SilkChart

OpenNMS and Telemetry Streaming

Network Operator's Tools Hackathon

Dublin 2018

Problem Statement

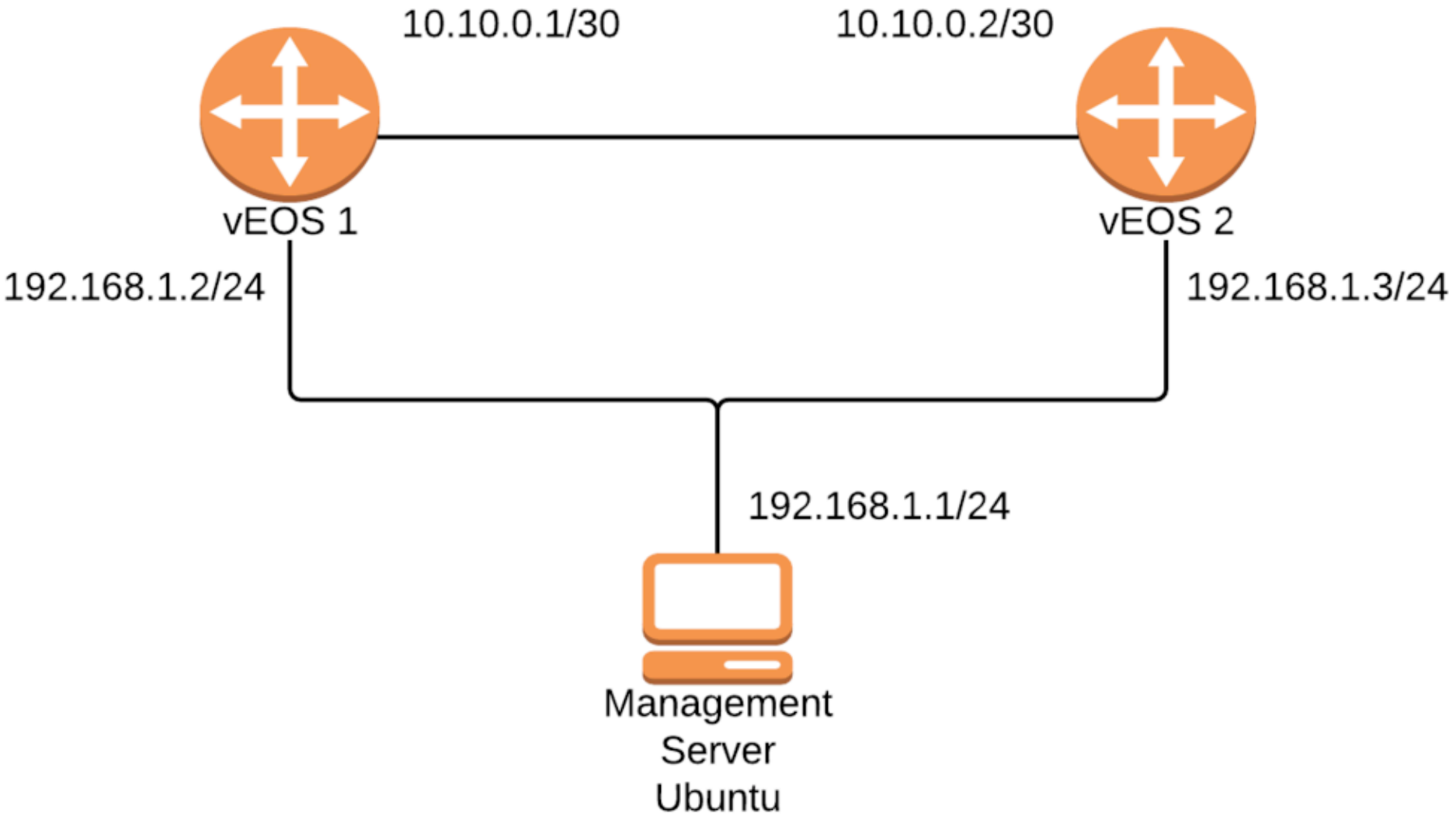
- SNMP-based network monitoring is long overdue for an upgrade. It was designed for legacy implementations, with poor scaling for today's high-density platforms, and very limited extensibility.
- Streaming telemetry is a new approach for network monitoring in which data is streamed from devices continuously with efficient, incremental updates.
- Operators can subscribe to the specific data items they need, using OpenConfig data models as the common structure and interface.

OpenConfig?

- openconfig-interfaces v2.0.0

```
interfaces/interface/name, read+write
interfaces/interface/config/description, read+write
interfaces/interface/config/enabled, read+write
…
interfaces/interface/state/counters/in-broadcast-pkts, read
interfaces/interface/state/counters/in-discards, read
interfaces/interface/state/counters/in-errors, read
…
interfaces/interface/state/counters/out-multicast-pkts,
read
interfaces/interface/state/counters/out-octets, read
interfaces/interface/state/counters/out-unicast-pkts, read
```

Test Setup


10.10.0.1/30
10.10.0.2/30
vEOS 1
vEOS 2
192.168.1.2/24
192.168.1.3/24
192.168.1.1/24
Management
Server
Ubuntu

Issues

- OpenNMS makes use of OSGi
  - Lots of examples on the interwebs in Go
  - While migrating to Java we had issue getting the gRPC (transport layer) going
  - JIRA ticket open: https://issues.opennms.org/browse/NMS-10223

Quick Demo to Kafka

- Streaming into Kafka
- Docker based setup for testing
  - Docker-compose file available

Project Links

- https://wiki.opennms.org/wiki/DevProjects/Telemetry_Arista_EOS
- Switch config: https://gist.github.com/indigo423/d1e37beec4d0adb1cd20d7ca1abee1f3