XDP feature planning

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Netconf
Boston, June 2019

The xdp-project repository

- We've created a GitHub repository for XDP feature planning
- The XDP tutorial lives in the same GitHub org
- Goal of this discussion:
  - Make you all aware of its existence and how it works
  - Give a short overview of what's in there
  - Get some feedback
  - Hopefully get (some of) you to contribute :)

Contents of the xdp-project repo

Org-mode files describing various aspects of XDP planning

- `xdp-project.org` - general TODO entries
- Areas: `areas/*.org`
  - Top-level .org files: TODO items for tracking projects
  - Subdirs: More detailed notes, performance numbers, etc.
  - Current areas:
    - `cpumap.org`
    - `drivers.org`
    - `mem.org`
    - `ovs.org`
    - `xdp_flowcache.org`
    - `xdp-tutorial.org`
- Conferences: Slides for XDP talks at various conferences
  - Including this one :)

Repo logic for each file

- Top-level "projects"
  - A "project" is any TODO with sub-TODOs
  - Use TODO-keyword `NEXT` for "immediate" tasks
  - Ex: Project: "Handling XDP_REDIRECT failures"
- Projects categorised in three (somewhat fluid) categories:
  - "Current high-priority tasks" - tag `@short`
  - "Important medium-term tasks" - tag `@medium`
  - "Longer-term preliminary plans" - tag `@long`

Why have this repo at all?

- **External** documentation of progress, known issues, feature plan
  - Somewhere to point users and PHBs
- **Internal** tracking of our own work + ensuring follow-up
  - I am the self-assigned "cat herder"
- Make it possible to **plan and prioritise**, at least a bit

Why org-mode?

- Really powerful query + project management tool.
  - Can pull out agenda views (demo?)
- Originates from Emacs world, but also has a `vim` implementation
- But you can also just treat them as text files!
  - Jesper and I will do the project management work

See `org-setup.el` if you do want to give it a shot in Emacs

Current short-term projects

- Consistency for statistics with XDP
- Better ndo_xdp_xmit resource management
- XDP feature flags
- Handling XDP_REDIRECT failures

Current medium-term projects

(This is most of them, so not all fit on one slide)

- Usability of programs in samples/bpf
- Exposing more kernel data structures through helpers
- Expanding XDP_REDIRECT support to more drivers
- Adding XDP support to new drivers
- xdp-tutorial for tracepoints project
- Layer-2 bridging helper
- Metadata from hardware
- Implementing page_pool return-hook via SKB
- XDP-tutorial ideas for assignments/examples

Current long-term projects

- Various cpumap features
- XDP flowcache project
- XDP-tutorial misc assignments
- Generic XDP fixes

Discussion points / action items

- Is this useful for anyone else?
  - Is there any way we can make it more useful?
  - E.g., HTML "reports" of various sorts?
- Please add anything you are working on / would like to see
  - Pull requests, patches, or just send me an email
  - Doesn't have to be something you want to work on (but it helps)