



LINUX

0x01 INTRO

- * Linux / Linux kernel
- * using Linux since 2004
- * growing community in tech team :metal:

0x02 WHAT IS LINUX

- * family of open-source operating systems built around the Linux kernel**
- * typically packaged in a form known as a Linux distro**

0x03 **LINUX KERNEL**

- * world's most successful and important software project started by Linus Torvalds**

- * source code released in 1991 (26 years ago) under GPLv2 licence**

0x04 LINUX KERNEL

- * Linux kernel 4.14 contains about 23 million lines of code
- * C, header files, Assembly, JSON, build scripts, etc.
- * 85% of kernel code is in drivers, and widest hardware support

0x05 LINUX IS EVERYWHERE

- * 100% of top 500 super computers
- * about 85% of cloud (servers and KVM)
- * Android has 90% of market
- * IoT is dominated by embedded Linux
- * network hardware, routers, switches, access points
- * only 3% desktops and laptops

0x06 LINUX IN SPACEX

- * SpaceX uses a special fault-tolerant Linux kernel in Merlin rocket engines
- * their IT infrastructure runs on Linux
- * Linux is also used in Tesla Motors
- * Falcon 9 self-destruct routine runs on Windows XP :troll:

0x07 LINUX IN ORGANIZATION

- * entire Linode runs on Linux
- * all our servers runs on Ubuntu
- * few developers already switched to Linux :metal:
- * we heavily rely on open-source

0x08 **KERNEL: CONTRIBUTORS**

- * over 14k developers from over 1300 companies have contributed since 2005**
- * 80% of developers are being paid for their work**
- * RedHat, Intel, Samsung, IBM, SUSE, Google, Linaro (ARM) and more**

0x09 **KERNEL: MAINTAINERS**

- * every file and driver has maintainer**
 - * subsystems have maintainers**
 - * branches have maintainers**
 - * developer -> driver/file maintainer -> subsystem maintainer**
 - * script identifies owners, so don't touch floppy disk**
- drivers** :troll:

0x0A **KERNEL: BRANCHES**

- * Linus' branch is mainline kernel**
- * linux-stable receives slower updates and less bug fixes**
- * linux-next is dev branch, merges all trees**
- * releases about every 66 days**
- * every now and then there is LTS**

0x0B **KERNEL: PATCHES**

- * an average of 185 patches per day**
- * source code is stored git, but changes are submitted in bite-size diffs over email to maintainers**
- * IBM is doing builds, but testing hardware is hard**

0x0C VIRTUALIZATION

- * VirtualBox, open-source hypervisor from Oracle
- * WINE, compatibility layer for running Windows apps

QUESTIONS?



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