anuta networks

ONUG

Case Study:

Responsive Networks with Closed Loop Automation

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Agenda

- Anuta Introduction
- Customer Business Case
- Customer Requirements
- Anuta Solution
- Results and Summary

Anuta Networks Overview

Closed-Loop Automation that delivers Assurance, Telemetry and Orchestration for Multi-Vendor, Multi-Domain Networks.

Telstra

TATA COMMUNICATIONS

f5

NTT AT

ERGON ENERGY

NRI 未来創発 Dream up the future.

HITACHI Inspire the Next

neustar

JAPAN POST

HQ in SF, with operations in India, Japan, UK, ANZ and Asia-Pac.

Target Customers

Telco, SP, MSP, CSP, Financial Services, Retail, Transportation

Network Domains

IP/MPLS Core, Data Center, WAN

Customer Profile & Requirements

Customer

- A leading financial services provider in US
- Delivers real-time information to global banks

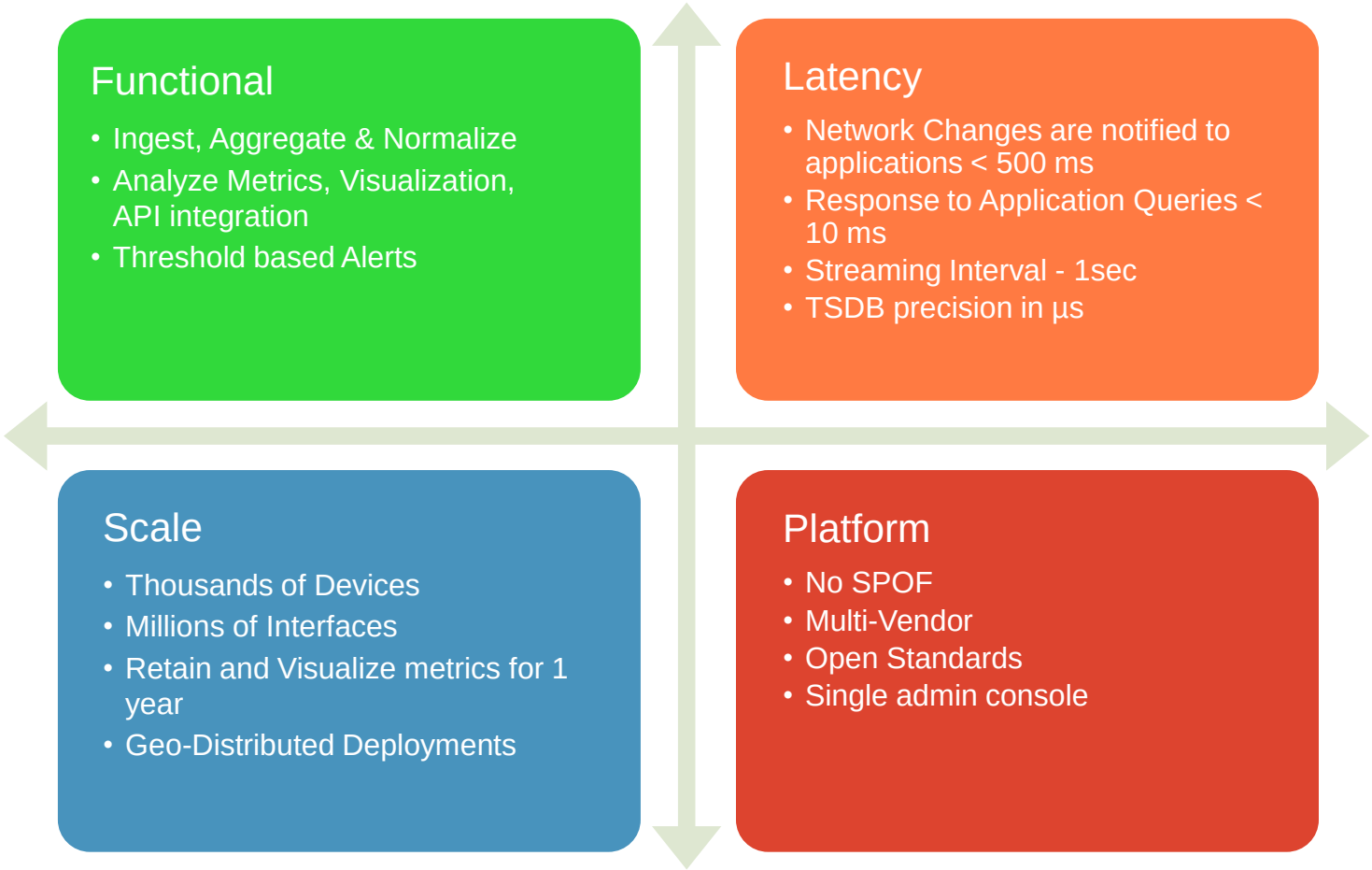
Wants

- Performance & Latency Optimization
- Network Capacity Planning
- SLA Compliance

Using

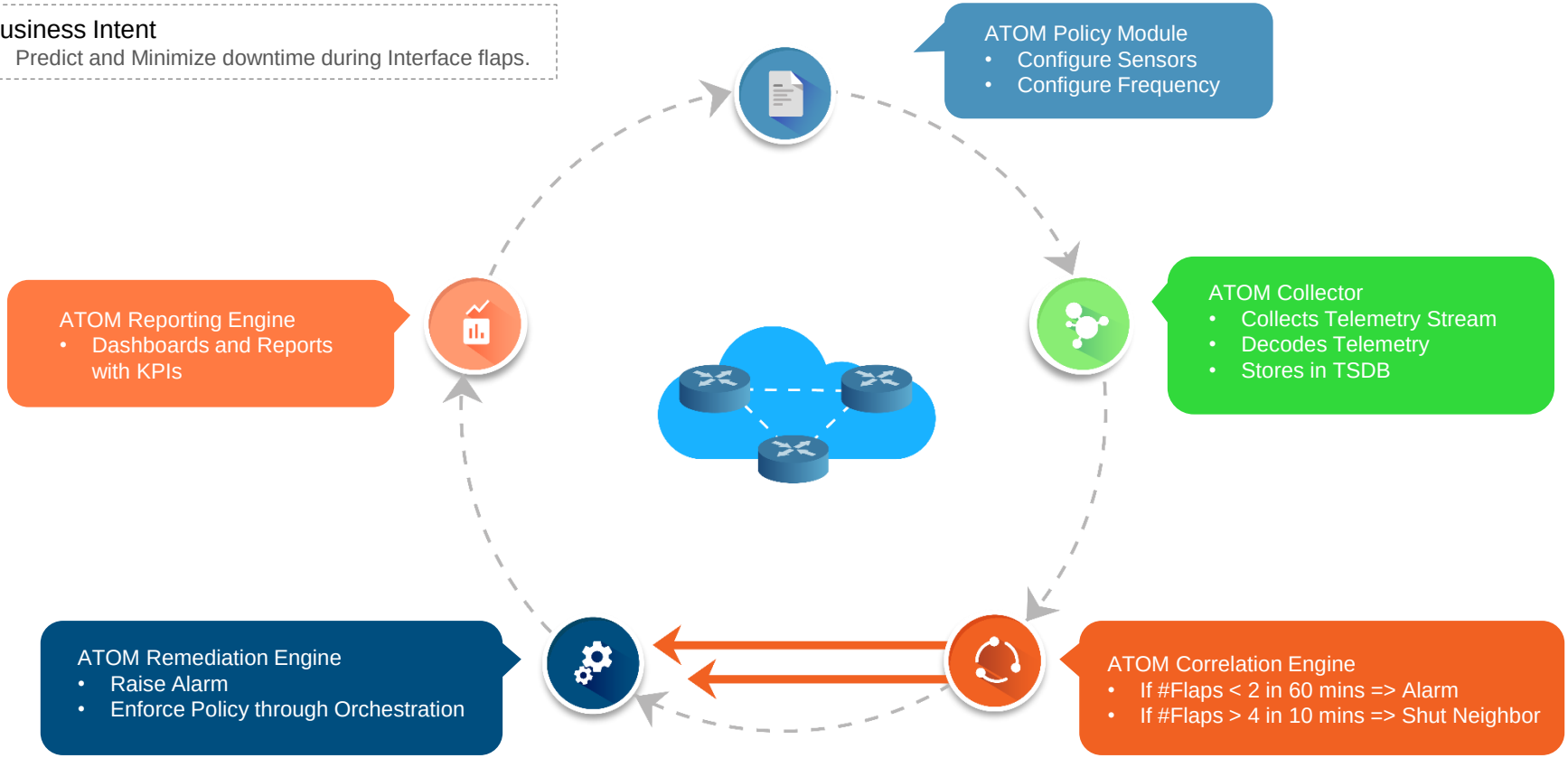
- Streaming Telemetry Collection
- Real-Time Network Analytics
- Closed Loop Automation

Customer Requirements

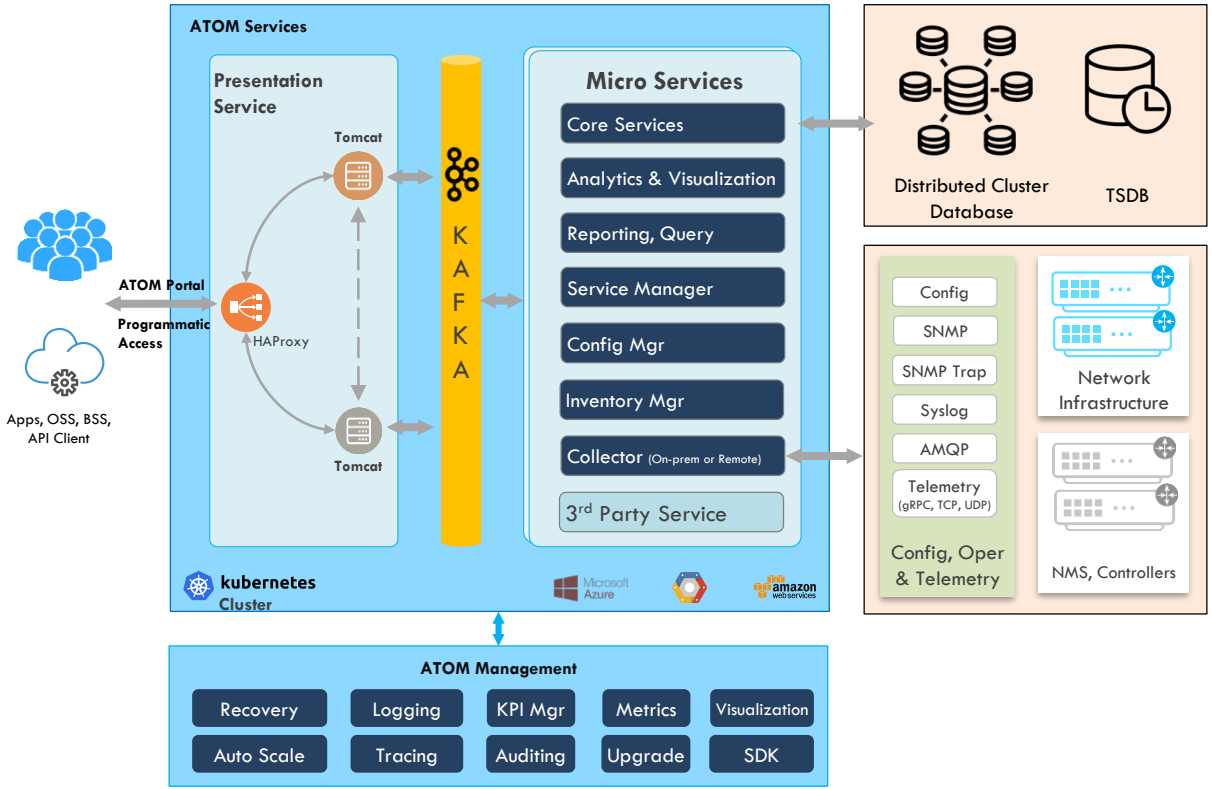


Closed Loop Automation – Interface Flapping

Business Intent
- Predict and Minimize downtime during Interface flaps.

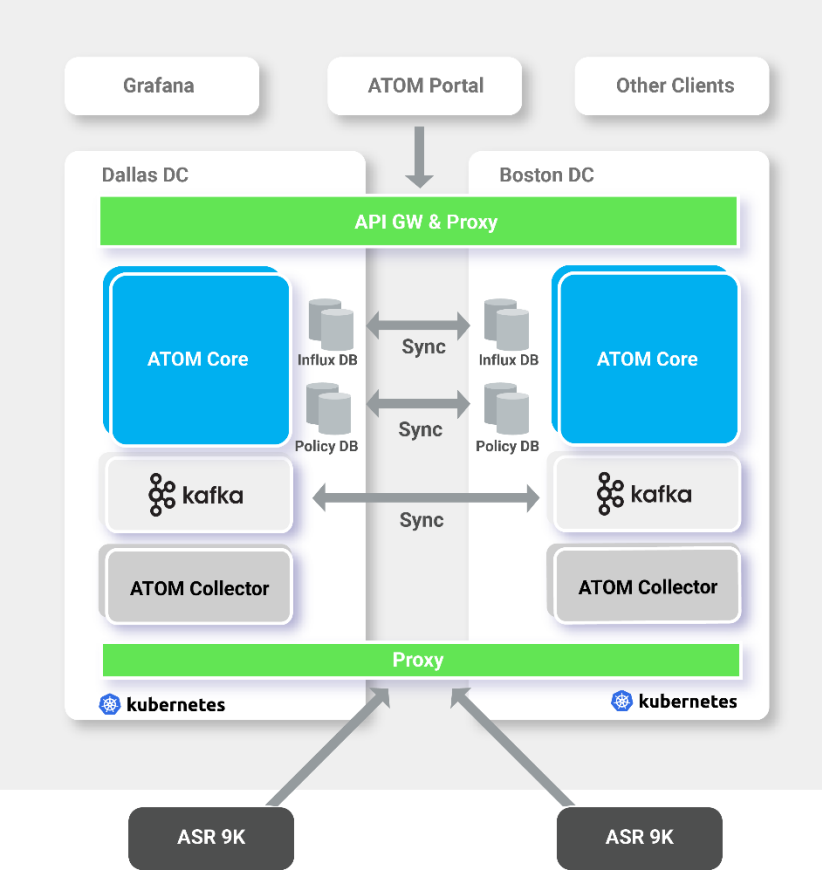


Anuta ATOM Architecture



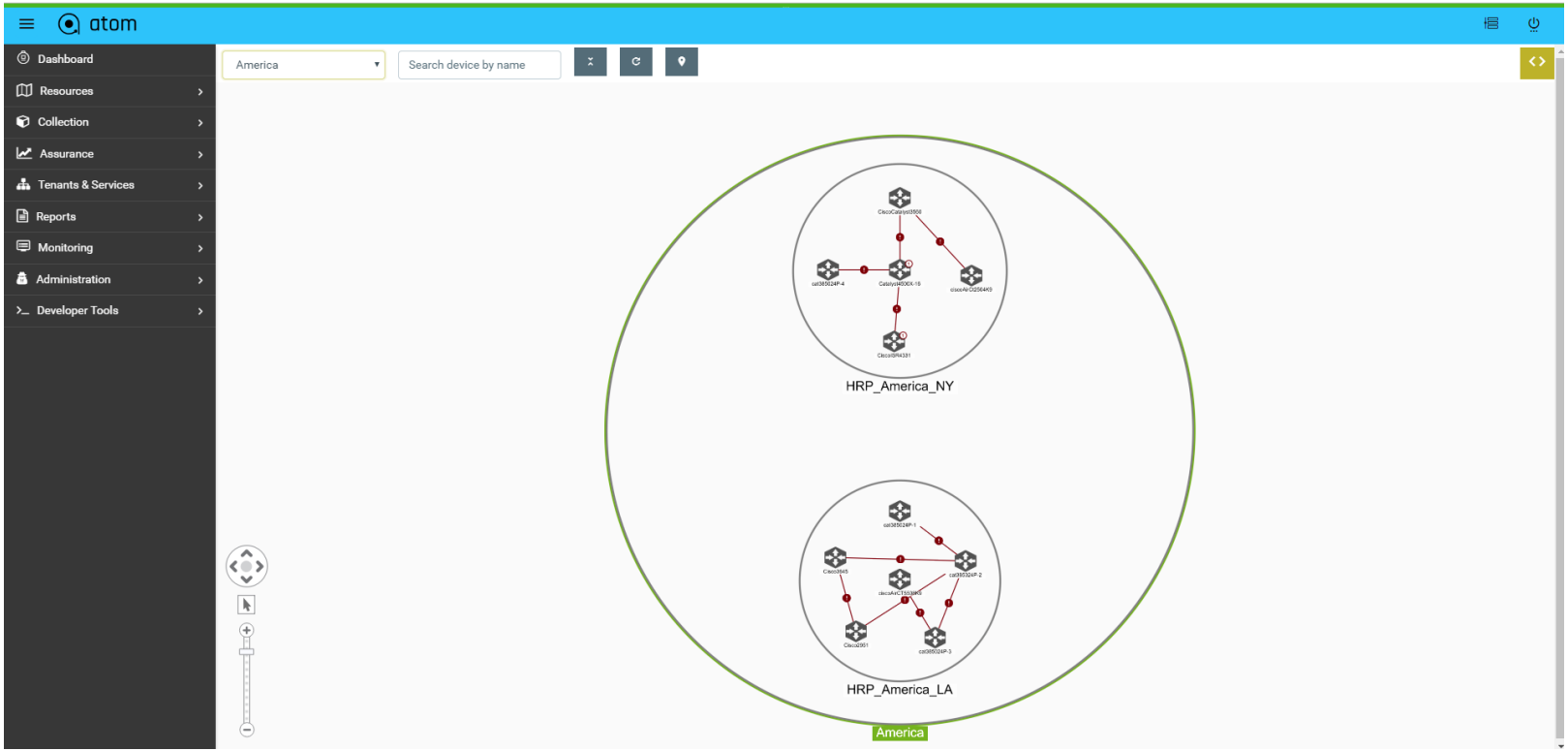
- Million+ Devices
- Layered & Model driven
- Assurance & Analytics
- Multi-Vendor – 45+ Vendors

Deployment Architecture

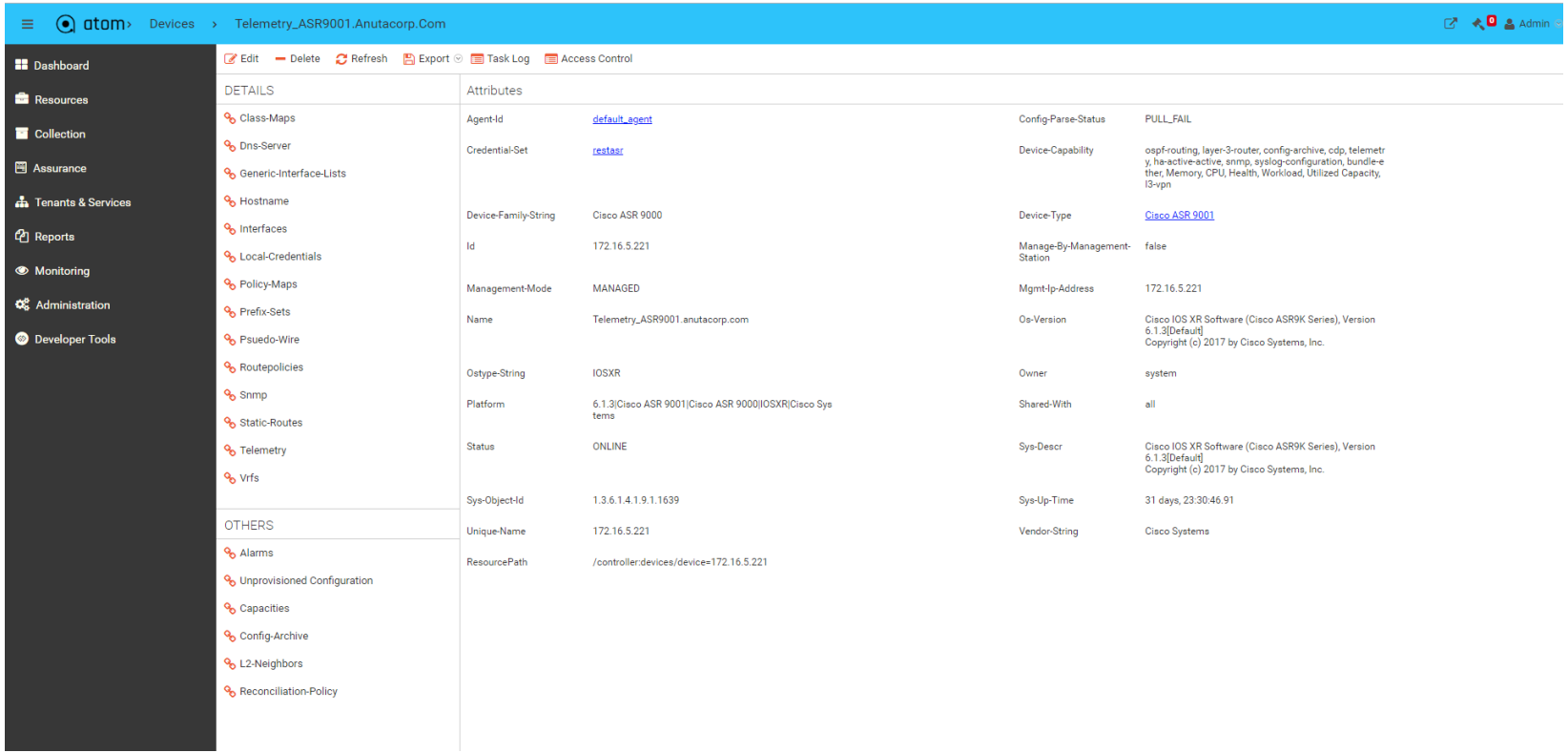


- Highly Available Deployment
- Geo-Distributed
- No SPOF

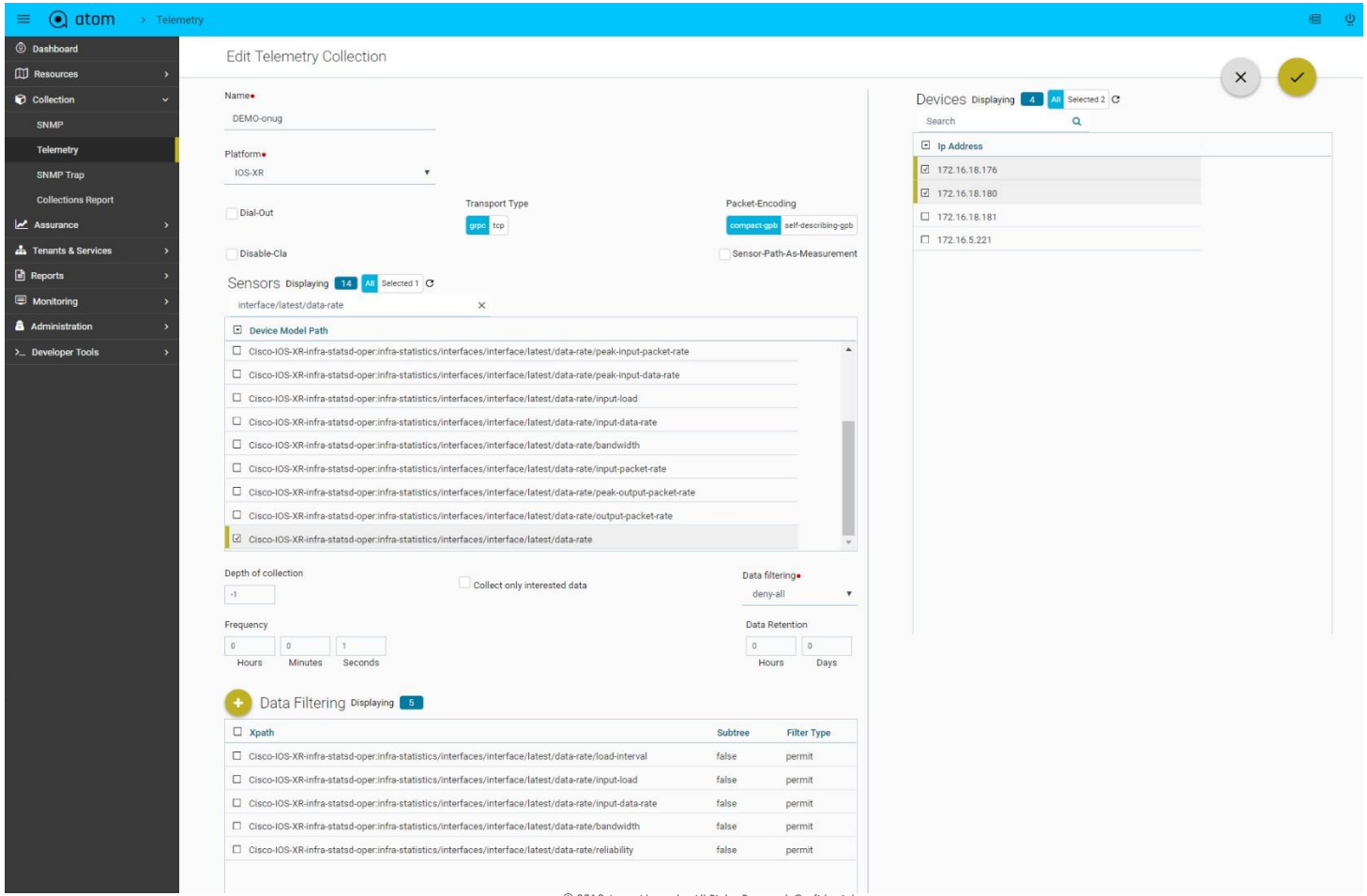
On-board Device to ATOM



On-board Device to ATOM



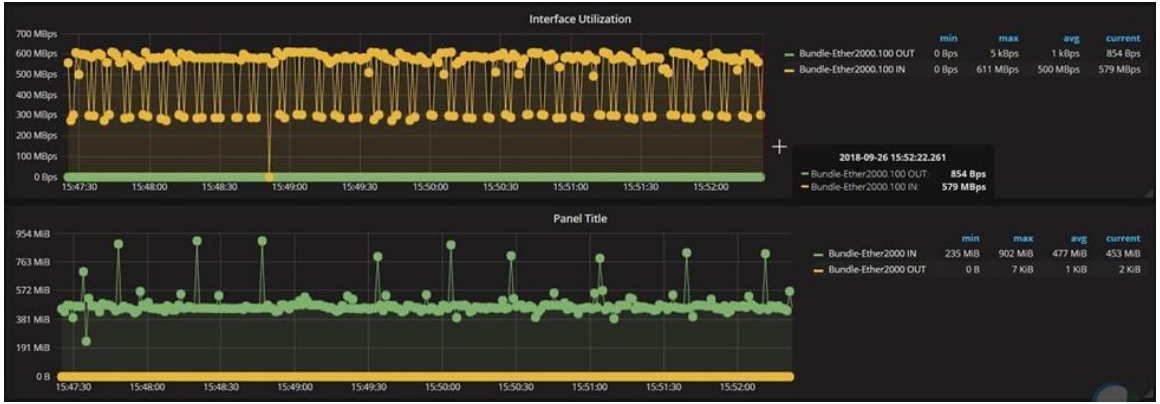
Select Pre-Defined Telemetry Sensors



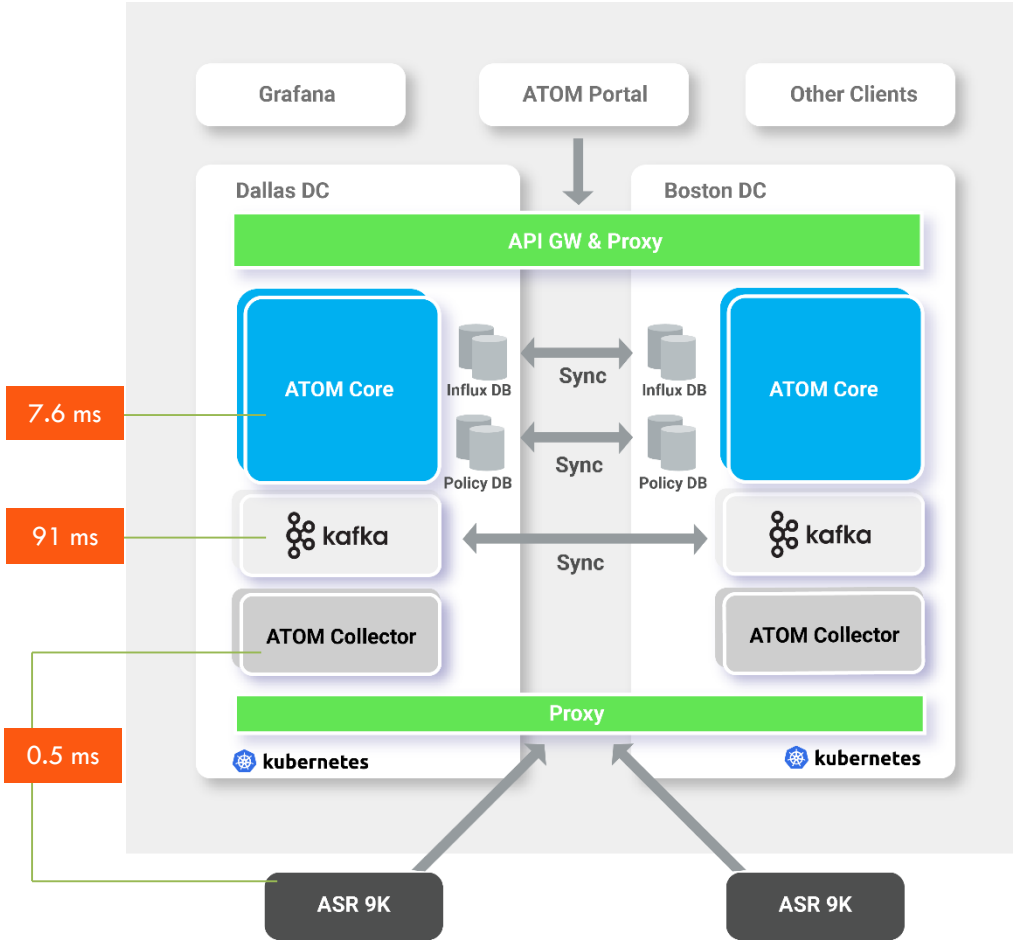
Telemetry Configs Pushed to IOS-XR

```
RP/0/RSP0/CPU0:asr9006b_PEG-2#sh telemetry model-driven subscription ATOM-POC2-GENERICCOUNTER
Fri Sep 21 09:27:30.754 UTC
Subscription:  ATOM-POC2-GENERICCOUNTER
-------------
  State:       ACTIVE
  Sensor groups:
  Id: ATOM-POC2-GENERICCOUNTER
    Sample Interval:      1000 ms
    Sensor Path:          Cisco-IOS-XR-infra-statsd-oper:infra-statistics/interfaces/interface/latest/generic-counters
    Sensor Path State:    Resolved

  Destination Groups:
  Group Id: 10.65.127.73_compact-gpb_tcp
    Destination IP:       10.65.127.73
    Destination Port:     12455
    Encoding:             gpb
    Transport:            tcp
    State:                Active
    No TLS
    Total bytes sent:     3022651650
    Total packets sent:   230375
    Last Sent time:       2018-09-21 09:27:28.1065914488 +0000

  Collection Groups:
  ------------------
    Id: 9
    Sample Interval:      1000 ms
    Encoding:             gpb
    Num of collection:    305712
    Collection time:      Min:    40 ms Max:  1470 ms
    Total time:           Min:    42 ms Avg:    59 ms Max:  1471 ms
    Total Deferred:       0
    Total Send Errors:    0
    Total Send Drops:     0
    Total Other Errors:   0
    Last Collection Start:2018-09-21 09:27:28.1065738515 +0000
    Last Collection End:  2018-09-21 09:27:28.1065809504 +0000
    Sensor Path:          Cisco-IOS-XR-infra-statsd-oper:infra-statistics/interfaces/interface/latest/generic-counters

RP/0/RSP0/CPU0:asr9006b_PEG-2#
```

Visualization & Latency with Grafana



Test Results - Latency



- Latency from Device to App < 100ms
- Collector – 0.5 ms
- Kafka Lag Time – 91 ms
- ATOM Telemetry Engine - 7.6 ms

Anuta ATOM Delivers

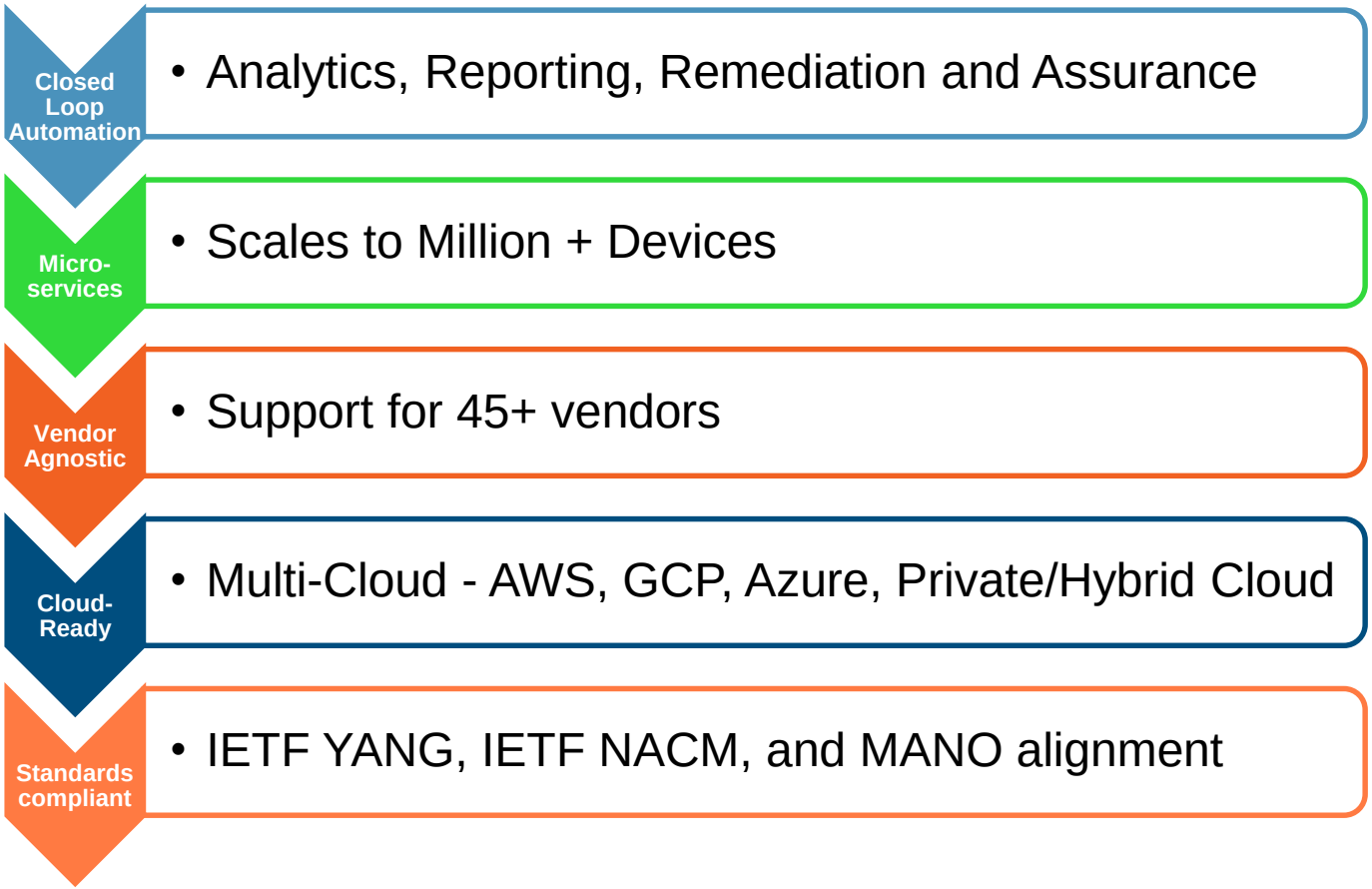
Fast and Responsive Network

Multi-vendor Support

Fully Redundant Design

Open Standard

Why Anuta ATOM ?



Additional Resources

- Live Demo - Drop by our Booth
- Data Sheet & Case Study – https://anutanetworks.com
- Email - info@anutanetworks.com
- LinkedIn - https://www.linkedin.com/company/anuta-networks/