compaq Alpha server

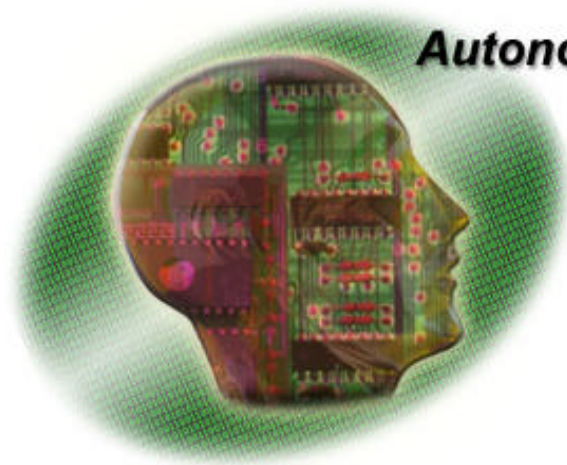


"We are committed to use the features and functionalities to the fullest, with Red Hat Linux running our mail server, Windows 2000 running the network PCs and authentication, and OS/400 running our in-house ERP, Web Application Server and HTTP environments."

S. Appan, CIO

HINDUSTAN MOTORS LIMITED - POWER PRODUCTS DIVISION

Linux on iSeries Investments



Autonomic



Integration

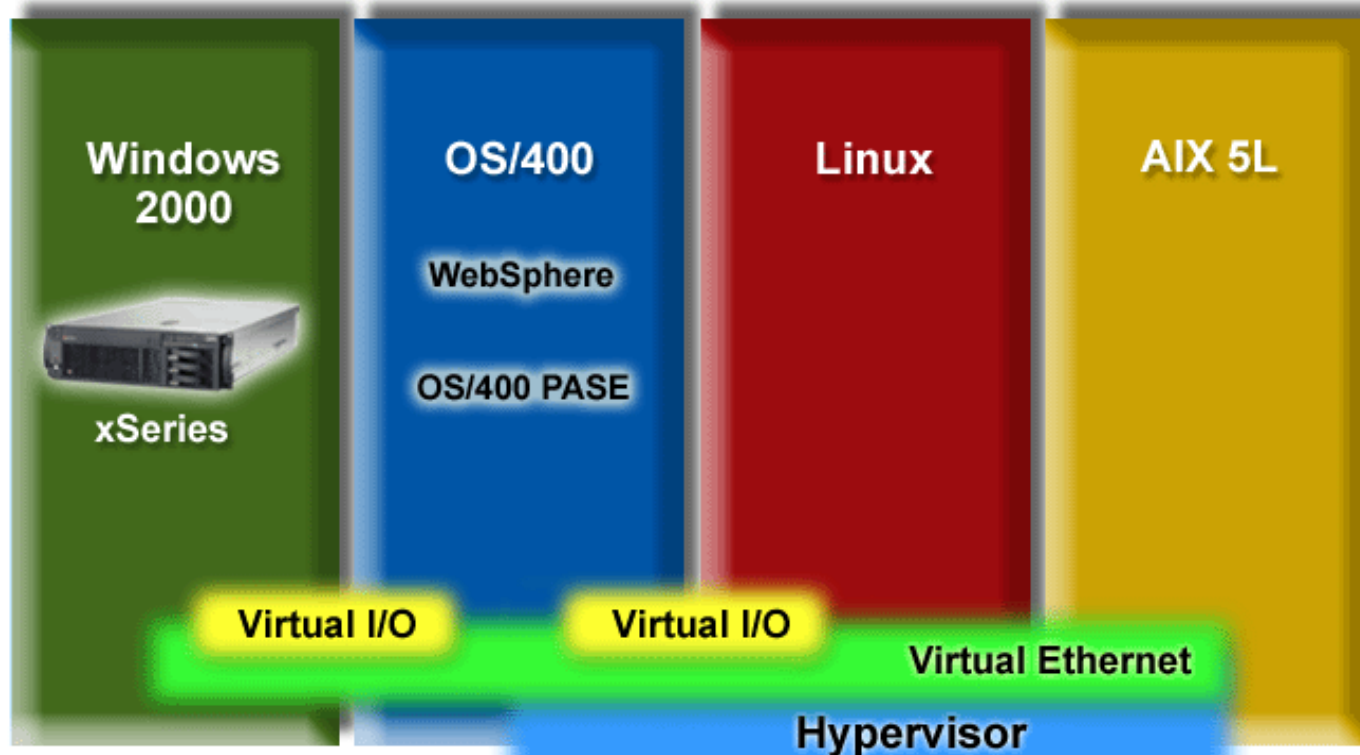


Virtualization



Open Standards

iSeries Server Consolidation



- Linux for iSeries is available from leading distributors
- iSeries offers On Demand Virtualization and Integration
- With Linux customers can consolidate their infrastructure and extend their OS/400 applications

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