



A-CORD (Analytics for CORD)



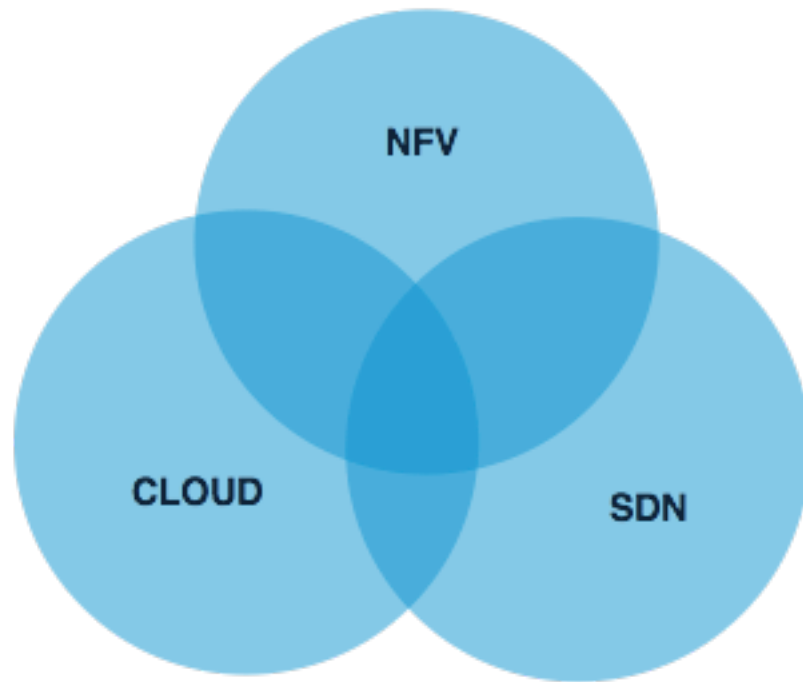
CORD
Central Office Re-architected as a Datacenter

#OpenCORD

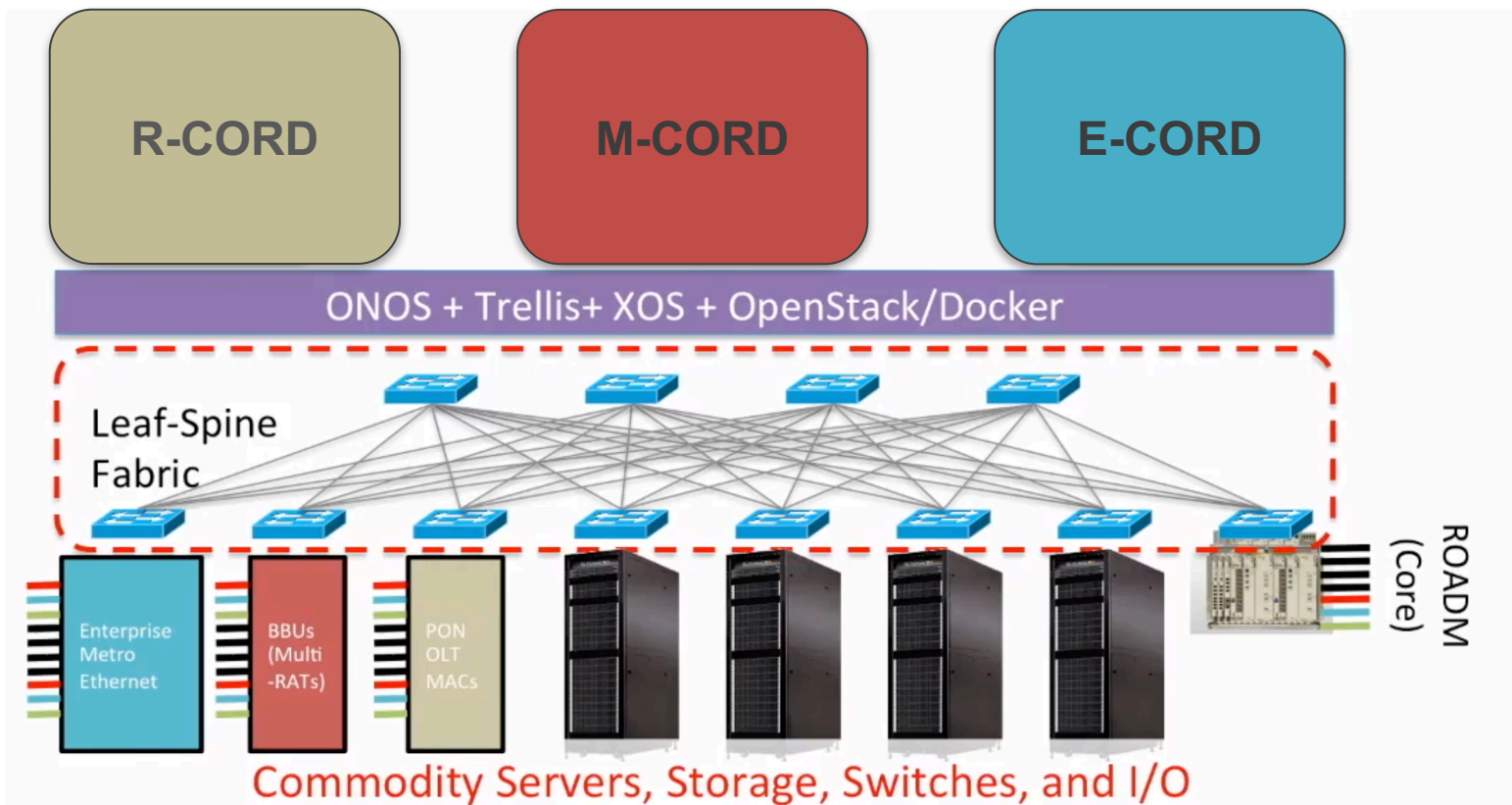
WHAT IS CORD?



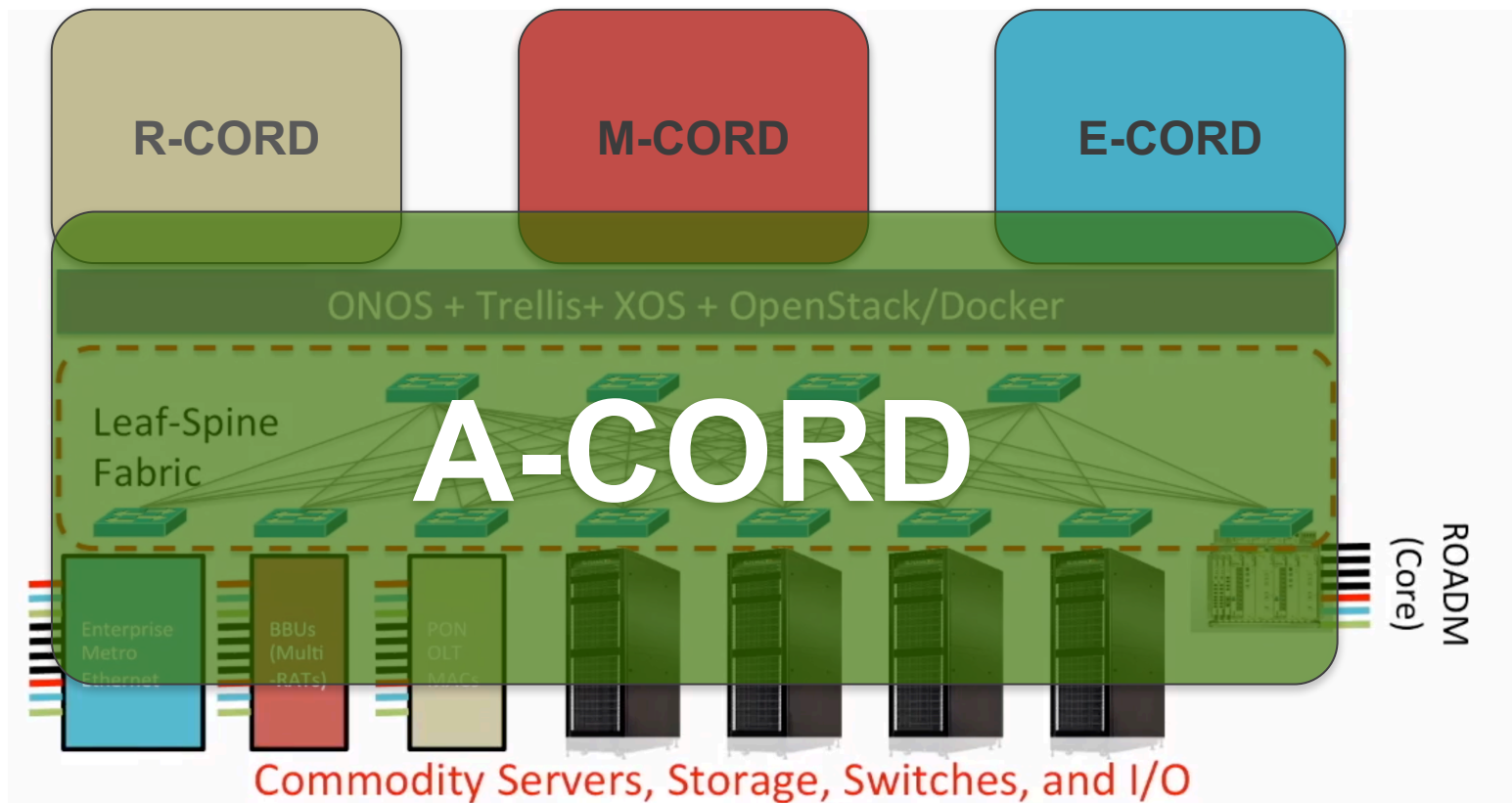
Central Office Rearchitected As Data Center



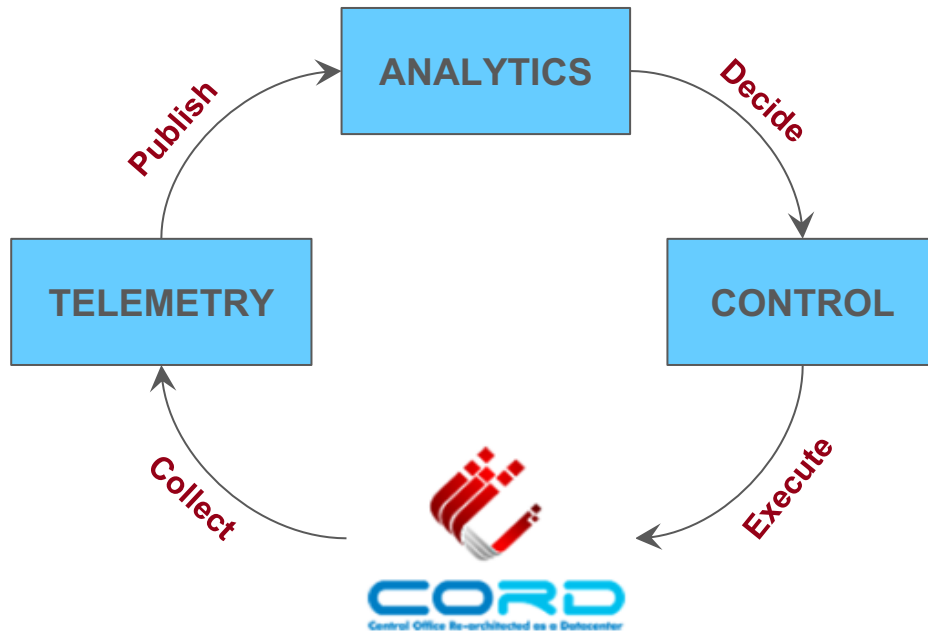
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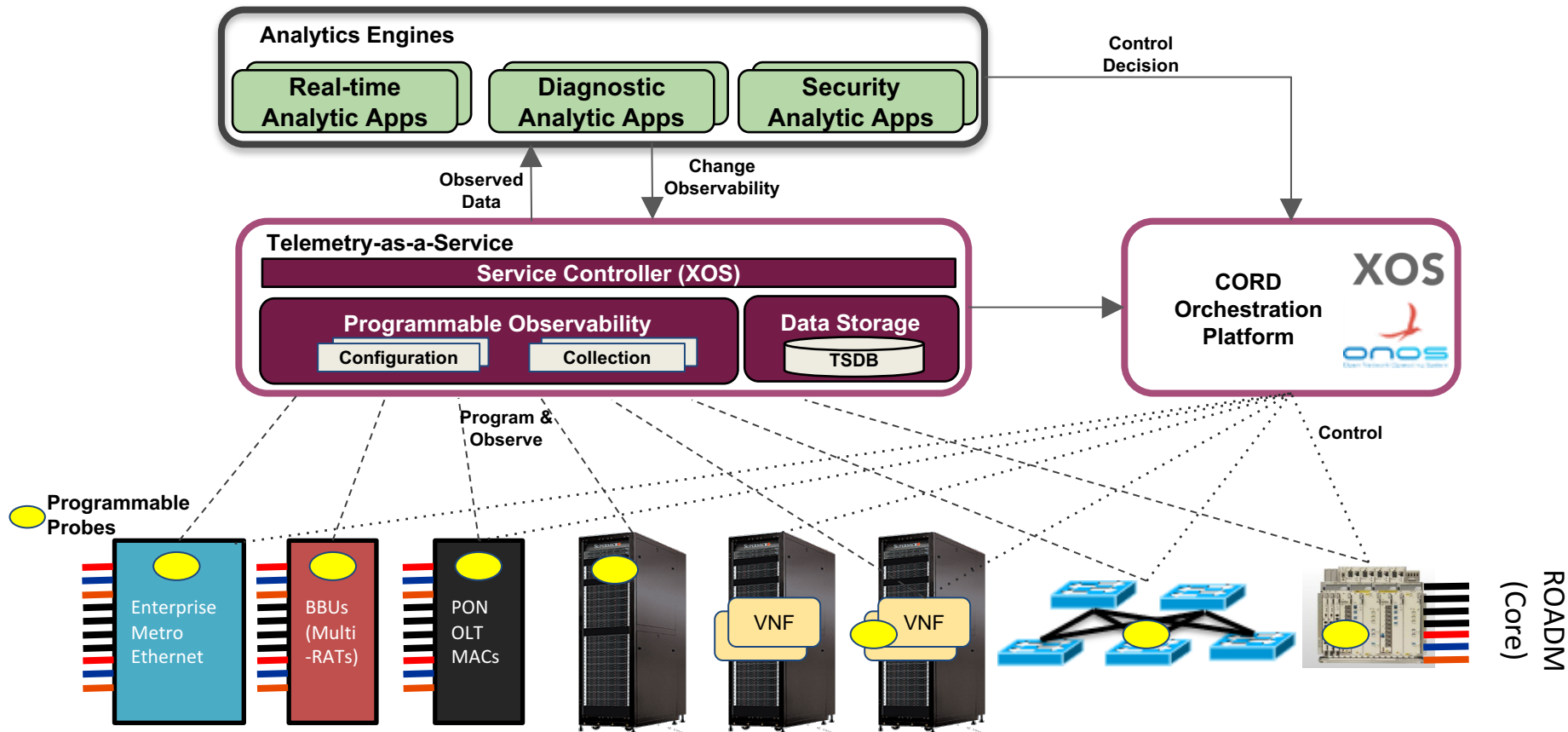
A-CORD is a part of the Platform Core



A-CORD is about



A-CORD High Level View



Programmable Probes: Fabric Switches



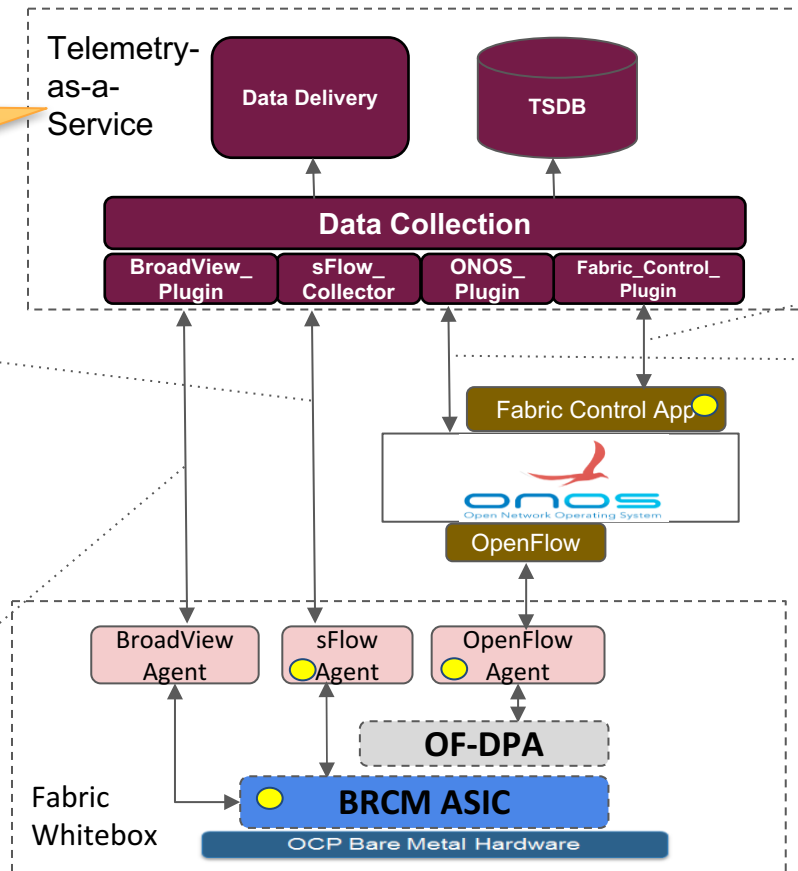
Work in progress for P4 INT

sFlow
- Packet Samples

BroadView

- ingress-port-priority-group
- ingress-port-service-pool
- ingress-service-pool
- egress-cpu-queue
- egress-mc-queue
- egress-port-service-pool
- egress-rqe-queue
- egress-service-pool
- egress-uc-queue
- ...

 Programmable Probes



Fabric Control App Events
- TBD

OpenFlow Probes/Metrics

- switch.port.receive.packets
- switch.port.transmit.packets
- switch.port.receive.bytes
- switch.port.transmit.bytes
- switch.port.receive.drops
- switch.port.transmit.drops
- switch.port.receive.frame_error
- switch.port.receive.overrun_error
- switch.port.receive.crc_error
- switch.port.collision.count
- switch.table.active.entries
- switch.table.lookup.packets
- switch.table.matched.packets

Programmable Probes: Service VNFs and NFVI



Service Level Events

vSG

- vsg.dns.cache.size
- TBD

vMME

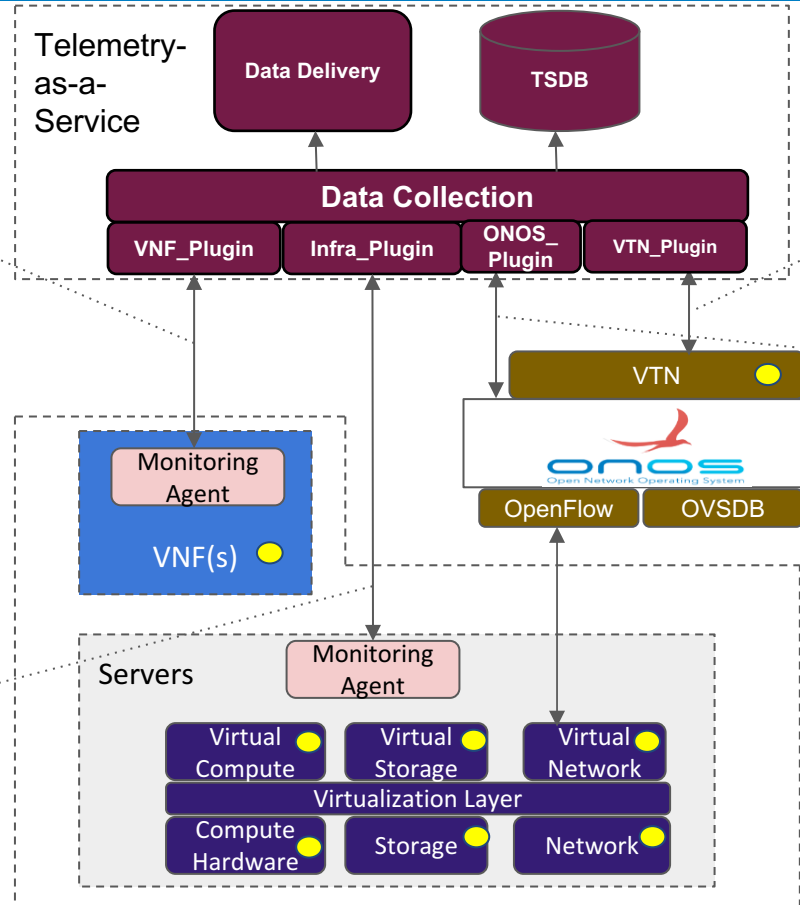
- TBD

vBBU

- vbbu.power.level
- TBD

Infrastructure Metrics

- instance.cpu
- instance.vcpu
- instance.memory.usage
- instance.network.incoming.bytes.rate
- instance.network.outgoing.bytes.rate
- instance.disk.usage
- instance.create
- instance.delete
- hardware.ipmi.node.cpu_util
- hardware.ipmi.node.mem_util
- hardware.ipmi.node.io_util



Virtual Tenant Networking App Events

- TBD

OpenFlow Probes/Metrics

- From Virtual Network Switches

A-CORD Roadmap



Upgrade all current A-CORD services to the CORD 4.1 release

Integrate P4 INT enabled Trellis to A-CORD

Integrate A-CORD and ONAP DCAE including VNF onboarding alignments.

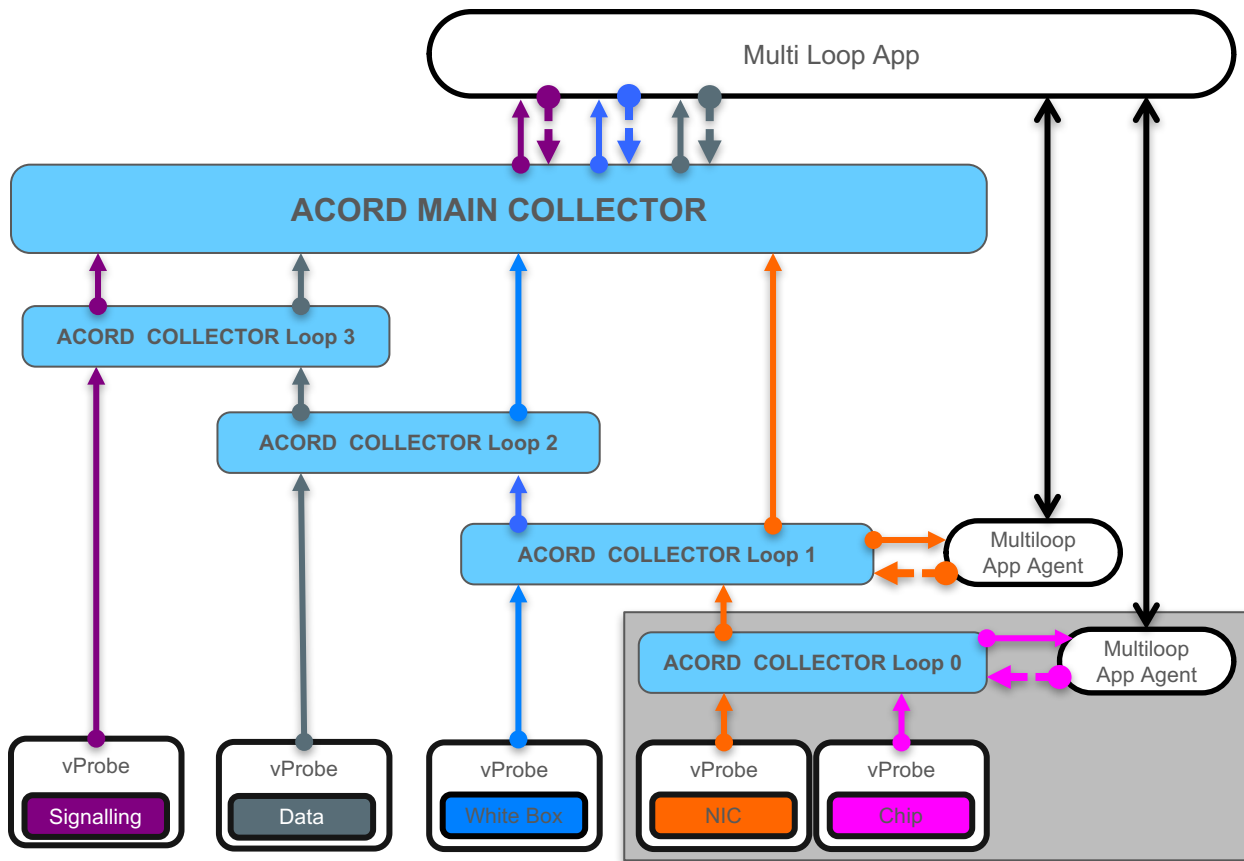
Move from unstructured to structured telemetry data combining data models from OpenConfig, VES and ETSI.

Create an hierarchical multi-collector architecture with dynamic collector and probe instantiations

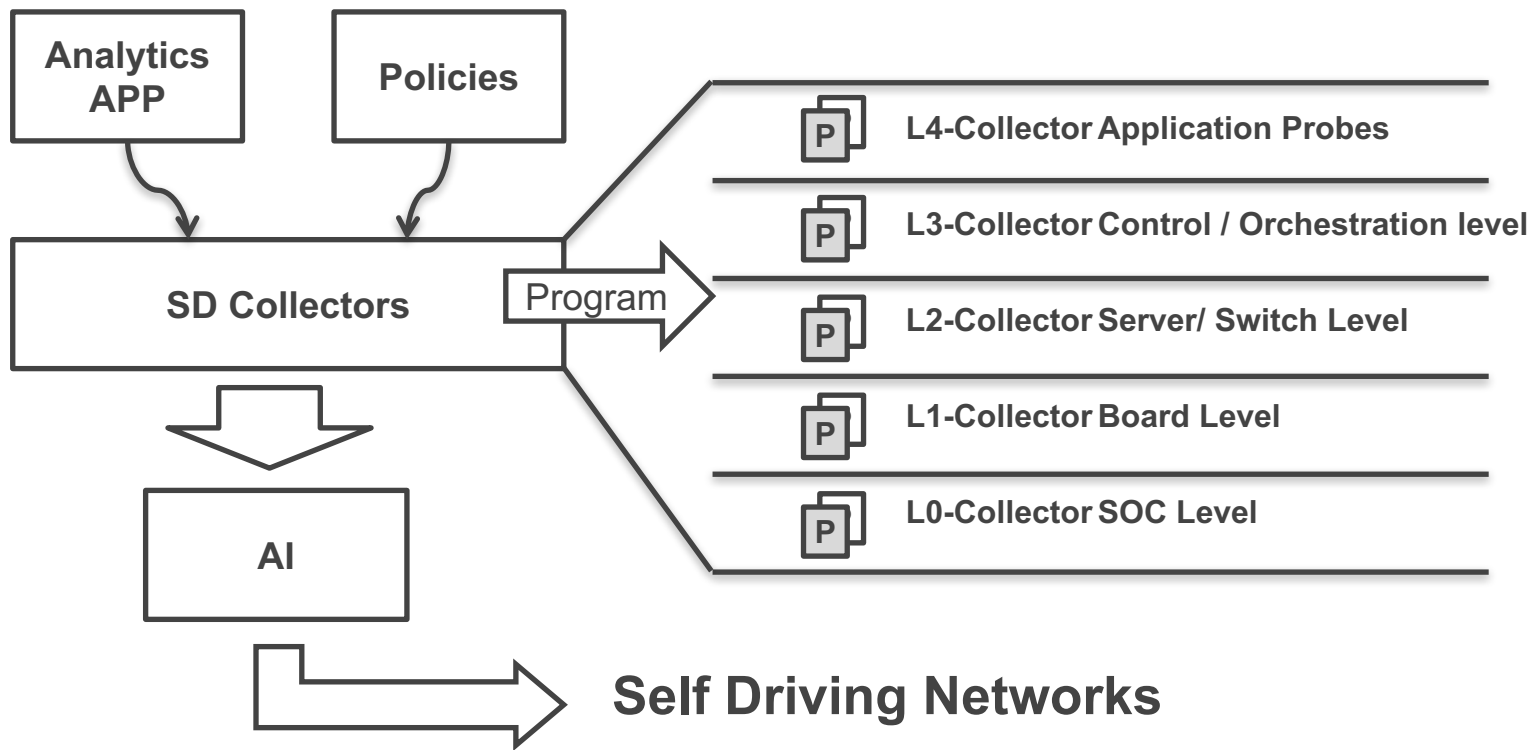
Create a programmable SD Collector architecture along with SD Collector development guidelines and SD Collector SDKs.

Create vProbe development guidelines and vProbe SDKs.

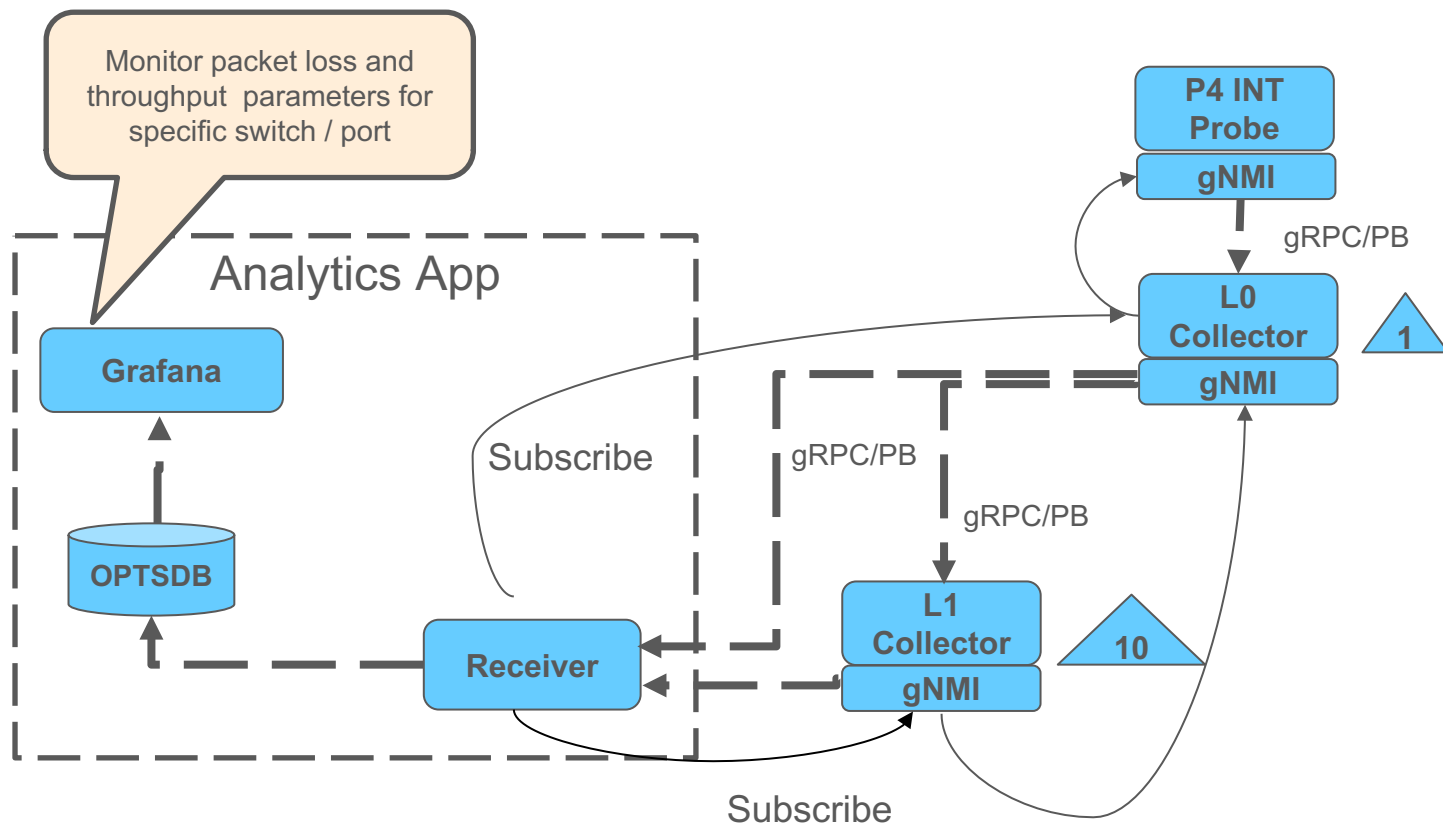
What is coming up? – Multi Layer Loops



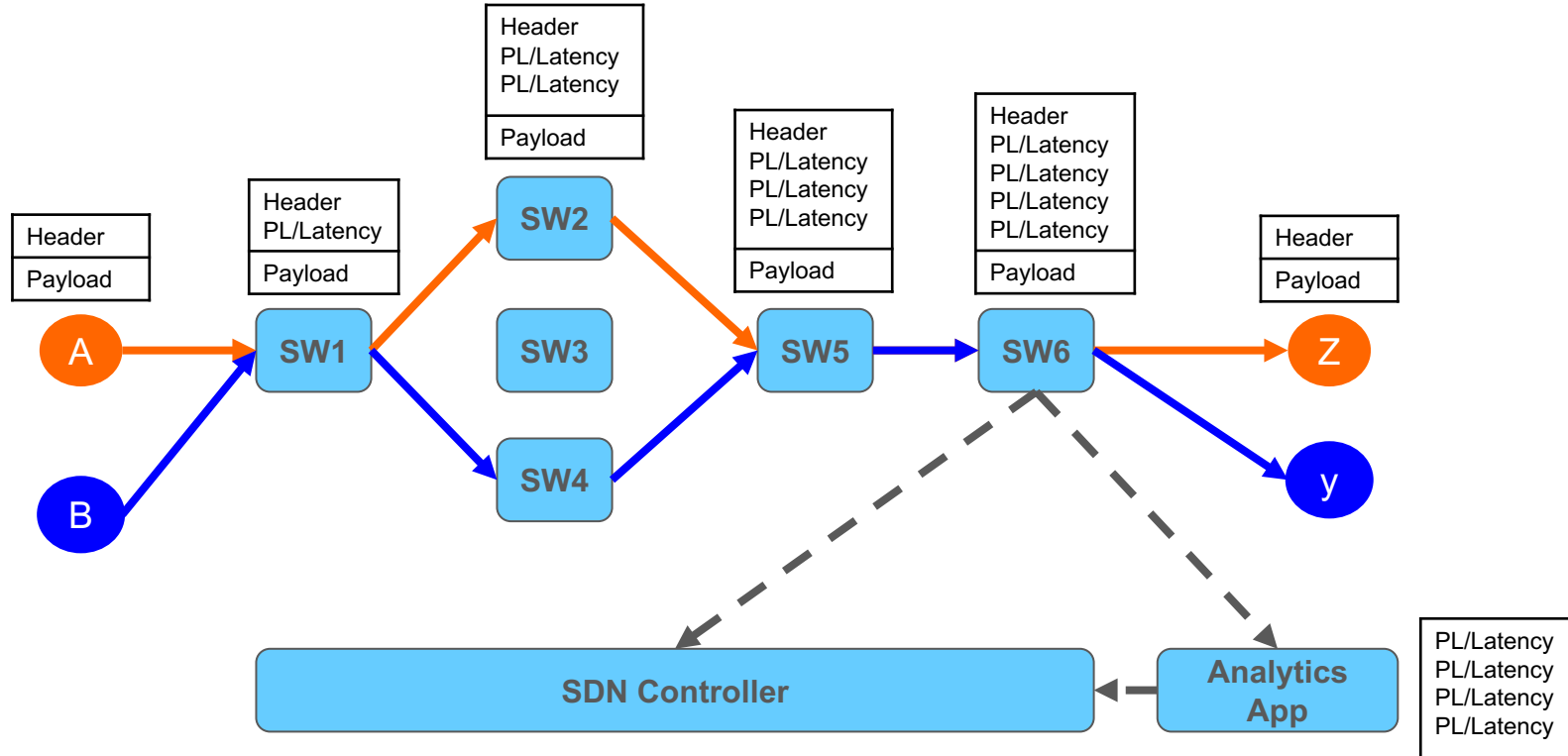
What is coming up? – SD Collectors



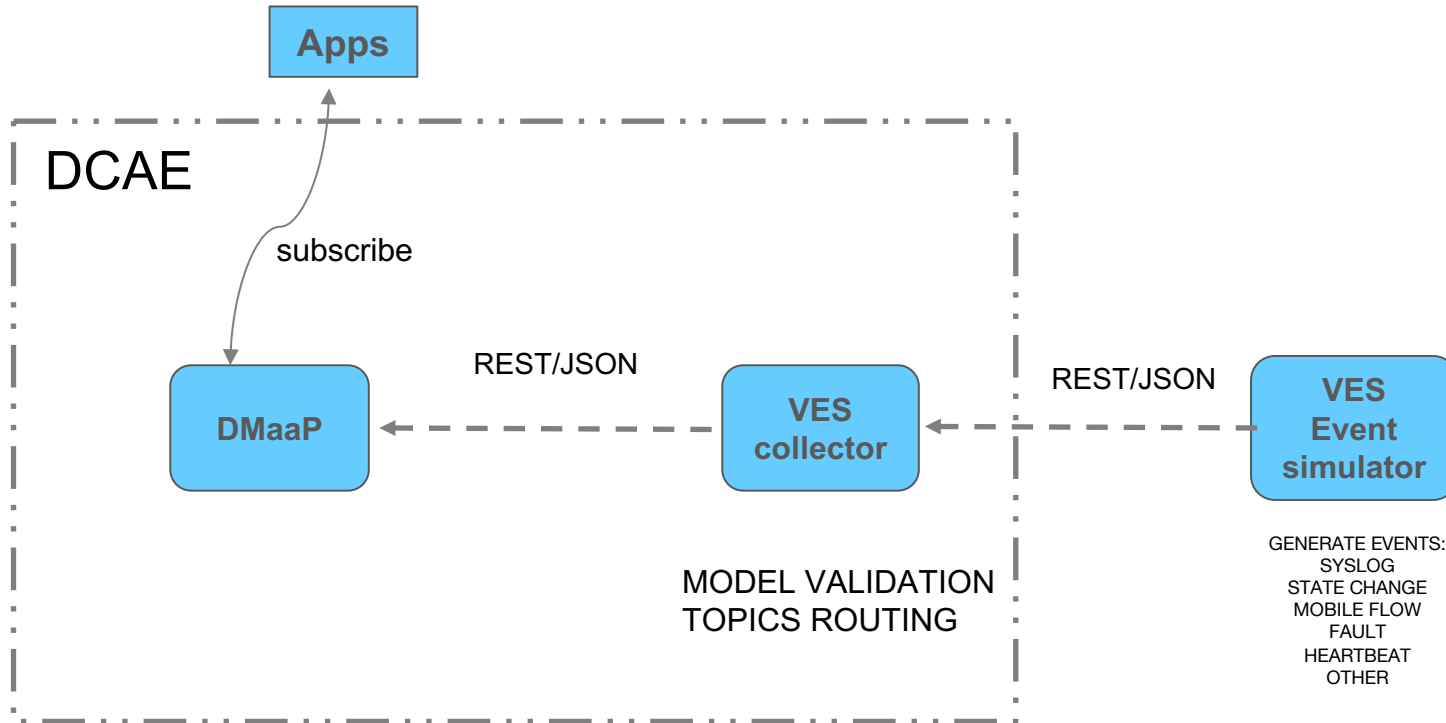
Demo - 1 OpenConfig and Grafana



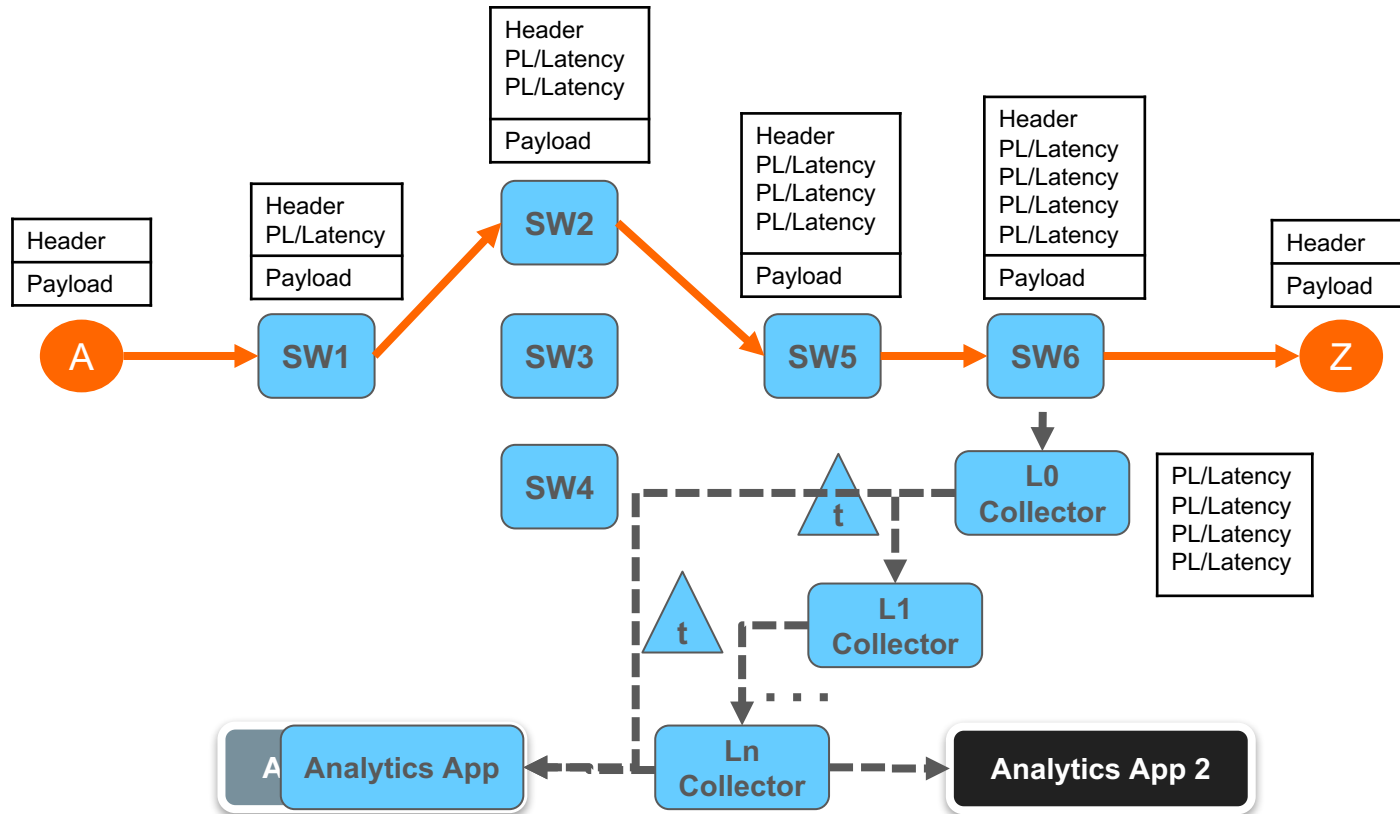
P4 INT - Explained



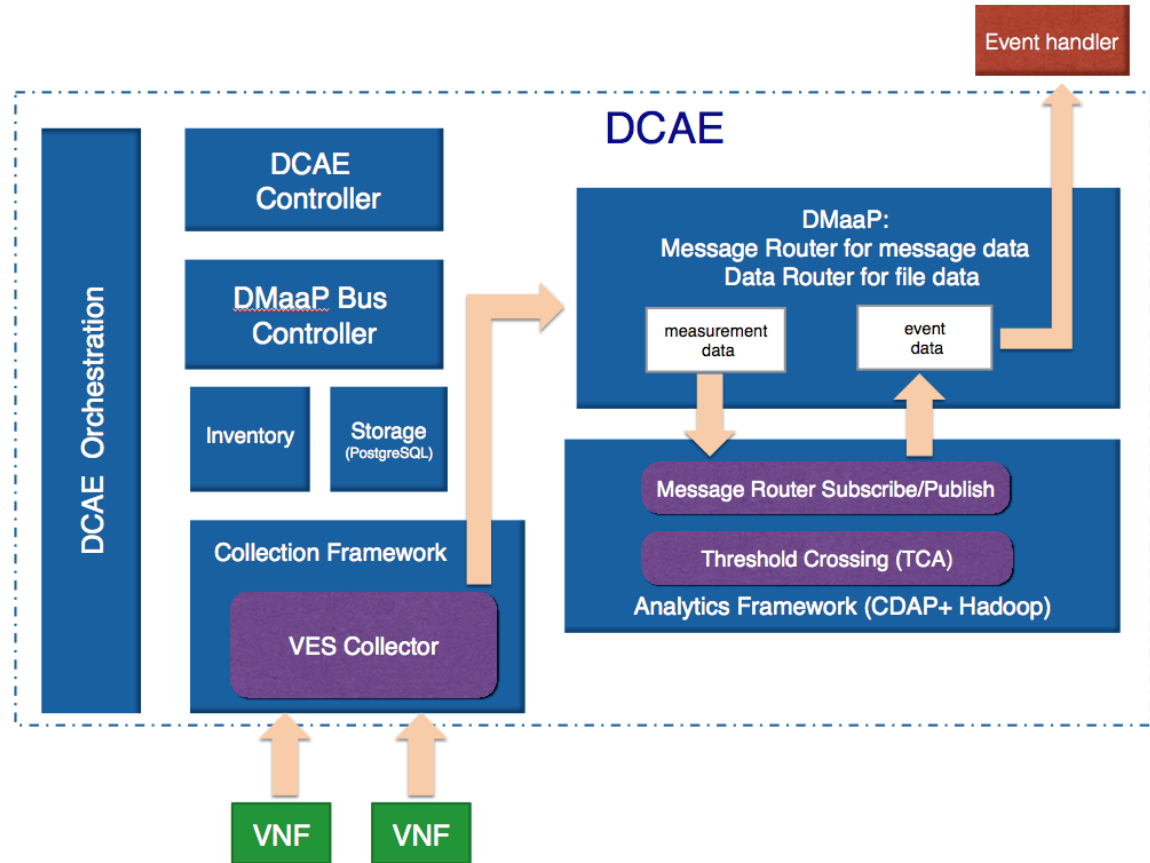
Demo - 2 VES and ONAP DCAE



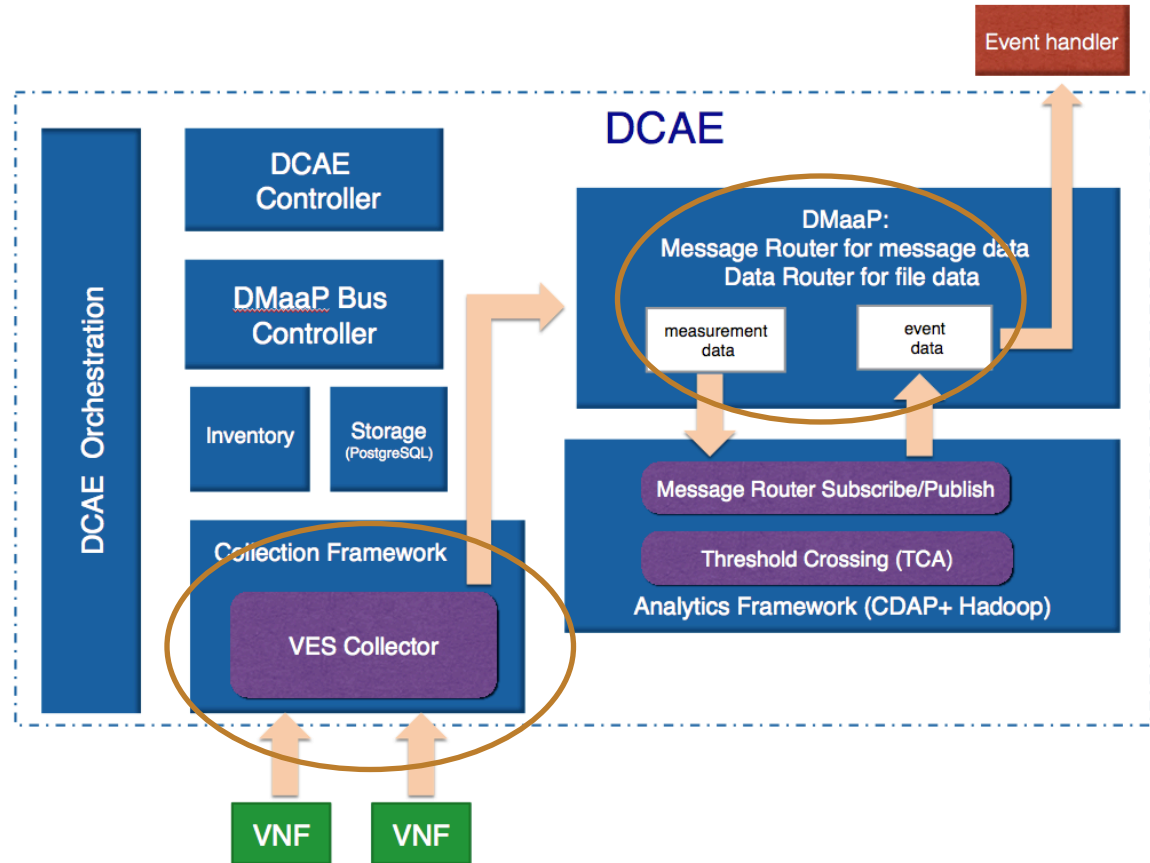
Loops of Collection / Control



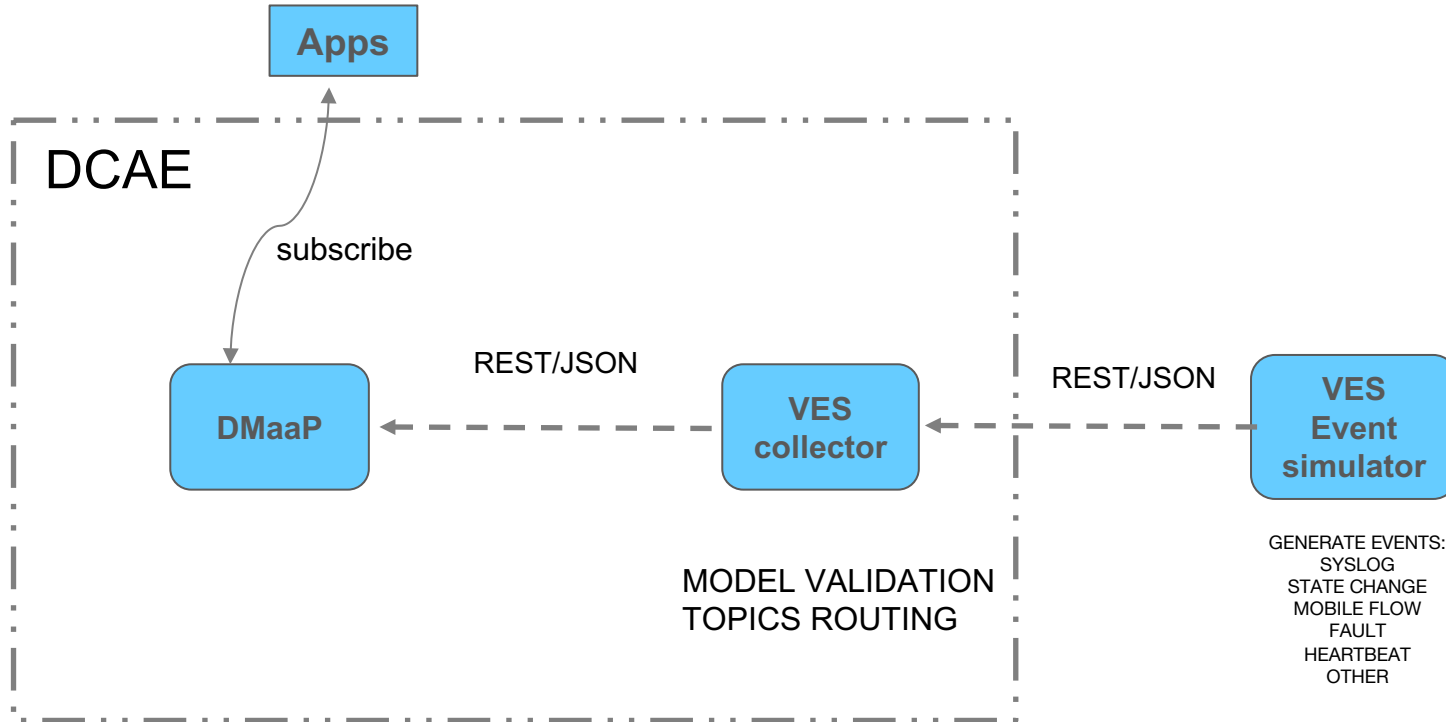
Demo - 2 VES and ONAP DCAE



Demo - 2 VES and ONAP DCAE



Demo - 2 VES and ONAP DCAE



Get Involved!



- 1. join Weekly Meetings, every Monday 09:30 PST**
- 2. Join our mailing list analytics@opercord.org**
- 3. Join us on Slack**

Thank you!



CONTACT

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