Adaptive Network Control (ANC): Reference Framework

Requestors
Order Submit, Dynamic Controller, Design Complete, Order Complete

Data Sources
Customer, Product, Service, Resource, As-Is-Network Inventories

Human Interaction (Ops)
Presentation of Work, Embedded Work Flow

Human Interaction (Customer)
UI, Programmed, Calendared, API, broader

ADAPTIVE NETWORK ORCHESTRATION AND CONTROL
Service Activation Orchestration

Dynamic Controller (L2 & L3)

Network Element (CPE-no-touch-provisioning)

Service Activation System (L2 & L3)

Test Controller (service validation)

Converged Voice Activator

Transport Element Activation

Offnet / Partner Service Activator

DATA COLLECTION, ANALYTICS, MACHINE LEARNING

Physical Network Functions (PNFs)

Virtual Functions (Network & Service, VNFs)

Media / Streaming Video (PNFs & VNFs)

Cloud / Partner (PNFs & VNFs)
Adaptive Network Control (ANC): to date…

70K+ Controlled Elements

10’s of thousands of Ops functions/tasks a month

10’s of millions of flows of data – real-time analyzed

Well over 1,000 customers with ANC today

Across NA, EMEA, full-Global here soon*

Thousands of Customer ANC-events monthly

*Level 3’s plan as of January 2016. Subject to change at Level 3’s discretion.
Can’t we all just get along?
Evolving operations to desire an automated coexistence

Much, much more than training & retooling…

**PREPARATION**

- **Organization** – Cross-Pollination of Resources
- **Engage** – Magic-IT-Curtain, removed
- **Integrate** – business-practice-process, automated through orchestration

**DEPLOYMENT**

- **Automate** – Integration drives automation (functional alignment)
- **Optimize** – Present work (exception handling)
- **Externalize** – when the human can address fall-out, ready for external consumption
Options to enable the *evolution of comfort*

- **UI / Portal Access** – give it a try
- **Calendaring** – program against known time/date/events
- **Alerts Driven** – program against analytics from the network
- **Set – it – and – Go**

**THE PROGRESSION**

- **Adhoc**
- **Schedule**
- **Program**

**Dynamic Capacity**
- Real-time Request
- Calendared
- Alerts Driven (Analytics-based Programmability)

**Dynamic Connections**
- Vyvx Video Solutions (UI, Schedule, API)
Getting Along . . .