Exponential B2B growth with NFV

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About CableLabs

• CableLabs is a non-profit R&D consortium funded by 57 cable operators world-wide
  ✓ CableLabs member companies are exclusively cable operators (MSOs)
  ✓ Representing ~180M end users world wide
  ✓ Members are located in the United States, Canada, Mexico, South America, Europe and Asia
  ✓ Offices in Louisville-CO and Sunnyvale-CA

• We actively contribute to international standardization and open source
  ✓ DOCSIS Standardized at CableLabs
  ✓ Vendor-neutral interop testing environment

• Working collaboratively with cable operators, telcos, vendors & academia to create a vibrant ecosystem for SDN-NFV
Common Business Needs

**Small**
- Few resources
- Limited technical expertise
- Vertical specialization

**Medium**
- Cost savings
- Focus on core business

**Enterprise**
- Growth & Savings
- Geographical dispersed
Connectivity and Voice
Business services market size

- **B2B IT**
  - Managed services with connectivity
  - OTT partnerships
  - Targeted verticals

- **B2B2C**
  - Enabling other vendors to deliver services to customers

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1. Cable MSOs Flourish on Business Services Segment Boom – Zacks 2015
Opportunities for managed services

- **Internet**
- **Apps**
- **Servers**

Migrate off customer premise

Service provider

Access network

Premise

- **IP PBX**
- **Firewall**
- **Wi-Fi**
- **Anti-Virus**
- **Encryption**
- **VPN Router**

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Virtualizing CPEs speed provisioning

Traditional

1: Initial service order
2: Handoff customer
3: Schedule installation
4: Dispatch truck
5: Wait for delivery
6: Deliver CPEs to all sites
7: Configure service
8: Verify activation
9: Billing
10: Notify of activation

Virtualized and automated

1: Request service activation
2: Configure vCPEs
3: Configure network
4: Validate activation
5: Update billing
6: Notify of activation

{Minutes - hours}
End-to-end automation

• Cross provider orchestration
  – Quote -> activation -> service assurance

• SDN+
  – Back office integration
  – Data analytics
  – Applications
  – Customer portal
Ease Development and Innovation

Project

- Protocol
- Virtual Access
- Mobile

NFVI

- Open vSwitch
- OpenStack Liberty (Subset)
- KVM
- OpenDaylight Lithium
- Linux X.Y
- …

Access networks

- DOCSIS
- PON
- Wireless

Specific hardware capabilities
Automation + NFV

Customer benefits
• Prompt service activation
• Additional service offerings
• Improved customer service through better end to end visibility

Provider benefits
• Reduced time to market
• Cost savings
• Rapid innovation for new revenue
• Contact me (Randy Levensalor):
  – @RandyLevensalor

• Download the tech brief from:
  – “Customer Impact From Virtualizing Network Services”
  – http://cblelabs.co/1TRVL7i