

☐ **LINUX FOUNDATION**  
COLLABORATIVE PROJECTS



Advisory Board Audit Q2 2014

# Purpose & Goals

- ✦ Interview AB members to identify key strengths, challenges, goals and opportunities for Xen Project.
- ✦ Use feedback and responses to update PR/AR messaging and positioning — in progress.
- ✦ Create influencer presentation deck to introduce and/or update analysts and press to Xen Project — in progress.

# Participants

- ✦ Interviewed 7 AB members
- ✦ AMD, Cavium, Citrix (3 set different subjects) Intel and Oracle

# Who We Are Today

- ✦ True Type 1 hypervisor with long track record of security and stability.
- ✦ Backed by industry giants - \$100+ billion companies like Oracle and Intel.
- ✦ Robust, fast and scalable platform ideal for cloud computing - used by world's largest cloud providers EC2, Rackspace Cloud and Verizon Terremark.
- ✦ First open source hypervisor optimized for ARM.

# Who We Are Today

- ✦ Working man's virtualization: Highly optimized, lightweight OS virtualization solution that meets today's cloud and data center scalability needs.
- ✦ Linux Foundation Collaborative Project - industry's most democratically developed OS virtualization software.
  - ✦ Supported and integrated into Linux kernel.

# Why Xen Project Matters Today

- ✦ Innovating beyond server virtualization and cloud computing thanks to flexible, customizable architecture that delivers excellent performance, stability and security.
  - ✦ Supports multiple environments and OSes, applications and high-growth markets, including automotive, aviation, military, telecom, embedded, mobile and network functions virtualization (NFV).

# Why Xen Project Matters

- ✦ Supports latest ARM CPUs to create more energy-efficient cloud and embedded applications.
- ✦ Huge, proven install base of more than 10 million users.
  - ✦ Used by Amazon, Fidelity, Goldman Sachs, Google, Rackspace, Verizon/Terremark and more.
- ✦ Since becoming a Collaborative Project, five new Advisory Board members: ARM, Cavium, NetApp, Rackspace and Verizon Terremark.

# Why Xen Project Matters

- ✦ Type 1 hypervisor truly owns the hardware. Gives users control over the guest OS for ultimate security.
- ✦ Multi-layered security; able to wall off intruders via disaggregation, driver domains, stub domains and Xen security modules.



# Goals

- ✦ Grow developer community by 10 percent.
- ✦ Increase integration/support with commercial Linux distros.
- ✦ Provide value to board members.

# Goals

- ✦ Improve industry awareness & marketing.
  - ✦ Maintain/increase reputation as leading OS hypervisor.
- ✦ Enhance performance in ARM environment.
- ✦ Improve stability of hardware systems.

# Competition

- ✦ KVM, Microsoft, VMWare - better at marketing.
- ✦ Easier to get started with KVM.
- ✦ KVM largely controlled by Redhat.
- ✦ If all you need is general purpose virtualization, KVM and Xen are equal.
- ✦ Some people don't care about type 1 and type 2 hosted hypervisor.
- ✦ Containers - starting to get worried about them. Making a lot of noise.

# Challenges

- ✦ Xen on ARM: Can't solve every problem in the data center - need to focus on specific workloads, run benchmarks & establish beachheads.
  - ✦ Cloud, big data, scale out, storage, data warehouse, greenfield.
- ✦ Need more partnerships with cloud, OEM/ODMs, hardware companies and Linux distros.
  - ✦ HP/Helion, SUSE, Canonical

# Challenges

- ✦ Less about technology and more about go-to-market strategy ie. OEM/ODM, cloud partnerships/integration.
- ✦ Need to keep development process running smoothly as Xen community grows.
- ✦ Performance — need more developers.

# Our Future

- ✦ New opportunities - networking, storage, IoT, embedded, auto, mobile, ARM.
- ✦ Data Center of the Future: dense servers, microservers, devices. Linux + Xen growth will take off.
- ✦ Many companies will continue to live in x86 and ARM worlds. Make transition as seamless as possible.

# Our Future

- ✦ Containers are the future. Containers inside virtualization; standardize on Xen, use Docker and other tools for Windows. Gives you total freedom. Might be something to look at in 2014-2015.
- ✦ New security/privacy demands as Internet of Things takes off.
- ✦ Consolidation opportunities for IT and data centers.

# Our Future

- ✦ Improved user experience - continue to focus on ease-of-use & out-of-box experience.
  - ✦ Xen ecosystem of installation and management tools.
- ✦ Integration/support with approved cloud infrastructure ie. OpenStack.
- ✦ Become go-to solution for all cloud OSes.



# PR/AR Next Steps

- ✦ Based on this feedback, opportunity to update messaging to reflect:
  - ✦ next-generation cloud innovation—ARM, Mirage OS, GPU virtualization;
  - ✦ innovation beyond the cloud — NFV, auto and mobile; and
  - ✦ breadth, depth and size of Xen user community.

# PR/AR Next Steps

- ✦ Update messaging for news releases, blogs, marketing collateral, etc.
  - ✦ Messaging presented to any AB spokespersons to help with media interviews.
- ✦ Create influencer deck for Xen Project AB members to present to industry analysts.
  - ✦ Targets include IDC, RedMonk, GigaOM Pro, ESG, 451 Group.

# PR/AR Next Steps

- ✦ Continue promoting technical superiority of Xen Project hypervisor:
  - ✦ Proven lightweight solution that delivers the most easily optimized and scalable virtualization possible;
  - ✦ Secure, stable, high performing; and
  - ✦ Lean, flexible architecture easily ports to new environments and use cases.