



DPDK

DATA PLANE DEVELOPMENT KIT

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

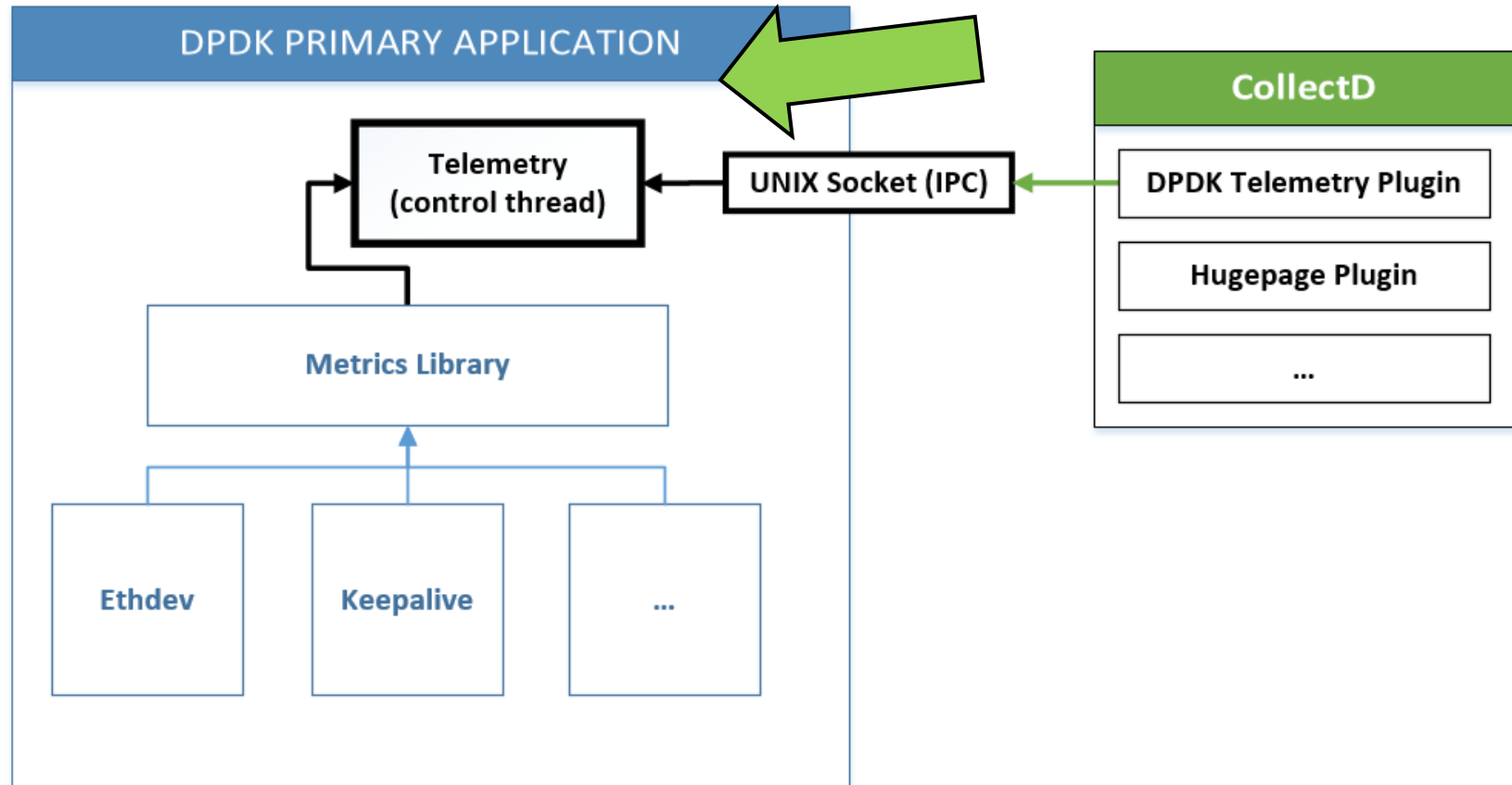
DPDK + CollectD Today

- 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

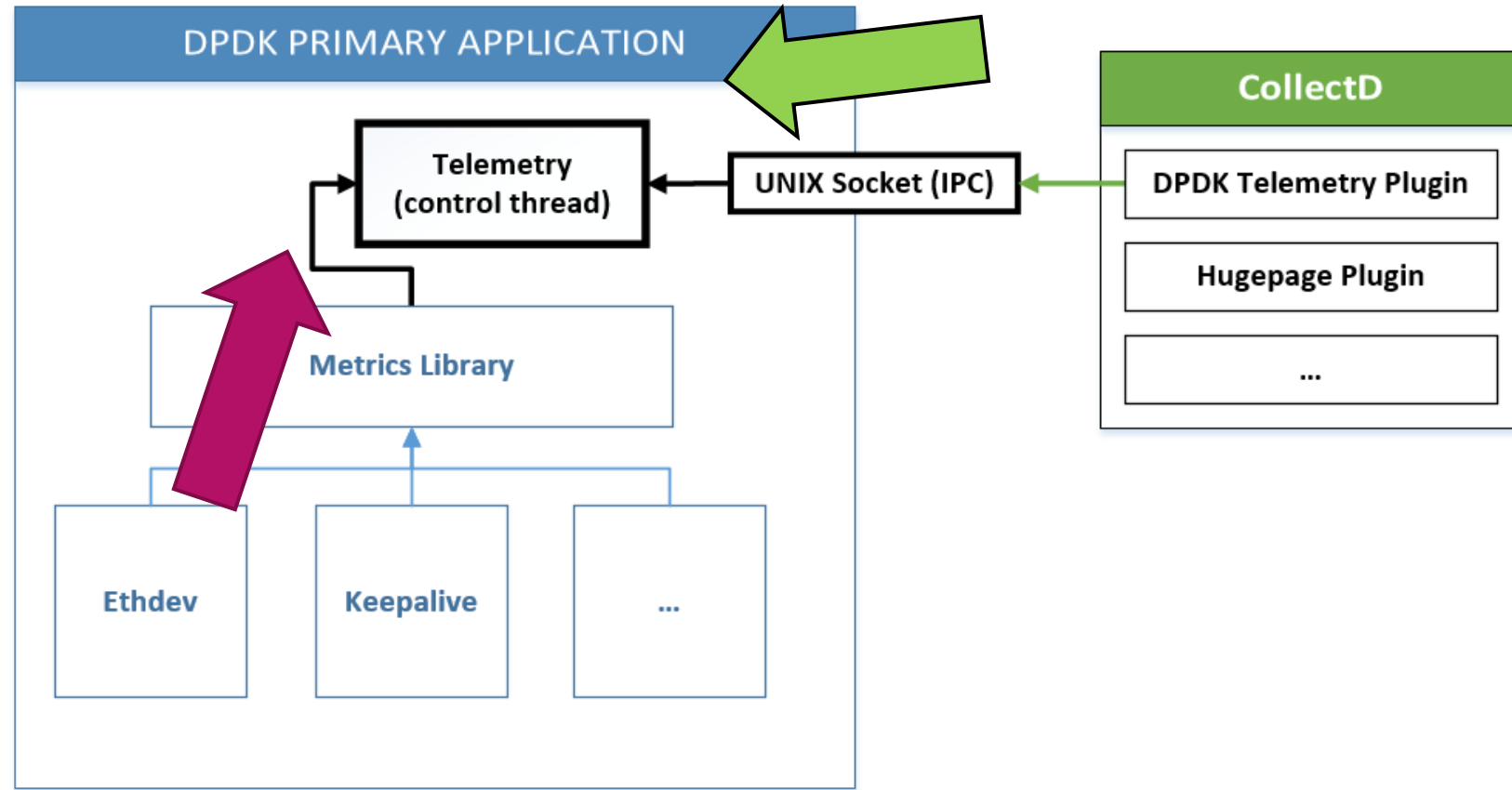
Telemetry Library

- DPDK opens UNIX Domain socket
- Client sends JSON encoded request
- DPDK replies with JSON encoded data

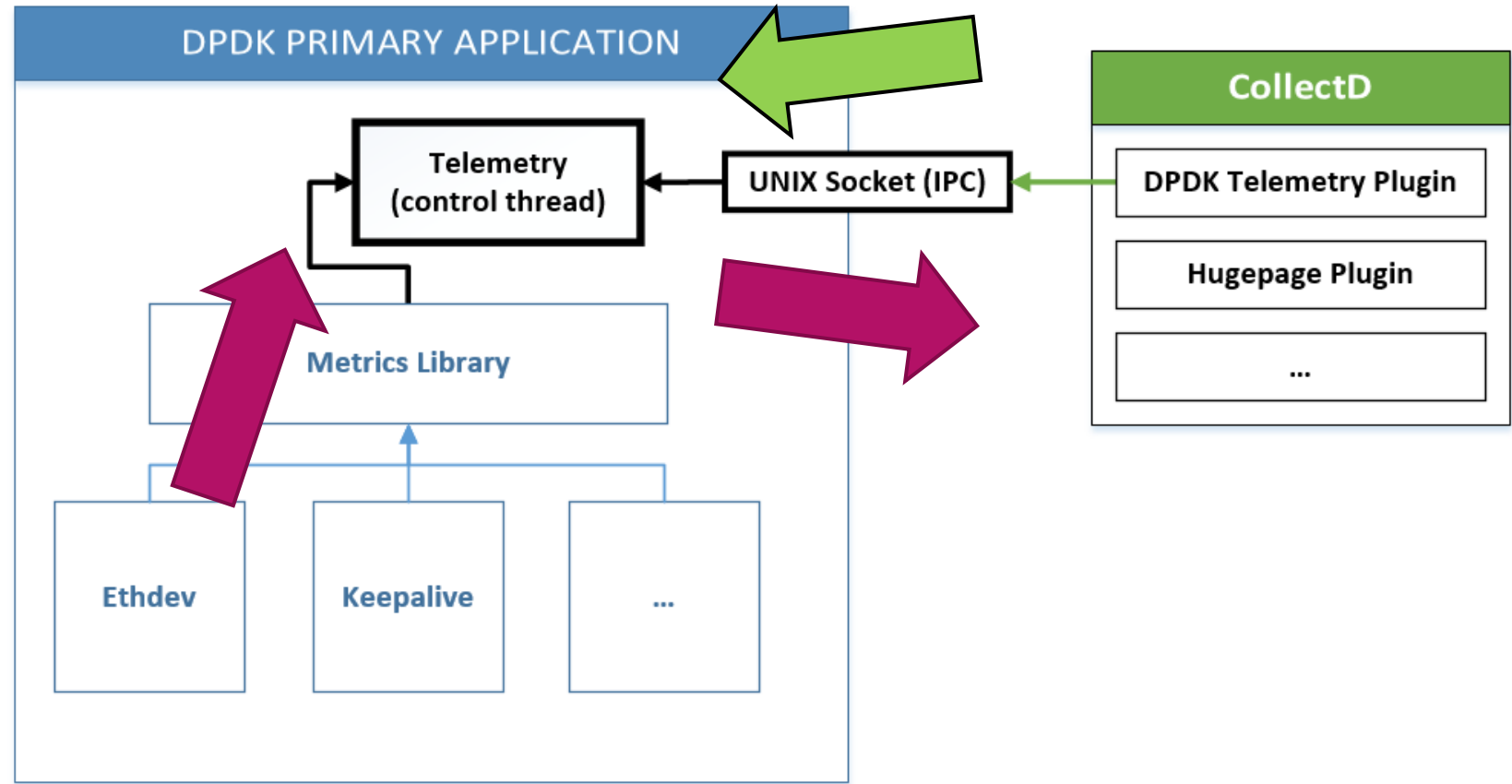
CollectD and Telemetry Library



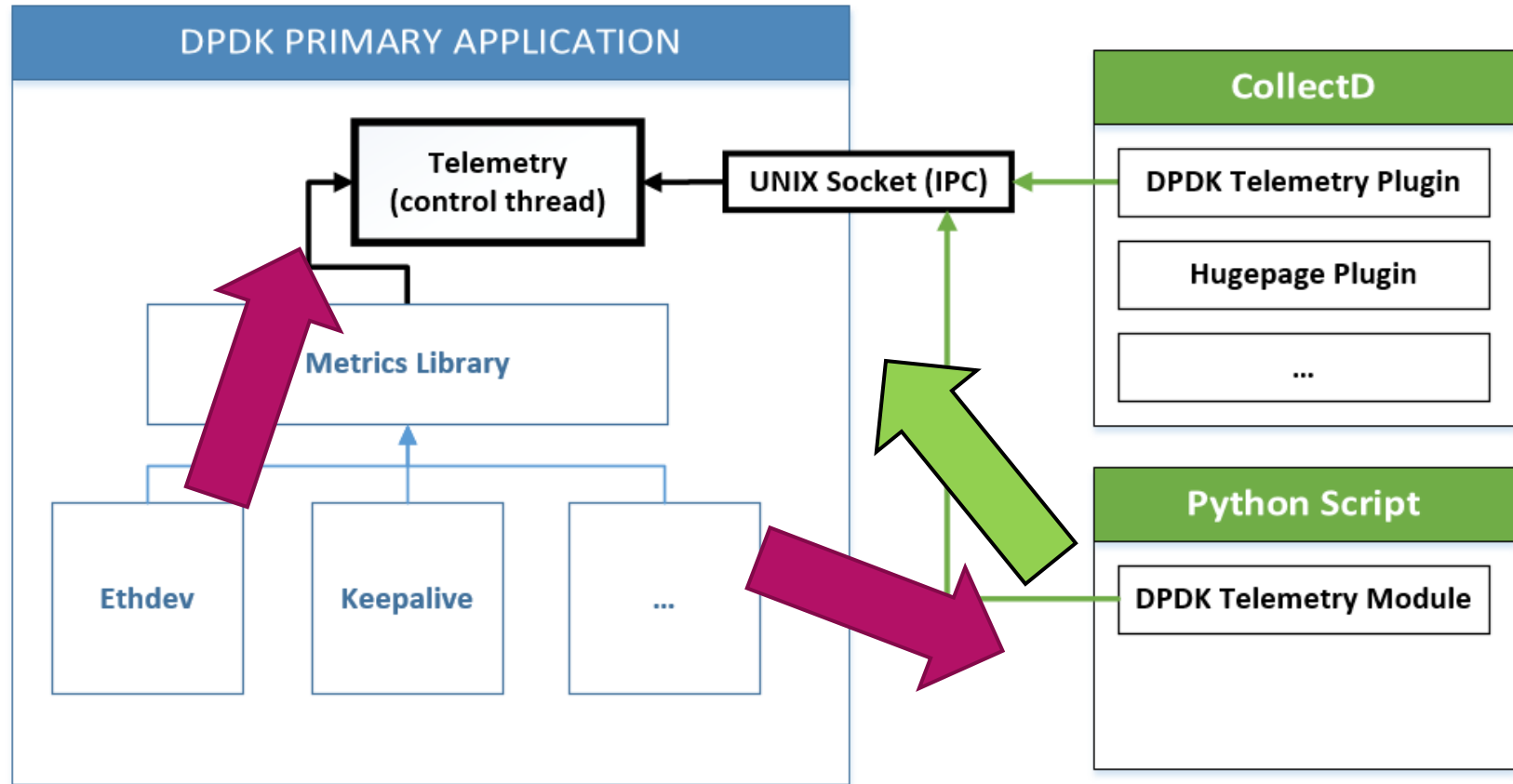
CollectD and Telemetry Library



CollectD and Telemetry Library



CollectD and Telemetry Library



- 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?

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