DPDK Telemetry
A SERVICE ASSURANCE SOLUTION FOR DPDK
Overview

- DPDK and Service Assurance
- DPDK + CollectD Solution Today
- Telemetry Library
  - With CollectD
  - With Python
  - With …
DPDK and Service Assurance

- Application to implement ad-hoc
  - Duplicated efforts
- Value in standardized DPDK implementation
  - All primary processes
- Target?
  - Just run with extra EAL args
Uses Secondary Process
- ASLR issues
  - --base-virtaddr hint to try work around…
- Linking CollectD against DPDK version
  - Limitation! Can only monitor one version of DPDK
  - Complexity in packaging and deployment

Polling mechanism
- Secondary DPDK process with SHM to CollectD process
- Non-trivial threading implementation…

Works and is available today
Telemetry Library

- DPDK opens UNIX Domain socket
- Client sends JSON encoded request
- DPDK replies with JSON encoded data
CollectD and Telemetry Library
CollectD and Telemetry Library
CollectD and Telemetry Library
CollectD and Telemetry Library
Summary

• Telemetry library simplifies Service Assurance
  • Reliable deployment - no secondary process
  • IPC abstraction from DPDK
  • Clients speaks via JSON-over-Socket
  • Scales to multiple clients
• CollectD client exists for POC
• Patchset available on list
  • http://patches.dpdk.org/project/dpdk/list/?series=1038
Thanks – Questions?

Harry van Haaren
harry.van.haaren@intel.com

Team

• Brian Archbold
• Ciara Power
• Emma Kenny
• Kevin Laatz
• Lee Daly
• Marko Kovacevic