Convergence Between Traditional and SDN-based Networks

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What’s Driving the Paradigm Shift in Networking?

- **2005**
  - Virtualization 1.0
    - Encapsulation
    - Resource sharing
    - Consolidation
    - Test/Dev

- **2007–2008**
  - Virtualization 2.0
    - Mobility
    - Planned downtime
    - Virtual clients
    - Production usage

- **2009**
  - Virtualization 2.5
    - Unplanned downtime
    - HA/DR/backup
    - Workload balancing
    - Mission-critical apps

- **2012+**
  - Virtualization 3.0
    - Private clouds
    - Adaptive/service oriented
    - Automation & orchestration
    - Policy based
    - Self-service

Operational Cost Reduction
The Problem with Traditional Networking

- Hierarchical structure of datacenter networks:
- Application density adds East-West traffic:
- Connecting everything leads to looping issues.
Software-Defined Networking

- Separating the control and the data planes:
  - Control and management in virtualized controller
  - Physical devices dedicated to control plane activity

- More efficient, better scalability.
Managing the Transition

- What you need is an umbrella:

- And some automation:

  - Changes looped back to IPAM
  - Create network in IPAM
  - Bind with SDN Controller
  - SDN network configured
  - Network pushed to SDNC
Thank you!

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