Xen Project Marketing Communications Proposal

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XEN: A Renaissance Project and Community

One of the defining traits of a renaissance man or woman is the ability to excel in a wide variety of areas and subjects. Nearly limitless development also is a given. As a new Collaborative Project, The Xen Project exemplifies these traits more than ever before. The Xen hypervisor, the leading open source virtualization platform designed from the start for cloud computing, is used by the world's largest cloud companies including Amazon Web Services, RackSpace and Verizon/Terramark.

Xen also is found in a number of different commercial and open source applications, including server virtualization, Infrastructure as a Service (IaaS), desktop virtualization, security applications, embedded and hardware appliances.

The Project is backed by more than a decade of development and is being used by more than 10 million users. It continues to innovate in areas beyond server virtualization and cloud computing. Proof of this is innovation in graphics virtualization, in-vehicle infotainment (IVI) and dual-Android platforms, which is being driven by Samsung and Intel. At a community level, Xen Project is more vibrant than ever before. With Xen porting to ARM in 2013, the industry's leading supplier of microprocessor technology also became a Xen Project member last year, and Rackspace membership is pending.

Moving beyond its complicated past and lineage, the Xen Project must continue to validate its transformation with outside stakeholders, including new members, additional developers, customers, partners, press and analysts. It must make good on its promise to diversify and broaden its community. With The Linux Foundation's history in building successful, vibrant open source projects, it's on the right path. It must promote the impressive technical achievements of the past, but take the lead with opportunities for virtualization technologies, such as cloud computing, mobile, IVI and the software-defined data center.

THE Xen Project PR Program

The Linux Foundation recommends an ongoing, sustained PR program that includes a variety of PR, analyst, social media and marketing communications tactics. In the next six months, our objectives with press and analyst outreach is to re-introduce and evangelize the Xen Project's defining qualities and how it will differentiate itself in the market moving forward. We will surface stories that illustrate its technical advancements and specific user stories and deployments. This will serve as the foundation for The Xen Project's strategy for the next 6 months and include (as appropriate):

Announcements

The Linux Foundation will work with The Xen Project to write and pitch newsworthy announcements to reinforce the positioning and messaging of the Project and demonstrate increasing industry credibility and acceptance. Releases might include the Xen Hypervisor 4.4 release, new growth and diversification within the Xen Project community, or updates on sub-projects and/or new sub-projects within The Xen Project, both downstream projects such as Linux, BSD, QEMU, as well as upstream (ie. distros). Target: 2-3 releases per quarter, but dependent on Project news and updates.

Media Relations

The Linux Foundation will serve as the point of contact for all incoming media requests and proactive outreach. This will include gaining media exposure for product news, relevant AB content, demos, user testimonials, expert commentary and key messaging. Editorial calendars, interviews at events, demos, tracking industry news and Xen Project coverage also included. The Linux Foundation will also create a pitch grid and conduct proactive media outreach between announcements to ensure the Xen Project remains in the news and in people's minds.

Analyst Outreach

The Linux Foundation will work with the Xen Project to launch industry analyst outreach with at least 5 key target analyst organizations. With a focus on top-tier analyst firms, we'll introduce Xen Project to key analysts covering server virtualization and cloud computing. This will provide additional visibility and credibility for The Xen Project in the market. It also helps support, as needed and appropriate, inquiries from press, prospective users and partners. Targets include: Dave Bartoletti, Forrester; Thomas Bittman, Gartner; Gary Chen and Iris Feng, IDC; Stephen O'Grady, RedMonk; and Jay Lyman, The 451 Group.

Advisory Board Coordination & Content Coordination

The Linux Foundation will serve as a liaison between Xen Project and the AB, soliciting new content from members on a monthly basis. Content examples to include commentary on breaking news, member profiles, technical blogs, user testimonials, demos, and updates on sub-projects and new sub-projects, etc. We'll coordinate the collection, assignment, production and distribution of the content, leveraging it via as many channels as possible, including http://www.xenproject.org, Linux.com, media and analysts relations and/or via social media.

Social Media Support

The Linux Foundation will push 1-2 pieces of content per day on Google+, Facebook and Twitter. Content to include news about Xen, links to website, resources on the website, helpful articles about open virtualization, events, etc. This work will help supplement other channels and position Xen Project as a trusted resource and authority.

Reporting and Metrics

The Linux Foundation will provide monthly status updates that document coverage results, press releases issued, analyst and press interviews completed, social media activity, and AB coordination. We will track the number of clips quarter-over-quarter, social followers, and share of voice among competing open source virtualization technologies. A quarterly presentation will also be submitted to the board. Below are suggested metrics to track moving forward:

1) Quantity of Coverage
Collect # of clips per month, compare 2014 to 2013 clips throughout the year

2) Competitor Share of Voice Coverage
Xen hypervisor, KVM, and third open source virtualization competitor, possibly Docker.

3) Qualitative Industry/Key Messaging Analysis - Chose 1-2 themes/key messages such as Xen + mobile, Xen + community and/or Xen + CloudStack and OpenStack.

Suggested Trend Features, Expert Commentary & Contributed Articles

The Linux Foundation will work with The Xen Project to secure interview opportunities for expert commentary and inclusion in trend/feature articles. The below themes will also be used to pitch, write and place bylined contributed articles in appropriate trade publications and other online and vertical industry publications, etc. Following are some suggestion themes for the Xen Project.

Virtualization Jumpstarts Automotive Infotainment Systems

While Android is a mobile success, in the automotive in-vehicle infotainment (IVI) space it has hit quite a few road bumps. In fact, reliability, security and long boot time are slowing down adoption of Android. By pairing Linux with open virtualization technology such as Xen, it's possible to simultaneously run two separate operating systems, one for mission-critical systems and another for IVI for optimal security and reliability. An Android, Linux and Xen-based solution addresses additional automotive requirements such as ultra-fast RVC boot time, quick IVI system boot time, cloud connectivity and multimedia capabilities.

Cloud and Software-Defined Data Centers Shape Hypervisors of the Future

Virtualization is the foundation for cloud computing, but as cloud infrastructures and services evolve can hypervisors keep up? Most clouds are running on virtualization technologies that are 10 years old. With users demanding private and hybrid cloud environments, and new approaches such as the software-defined data center unfolding, virtualization technology must be able to take advantage of both the latest in software and hardware developments. While hypervisors are evolving to support more IO-intensive network and storage workloads, virtualization based on open source and standards offers users the most fluid and flexible cloud, graphics utilization and SDDC delivery options. Developments to watch include PVH for x86, an example of continued innovation in Xen around energy efficiency, and Intel's XenGT, a software-based graphics virtualization solution based on Xen.

Hybrid Virtualization On the Rise

Just as users are demanding hybrid cloud environments, businesses are deploying different virtualization technologies in separate parts of their organization to avoid vendor lock-in and exorbitant costs. This approach allows businesses to customize their virtualization strategy to meet their needs, while containing costs. Offerings like Verizon Cloud Compute, unite CloudStack and Xen, to run proprietary virtualization in-house, while seamlessly moving other workloads out to the cloud. Enterprises pay for performance based on VMs, storage and network resources, which are protected from resource-hogging infrastructure.

Top Benefits of Mobile Virtualization

• Tiny, microkernel-based hypervisor is an excellent fit for the embedded environment.
•Improved security via the ability to create hardware-isolated micro-VMs for each end user task, ie. new email attachments.

•Improved agility -- able to run two isolated OSes, personal and work simultaneously - to make BYOD a reality.

• High-performance GPU-accelerated graphics that demand high throughput and low latency is possible through projects like XenGT and GPU virtualization.

•Good graphics performance (ie frames per second) with both OSes.

Starbucks and Hiltons Are Unsafe for Today's Mobile Workers

According to Gartner, 90 percent of companies will offer BYOD, or bring-your-own-device options to employees this year. While this encourages convenience and collaboration, at the same, it exposes workers to any number of untrusted networks, mobile devices USB drivers. As mobile users access corporate data and applications via wireless hotspots, these open endpoints are ripe for attacks. A new approach to mobile security is emerging that uses hardware-enforce micro-virtualization technology to isolate attacks. Made possible by levering highly secure hypervisor technology, companies can now ensure that data and applications accessed on the road are as secure as information behind the corporate firewall.

Building an Embedded Product on Xen

Embedded systems are finally powerful and interesting enough that virtualization is possible and beneficial. Xen, as a very tiny, microkernel based hypervisor, is an ideal fit for the embedded environment. Recently ported to ARM, the number of supported boards is constantly increasing.

This article will outline the major strengths of the Xen architecture on embedded systems. It will also identify and discuss areas where there is still room for improvement. It will outline how to setup an "Android on Xen" environment and provide an update on collaboration between the Xen community and other interested parties in the Android community.

PVTCP: Control the Congestion in Virtualization Data Centers

While modern data centers are increasingly adopting virtual machines (VMs) to provide elastic cloud services, they still rely on traditional TCP for congestion control. In virtualized data centers, TCP endpoints are separated by a virtualization layer and subject to the intervention of the hypervisor's scheduling. Most previous attempts focused on tuning the hypervisor layer to try to improve the VMs' I/O performance, and there is very little work on how a VM's guest OS may help the transport layer to adapt to the virtualized environment. This article will outline challenges with this approach and propose a ParaVirtualized TCP (PVTCP) to counter the distorted congestion information caused by VM scheduling on the sender side. PVTCP is self-contained, requiring no

modification to the hypervisor. Experiments show that PVTCP is much more effective in addressing in-cast congestion in virtualized data centers than standard TCP.