Enterprise CORD

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http://cord.onosproject.org/

CORD
Central Office Re-architected as a Datacenter

Current State of the Art

Expensive and vertically integrated equipment

Branch Office

Branch Office

Central Office

ROADM

ROADM

ROADM

ROADM

L3VPN

E-Line

HQ

Regional HQ

Very hard to spawn VNFs, enterprises use OTT instead

Internet

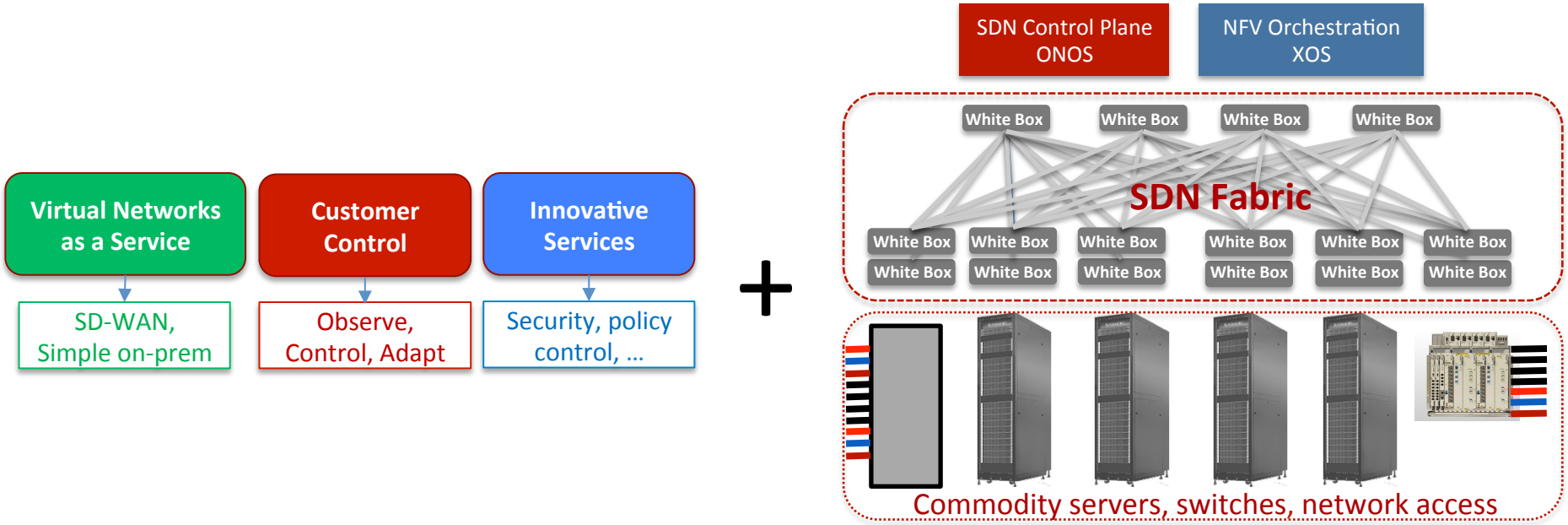
Public Cloud

- Firewall
- IDS
- Policy Control
- VPN

Service provisioning takes days, weeks or even months

Very hard to monitor and control

E-CORD Value Proposition



Carrier-grade Network as a Service

Built on an open platform

Bring data center economy and cloud agility

E-CORD PoC (March 2016)

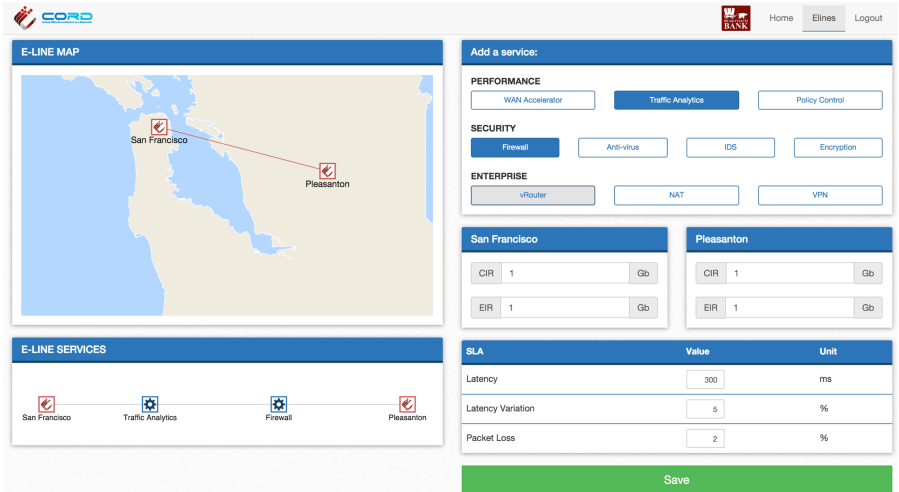
https://youtu.be/nXAZ3d8d4ZM

- Carrier Ethernet connectivity
  - MEF E-Line service model
  - Ethernet Edge UNI (re)provisioning
- On-demand enterprise services
  - Bump in the wire
  - Firewall, traffic analysis, WAN accelerator, …

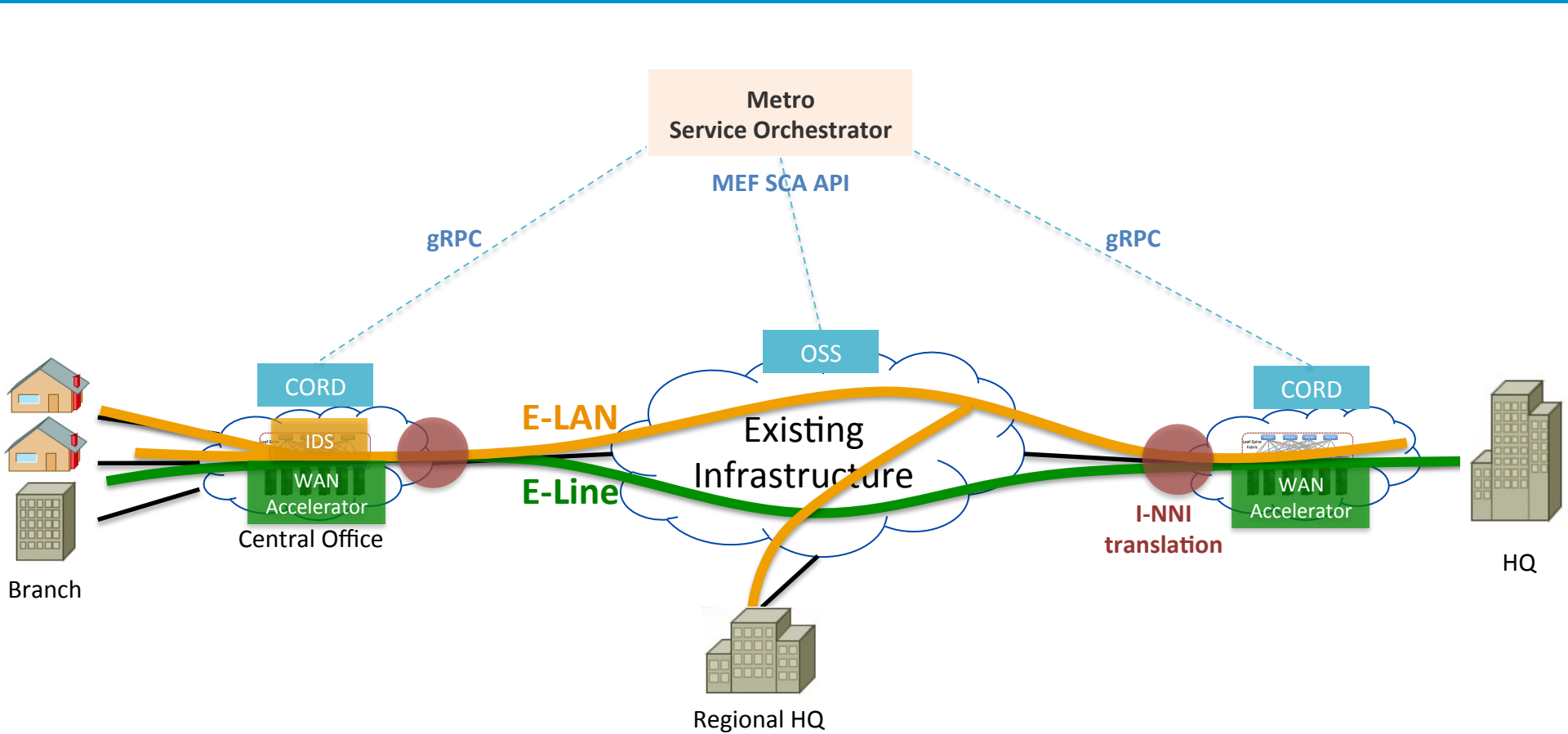
Virtual Network as a Service

Customer Control

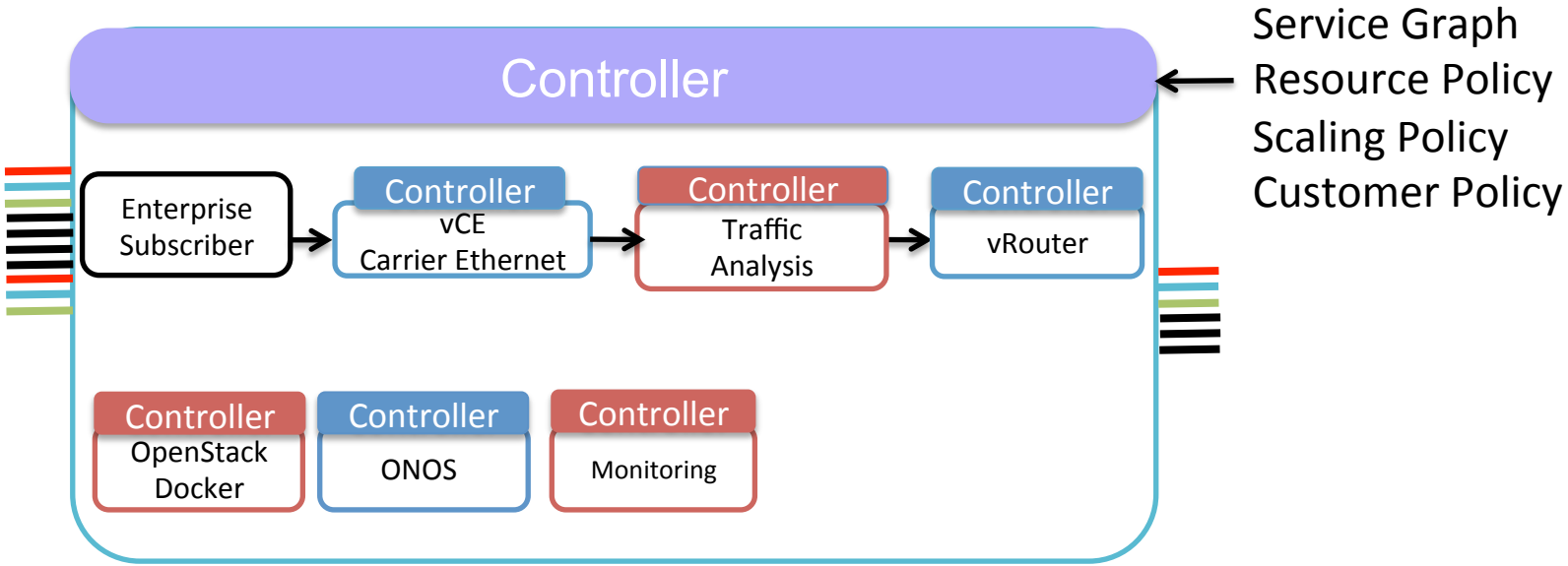
Carrier grade services



E-CORD High-level View

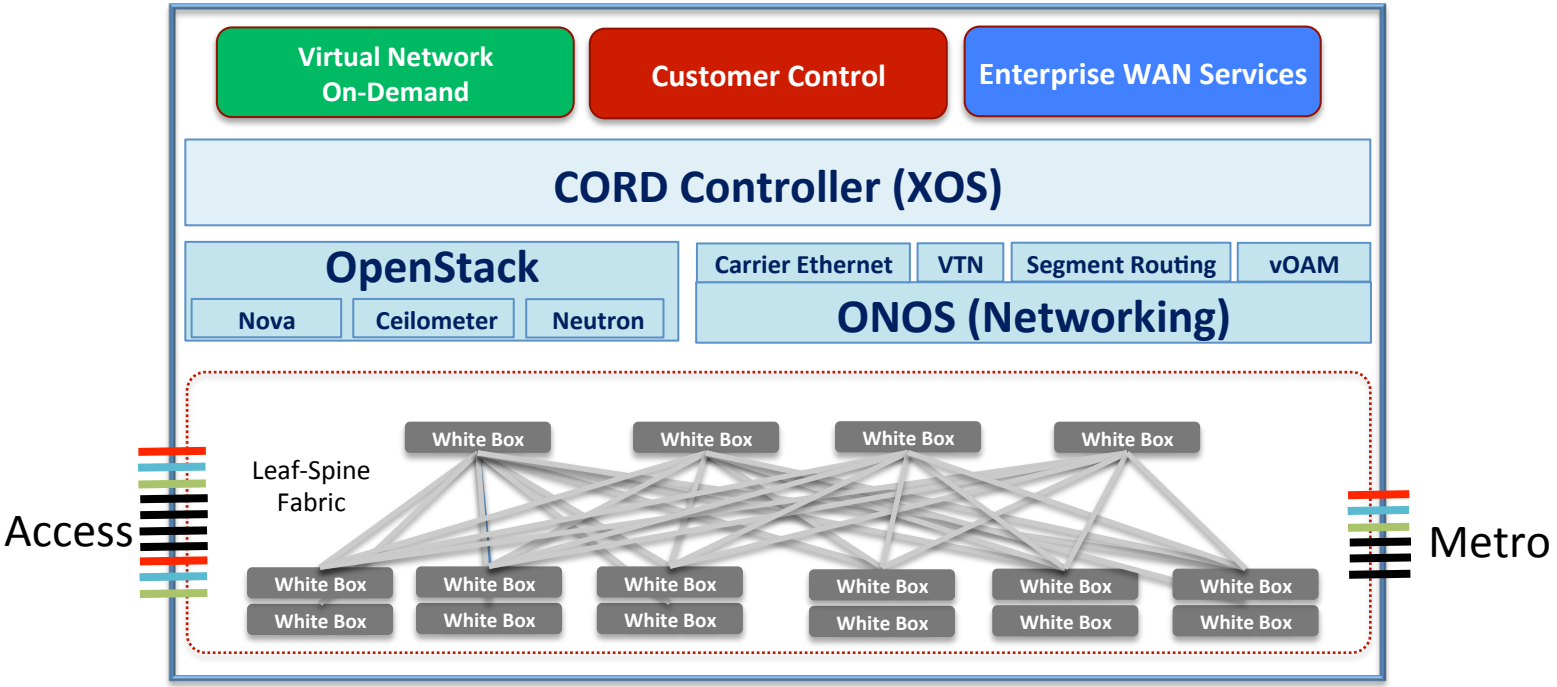


E-CORD Internal View

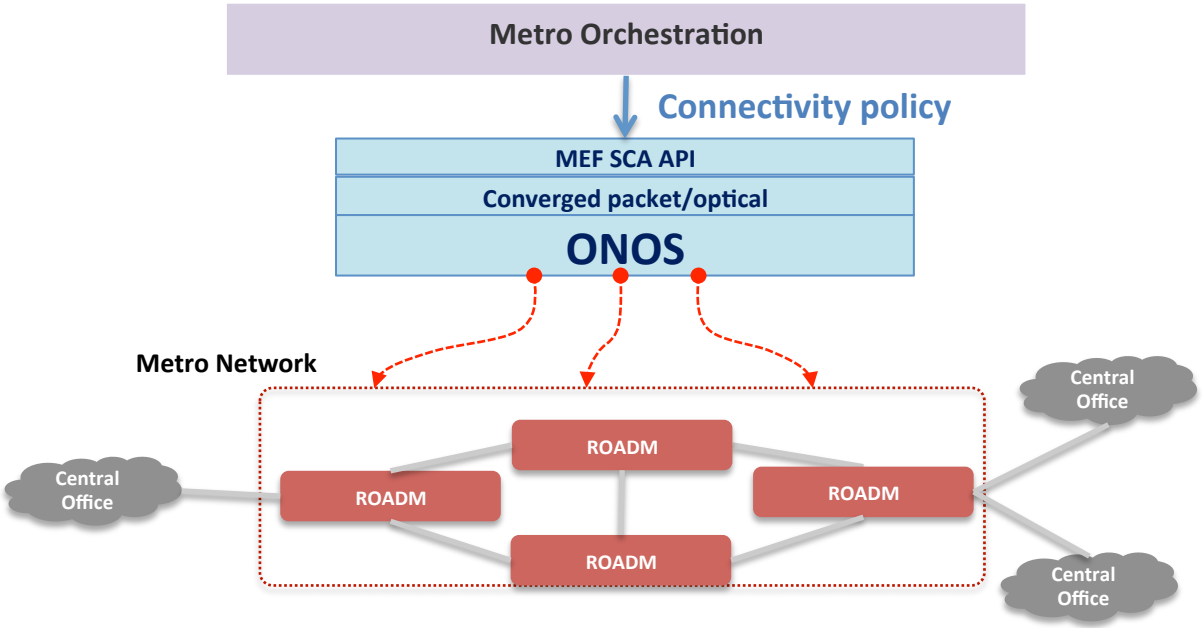


Everything-as-a-Service (XaaS) / Micro-Services Architecture

E-CORD Software Architecture: Central Office



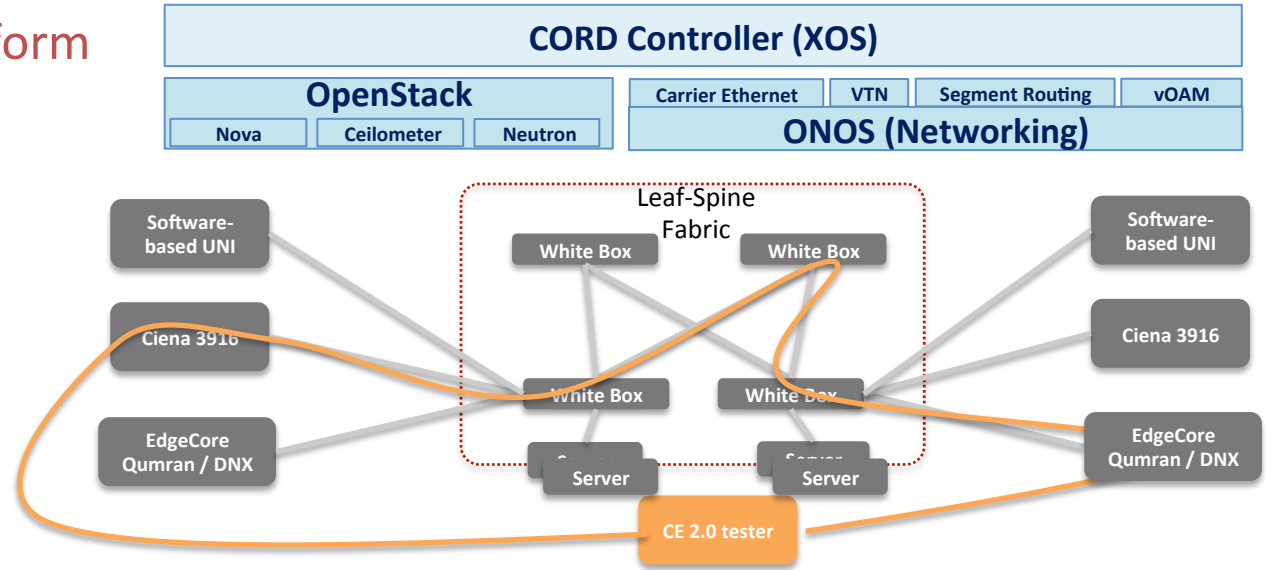
E-CORD Software Architecture: Transport



Work in Progress: MEF Collaboration

- Participated in Euro16 LSO Hackathon, white papers, …
- E-CORD is reference build for OpenCS
  - Open source
  - V1 done, v2 in progress
- E-CORD is reference platform
  - Based on whitebox

- MEFnet
  - Hosting of hardware & software components for OpenLSO & OpenCS
  - Performance and compliance testing
  - Vendor neutral



Work in Progress: Platform and Services

- Integrating with the CORD platform
  - Fixing the shortcuts
- L2VPN
  - collaboration with MEF to follow up with latest OpenAPI activities
  - refactoring apps to align better with MEF LSO architecture
- L3VPN
  - started design discussion with our collaborator
- Multi-CORD site coordination
  - start modeling metro orchestration layer XOS

Roadmap

- Expanded variety of virtual networks of demand
  - L2VPN, L3VPN, SD-WAN overlays, …
- Offer richer set of value added services
  - Firewall, WAN acceleration, traffic analysis and steering, …
- Add integrated analytics through A-CORD
- Enable field trials
  - China Unicom, …

Details at the breakout session

Summary

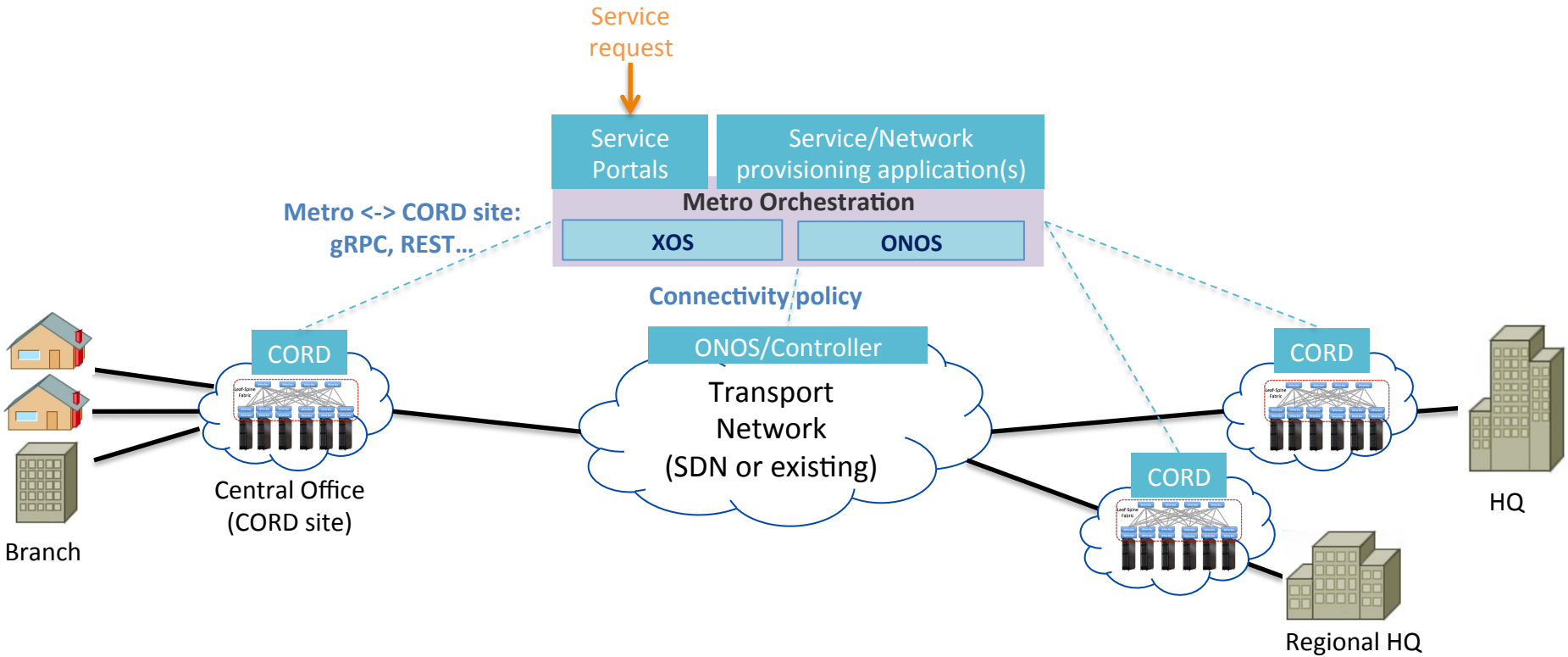
- E-CORD enables service providers to offer enterprise customers
  - Virtual networks on demand with value added services
  - Ability to observe and control their virtual networks and services

  With CORD's standard economics and agility
- Strong collaboration with MEF
  - OpenCS reference build and platform
  - MEFnet
- Hope to do more field trials in 2016

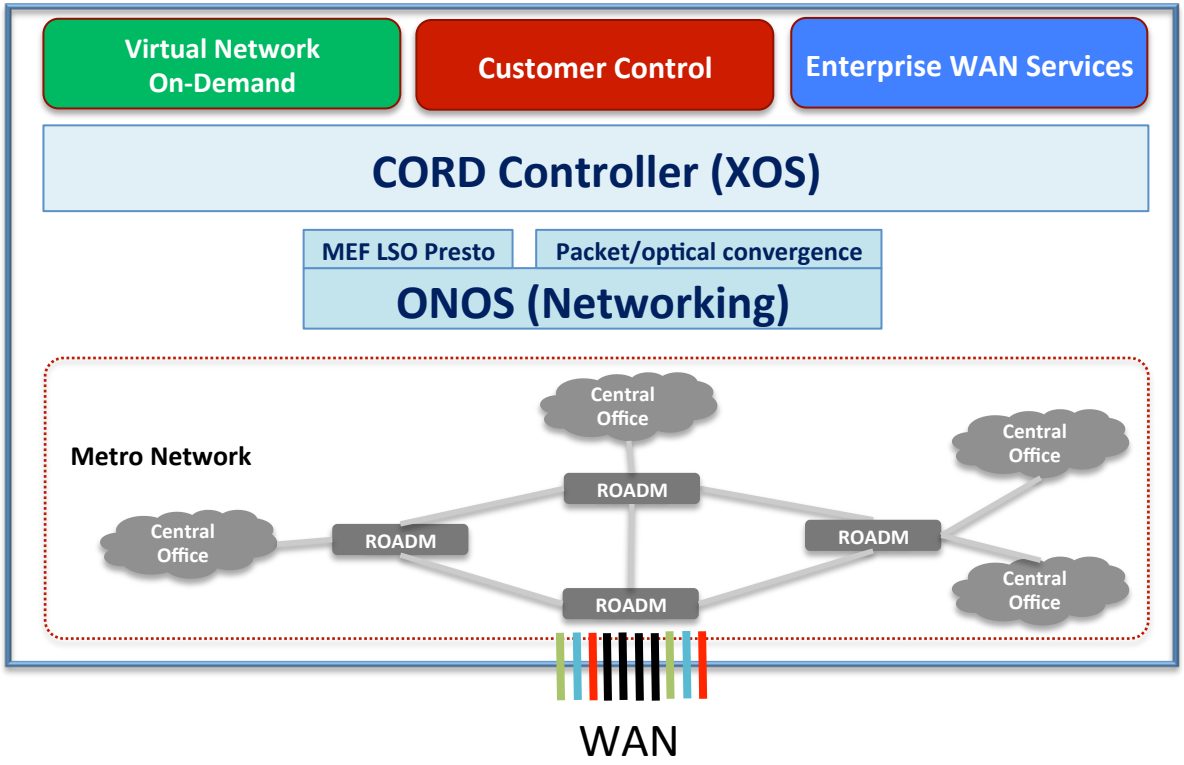
Join us at the breakout session to help plan E-CORD future!

backup

E-CORD High-level view

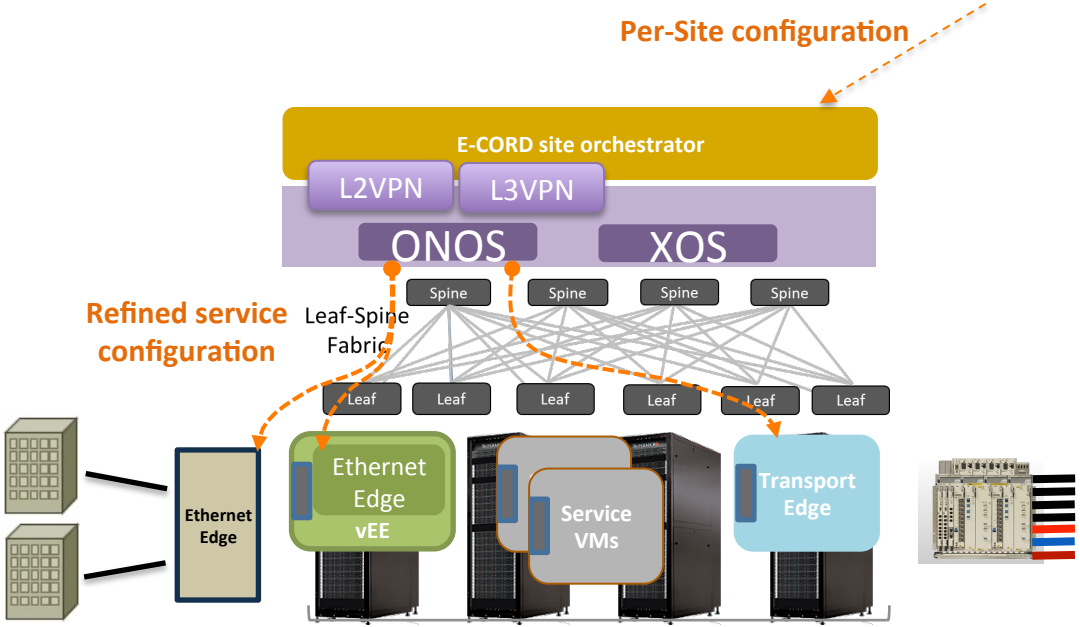


E-CORD Software Architecture: Metro Layer



E-CORD Architecture: Central Office

1. Site orchestrator refines High-level service graph into site-local service graph
2. XOS instantiates the service graph, app on ONOS configures the networking for service instances



OpenCS in ONOS