Introduction and Overview

• Intro
  – Mark Pearson
    (markpearson@lenovo.com)

• Topics
  – Overview
  – Releasing a Linux platform
  – How Lenovo is supporting Linux
  – LVFS, forums & ThinkLMI
  – We’re hiring :)
  – Questions/Feedback
Overview

- Lenovo is doing Linux certification for ~50 platforms. Covering laptops, desktop, workstations and now edge platforms.
- We do Ubuntu and RHEL certification with our Linux supported platforms
  https://certification.ubuntu.com/desktop
  https://catalog.redhat.com/hardware/workstations/search
- We have a few Fedora platforms available and work actively with the Fedora community.
- Aim is to make sure support for our platforms is upstream so that any distro will work. We are contributing directly to open source projects.
Systems online

Releasing a Linux platform – the timeline

- Platform kickoff, specs defined
- Hardware enablement, initial testing, bug fixing, alpha image, beta image
- GA image created, final testing pass
- Energy certification (worldwide standards)
- Product documentation
- Launch logistics
Linux Program

Sales Support
- Linux offering and support education
- CTO
- Pre-sales & RFP support

Offering More
- Product offerings – full config for workstation portfolio
- Thunderbolt 3 Workstation Dock
- Linux distributions
- Component drivers
- LVFS support
- ThinkLMI for Linux

Community Participation
- Kernel contribution
- Vendor partnerships
- Conference sponsorship
- Non-Lenovo forum monitoring

Customer Engagement
- Customized offerings
- Post-sales support
- Dedicated Lenovo Linux forums
- Partner participation in Lenovo Linux forums

Sales Support

Offering More

Community Participation

Customer Engagement
What do we do? An update for 2020

- Testing pre-defined systems, configurations and devices against the latest OS release
  - Full configuration workstation portfolio certified
  - Ubuntu 20.04 and Fedora 33 releases
  - TBT3 workstation dock certified

- Work with partners to include updates in future OS releases
  - Ubuntu 20.04 and Fedora 33
  - Regular collaboration with distro Linux engineering team

- Collaborate with device driver owners regarding architecture to support Lenovo-unique devices and features
  - Patches delivered to upstream kernel community for lap and palm sensors
  - Collaboration with community and other vendors on platform profile enhancement.
  - ePrivacy and hotkey enhancements in progress

- Work with IHVs to obtain / update Linux drivers for mainstream Linux distributions
  - Fingerprint reader available on Linux
  - Synaptics F34a functionality
  - WWAN work in progress (L860, Quectel)

- Work with firmware owners to support firmware update feature on mainstream Linux distributions (LVFS)
  - Over 200 firmware files delivered
  - Up to 15000 downloads every two weeks
  - Lenovo support forum added to fwupd.org

- Provide support for customer field issues
- Monitor and respond to Linux forum posts
  - Increased participation and solutions
  - Posts with > 4000 views
  - Referenced in external sites
  - Working with Lenovo support to improve Linux support experience
Lenovo leading the way in delivering firmware to LVFS. Over 200 firmware files delivered and increasing.

User downloads increasing – more people are trusting Lenovo to deliver on Linux.

https://github.com/fwupd/firmware-lenovo-thinkpad/issues

Active community on LVFS supporting Linux customers.
Lenovo Linux forums

Very active Linux community on Lenovo Linux forum
https://forums.lenovo.com/linux

- over 3000 postings
- contributions from leaders in the community
- 100’s of solutions provided
- referenced by external sites

We also participate on many open source forums
- kernel
- audio
- gnome
- systemd
- Fedora devel@lists.fedoraproject.org
- LVFS fwupd/firmware-lenovo-thinkpad
ThinkLMI

Utility for easy access to BIOS WMI settings
• Kernel driver portion
• User space utility

Open sourced and available publicly:
• https://github.com/lenovo/thinklmi

Working on upstreaming (changes needed with introduction of firmware-attributes class)
Upstreaming kernel patches

- Lapmode sensor enablement – status: accepted
- Palm sensor enablement – status: accepted
- Platform profile mode control enhancement – status: accepted
- Temp sensor fixes – status: in progress
- ePrivacy screen support – status: in progress
- Wlan support – status: in progress
We’re hiring – Linux kernel engineer

- Work with HW vendors and other Linux engineers to debug, analyse and solve kernel and hardware driver compatibility issues.
- Troubleshoot and provide accurate and timely resolution to customer issues.
- Customize and build kernel for special bids of different industry.
- Implement and backport new features and new drivers from upstream kernel to target platforms.

Enthusiasm about Linux, flexibility and good communication skills are key
Questions & Feedback

Mark Pearson: markpearson@lenovo.com