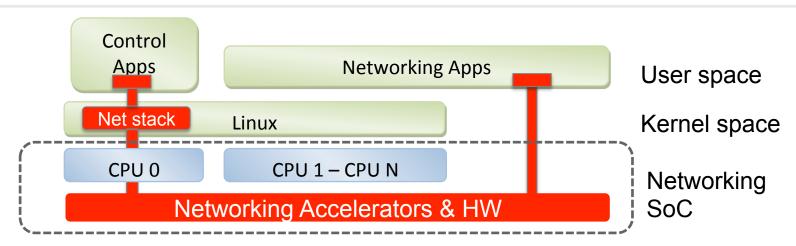
Tracing & Debugging for Networking Applications



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Application Domain



- Networking is the application
- The networking app runs in user mode
- Special HW with highly integrated networking functions
- Lots of accelerators



Requirements

- Functionality for debugging and performance tuning of networking applications
- Reachable from user space
- Performance data and traces even from processing that does not touch cores. HW/SW implementation agnostic API
- Plug in architecture needed as each vendor's HW is different
- Standard Linux interfaces
 - CoreSight access library
- High resolution timers

What is missing?



Existing Linux Features

- Ftrace
- LTTng
- Perf
- ftrace
- Uprobes
- Systemtap
- Ktap?
- GDB
- Cat /proc/*
- Etc...

What to build on?



What Functionality to Add?

- Access to CoreSight (access lib from ARM)
- Device driver for SW annotations to STM
- LTTng & ftrace writing to trace buffers (ETB) instead of file
- Decoding of ETB data through Linux (not DS-5). Open decoder needed
- GDB access to HW trace functionality
- Plugin of vendor's accelerators into ftrace / LTTng
- Monitoring core isolation disturbances
- What about scalability?
- Feature uplift to x86 level? What functionality to target?
- What does ODP need?

What more to add?



Slide 1

- For many people looking at this, English may be their second, third or fourth language,...
- Try and keep bullet points to a minimum
- Relevant images are great
- Contact marketing (Steve and Jen) if you need some help with images and/or editing





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