Fedora Kernel

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Agenda

- Who we are
- What we did last year
- What we want to do next year
Who makes the kernel happen

- Community contributions
  - Bug fixes
  - “Please turn on config X”
- Your contributions are valued!
Who makes the kernel happen

- Engineers with a specific focus area
  - Graphics
  - Input drivers
  - Architecture specific fixes
  - etc.
- Always working with Fedora team
Who makes the kernel happen

- Full time Fedora Kernel engineers
  - Josh Boyer
  - Justin Forbes
  - Laura Abbott
- Regular releases, anything and everything
What do you all make?

- Kernel is still a Fedora project
  - Very complex one
- Minimal number of kernel packages
  - No kernel-cloud, kernel-server
  - Kernel packages broken down by arches
- Maximal number of kernel options enabled
  - Drivers as modules when possible
  - Who is this option helping?
Numbers!

- July 1 2015 - June 30 2016
  - F21 - released 2014-12-09, EOL 2015-12-01
    | Released well before period, went EOL part way through the period
  - F22 - released 2015-05-26, EOL 2016-07-21
    | Released just before period, went EOL outside the period
  - F23 - released 2015-10-13
    | Released during the middle of the period
  - F24 - released 2016-06-21
    | Released toward the end of the period
  - Rawhide - rolling release
Numbers!

- July 1 2015 - June 30 2016 number of commits to pkg-git
  - F21 - 61
  - F22 - 191
  - F23 - 263
  - F24 - 419
  - Rawhide - 500
Numbers!

- July 1 2015 - June 30 2016 number of bug fixes
  - F21 - 37
  - F22 - 124
  - F23 - 138
  - F24 - 109
  - Rawhide - 96
Numbers!

- July 1 2015 - June 30 2016 number of updates
  - F21 - 12
  - F22 - 30
  - F23 - 57
  - F24 - 150
  - Rawhide - 224
Numbers!

- July 1 2015 - June 30 2016 rebases
  - F21 - 4.0.x -> 4.1.x
  - F22 - 4.0.x, -> 4.4.x
  - F23 - 4.2.x -> 4.5.x
  - F24 - 4.5.x
  - Rawhide - 224
Okay what do those numbers actually mean

- Older releases have a fall off
- Stable releases get more bug fixes than updates
- Rawhide gets ~1 commit a working day on average (kind of)
- Releases get several different kernel versions
What have we learned?

- People don’t like bugs
- People don’t like surprise bugs
- Most of the bugs are coming from upstream, not Fedora
- We like it when we can fix bugs!
- We want to get more people involved
What was the plan from last year

- **Power management**
  - Some work, needs focus
- **Automation/Testing**
  - Great work!
- **Upstream**
  - Ongoing work
What was the plan from last year

- **32-bit**
  - Continuing on downward trend, still low priority
- **BTRFS**
  - Still not the best choice for Fedora
- **Kdbus**
  - Developers are re-evaluating
What’s the plan for next year

● Good surprises, not bad
  ○ Will out of tree modules work?
  ○ Will my hardware work?

● Share our work
  ○ Writing
  ○ What do you want to see?

● Tools to solve your problems

● We want more people involved

● https://fedoraproject.org/wiki/Fedora_Engineering/FY17_Plan#Kernel
Questions?