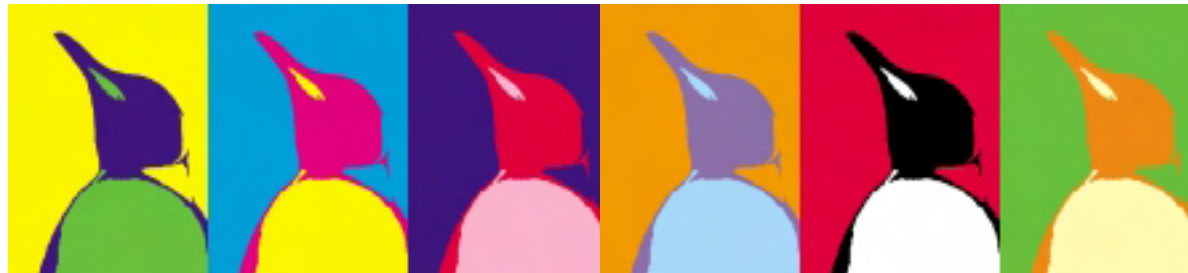




# IBM Software for Linux



**John Alessio**

*Vice President, Americas Software Technical Sales and Support*

*November 10, 2005*



## Agenda

- **Customer adoption of Linux**
- Mission critical workloads and Linux
- Business applications and Linux
- Open computing and Linux
- Why IBM (we do it best)





# Businesses Deploying Linux

## Retail/CPG/Travel & Transportation



## Telecom/ Media & Entertainment/ Energy and Utilities



## Banking/Financial Markets/Insurance



## Education/Government/Healthcare/Life Sciences



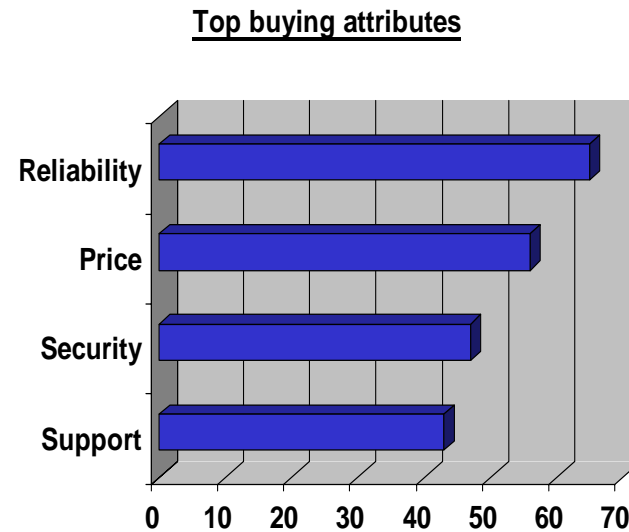
## Automotive & Electronics





## How Linux meets Customer needs

- Linux is about choice and flexibility
- Linux is secure
- Linux is reliable
- Linux performs and scales
- Linux drives business goals
  - Reduce costs
  - IT Simplification
  - Improve application service levels
  - Promotes innovation
  - Internally change business process and drive contribution to business
- Linux is an excellent path to On Demand Business

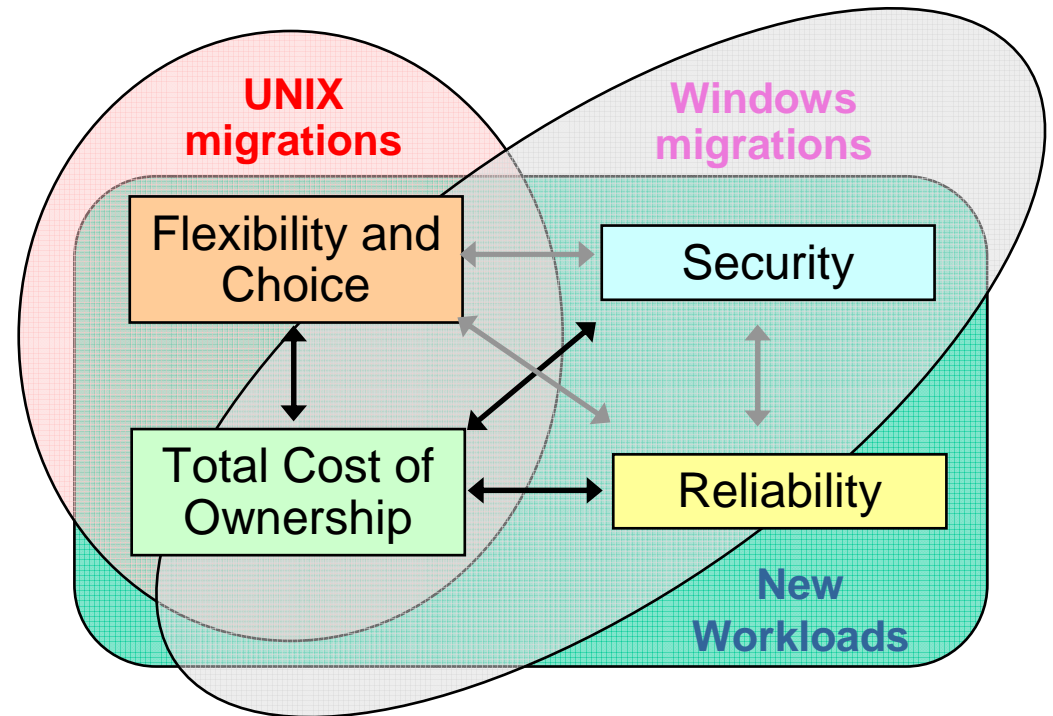


\* IDC Linux MCS 4th Wave (2004)



## Why Customers Are Adopting Linux

- Linux offers UNIX customers the flexibility to choose lower cost hardware
- Linux offers Windows customers increased flexibility and enhanced security / reliability
- Linux offers all customers choice for new workloads through open computing, avoiding lock-in to proprietary hardware or software vendors or architectures



## Press and Analysis Perspective

**“Linux has the potential to become the dominant platform,”** said Trolltech, Chief Executive, Harvard Nord. **“The technology is ready.”** (*Investors Business Daily*)

“People thought this wouldn't work. There are just too many people and companies to hang together. But **now it's clear it does work,**” says Mark Blowers, an analyst at market researcher Butler Group. (*BusinessWeek*)

“More and more you will hear about free software, Linux, principally in the government and corporate environments, and less about Windows,” Oscar Clarke, head of Intel in Brazil, said at a press conference. **“It's an inexorable trend.”** (*Reuters*)

**“Linux is the first natural business ecosystem,”** says James F. Moore, a senior fellow at the Berkman Center for Internet & Society at Harvard Law School. (*BusinessWeek*)





## Market Perspective: Linux growing in many areas

- UNIX workloads migrating to Linux due to TCO benefits
- Linux use transitioning from infrastructure to business application workloads - 4 or 5 ERP customers migrating from UNIX will move to Linux
- Linux picking up momentum as a development platform
- Linux is introducing heterogeneity to the SMB market
- Emerging countries are hot areas for growth
- Ongoing interest in Linux desktop adoption in public sector and emerging countries

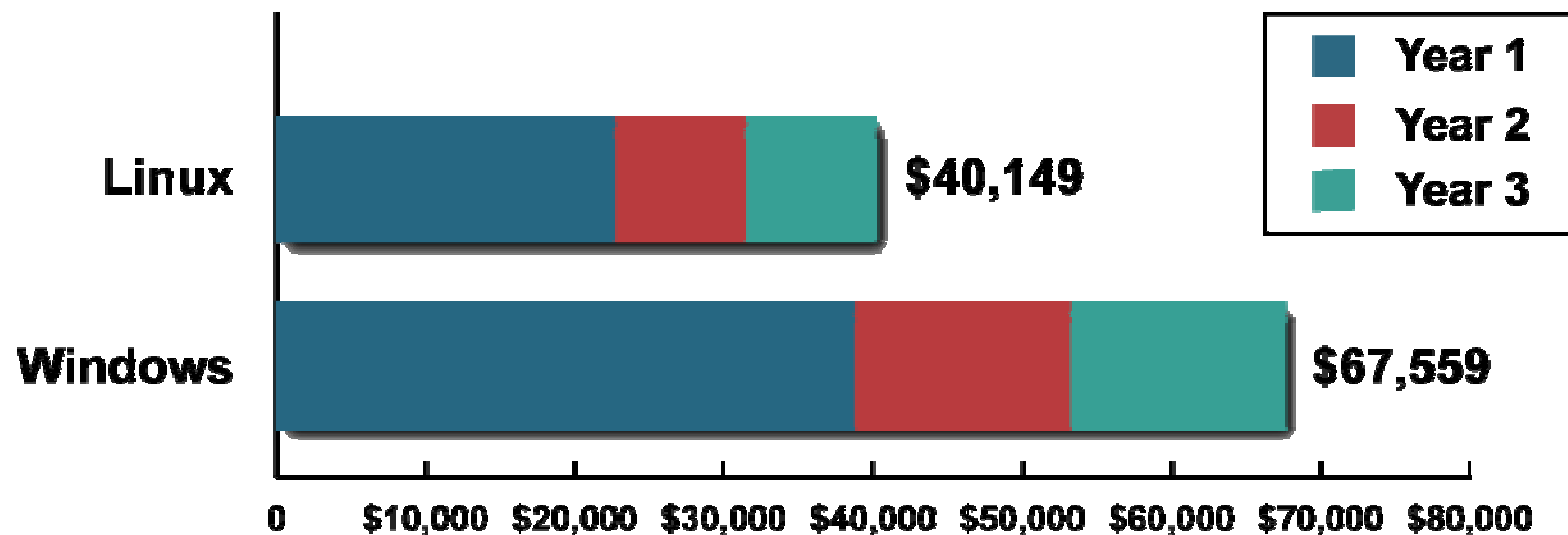
## Linux Continues to Deliver Cost Benefits

**Linux is 40% less expensive than a comparable x-86 based Windows solution**



Based on a 3-year period of ownership for a system supporting 100,000 operations per second on the SPECjbb benchmark

### Operating System TCO for Enterprise J2EE



Source: Robert Frances Group: *TCO for Application Servers Study*, August, 2005

## Agenda

- Customer adoption of Linux
- **Mission critical workloads and Linux**
- Business applications and Linux
- Open computing and Linux
- Why IBM (we do it best)







## Analyst Perspective: Linux ready for mission critical workloads

### **IDC: May, 2005**

*“The demand for return on investment, leveragability, and support for service-oriented architecture is right up the Linux alley. A number of large banks and non-bank financial institutions are very interested in achieving these attributes. Linux provides flexibility for the future in a heterogeneous IT environment. In fact, some of the largest financial institutions in the world are now running elements of their mission-critical Internet infrastructures on Linux server farms.”*

### **Peerstone: November, 2004**

*“Linux will unquestionably be the fastest growing server OS in the enterprise applications market for the foreseeable future. During the same time period Unix will continue to decline and Windows Server will stagnate.”*

### **Gartner: March, 2005**

*“The growing maturity of Linux poses a rising threat to Windows. Although this impact has mostly been felt in network edge and infrastructure deployments, Gartner believes that you can now consider Linux as a safe choice for transaction-processing applications and selective database deployments.”*



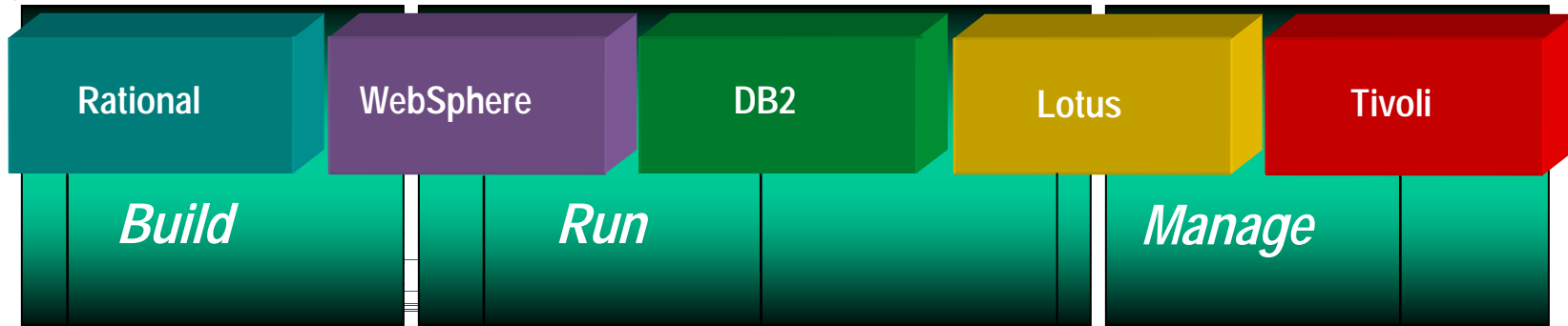
## Analyst Perspective: Linux ready for mission critical workloads

- According to IDC's 1Q 2005 report, Linux server sales grew 35.2% in the first quarter of 2005, three times faster than Windows, marking the 11th consecutive quarter of double-digit growth.
- According to Gartner, in Q1 2005, Linux was the only OS to gain share in unit terms, accounting for one in every five servers shipped.
- Linux is the fastest growing OS in the worlds in terms of unit share, according to both Gartner and IDC.
- A Peerstone Research survey of more than 400 installations from the top three ERP vendors (SAP, PeopleSoft and Oracle) shows that Linux will grow from 2% of the ERP installed base today to 15% by 2007.
- Linux adoption among mid-sized businesses is growing. According to Gartner, 45 percent of mid-sized businesses are already using or experimenting with Linux.



# IBM Middleware for Linux

Key enabler of missions critical solutions



## Software Development

- Robust, full life-cycle software development both on and for Linux
- 18 Million Eclipse Downloads

## Process & Transaction Management

- Mission critical for customers
- #1 in Application Server market share
- #1 in Portal market share

## Information Management

- #1 scalability and performance on Linux
- Apache Derby used in 70+ IBM projects

## Collaboration

- #1 in Collaboration market share
- New Workplace support for Linux clients

## Systems Management and Security

- #1 systems management provider on Linux
- Broadest and most integrated Linux portfolio

## Over 400 Linux Offerings . . .

Linux Product Matrix can be downloaded from:

<http://www-306.ibm.com/software/os/linux/software/index.jsp>

Evaluation copies of IBM middleware can be downloaded from:

<http://www-106.ibm.com/developerworks/offers/linux-speed-start/index.html>





## Canada Department of National Defense (CDND)



### ■ Business Challenge:

- Produce quality software within a high visibility/impact training environment for the Canadian military
- Develop code quickly and inexpensively
- Eliminate the need to test manually for memory leaks & bottlenecks
- Automate support for both Windows and Linux applications

### ■ Solution:

- The CDND chose Red Hat Linux running on an IBM server as its development platform. The move to Linux was motivated by a need for a robust, low-cost platform.
- The CDND implemented Rational PurifyPlus for Windows and for Linux, which automatically scans code for memory leaks and possible performance bottlenecks.
- The CDND uses the Linux and Rational solutions for both its client and client-server applications.

### ■ Benefits of the Solution:

- Rational PurifyPlus catches problems that manual testing wouldn't, increasing the quality of the CDND's software programs and freeing up the development staff to do other work
- Checking new code for bugs now takes 30 percent less time
- The CDND reports that it is extremely impressed with the user interface of the Rational product, which reduces the amount of time it takes for users to master the product.





# Southside Electric Cooperative uses Linux and WebSphere to Integrate Applications and People

## Challenge

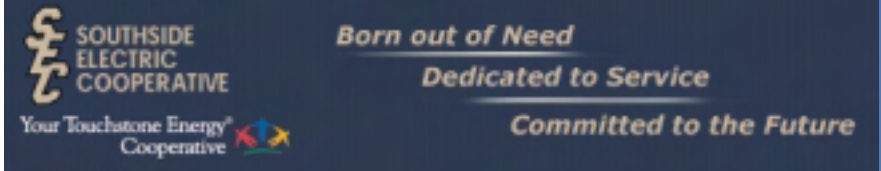
U.S. utility cooperative seeking improvement of responsiveness to service requests with streamlined flow of data across its systems

## Solution

**Linux and WebSphere** products aggregate information from separate systems (iSeries and xSeries), giving employees a single, comprehensive, real-time view of customer accounts and dispatch resources.

*"This is the single most important [business improvement] we have worked on in the 20 years [that I have been] here." -- Linda Davis, CIO, Southside Electric Cooperative*

**WebSphere Application Server,  
WebSphere BI Message Broker, WebSphere MQ,  
WebSphere Portal**



## Business Benefits:

- SEC has saved time, improved the productivity of its employees and boosted customer satisfaction.
- Reduced average outage time from 8 days to 2 days
- Decreased data-entry time from 30 minutes to just seconds
- Improved consistency and accuracy of integrated data

## Technology Benefits:

- SEC was able to integrate a wide range of legacy systems without any re-coding work using IBM's open-standards framework and Linux
- SEC used its existing IT platforms without investing a lot of extra time or effort to make them more user-friendly

# Pioneer Petroleums

## Challenge

- Needed an efficient and cost effective way to provide retailers with easy access to information from the head office

## Solution

- IBM Workplace Messaging solution running on Red Hat Linux platform

## Benefits

- Easy-to-use and flexible desktop
- Increased productivity through collaboration instead of faxing information
- Affordable and reliable operating system

The screenshot shows the Pioneer Petroleums website interface. At the top, there's a navigation bar with links for 'Products & Services', 'Latest Specials', 'Bonus Bucks', 'Station Locator', and 'Careers'. The main content area features a large image of a gas station with a red car, a '3X Bonus Bucks' promotion, and a 'Tsunami Relief' section. A sidebar on the left contains a search bar and a 'Home' link. The website is displayed on a desktop environment, illustrating the IBM Workplace Messaging solution running on Red Hat Linux.

### Technology

- IBM Workplace Messaging
- Red Hat Enterprise Linux Desktop

## IBM Middleware for Linux : Linux Distribution Partners

- Linux is a main tier, strategic platform for all IBM software products
  
- 2 Strategic LDPs: Red Hat and Novell SUSE
  - RHEL and SLES for servers
  - RH Desktop/Workstation and Novell Linux Desktop for clients
  - Additional LDPs supported on exception basis in specific geos (for example, Red Flag in China)
  
- Strategic focus on x86 (IA32/EM64T/AMD64), POWER, and zSeries
  - Focus on 64-bit transition: EM64T/AMD64, POWER, zSeries

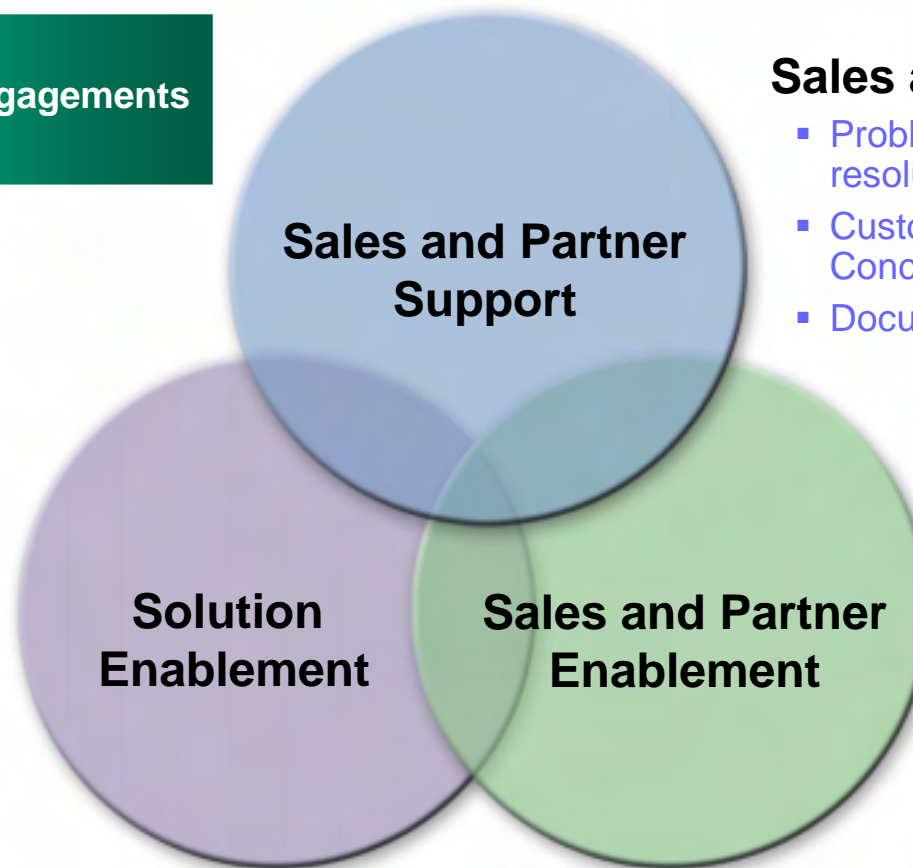




# IBM Linux Integration Center (LIC)

*Helping customers create mission critical solutions using IBM software on Linux*

- 7 Locations
- 700+ Customer engagements



## Sales and Partner Support

- Problem determination and resolution
- Customer Pilots and Proof of Concept
- Document best practices

## Solutions Enablement

- ISV support
- Partner support
- Solution validation and Tuning
- Drive key features into the Linux community

## Sales and Partner Enablement

- *Technical product documentation*
- *SW Certification Matrix*
- *Presentations and workshops*



# IBM Linux Support Centers

*Helping customers create mission critical solutions*



- |  |  |  |   |
|--|--|--|---|
| <p><b>IBM Linux Integration Centers</b></p> <ul style="list-style-type: none"> <li>▪ Austin, TX</li> <li>▪ Boeblingen, Germany</li> <li>▪ Tokyo, Japan</li> <li>▪ Beijing, China</li> <li>▪ Sao Paulo, Brazil</li> <li>▪ Bangalore, India</li> </ul> | <p><b>IBM Design Centers for e-business on demand</b></p> <ul style="list-style-type: none"> <li>▪ Poughkeepsie, NY</li> <li>▪ Makuhari, Japan</li> <li>▪ Montpellier, France</li> <li>▪ San Jose, CA</li> </ul> | <p><b>IBM Linux Centers of Competency</b></p> <ul style="list-style-type: none"> <li>▪ Austin, TX</li> <li>▪ Beijing, China</li> <li>▪ Boeblingen, Germany</li> <li>▪ London, England</li> <li>▪ Moscow, Russia</li> <li>▪ New York, NY</li> <li>▪ Poughkeepsie, NY</li> <li>▪ Research Triangle Park, NC</li> <li>▪ Tokyo, Japan</li> </ul> | <p><b>IBM Executive Briefing Centers</b></p> <ul style="list-style-type: none"> <li>▪ Austin, TX</li> <li>▪ Boeblingen, Germany</li> <li>▪ Greenock, Germany</li> <li>▪ Mainz, Germany</li> <li>▪ Montpellier, France</li> <li>▪ Poughkeepsie, NY</li> <li>▪ Research Triangle Park, NC</li> <li>▪ Rochester, MN</li> <li>▪ Tucson, AZ</li> </ul> |
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## IBM Linux Technology Center (LTC)

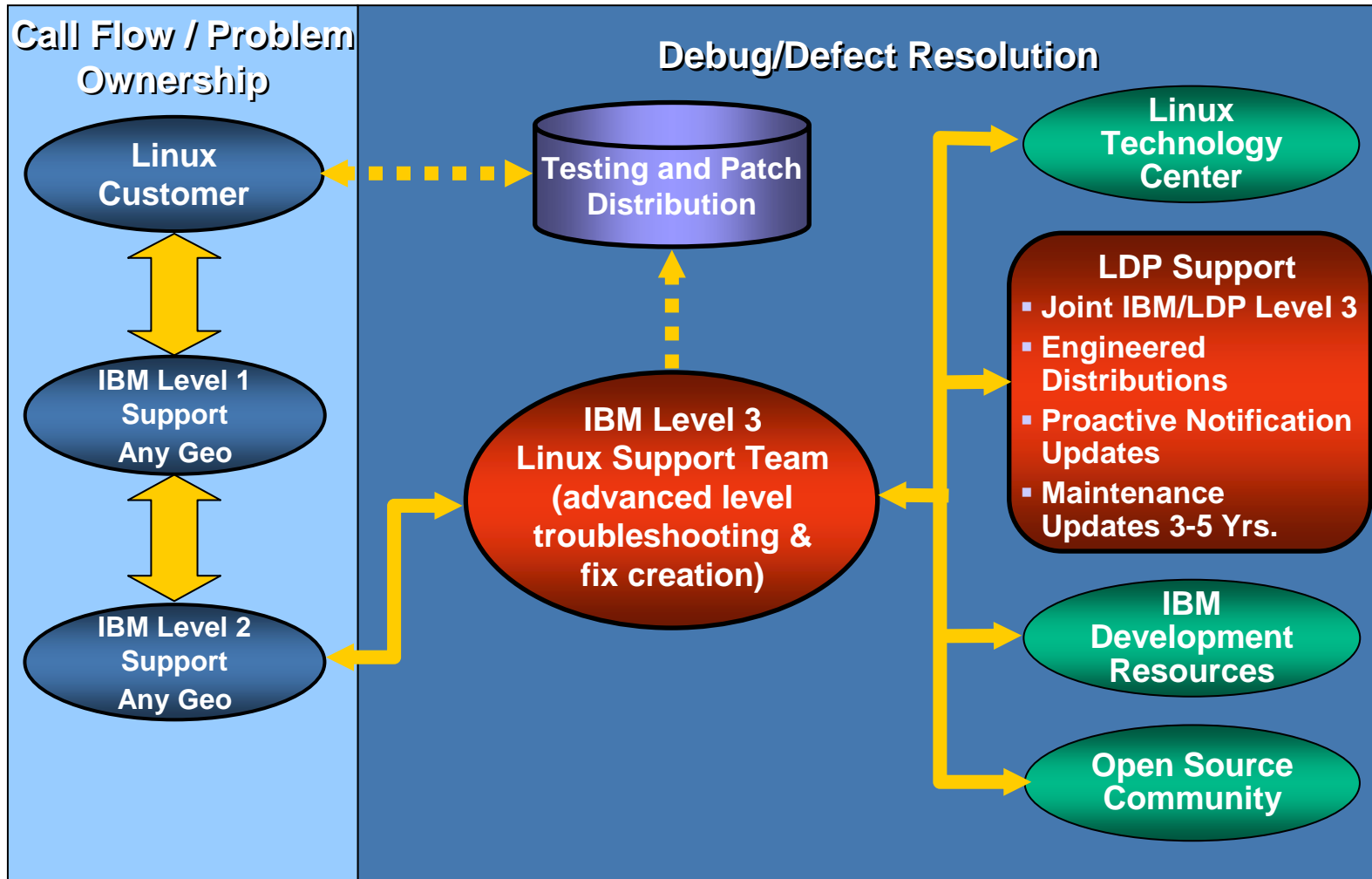
- **600+ Developers worldwide, 40 locations**
- **150+ Open Source Projects**
- **Critical contributions to current and in-progress versions of Linux**
  - ***“Helping make Linux better”***
- **Members of the Linux Community**
  - Open Source Development Lab (OSDL) and its projects (Carrier Grade Linux, Data Center Linux, Desktop Linux ...)
  - Free Standards Group, including Linux Standards Base and Internationalization
  - Free Software Foundation
  - Technical conferences.....
  - ..... *and many more memberships*





# IBM IGS - Linux Support Structure

*Providing enterprise support for mission critical workloads*





## Agenda

- Customer adoption of Linux
- Mission critical workloads and Linux
- **Business applications and Linux**
- Open computing and Linux
- Why IBM (we do it best)





# Over 6,000 Linux-enabled ISV applications



65% Leverage IBM SW

## IBM's Linux Partner Ecosystem

### *IBM Business Partner Programs*

- **Over 6,000 IBM Business Partners**
- **Leaders for Linux Program**
  - Custom co-marketing campaigns
- **PartnerWorld Industry Networks**
- **Solution Builders Express**
- **Value Networks**
  - Creating repeatable solutions
- **Chiphopper**
  - Porting ISV Applications to OpenPower



### *IBM Developer Programs*

- **developerWorks Linux zone**
  - Tutorials, Redbooks, best practices, etc.



## Agenda

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# Open Computing: Staying.....Open for Business

## Goals of openness:

- Flexibility
- Resilience
- Avoid vendor lock-in
- Maximize freedom of action

## Open standards:

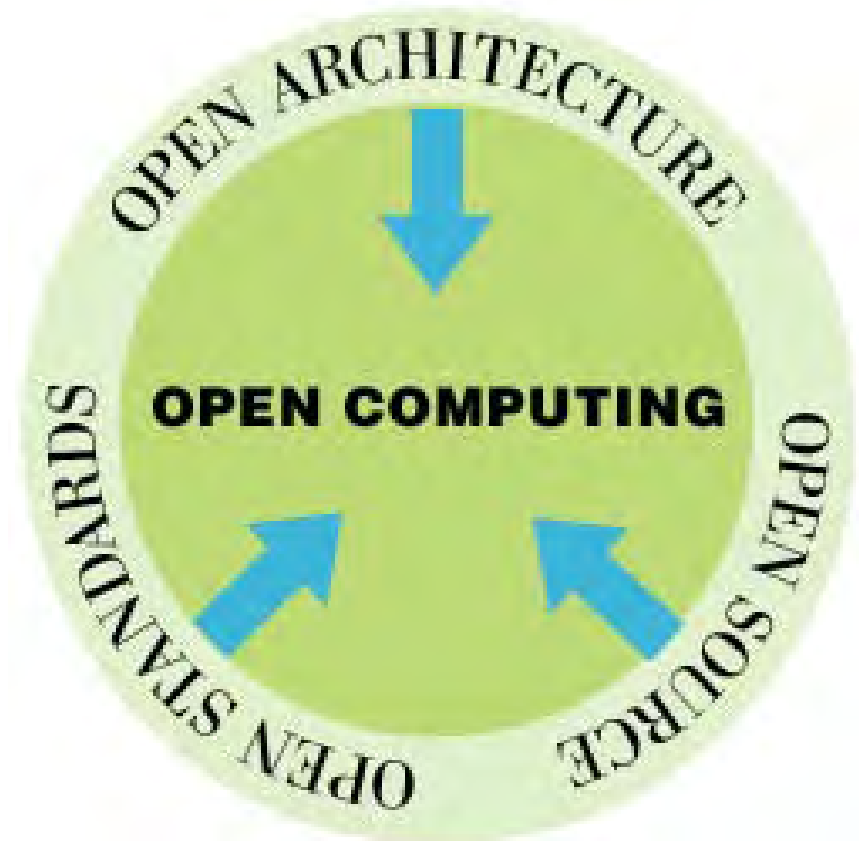
- Promoting interoperability by using open published specifications for API's, protocols, and data and file formats

## Open architecture:

- Building loosely coupled, flexible, reconfigurable solutions

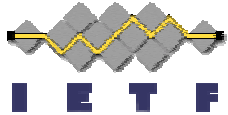
## Open source software:

- Promotes standards
- Leverages community development and collaborative innovation





# IBM Open Standards Leadership



## 1998 / 1999

### Java, XML

- Author of XML4J
- Co-author W3C DOM
- Chair W3C XSL WG
- Chair OMG XML Metadata Interch. Format
- Founder XML.org
- Elected to OASIS Board of Directors

## 2000

### Web Services & UDDI

- Co-author of SOAP 1.1 & submission to W3C, chair of XML Protocol (SOAP) WG
- Cofounder of UDDI.org and author of original UDDI spec
- Co-author of WSDL

## 2001

### Web Services and Tools

- Led submission of WSDL to W3C
- Co-chaired W3C Web Services Workshop
- Founder of Eclipse.org
- Co-author of W3C XML Schema
- Chair OASIS WS Interactive Appls & WS-Remote PortletsTCs
- IBM Web Services Toolkit released on Alphaworks

## 2002

### WS-I, OMA and WS-Security

- Founder and chair, WS-I.org
- Helped found OMA, vice-chair
- Chairs of OMA Browser WG & Device Mgmt WG
- Co-author of WS business process specs (BPEL, WS-TX, WS-TC)
- Co-author for Web Services Security roadmap and specification
- Submitted & co-chair OASISWS-Security TC
- Co-chair UDDI TC

## 2003

### Web Services Interoperability

- Co-chair OASIS WS-Security 1.0
- Submitted BPEL to OASIS and co-chair TC
- Co-chair OASIS WSDM TC
- Submitted CBE & WS-Manageability to OASIS
- Chair of OMA Architecture Framework
- Merged SyncML Forum into OMA
- Member of OASIS Technical Advisory Board

## 2004

### Web Services Management

- Chair WS-I Basic Profile 1.1
- Co-chair OASIS WS-Notification TC & WS-Resource Framework TC
- Chair OASIS DITA
- Submit WS-Addressing to W3C
- IBM appointed to W3C TAG
- Vice-chair OMA mobile commerce
- Co-author of OMA architecture
- Led WS-Security, and WS-I Basic Profile 1.0 to completion as Standards

## 2005

### Web Services Reliability

- IBM named to chair of IETF and IESG
- IBM declares commitment to RF in OASIS
- Co-authored & submitted WS-Reliable Messaging to OASIS
- Led OASIS WSDM to Standard status
- Led OASIS DITA to Standard status

Over 160 business integration technology patents

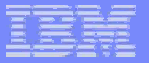
First Web Services Gateway

First integrated private UDDI directory



## Why does IBM consider Open Source important?

- ***Can be a major source of innovation***
  - Innovation can happen anywhere - any time
  - Development through "open communities" leads to potentially broad ideas & creativity
  
- ***Community Approach***
  - Internet has changed how enterprises address technical innovation
  - Enterprises engaging early on
  - Shapes IBM technical leaders thinking & approach to broad collaboration
  
- ***Good approach to developing emerging standards***
  - Popular Open Source projects can become de facto / open standards
  - Wide distribution/deployment
  
- ***Enterprise customers are asking for it***
  - Increase choice & flexibility – adoption/use of open source can reduce time to market
  - Example - want Linux to be part of an overall, vendor-supplied and supported total solution



# Open-Source and Commercial Software co-exist



Creating software that is closed-source and innovative - intended to differentiate the vendor and deliver value to the client.

Creating, maintaining, and enhancing software through open, collaborative communities driving standardization and innovation.

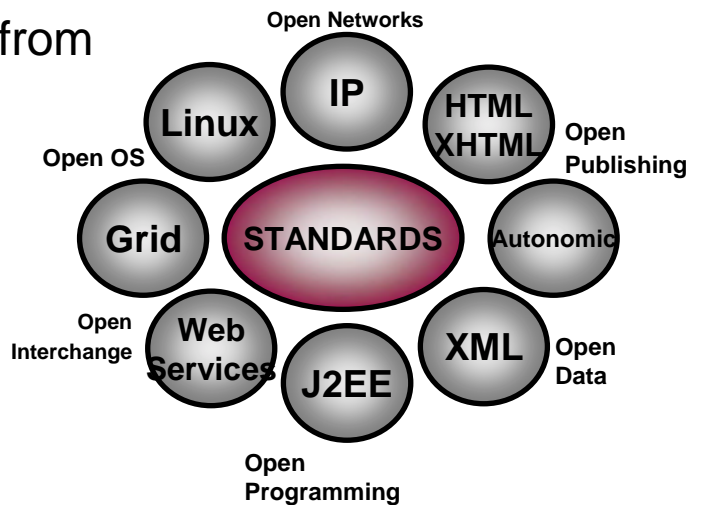
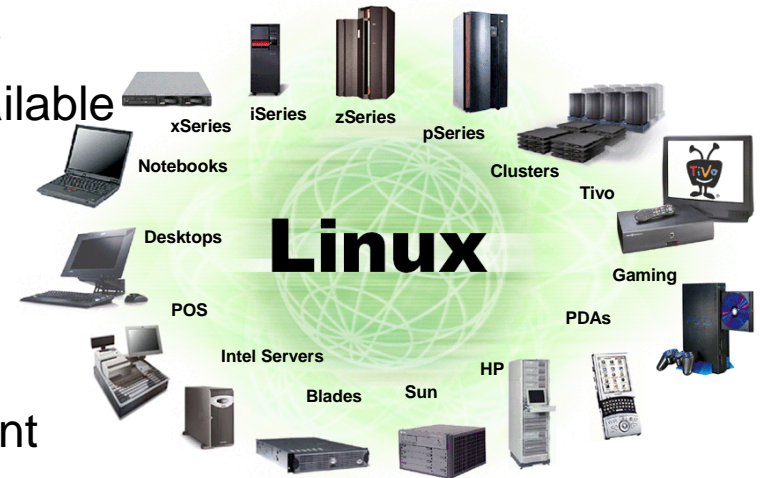
## The Industry is Seeking a New Equilibrium





# Linux is an excellent example of how Open Source Software can rapidly mature to become a key IT and business enabler

- A "Unix-like" Operating System that is community developed with the source code being readily available
  - Robust functionality and scalability
  - Solid stability and security
  - Lightweight and modular
- Operates on virtually any platform – server or client
- Generally acquired on a support subscription basis from Linux Distribution Partner: Novell or Red Hat



**“Linux will do for applications what the Internet did for networks.”** -Irving Wladawsky-Berger

# IBM is a Leader in Open Source



## 1999 / 2000

- IBM forms Linux Technology Center
- Leads Apache projects Xerces (XML4J), Xalan, SOAP
- IBM forms Open Source Steering Committee
- Creates OSI-approved IBM Public License
- Strategic participation in Mozilla
- IBM becomes founding member of OSDL

## 2001

- Linux contributions to networking, serviceability, performance
- Mods to Apache 2.0 HTTP server
- Founder of Eclipse.org – contributing Platform
- Common Public License approved – used by Eclipse
- Creates internal bazaar using OSS methodology

## 2002

- Linux contributions to scalability (8-way+), reliability (stress testing, defect mgmt, doc)
- Leads Apache Web Services projects WSIF and WSIL
- Leads Eclipse projects GEF (editing), EMF (modeling), XSD (XML Schema)
- IBM contributes eServer support for Globus Toolkit 2x

## 2003

- IBM and SuSE achieve EAL2+ Common Criteria security cert
- Leads Apache projects Pluto (Portlet API) and WSRP4J (Remote Portal)
- Leads Eclipse projects Hyades (testing), Visual Editor, AspectJ, Equinox rich client
- Globus Toolkit 3 contributions for OGSA, OGSi

## 2004/2005

- IBM and Novell/SuSE achieve EAL4+ and Common Operating Environment compliance
- Eclipse becomes independent org – IBM contributes UML2, Web Tools, Voice Tools
- Globus Toolkit 4 to be WS-I compliant
- Contributed 500 Patents to Open Source
- Partner with Zend PHP
- IBM enhances Apache partnership
  - Incubates project Derby (Cloudscape Java database)
  - Contributes voice recognition technology
  - Supports Geronimo J2EE project – acquires Gluecode for skills

**More than 1000 developers involved in OSS projects**

**IBM leads 80+ OSS projects**

**IBM contributes to 150+ OSS projects**




# IBM Cloudscape

Simplifying database application development and deployment



Derby

Open Source Via Derby  
 The Apache Software Foundation

Downloadable from IBM  
[www.ibm.com/developerworks/cloudscape](http://www.ibm.com/developerworks/cloudscape)

Fully Supported IBM Product

## Fully Embeddable or Server-based



Small  
Foot Print



Java  
Based



PHP/Perl  
Access



No  
DBAs

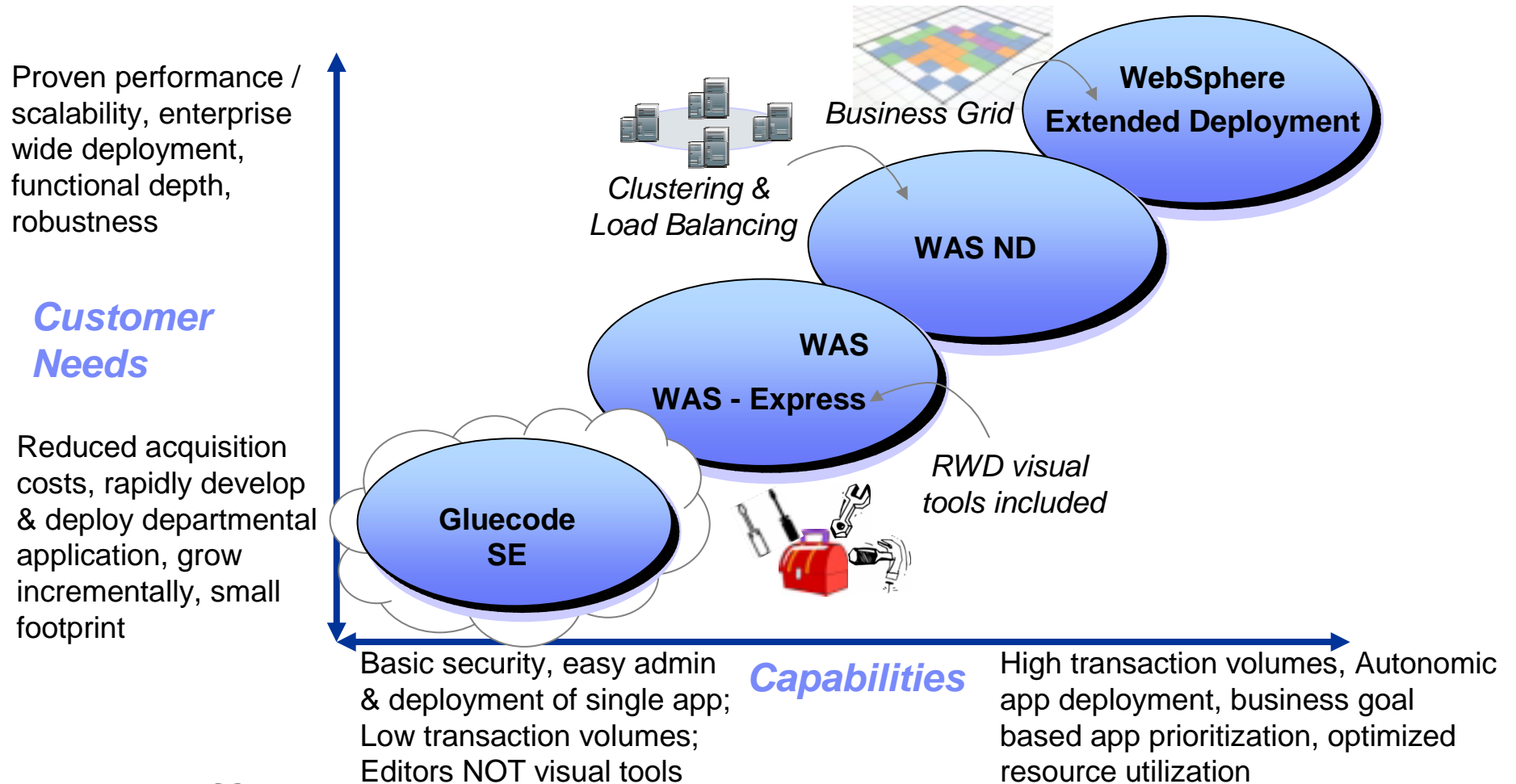


Upwardly  
Compatible with **DB2**



# IBM's Application Server Offerings

Gluecode takes IBM's application server portfolio into new markets...



## Agenda

- Customer adoption of Linux
- Mission critical workloads and Linux
- Business applications and Linux
- Open computing and Linux
- **Why IBM (we do it best)**







# IBM continues to invest in Linux throughout the corporation

*Worldwide Porting Centers*

*Technical Support*

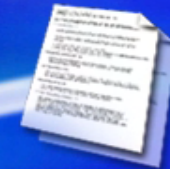


*Linux Technology Center*

*Linux Integration Center*



*WW Competence Centers*



*OSDL*



*Products*



*Linux Enabled Business Partners*

*Linux Services*

[www.ibm.com/linux](http://www.ibm.com/linux)



## Linux: Transforming IBM's IT Infrastructure

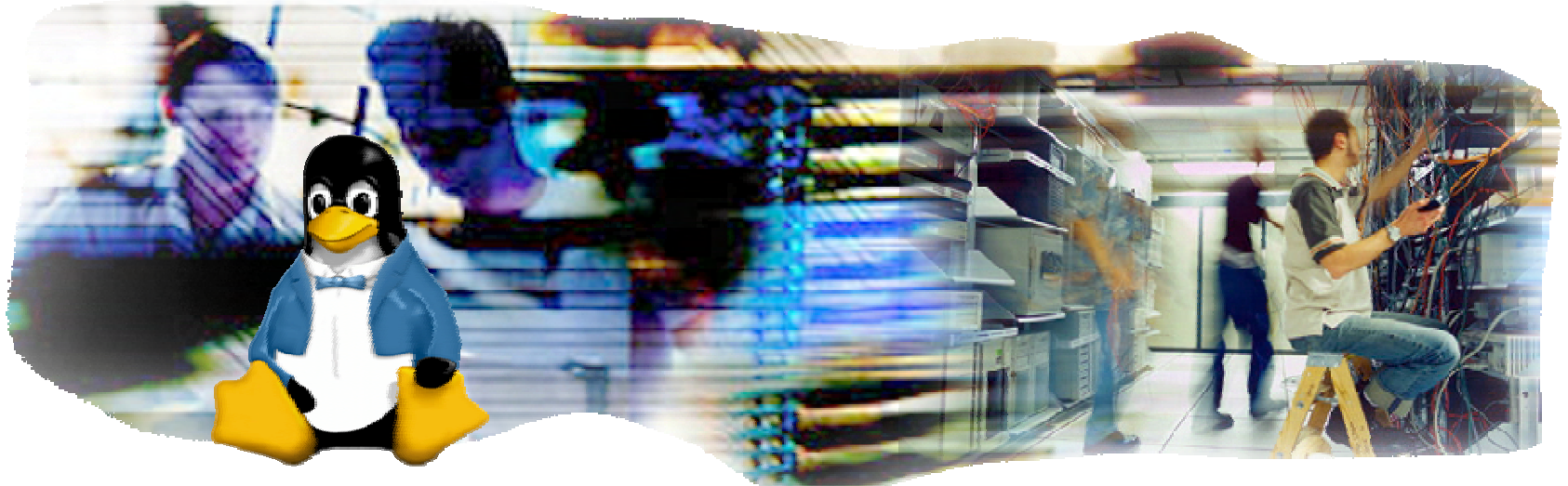
### *Providing Key Business Solutions*

- **3,100+ Production Servers, Worldwide**
- **300mm Wafer Manufacturing Automation & Equipment Control**
  - 200+ production xSeries
- **IBM's Application Hosting Environment's HTTP workload**
  - 21 Blade servers
- **IBM's Special Events Infrastructure (e.g. Wimbledon)**
  - 291 xSeries servers running Linux in 3 clusters, in 3 data centers
- **IBM Global Services Internet Vulnerability Security Scanning**
  - 120 xSeries servers scanning 30K IP addresses/week
- **IBM's Web Fountain Advanced Mining Application Service**
  - Development environment of 326 servers
  - Production environment of 616 servers, including 398 Blade servers
- **..... and more**

## Unstoppable *Linux*

*Linux passes the inflection point*  
*A safe choice for customers*

*Unleashing Innovation*  
*Pervasive in business*



**IBM**  
*Your Partner  
of Choice*

- Enabling the On Demand Infrastructure
- Industry leadership in Linux and OSS
- Strong offerings in software and hardware
- Investing not only in Linux, but in industry specific application solutions and partner support
- Tying it all together with support and services
- IBM does IT ALL... IBM does it best



## Summary

- Customer adoption of Linux
- Mission critical workloads and Linux
- Business applications and Linux
- Open computing and Linux
- Why IBM (we do it best)





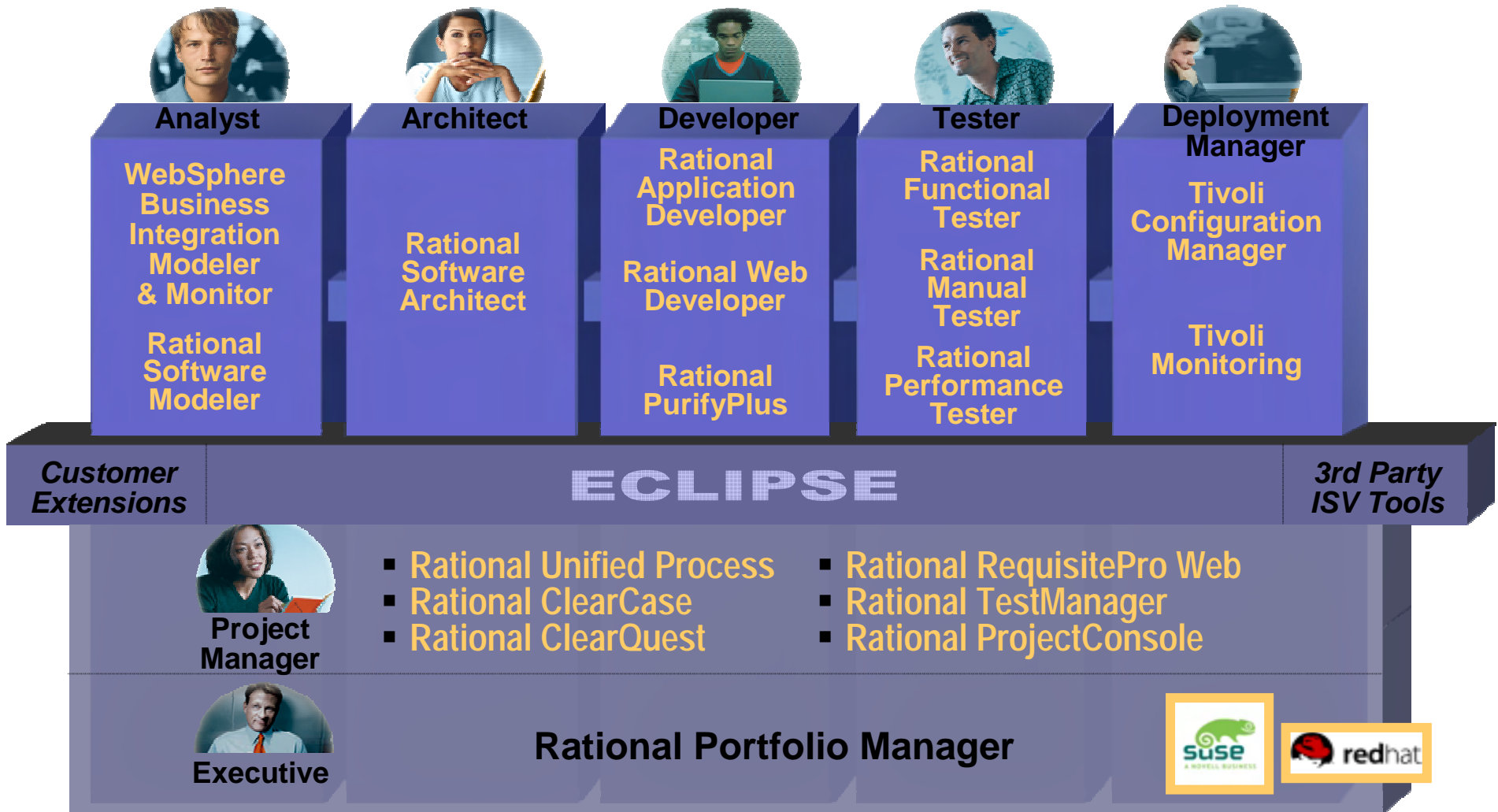
## Back-up

- SW Brand charts
- Linux on the Client



# The IBM Rational Software Development Platform

*Accelerates software development on and for Linux*



# WebSphere Offerings on Linux

*An integrated part of the leading middleware software and support offerings from IBM Software Group*

- Product Leadership in All Categories
- Most Comprehensive Integration Platform
- Reliability, Security & Scalability
- Modular, Incremental & Adaptable
- Open Standards Leadership



## **WebSphere Portal**

*A single point of personalized interaction with applications, content, processes and people*



## **WebSphere Commerce**

*Powerful sell-side solutions to handle the challenges encountered in customer and trading partner environments.*



## **WebSphere Everyplace**

*Software for extending e-business applications to mobile devices*



## **WebSphere Voice**

*Software for enabling natural voice interactions with applications and data*



## **WebSphere Business Integration**

*Software needed to model, integrate, automate, and manage efficient and flexible business processes*



## **WebSphere Information Integration**

*Software for delivering accurate, consistent, timely, and coherent business information*



## **WebSphere MQ**

*Software to connect internal and external applications to exchange information reliably and securely*



## **WebSphere Host Integration**

*Software to leverage and extend legacy assets for new e-business solutions*



## **WebSphere Application Server**

*A high-performance and extremely scalable transaction engine for dynamic e-business applications*

# IBM Information Management Portfolio on Linux

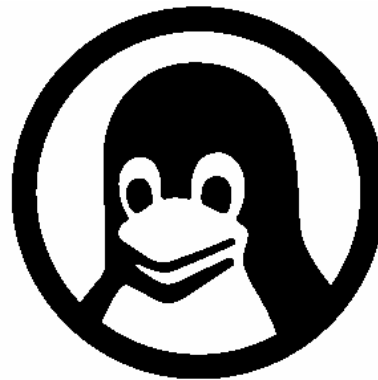
*IBM offers the most comprehensive information management infrastructure on Linux*

## Database Server and Tools

- *Build the foundation for information on demand to meet the full range of your business needs*
- **DB2 Universal Database**
- **Informix IDS**
- **Cloudscape (Derby - open source )**
- **DB2 Everyplace (mobile)**

## Business Intelligence

- *Gather, manage and analyze information providing real-time insight into your business*
- **DB2 Data Warehouse Edition**
- **DB2 Alphablox**
- **DB2 Entity Analytics (SRD)**



## Content Management

- *Capture the value of all information contained within multiple content types*
- **DB2 Content Manager**
- **DB2 Document Manager**
- **DB2 Commonstore**

## Information Integration

- *Collect and integrate diverse and distributed information across your enterprise*
- **WebSphere Information Integrator**
- **WebSphere OmniFind**
- **WebSphere DataStage (Ascential)**

**DB2.** Information Management  
Software





# IBM Workplace Family on Linux

*A family of products, technologies and solutions for transforming the way people work*



**Products, solutions and technologies that integrate collaboration, portal and productivity capabilities based on open standards**



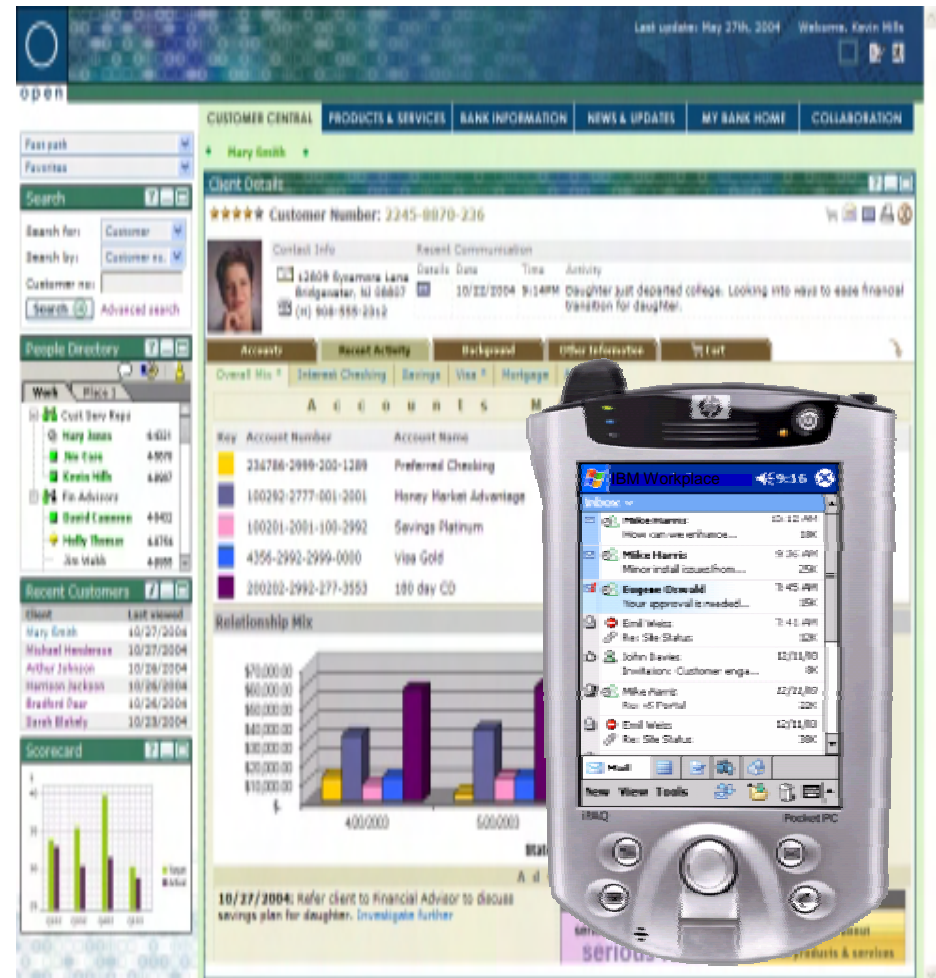
**Market leading messaging, collaborative application development and collaboration products**



**Integrated access to people, information, applications and business processes in a single role based interface**



**Mobile access to applications, information and people**

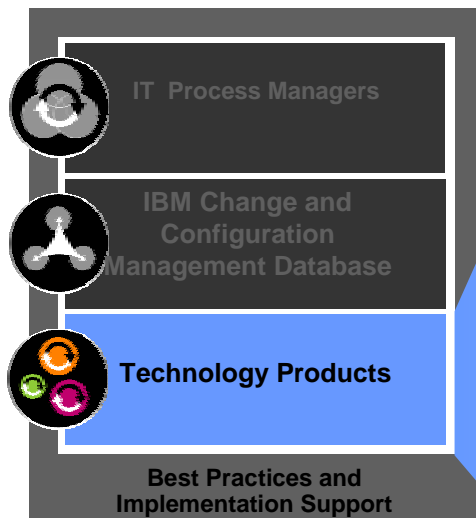




# Tivoli Software on Linux

An integrated part of the leading middleware software and support offerings from IBM Software Group – **Over 40 Products Supporting Linux**

## Key IBM Tivoli Software Products



### Tivoli Provisioning Manager

Reduce IT administration costs, improve infrastructure utilization, and reduce management complexity by automating manual and repetitive datacenter change management tasks



### Tivoli OMEGAMON® for Linux & Tivoli OMEGAMON DE

Integrate Linux with all systems and applications to see and manage the entire enterprise from a single point of control



### Tivoli System Automation for Multiplatforms

Provides Mainframe-like High Availability/Failover and Application Automation for Linux servers, middleware, and applications



### Tivoli Access Manger for Operating Systems

Combines full-fledged intrusion prevention—host-based firewall, application and platform protection, user tracking and controls—with robust auditing and compliance checking



### Tivoli Storage Manger

Protect your organization's data from failures and other errors by storing backup, archive, space management and bare-metal restore data, as well as compliance and disaster-recovery data in a hierarchy of offline storage

## Agenda

- Customer adoption of Linux
- Mission critical workloads and Linux
- Business applications and Linux
- **Linux on the client**
- Open computing and Linux
- Why IBM (we do it best)



## Clients Becoming Increasingly Heterogeneous

### Enterprise desktops becoming heterogeneous

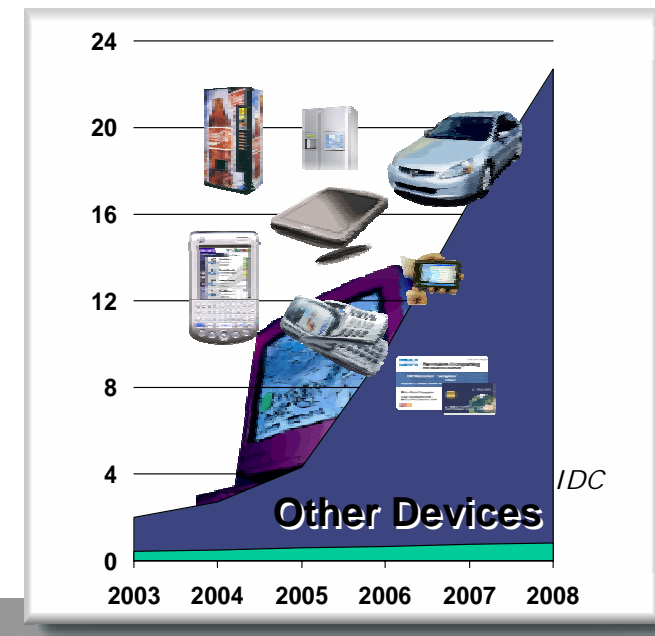
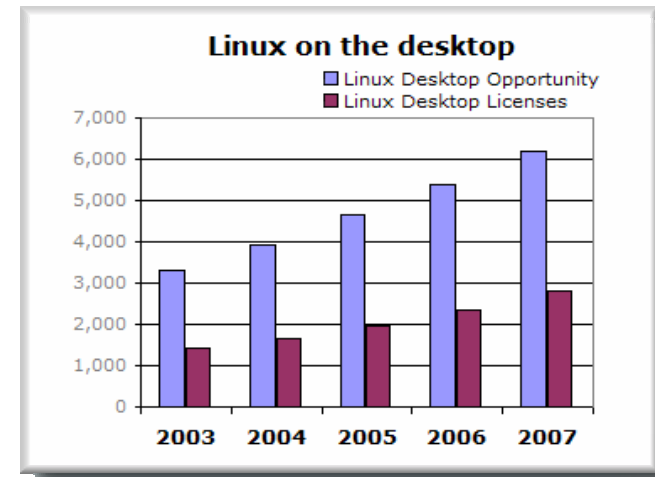
- Linux desktop market will grow at 37% CAGR from '03 – '07
- Linux desktop install base - approximately 10M in '04

### Desktop usage extending beyond browser applications

- Richer GUI will be required for certain applications
- Disconnected application

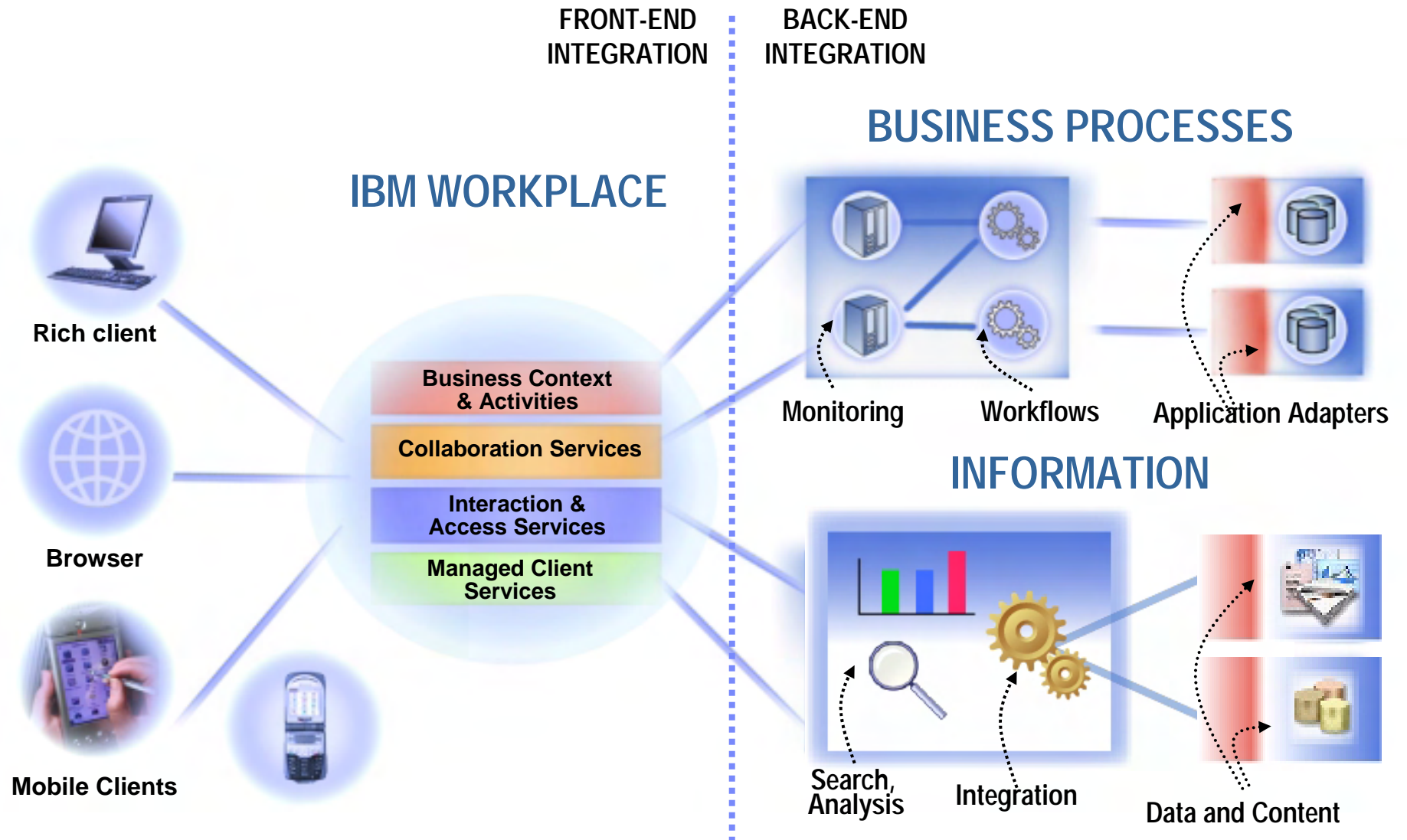
### Expanding role of mobile devices

- Increased need for access to people, business processes, applications from a wide spectrum of devices, user types and forms of connectivity



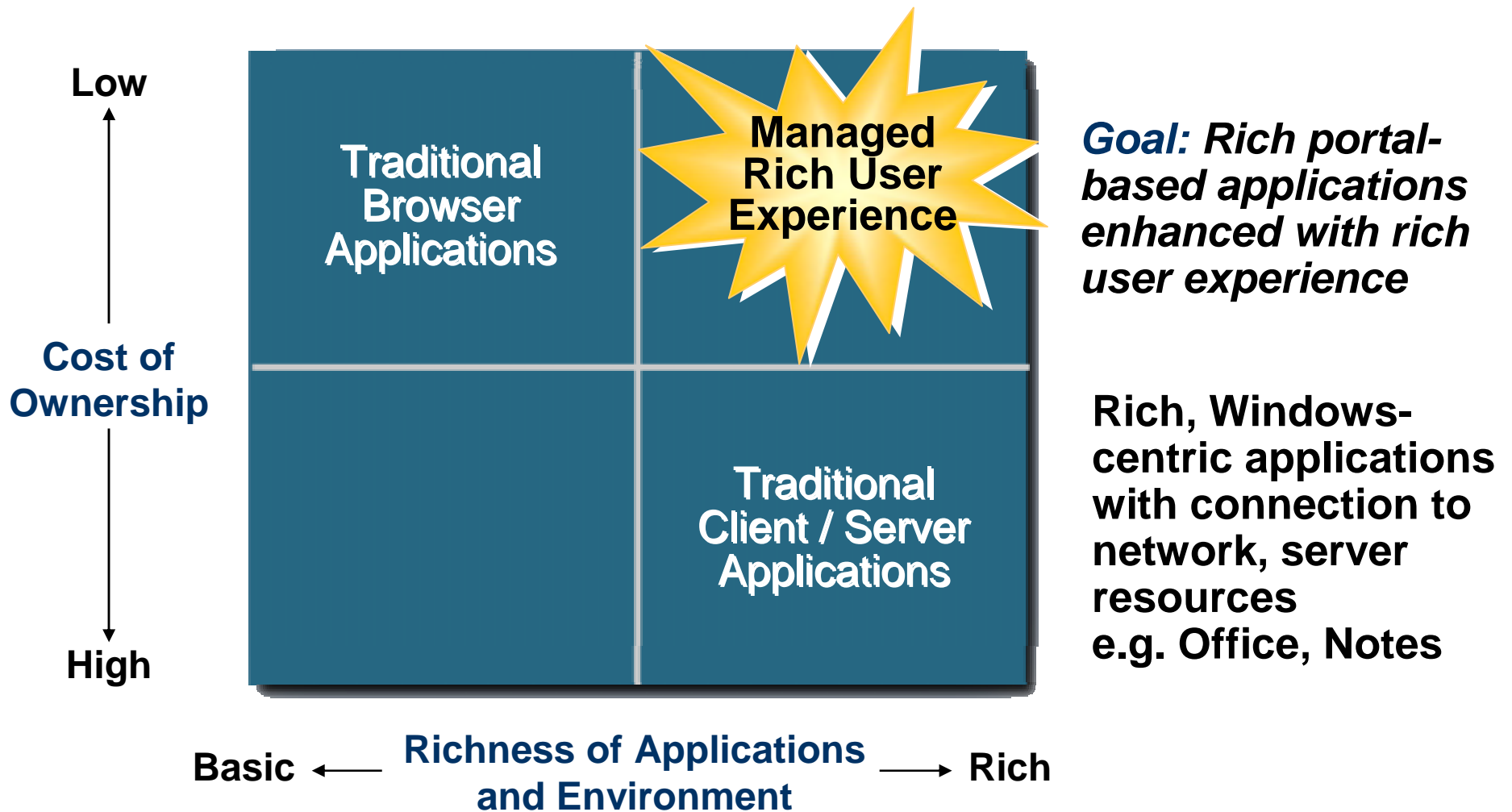


# Managed Client





## Challenge: *Achieve Rich Functionality at Low TCO*



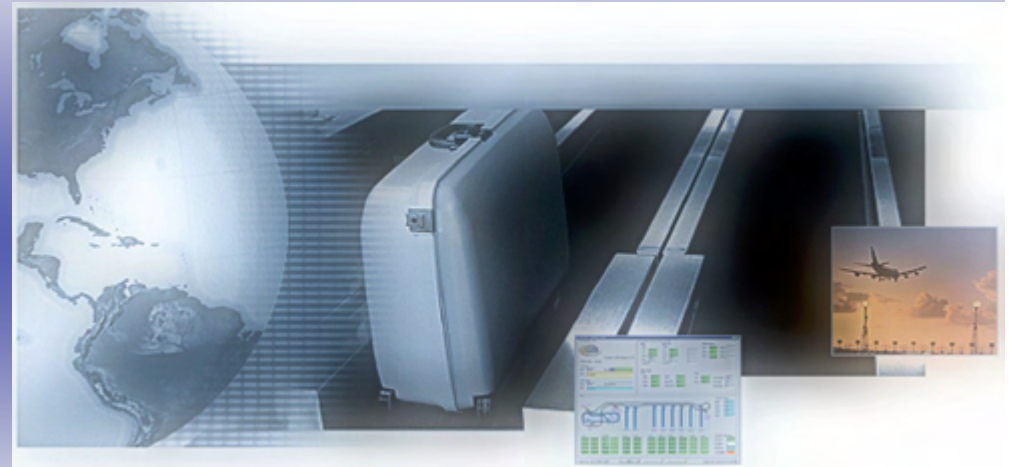
# Glidepath

*Staying operational – longer  
Mail System remains 'fail-safe' 24x7*



***“One of the problems with Microsoft Exchange is that it is constantly being attacked by viruses and I found it difficult to keep the system secure ... nothing ever attacked the Linux server so we decided to drop Windows altogether and have both servers running the Lotus Notes, Domino and Linux combination.”***

-- Ray Welburn  
IT Manager. Glidepath





*“IBM Tivoli System Automation for Linux helped us cost-effectively deliver the 99.99 percent availability that customers demanded... The cluster technology provides mainframe-like high-availability to the IBM eServer with Linux distributed environment.”*

— Andreas Walter,  
IT Manager,  
Proximity Group  
Germany

## Proximity Group Germany



### Business Challenge

- Strengthen market position, expand services cost-effectively.

### Business Benefits

- Increased service revenue, strengthened market image, and maintained SLA compliance by consistently delivering 99.99 percent availability of hosted services.
- Reduced total cost of ownership of data management by 75 percent as compared to competitive solutions.
- Avoided a 25 percent increase in support personnel through improved staff productivity.
- Reduced implementation time for new hosted services with out-of-the-box automation.

### Solution

- A high availability, fault tolerant Web hosting center based on IBM eServer xSeries systems running Linux; IBM DB2 Universal Database Workgroup Edition for Linux; Tivoli System Automation for Linux; Tivoli Storage Manager.

## Grohe excels with DB2 and Linux for their SAP solutions

Application	Enterprisewide ERP and CRM mobile sales solutions for global faucets and fittings manufacturer
Business Benefits	Substantial savings due to economies of scale and elimination of costly resource duplication; more effective business decisions through unified enterprisewide business view; heightened productivity and efficiency for sales force; increased customer satisfaction
Solution	DB2 Universal Database



Founded in 1936, Grohe has grown into the leading brand for high-quality water fittings and holds 10 percent of the global market in sanitary products and systems.

*“The choice of Linux for Grohe's IBM and SAP CRM solution was a key strategic decision. Linux offers far-reaching advantages in cost and performance, and we are impressed with IBM's clear commitment to maximize those advantages for its customers. The combination of DB2 with xSeries on Linux offers the best performance, reliability and manageability available for our CRM environment.”*

*-- Bernd Morlock, Computer Scientist for SAP System Platforms, Grohe AG & Co. KG*