

System z Update

October 15th 2009 Analyst Call



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Agenda

State of the Business

- Red Hat Corporate Overview
- Revenue growth
- Updated market share (through CY2008)
- Updated Red Hat percentage of new workload sales

Current & Future Strategy

Customer Stories

State of the Business





Headquarters: Raleigh, NC

- Founded 1993 - IPO 1999
- Operates in 27 countries
- 65 offices
- Engineering in:
 - Raleigh, NC
 - Westford (Boston), MA
 - Mountain View, CA
 - Minneapolis, MN
 - Toronto, Canada
 - Raanana, Israel
 - Beijing, China
 - Pune, India
 - Brno, Czech Republic

Year ended February 2009

- Revenue: \$653 million
- Employees: ~3,000





Red Hat Product Portfolio

INFRASTRUCTURE

Red Hat Enterprise Linux
- Server
- Client
Red Hat Enterprise Linux Advanced Platform
Red Hat Enterprise MRG
Red Hat Enterprise Virtualization

MIDDLEWARE

JBoss Enterprise Application Platform
- Web Server
JBoss Enterprise Communications Platform
JBoss Enterprise SOA Platform
JBoss Enterprise Data Services
JBoss Enterprise Portal Platform
JBoss Enterprise BRMS
JBoss Enterprise Frameworks
JBoss Hibernate, JBoss Seam, JBoss jBPM,
JBoss Rules
JBoss Developer Studio

MANAGEMENT

Red Hat Satellite
JBoss Operations Network
Red Hat Directory Server
Red Hat Certificate System
Red Hat Enterprise Virtualization Manager for Servers/Desktops

SERVICES

Red Hat Consulting
Red Hat Support Services
Red Hat Training

Why Open Source?

Strategic elimination of vendor lock-in

OSS naturally creates multiple vendors

Improved security

Proven security through better technology & threat response record

Auditability

Customers and industry can verify standards adherence, quality & flexibility

Cost reduction in multiple dimensions

Hardware; system administration; compute transactions/watt; license management

Solution Ecosystem

OEM and ISV suppliers across the IT industry are focusing on delivering OSS solutions

Technology

All leading software technology development today is being done under the OSS model

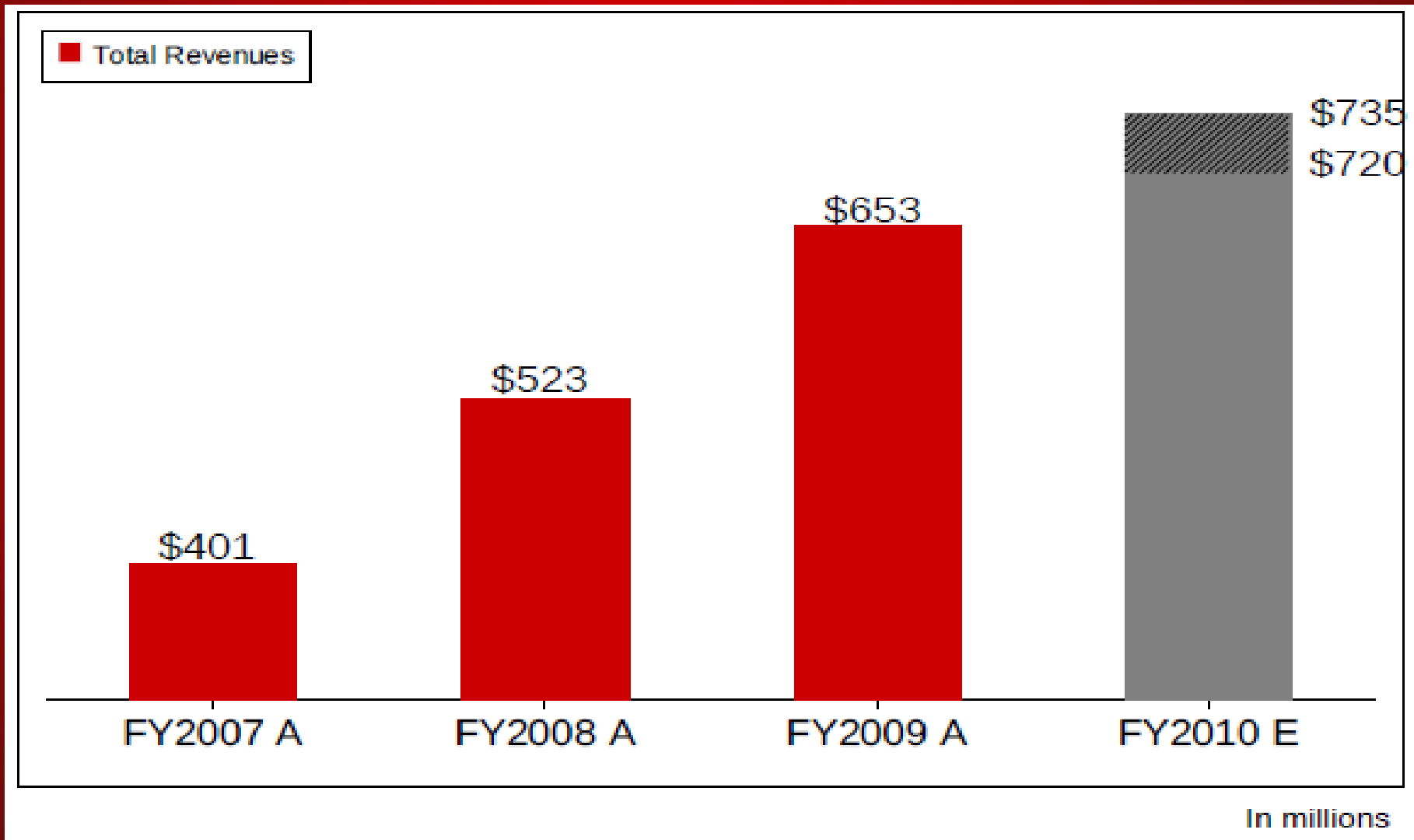


Proprietary

Open Source

Oracle/IBM Portal, Oracle BPM, ILOG JRules	JBoss Portal Platform, JBoss jBPM, Rules Framework
BEA WebLogic, IBM Websphere	JBoss Enterprise Application Platform
BEA AquaLogic, IBM ESB, IBM EII	JBoss Enterprise SOA Platform, Enterprise Data Service Platform, JBoss Operations Network (management)
IBM Websphere MQ, Tibco EMS	Red Hat Enterprise MRG Messaging
eDirectory , SunOS	Red Hat Directory Service, Certificate System
Data Synapse, Platform	Red Hat Enterprise MRG Grid
EMC PowerPath	Multi-path I/O
Veritas Storage Suite	LVM, CLVM, Global File System
VMware Virtualization	Red Hat Enterprise Linux
AIX, HP-UX, Solaris	Red Hat Enterprise Linux, Red Hat Enterprise MRG Red Hat Satellite (management)
Veritas Cluster Suite	Red Hat Cluster Suite

Red Hat Annual Revenue



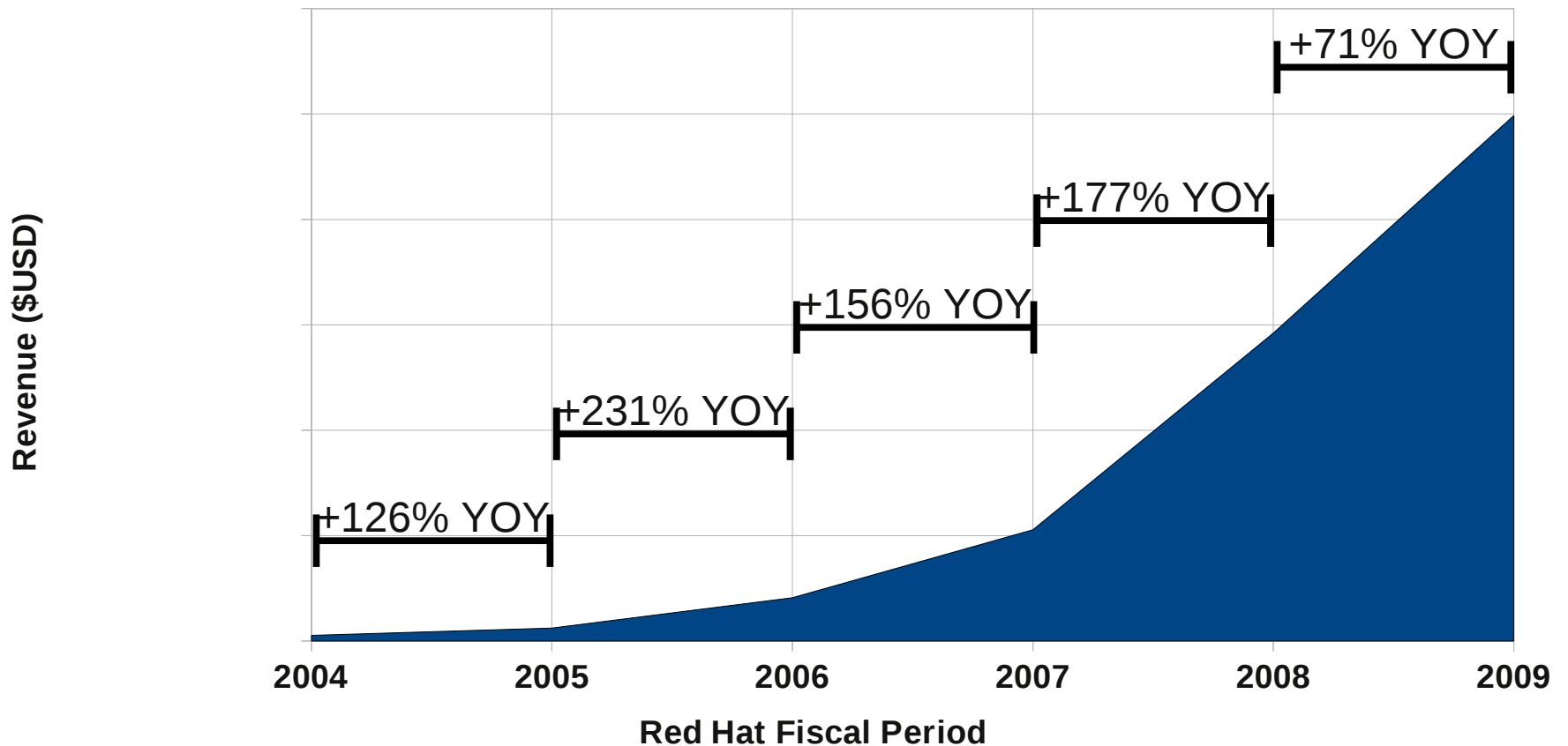
Red Hat Joins the S&P 500

- On July 24th Red Hat (NYSE: RHT) became one of the S&P 500 companies
- The S&P 500 is widely regarded as one of the best measurements of the US equities market. It includes 500 leading companies of the U.S. economy including J. P. Morgan, GE, IBM, and Google. Investors use the index to build a diversified portfolio of stocks that best mirrors the US markets.
- The inclusion in the index is based on Red Hat's strong viability and position of relevance in the marketplace.



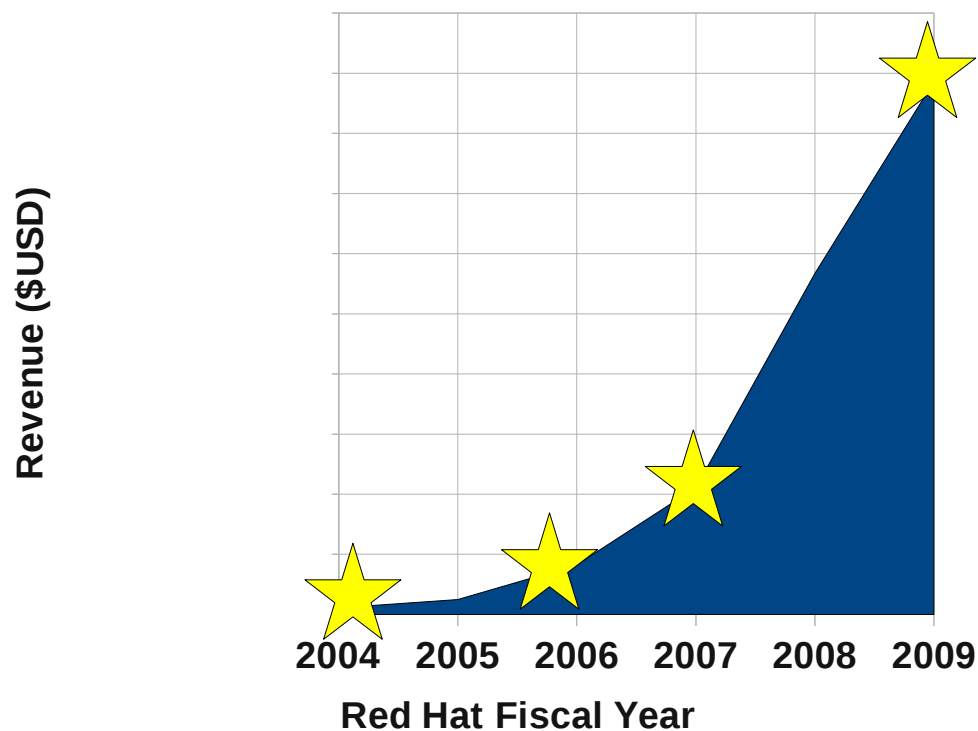
Red Hat System z Revenue

System z Platform Revenue
Red Hat Enterprise Linux Subscriptions



Historical Events

System z Platform Revenue
Red Hat Enterprise Linux Product



2004: First RHEL for System z sale

Late 2005: Dedicated System z Sales, Engineering and Support teams formed

June 2007: IBM exclusively selects Red Hat to re-launch global Linux on System z efforts [1]

IBM pays for Red Hats Common Criteria evaluation, in which RHEL5 became the highest government rated Linux operating system (exceeding both SuSE and z/OS)

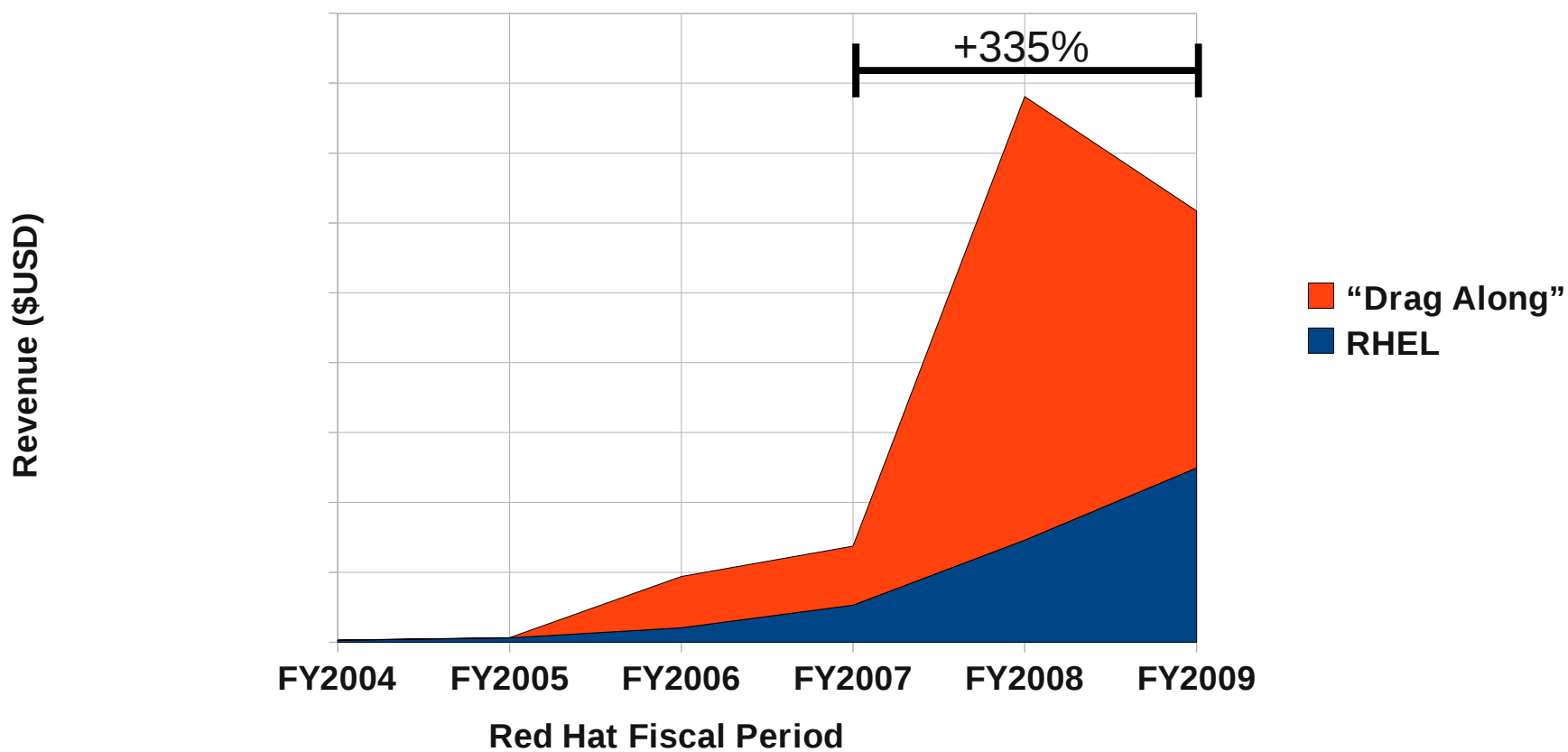
April 2009: Co-Funded 55 day Global System z executive tour through APAC and EMEA (55 days, 18 cities, 10 countries)

[1] <http://www-03.ibm.com/press/us/en/pressrelease/21513.wss>

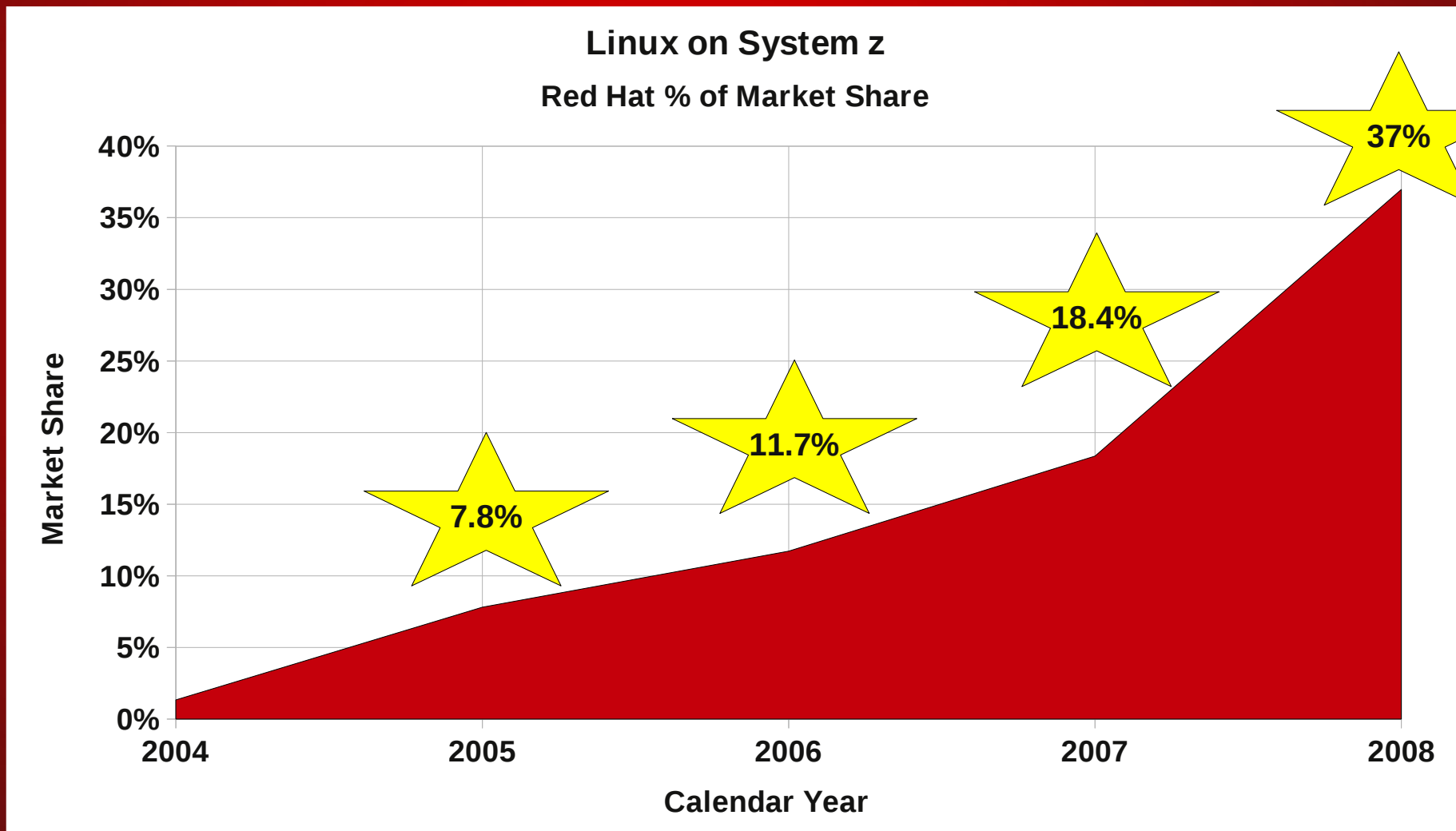
Red Hat System z Revenue

System z Platform Revenue

Red Hat Enterprise Linux + Layered Products



Red Hat System z Market Share



Future Strategy



Red Hat / IBM Relationship

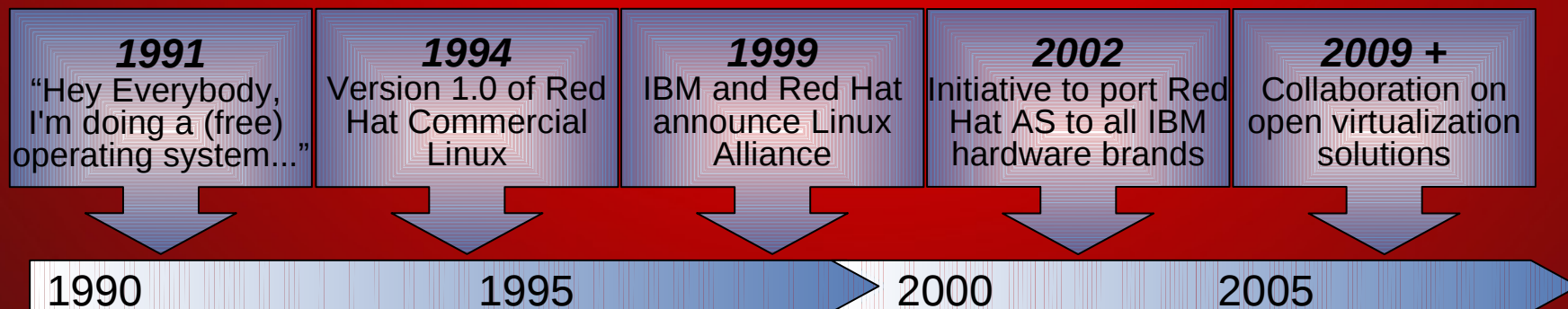
Red Hat and IBM



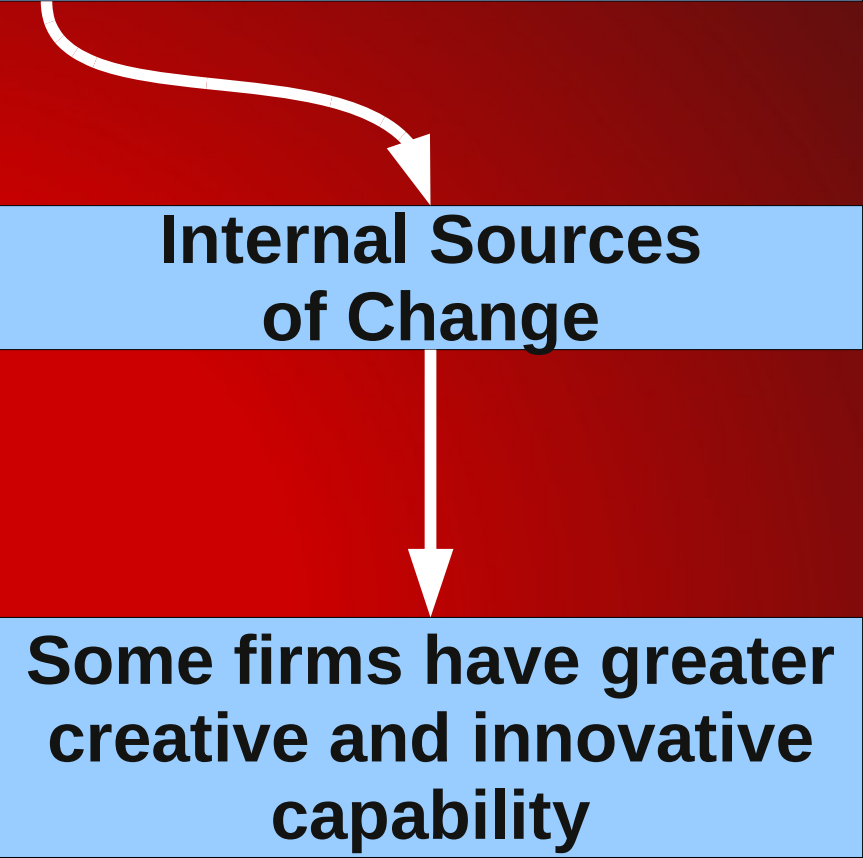
10 Years of Collaboration

- **10 years of joint development**
 - Platform support
 - Innovative feature development
 - Usability
- **Ongoing collaborative projects**
 - Open virtualization
 - Open Client for Linux
 - Linux Test Project, Real Time, System Tap
- **IBM runs Red Hat...
...Red Hat runs on IBM**

Two industry leaders working as one to maximize the Linux advantage



Emergence of Competitive Advantage

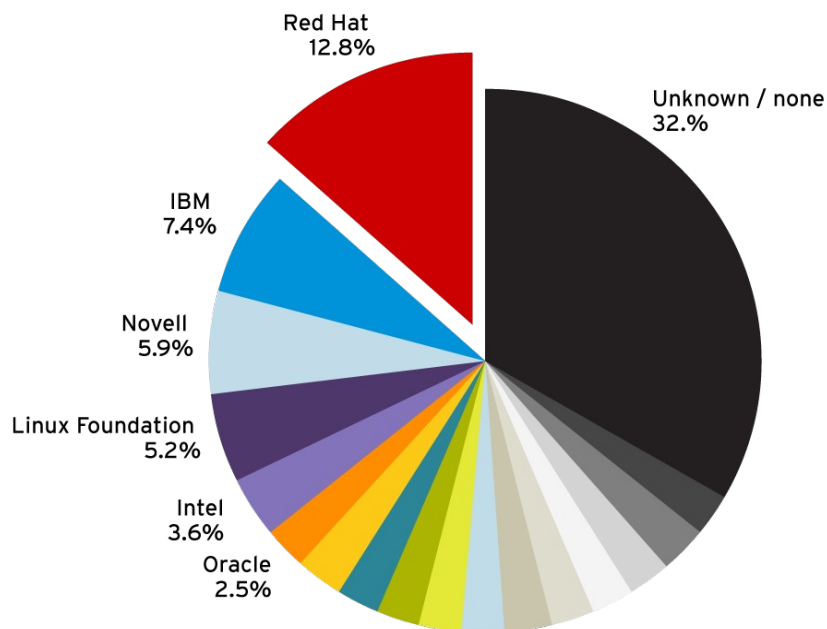


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graph TD; A[Emergence of Competitive Advantage] --> B[Internal Sources of Change]; B --> C[Some firms have greater creative and innovative capability];
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**Internal Sources
of Change**

**Some firms have greater
creative and innovative
capability**

Emergence of Competitive Advantage



Source: <http://lwn.net/Articles/247582/>

Internal Sources
of Change

Some firms have greater
creative and innovative
capability

- LVM2, md - maintained
- KVM virtualization- developed and maintained
- Kernel 2.6 Audit subsystem - written and maintained
- ipsec - maintained
- crypto - maintained

- ext3 - Written and maintained
- vfs- Written and maintained
- Kernel 2.6 Virtual Memory manager - Written and maintained

Emergence of Competitive Advantage

External Sources of Change

- Changing Customer Demand
- Changing Prices
- Technological Change

Internal Sources of Change

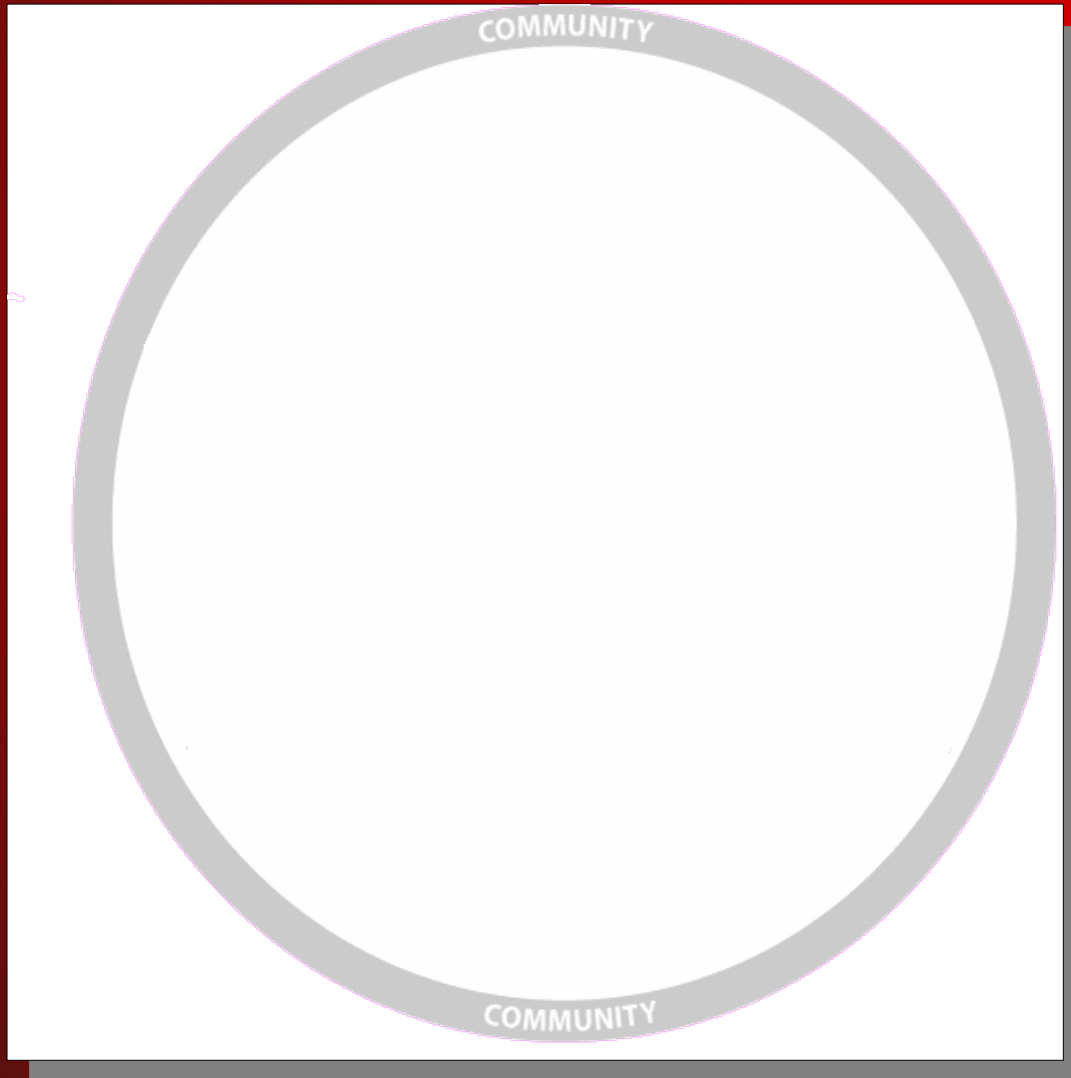
Some firms have greater creative and innovative capability

Resource “heterogeneity” among means differential impact

Some firms faster and more effective in exploiting change

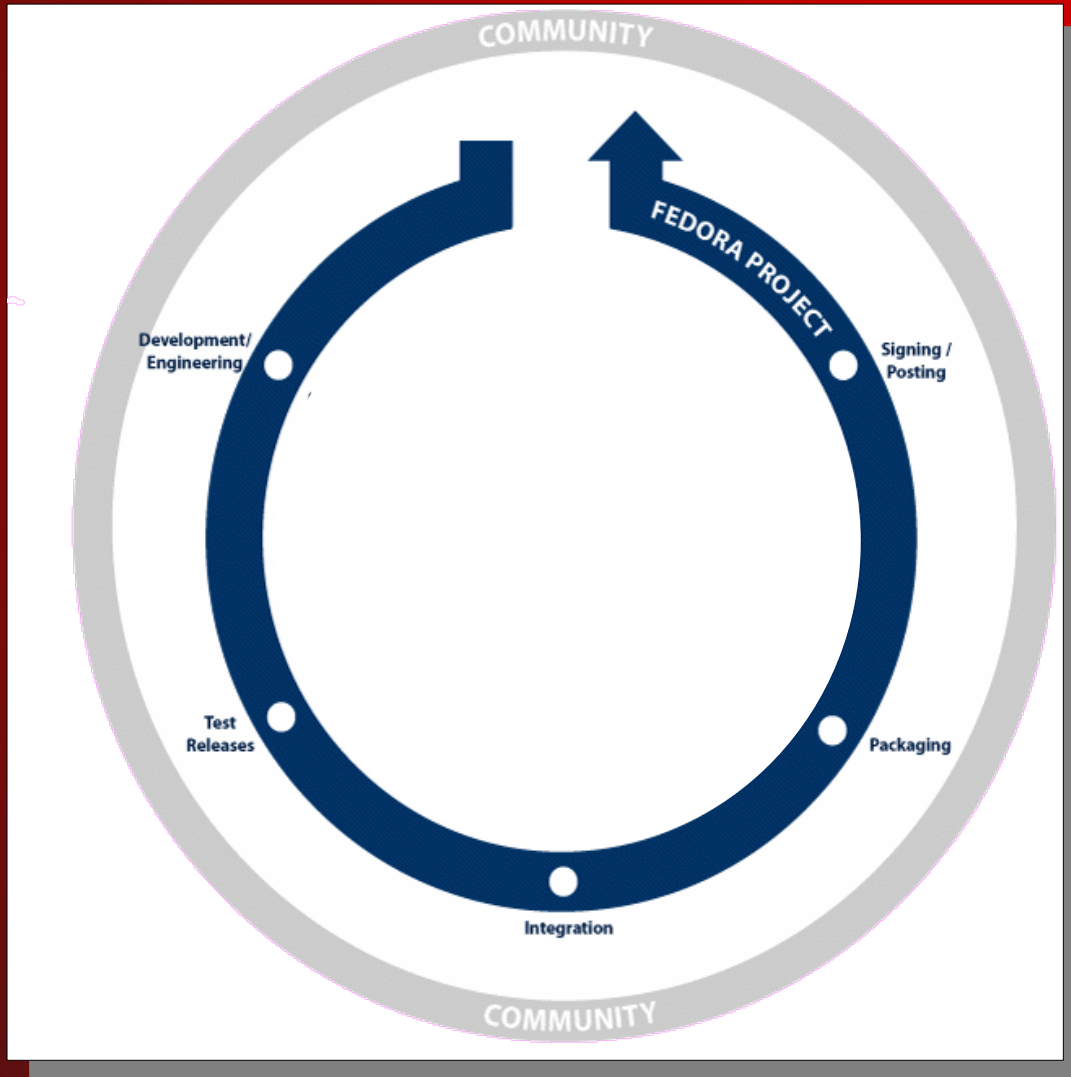


Red Hat Development Model



- Collaboration with open-source communities; individuals, business partners, customers
- Kernel, firewall, apache, etc

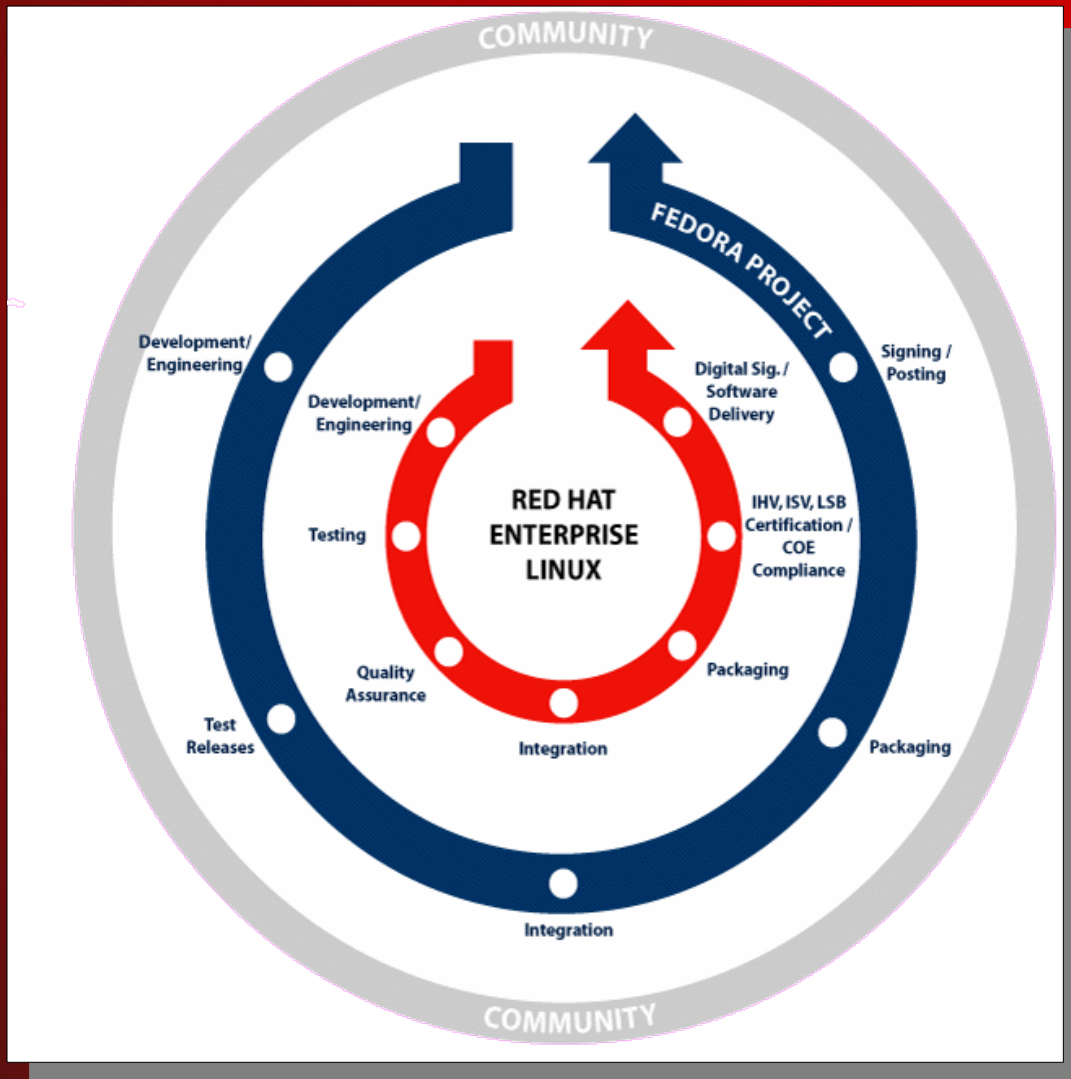
Red Hat Development Model



FEDORA

- Bleeding edge
- Sets technology direction for RHEL
- No commercial support
- Released in ~6mo cycles
- Fedora 8,9,10,11 = RHEL6

Red Hat Development Model



Red Hat Enterprise Linux

- Commercially Viable
- Q&A, tested
- H/W + S/W Certifications
- 7-10 year support
- Major releases 2-3yr cycle

Fedora for System z



Opens Linux on System z development to entire Open Source community, not just IBM, Red Hat, and Novell.

Linux for System z now follows same development process as every other platform, allowing for faster Q&A, faster feature inclusion, and increased stability

Differentiation from Novell

System z in Academia (zNexGen)



- Free RHEL to university partners
 - Marist College
 - Binghamton
 - NCCU
 - San Diego State
 - ... etc

Currently working on creating an Open Source Linux for System z curriculum for Academic partners and the larger community

System z in Academia

North Carolina Central



James E. Shepard, Founder

- Nations first public liberal arts college funded for African-Americans, located in Durham, North Carolina.
- With nearly 9,000 students enrolled, the historically black university is diverse. International studies and exchange programs attract exchange students from more than 12 countries, including Liberia, India, Senegal, Sierra Leone, Nepal, China, the Czech Republic, Nigeria, South Korea, Russia, the Dominican Republic, Mexico, and South Africa.

APPENDIX: Customer Stories





Bank of New Zealand

A bank moves from SUN SPARC to System z10 with Red Hat Enterprise Linux to reduce their carbon footprint and address datacenter cost and capacity concerns

The Challenge

- A data center with 131 SUN SPARC servers was at capacity
- Bank of New Zealand needed to grow, reduce emissions and costs, become more open, and become carbon-neutral by 2010

The Solution

- Consolidate 131 SPARC servers down to just 1 IBM System z10 mainframe (5 IFLs) running Red Hat Enterprise Linux

The Benefits

- Bank of New Zealand reduced power consumption by close to 40%, heat output by 33%, datacenter footprint by 30%

“Deploying IBM mainframes with Red Hat Enterprise Linux to address our carbon footprint and cost savings concerns was a very big deal, especially at the senior management level.”

*Lyle Johnston
Infrastructure Architect
Bank of New Zealand*



Handelsbanken

Large European bank migrates from Novell SuSE, standardizes on Red Hat Enterprise Linux and z/OS for IBM System z10

The Challenge

- Maintain a highly resilient and secure network that scales based on business demands.

The Solution

- A hybrid solution of utilizing z/OS and Red Hat Enterprise Linux on IBM System z10 servers

The Benefits

- The bank's virtualized environment has helped to lower costs by minimizing the need for additional systems that require more energy and space, translating into a greener IT infrastructure

“Most important for Handelsbanken is that we can achieve all the benefits of virtualized systems, while still maintaining a secure and flexible environment with high availability and reliability through Red Hat Enterprise Linux.

These elements are extremely important to our business, especially when running transaction-intensive applications. Red Hat Enterprise Linux on System z has helped us meet mission-critical needs for our organization”



City of Recife, Brazil

Brazil City of Recife's computer technology organization finds long-term reliability with Red Hat Solutions

The Challenge

– Find a secure, stable platform to bring municipal tax, urban planning, health, education, budget, financial and shopping port systems online

The Solution

– A hybrid solution of Red Hat Enterprise Linux for distributed and IBM System z platforms, combined with JBoss Application Server and IBM WebSphere.

The Benefits

– Since implementing Red Hat solutions, the government has enjoyed an extremely stable platform, ISV compatibility and cost reduction for its management of over 2,000 machines

“The adoption of Red Hat solutions allows us to ensure compatibility and the knowledge that we can install its solutions without concern.

Additionally, we didn't have to use Red Hat support, which in our Opinion is an excellent sign of stability and reliability”

*Luis Siquera,
Director of IT Infrastructure*



EDB Nordics

EDB implements Red Hat solutions for the reliability of in-house Mainframe computing

The Challenge

– Offer customers a standardized operating system for all Linux-based IT services, crossing financial services, retail, telecommunications and the public sector

The Solution

– Red Hat Enterprise Linux on IBM System z running in LPARs

The Benefits

– Via the System z LPAR feature, EDB is able to securely provide hosting to various customers across industries, each with their own security requirements

“There are clear advantages to mainframe computing including high reliability, security and resource savings in the amount of energy and cooling capacity used to run an application.

We now utilize Red Hat Enterprise Linux for our in-house mainframe computing and we've experienced a rising demand among customers to whom we can offer Red Hat Enterprise Linux for IBM System z”

*Helge Forberg
Section Chief,
Application, Automation and Support Systems*



Fratelli Carli

Italian olive oil manufacturer enhances performance with RHEL5 on IBM Mainframes

The Challenge

- Ensure the fast processing of customer orders by reducing system response times and maintaining consistent performance levels, even during peak periods

The Solution

- 6 virtualized instances of Red Hat Enterprise Linux 5 running on IBM z/VM, DB2/UDB database, Ware Place and Tomcat, on IBM System z9 Business Class mainframe

The Benefits

- Sub-second response times maintained for order processing

“I like Red Hat Enterprise Linux because it is a standard Linux product much closer to the logic of a mainframe than other products. I am totally satisfied with this choice. Red Hat support is very competent and always available, and it has supported me very well in the completion of this complex project”

*Marco Gardini
Mainframe System Architect*



Salt River Project

Salt River Project migrates to Red Hat Enterprise Linux on IBM Mainframes for flexibility and performance

The Challenge

– Search for a replacement to proprietary software for their legacy IBM mainframe that could provide greater flexibility, manageability, and utilization opportunities

The Solution

– Migrating from HP-UX to Red Hat Enterprise Linux with Red Hat Network Satellite on IBM System z

The Benefits

– Experienced cost savings, boosted performance, stable and reliable management, consolidation and valuable technical support. Managing VMWare and x86 Linux from their IBM System z

“When evaluating Linux mainframe solutions, we experimented with SuSE because it had an early relationship with IBM for that architecture, but Red Hat Had become very mature in the mainframe environment, too. Since we were already learning towards Red Hat in our distributed environment, choosing Red hat on the Mainframe coincided perfectly with our desire to have one corporate standard for Linux”

*Kevin Masaryk
Senior Linux/UNIX Administrator*