Rethinking Operating System and Application Development for the ppc64le Architecture

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AGENDA

• The x86_64 factor
• The Value of the OS
• Enabling hardware partners
• Attracting the right ISVs
• Red Hat and Your Business
THE x86_64 FACTOR

CHALLENGES:

1. Convincing executive leadership when and how to invest outside x86_64
2. Convincing product teams and engineering to care
3. Avoid disruption to core business and product plans
4. Guidance: “Don’t F**K it up”
THE RED HAT ENTERPRISE LINUX APPROACH

FEATURE PARITY
Deliver an identical Red Hat experience regardless of underlying hardware

DEDICATED FOCUS
Ensure Multiple Architectures receive 100% attention, not 10% of a product team

PORTFOLIO GROWTH
Expand the Red Hat product and solution offerings beyond Red Hat Enterprise Linux
THE VALUE OF THE OS

TALKS TO THE HARDWARE
Insulates apps and developers from hardware details while allowing hardware innovations

MANAGES COMMON TASKS
Performs common tasks to keep systems running efficiently and securely

CONNECTS APPS TO THEIR DEPENDENCIES
Provides a consistent interface based on open standards for apps to system utilities
WHY THE OS MATTERS

Operating Systems (Red Hat Enterprise Linux)

- ISVs (PowerAI, SAP HANA, etc)
- OS Capabilities (Virtualization, Containers)
- Use Cases - Cognitive, AI/ML, Big Data

OEMs (IBM)
- Power 7 (BE/LE)
- Power 8 (BE/LE)

OEMs (OpenPOWER)
- Power 9 (LE)
- ...
ENABLING HARDWARE PARTNERS

PARTNER ALIGNMENT
Identify aligned business objectives and timelines with hardware and software partners

PRODUCT DELIVERY
Develop and test software using repeatable and scalable delivery models

FIELD ENABLEMENT
Ensure the benefits of multiple architectures are understood and executed in sales cycle
ENABLING HARDWARE PARTNERS

• Red Hat has an 18+ year history partnering with IBM
  • Providing support for the Power architecture since Power 5 (late 2005)
• Ability to enable new Partners, Platforms, and Architectures quickly
  • Upstream collaboration for the development of new features and functionality
  • Hardware certification program
• Customer Guarantees
  • Kabi support with 10 year lifecycle
  • Consistent set of compilers, libraries, and tools
ATTRACTING THE RIGHT ISVs

• Vital to the success of the OpenPOWER Foundation
• Requires the effort of the entire OpenPOWER ecosystem
• Many architectures have failed by their inability to attract an ISV ecosystem (APLPHA, IA64)
• Transition of HPC is a huge opportunity
  • Big Data, AI/ML/Cognitive
  • Alignment with enhancements in hardware capabilities
RED HAT AND YOUR BUSINESS

STABILITY
Efficiently meet current challenges of datacenter virtualization and cloud

FLEXIBILITY
Quickly adapt to demands for business agility

CERTAINTY
Mission-critical reliability, military-grade security*

As of June 2014, more than 97% of the world’s 500 fastest supercomputers run some variant of Linux, including all of the 44 fastest.

Source: Top500 Project, June 2014 Report (top500.org)

*www.redhat.com/solutions/industry/government/certifications.html

Titan at Oak Ridge National Laboratory
Thank You

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