



# CIO's Foot In The Door: Can We Keep Cloud/SDN Open

Rohit Mehra, *Vice President, Network Infrastructure*

*March 27<sup>th</sup>, 2014*

# Panelists

## Moderator

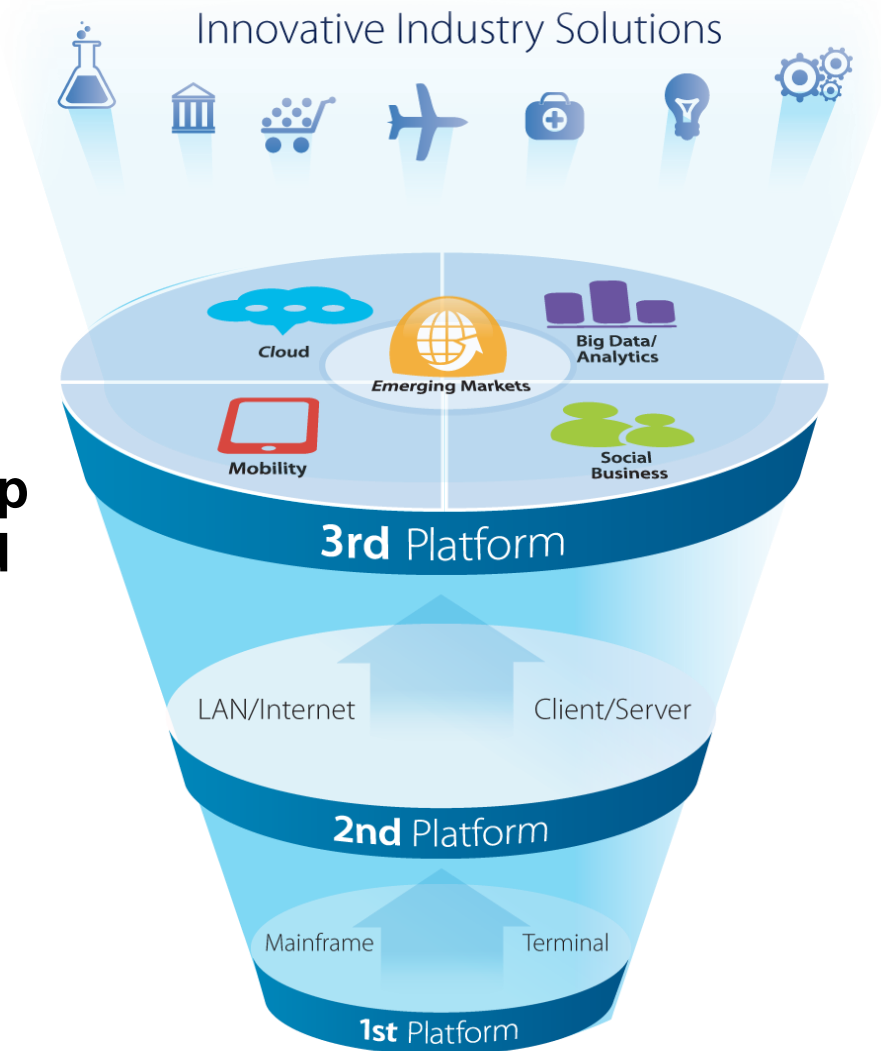
- Rohit Mehra, VP, Network Infrastructure, IDC

## Panelists

- Guido Appenzeller, Co-Founder, Big Switch
- Arpit Joshipura, Vice President, Dell Networking
- Said Ouissal, Vice President, Juniper Networks
- Dan Pitt, Executive Director, ONF
- Dominic Wilde, Vice President, HP Networking

# Enterprise IT Rapidly Transforming

- **New Enterprise IT Platform Emerging**
  - Virtualization
  - Cloud
  - Mobility
  - Big Data Analytics
- **Continuous delivery and new app architectures accelerate rate and pace of change**
- **Number and diversity of devices proliferates**
- **Datacenter and computing architectures also change dramatically**

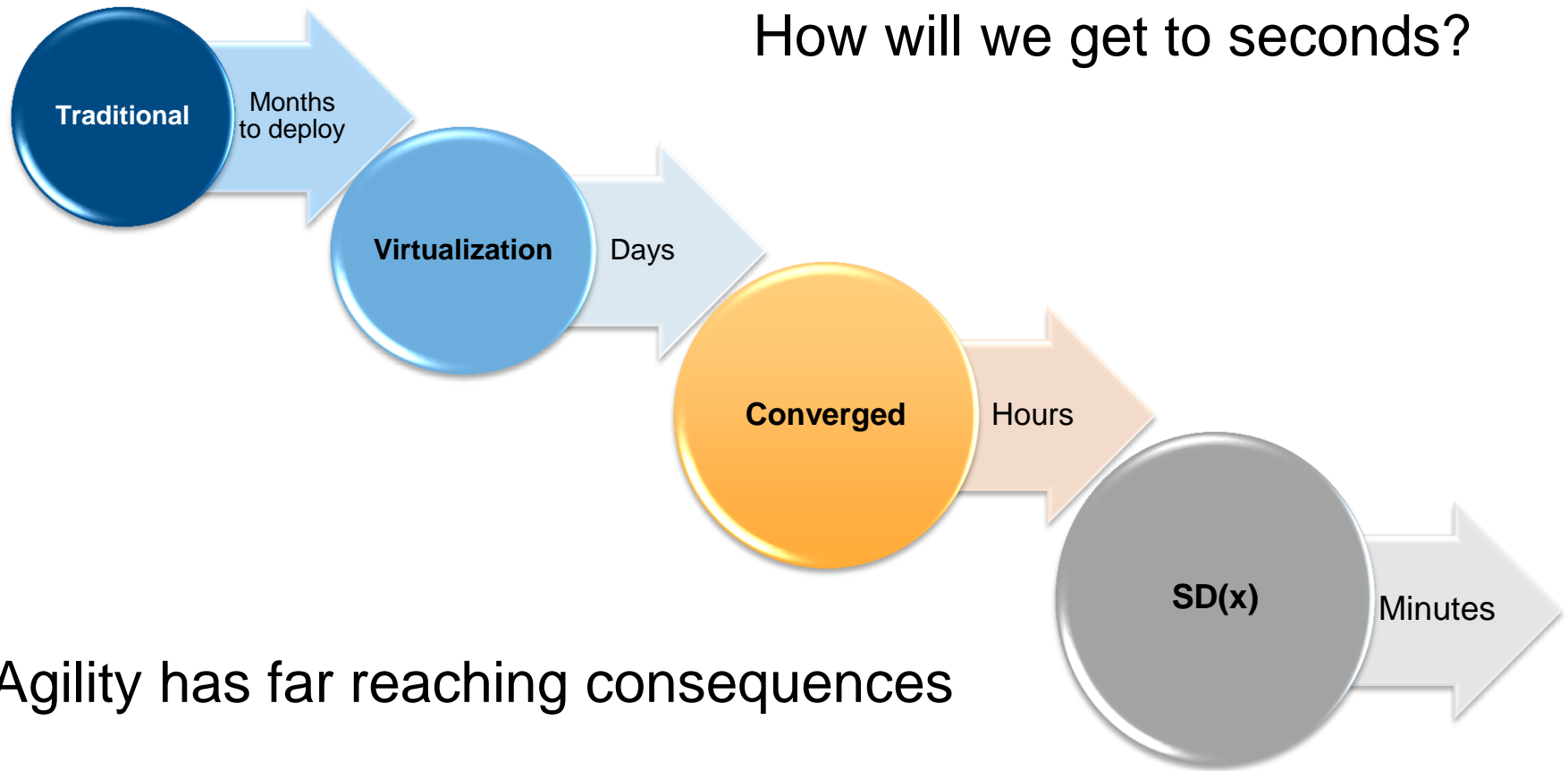


# “Open” Cloud/SDN Has Momentum; Although Interests Vary

- ONF – led by board of directors, which includes Google, Facebook, Microsoft, Verizon, Deutsche Telekom, NTT, Yahoo, Goldman Sachs
- NFV – led by major carriers (ETSI), reflecting their concerns and interests (cut costs, compete for cloud, etc.)
- OpenDaylight – led by major networking and IT vendors, primarily IBM and Cisco, two vendors that do not share the same objectives
- Open Compute Project – led by Facebook, supported by others looking to close infrastructure gap on Google.
- Open Networking Users Group (ONUG) – Board members include Bank of America, Fidelity, GAP, JPMorgan Chase, UBS
- Northbound and Southbound Interfaces Still an “Open” Question?
- Battle of the Stacks (e.g. OpenStack)
- Another common theme: (Big) Customers Take Control

# Agility: The Never-ending Journey

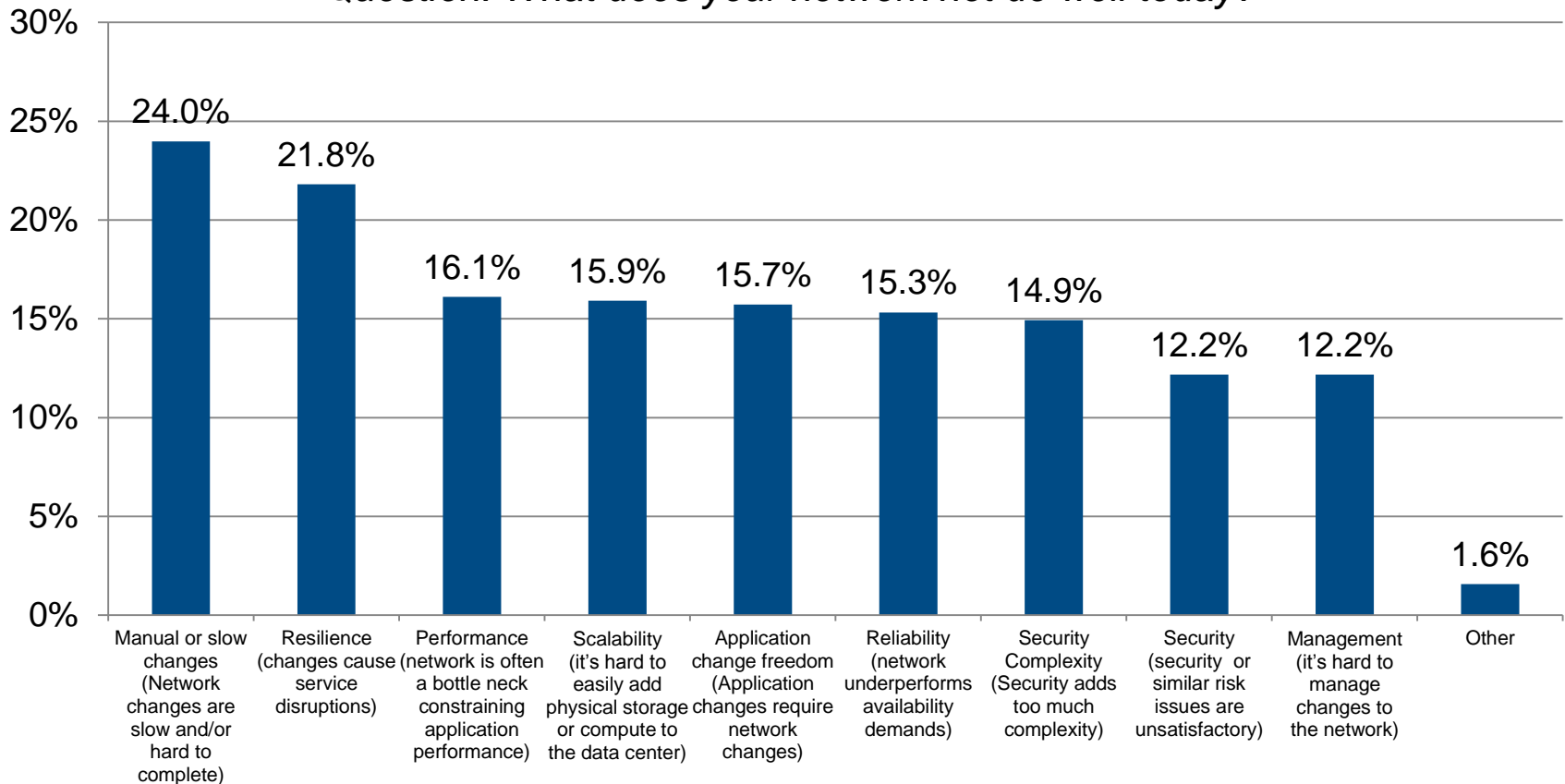
How will we get to seconds?



Agility has far reaching consequences

# The Network Not Well Suited to Making Changes

*Question: What does your network not do well today?*

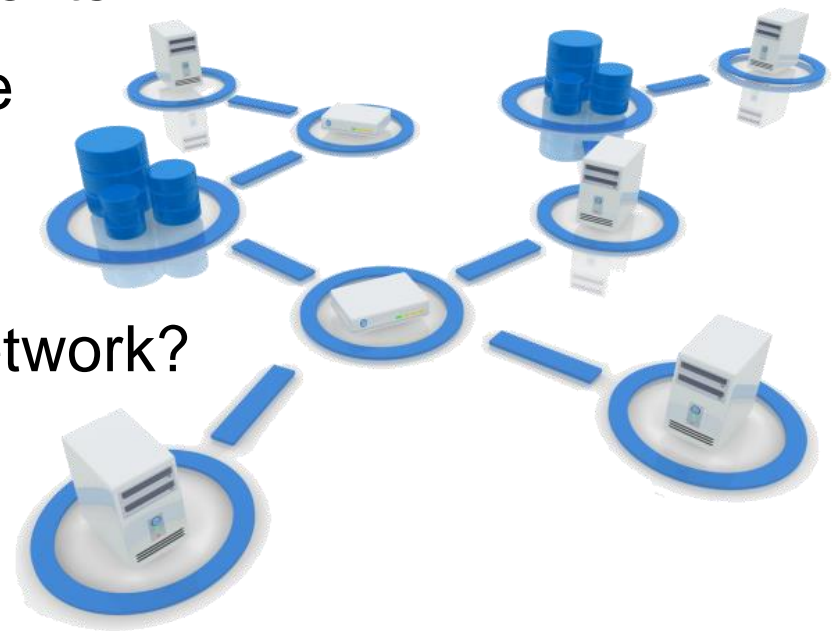


- More than 20% of respondents noted that their network is not well suited for making changes and loses resiliency when doing so

# Software Overlays for Network Virtualization Make Increasing Gains, Stir Intense Debates

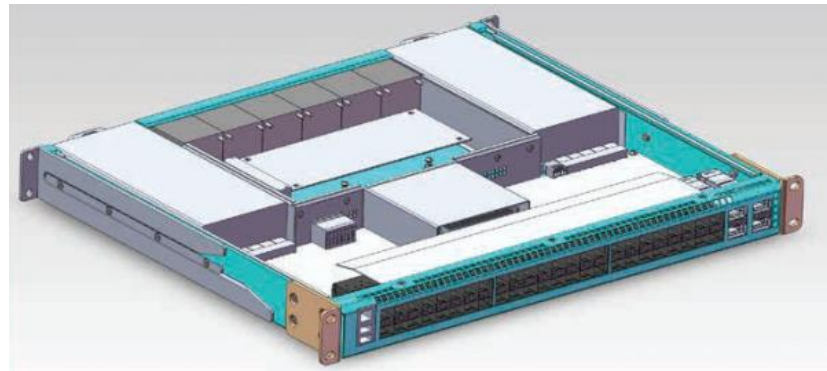
- Software overlays for network virtualization make the case for an alternate architecture
- Overlays will increasingly blur distinctions between silos in customers' IT departments
- The question that will resonate increasingly in enterprise IT departments:

Who ultimately controls the network?



# Network Disaggregation a Wildcard?

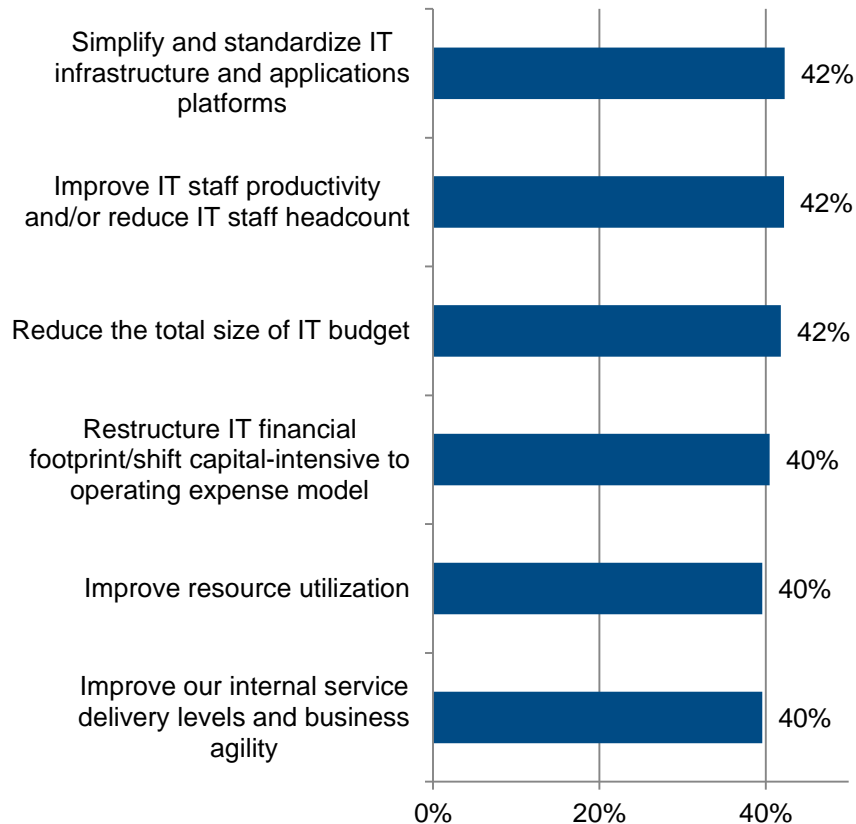
- Some Hyperscale players (e.g. Facebook, Google) have adopted white-box (bare-metal) switches where network-device hardware and software are disaggregated
- ODMs, and some OEMs, will provide switch hardware that is capable of running multiple switch operating systems (Open Compute Project's ONIE, etc.)



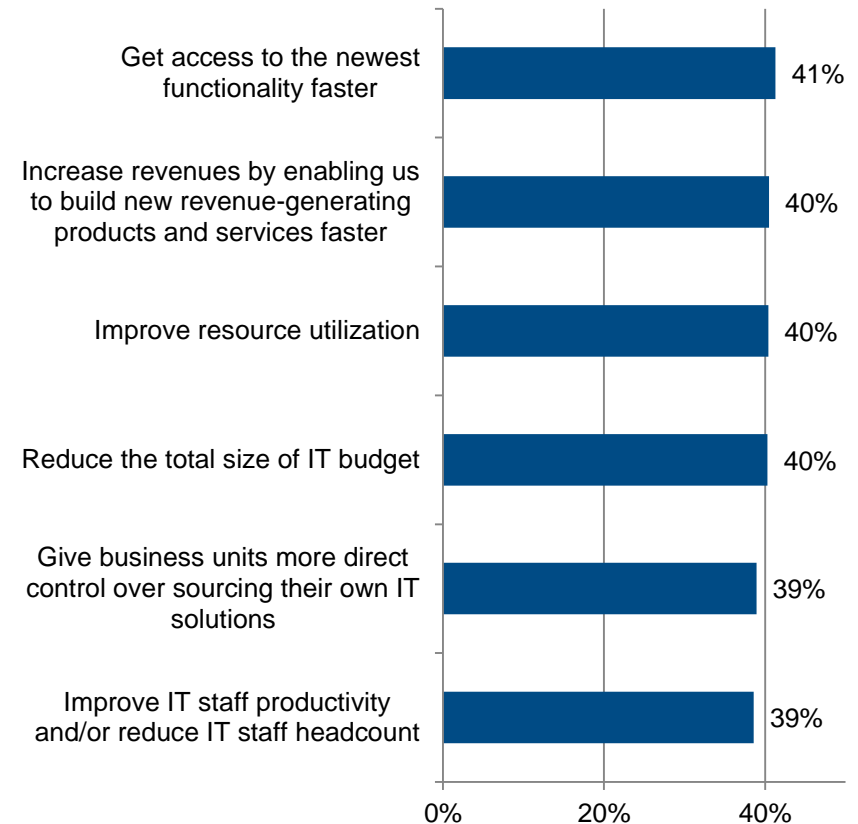


# Reasons for Moving to Cloud

## Most important drivers for moving to private cloud



## Most important drivers for moving to public cloud



N = 1109 Business and IT Decision Makers currently using cloud or planning to use within 12 months  
Source: IDC CloudTrack 2013

# Points for Discussion

- Do you agree and “comply” with this drive towards “Open”? Is the transition going to be real?
- How can Open Cloud and Open SDN help with automation, orchestration and ultimately, agility?
- An Open Network Overlay has limited visibility into physical network infrastructure? Is that a limitation?
- Is Network Disaggregation an Opportunity?
- There’s been a lot of attention on Infrastructure Integration in the Datacenter (Compute, Storage, Network). Isn’t that taking us away from Openness?

