

# INTERCONNECTING MULTICLOUD WITH VMX

Julie Zhao  
Senior Product Manager

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# AGENDA



Introduction & Overview



Telco Cloud



Enterprise Multicloud

# NFV ADOPTION DRIVERS



## TELCO CLOUD

- Rapid Service Enablement
- Flexible & Scale-out Deployment
- CAPEX & OPEX Reduction



SP & Enterprise

## MULTICLOUD

- Seamless Extension into Cloud
- Multicloud Secure Interconnect
- Virtual POP in Public Cloud

# VMX FAST-GROWING GLOBAL PRESENCE

“...a carrier-grade virtual router with a full feature set, not a stripped down MX. Having Junos OS run on both the physical and virtual MX ensures consistent operations.”

**Dr. Ray Mota, CEO and principal analyst,  
ACG Research**

“We are very excited about Korea's first commercial launch of a carrier-grade NFV-based router. As a leader of the 5G era, LG U+ plans to expand NFV adoption in close cooperation with Juniper.”

**Jae-ho Choi, GM, Transport Platform Development, LG U+**



“Juniper's vMX leverages OTS hardware and supports open APIs, reinforcing programming tools such as Ruby, Python, Ansible, Puppet and Chef. This will allow us to spend less time manipulating the platform and more time creating innovative solutions with our clients.”

**Frank Jadevaia, president, Intercloud Systems”**

# VMX EVOLUTION

## Cloud Agnostic Automation

Virtual RR  
Virtual PE

Virtual BNG

Multicoud  
Interconnect

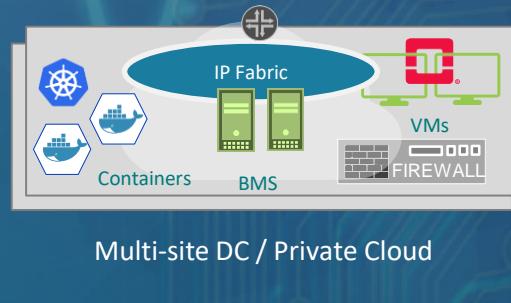
vMX  
Appliance

Virtual POP

2015

2016

2017+



Remote  
Branch Office

# VMX DEPLOYMENT MODELS



COTS

Telco Cloud

Public Cloud

Juniper Appliance

Use Cases

- Internet Gateway
- Contrail Cloud Gateway
- Virtual PE
- Virtual BNG
- Virtual RR

- Multicloud Interconnect
- Transit VPC
- Virtual POP

- Small MX
- Managed CPE

Customer Segment

- Service Provider

- Service Provider
- **100G+ Throughput**

- Enterprise
- Service Provider
- **High Perf IPsec**

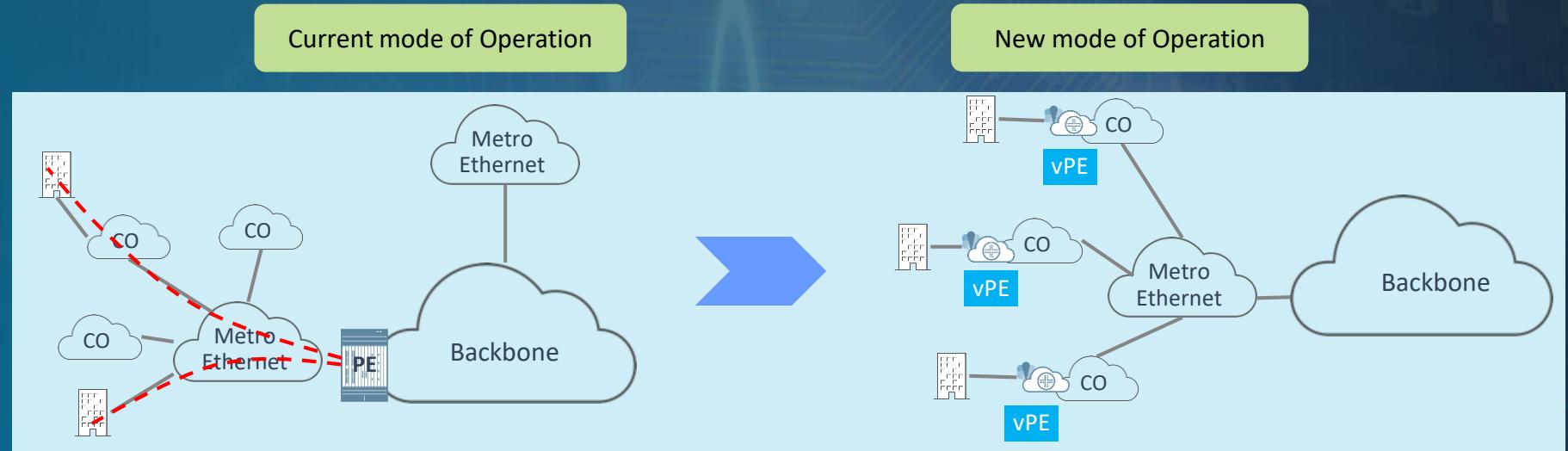
- Enterprise
- Service Provider



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# TELCO USE CASES

# VIRTUAL PROVIDER EDGE



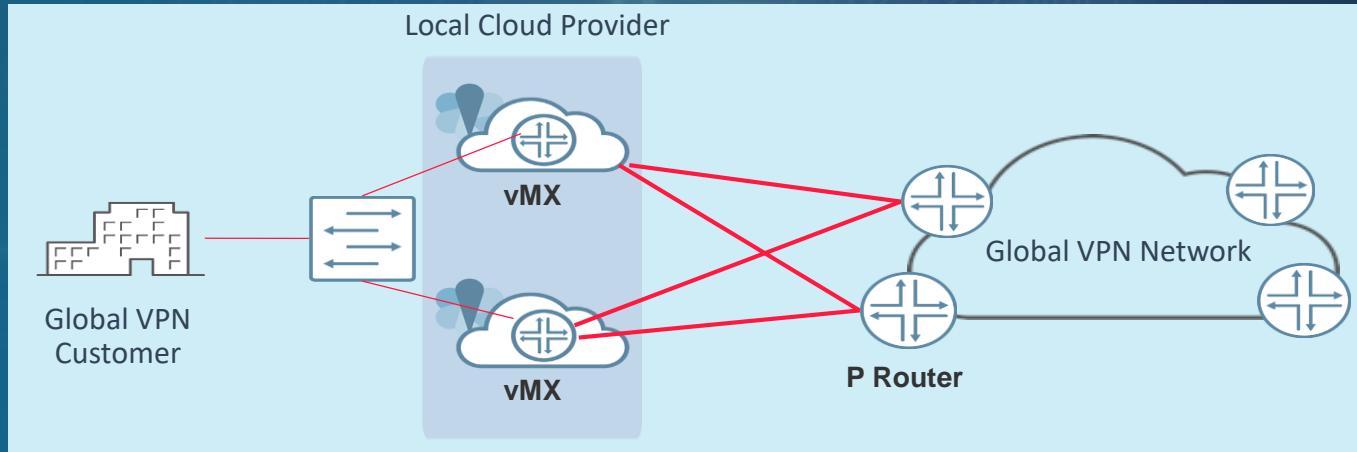
## Virtual Provider Edge

- Agile Service Deployment
- Pay As You Grow
- CAPEX Reduction

## Deployment Consideration

- 100G @256bytes Throughput
- Physical MX Feature Parity

# NETWORK GATEWAY



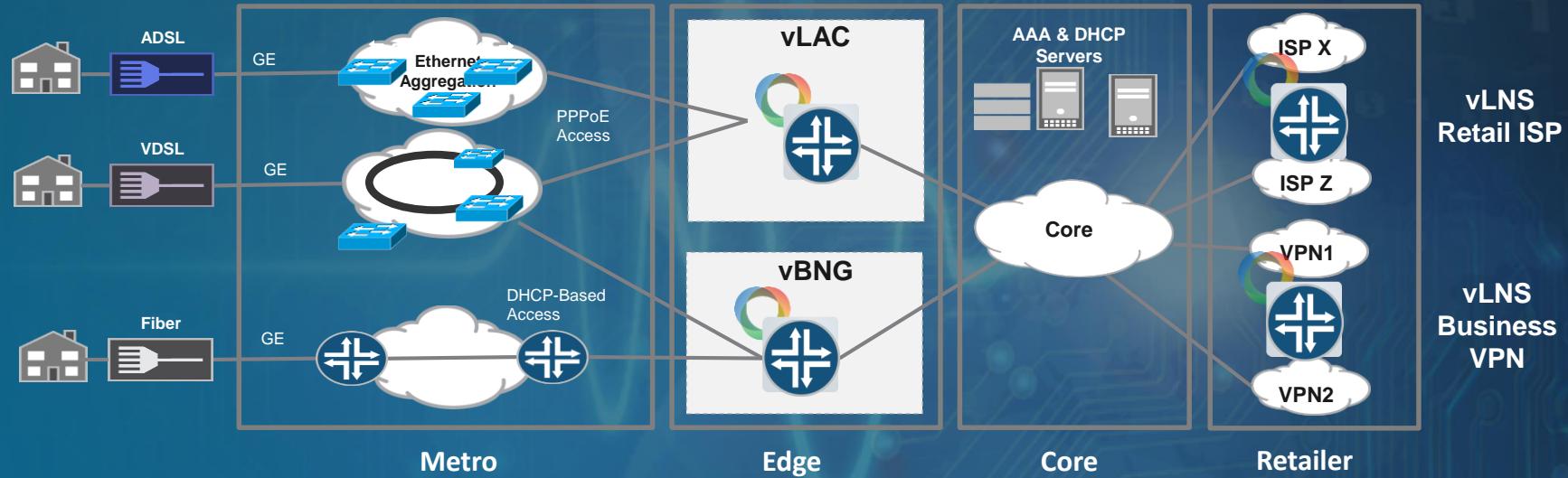
## Network Gateway

- Flexible Deployment
- Pay As You Grow
- CAPEX Reduction

## Deployment Consideration

- Secure with IPSec
- Interop with Physical Network Function

# DISTRIBUTED VBNG & VLNS



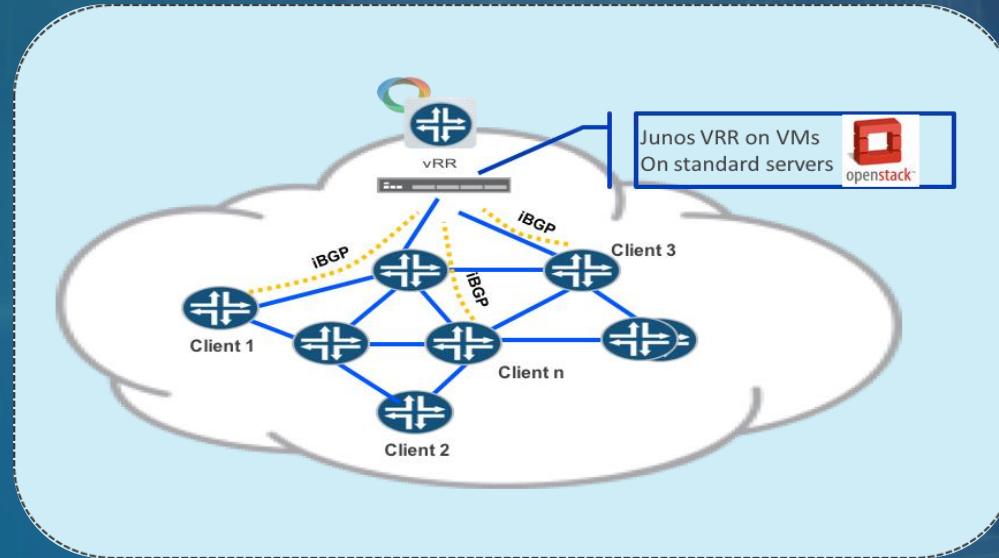
## Distributed vBNG & vLNS

- Faster Time To Market
- IT Integration cost Reduction
- CAPEX Reduction

## Deployment Consideration

- vBNG for just in time provisioning in small CO
- vLNS for optimized instances with dynamic capacity management

# VIRTUAL ROUTE REFLECTOR



## Virtual Route Reflector

- Ease of Deployment
- CAPEX & OPEX Reduction

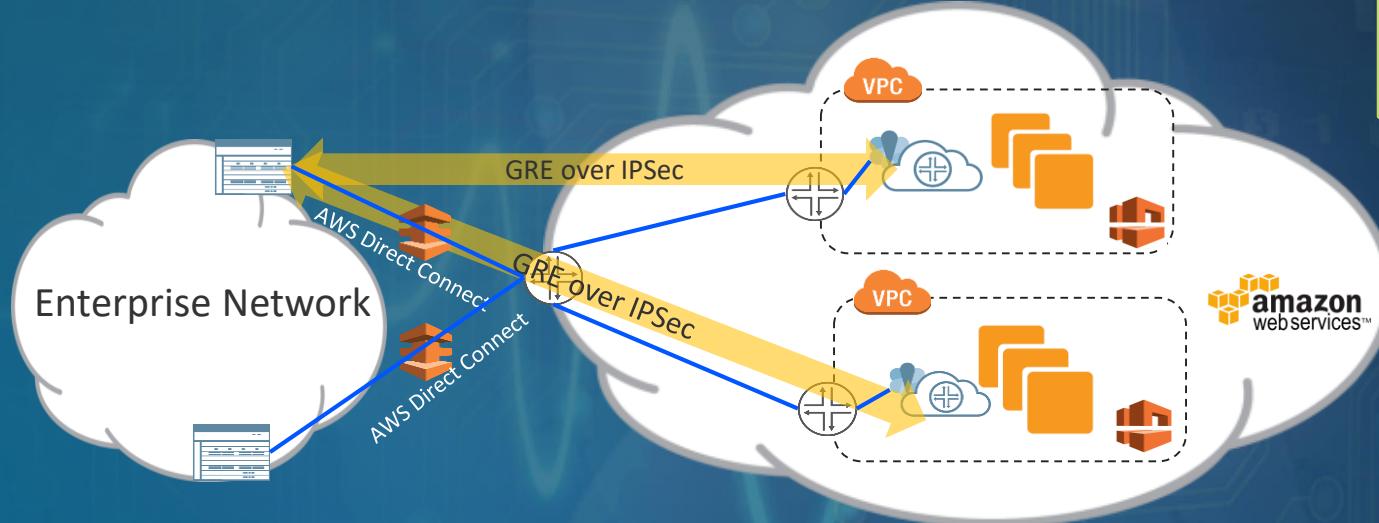
## Deployment Consideration

- Same JUNOS BGP Feature Stack
- Scale & Performance

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# MULTICLOUD INTERCONNECT

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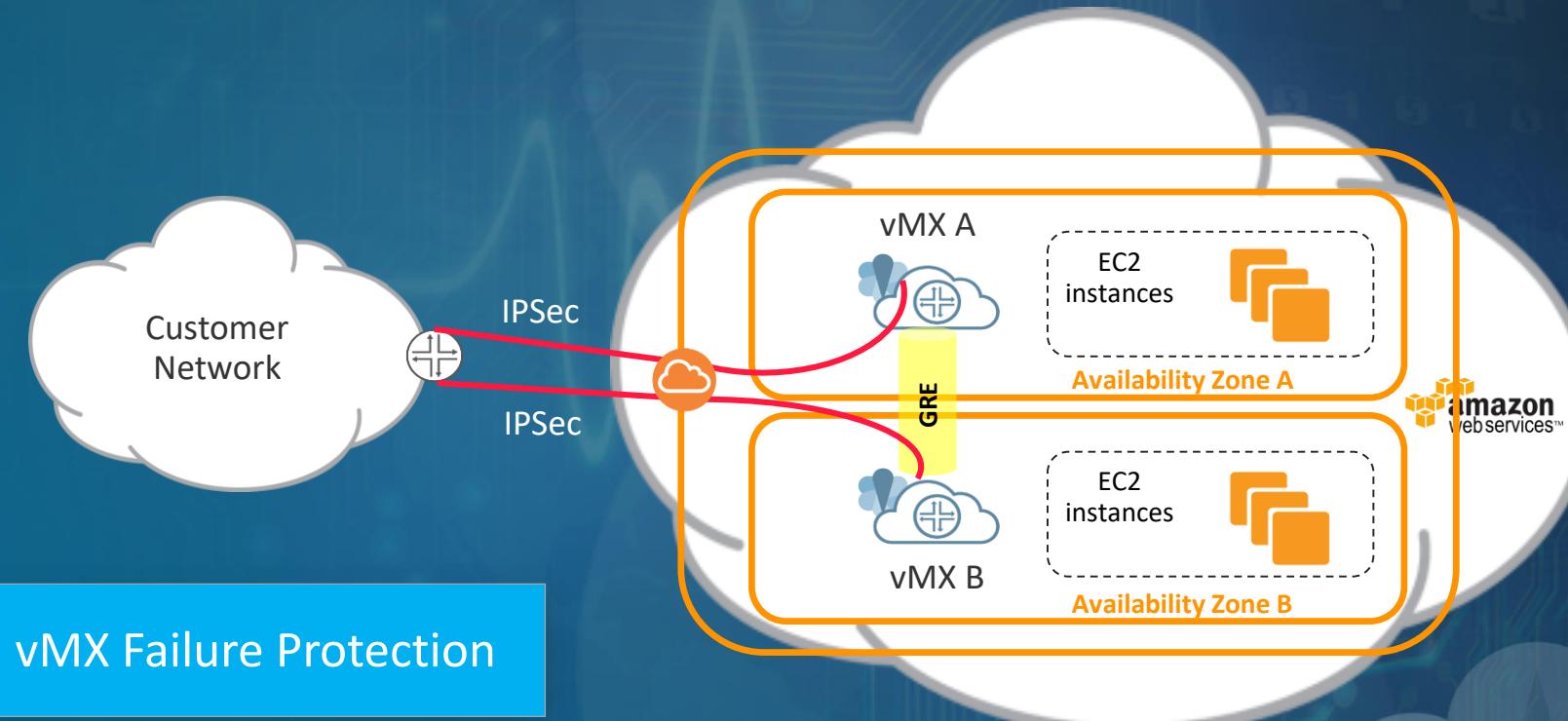
## Multicloud Interconnect

- Deployment Consistency with existing Network

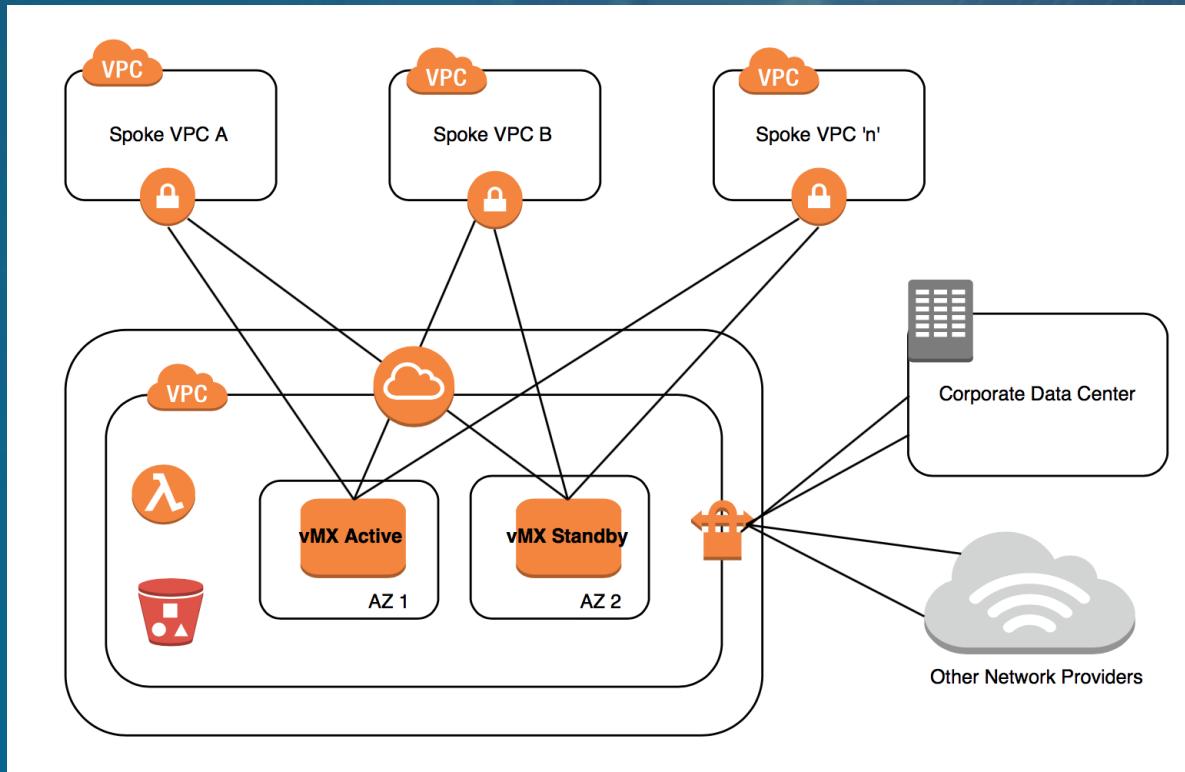
## Deployment Consideration

- Deployment automation with CloudFormation
- Seamless extension into the cloud

# VMX HIGH AVAILABILITY IN AWS



# MULTICLOUD INTERCONNECT

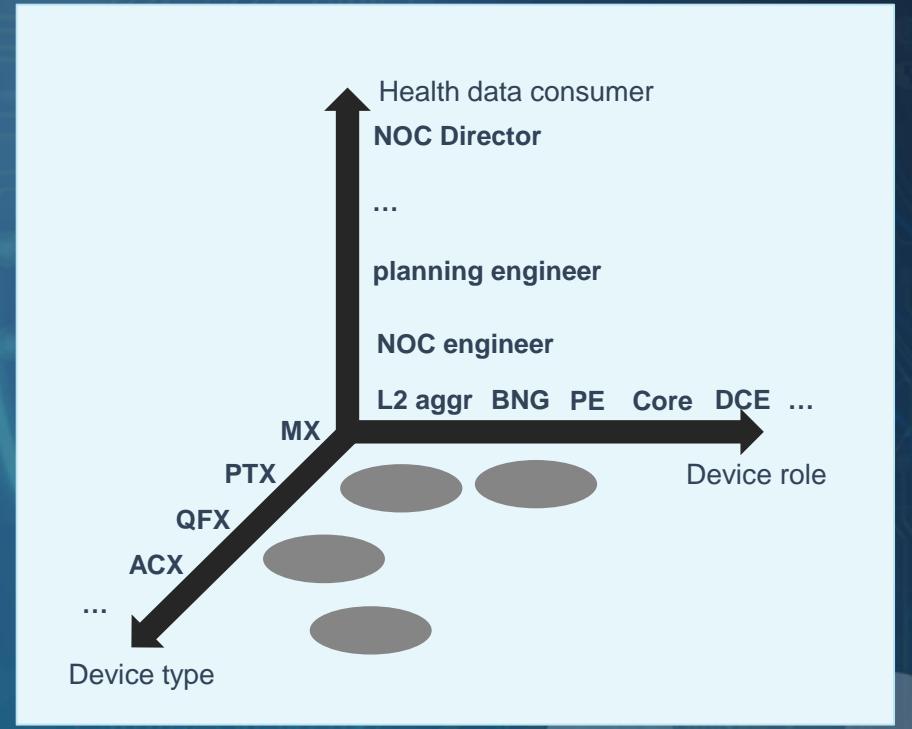
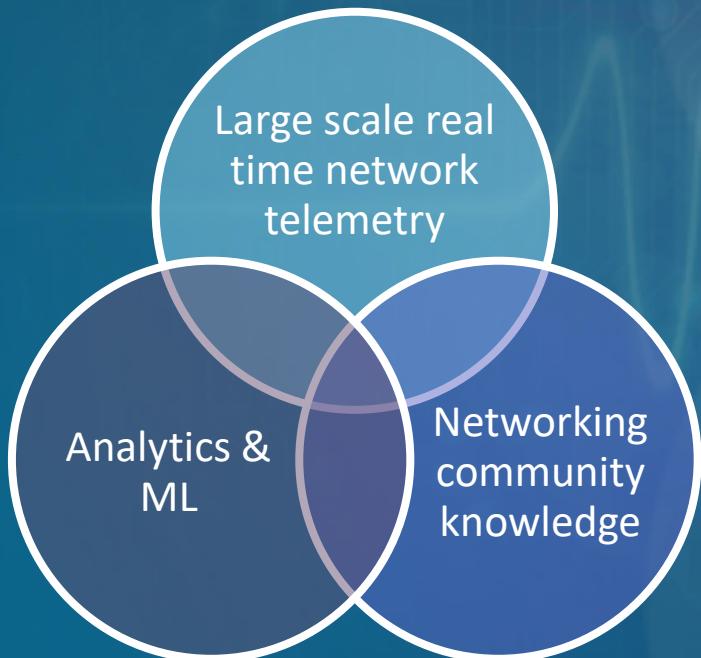


Interconnect Cloud & Existing Networks

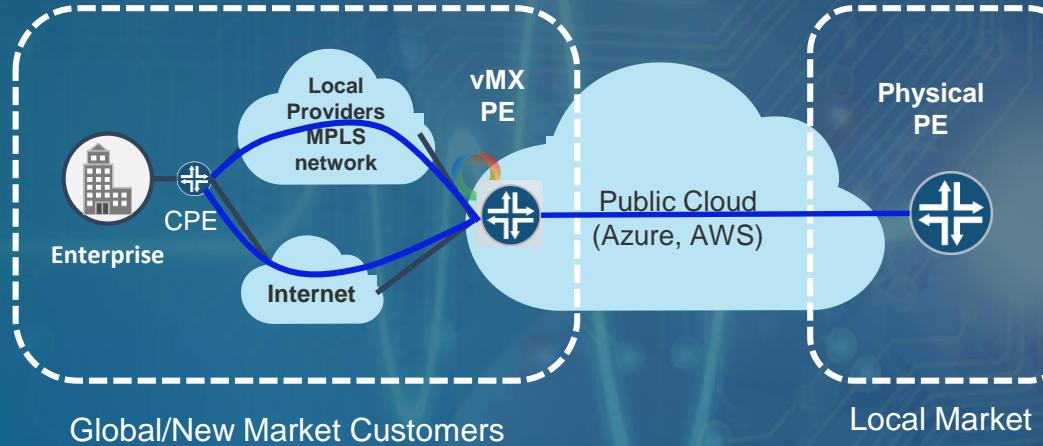
End to End Automation

Network Insights with AppFormix HealthBot

# NETWORK INSIGHTS WITH APPFORMIX HEALTHBOT



# CLOUD VIRTUAL POP



## Cloud Virtual POP

- Fast Service Deployment
- CAPEX reduction by leveraging Public Cloud Infrastructure

## Deployment Consideration

- Deployment automation leveraging Public Cloud eco-system
- Tunneling required

# ONLINE RESOURCES

<https://www.juniper.net/us/en/products-services/routing/mx-series/vmx/>

<https://www.juniper.net/us/en/dm/free-vmx-trial/>

<https://www.juniper.net/us/en/products-services/routing/mx-series/mx150/>

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# Q&A

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