



Cisco Q-vBN

Quantum Virtual Broadband Network

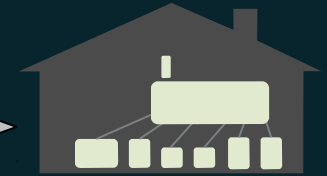
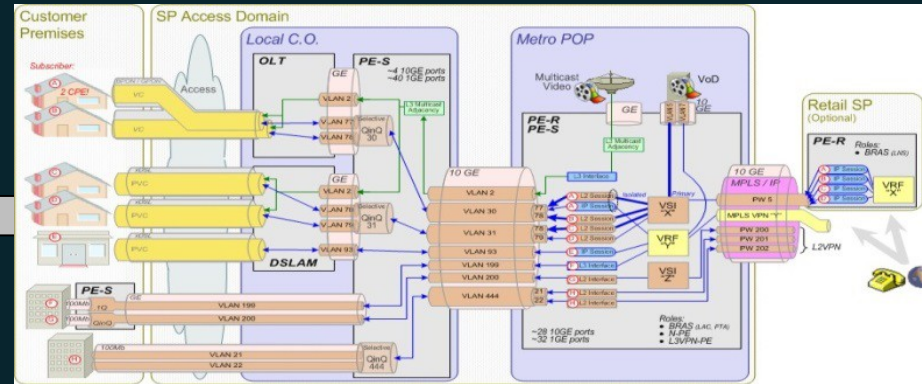
Flexible, Programmable, Application Aware

March 4, 2014

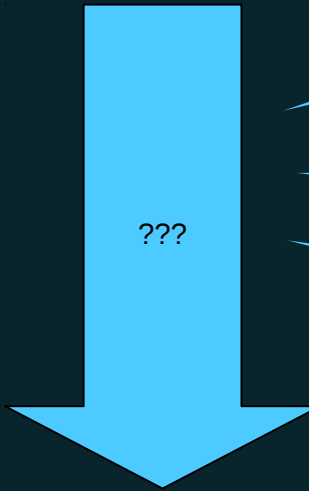
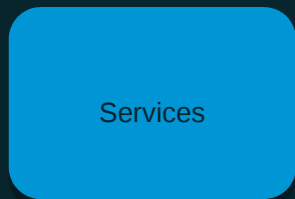


Introducing Q-vBN

Broadband Today



Broadband Tomorrow



- Virtualize Services
- Virtualize Network
- API Exposure

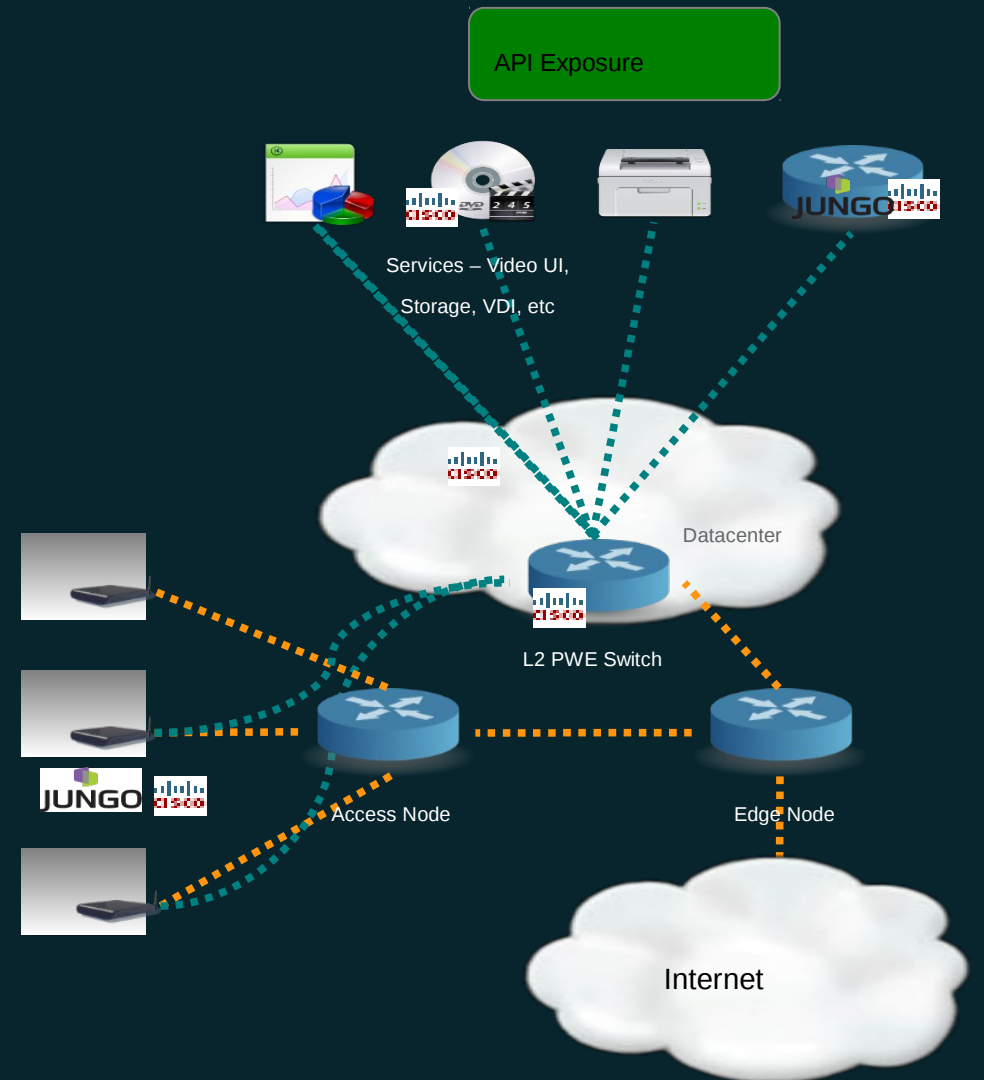


Q-vBN: What is it?

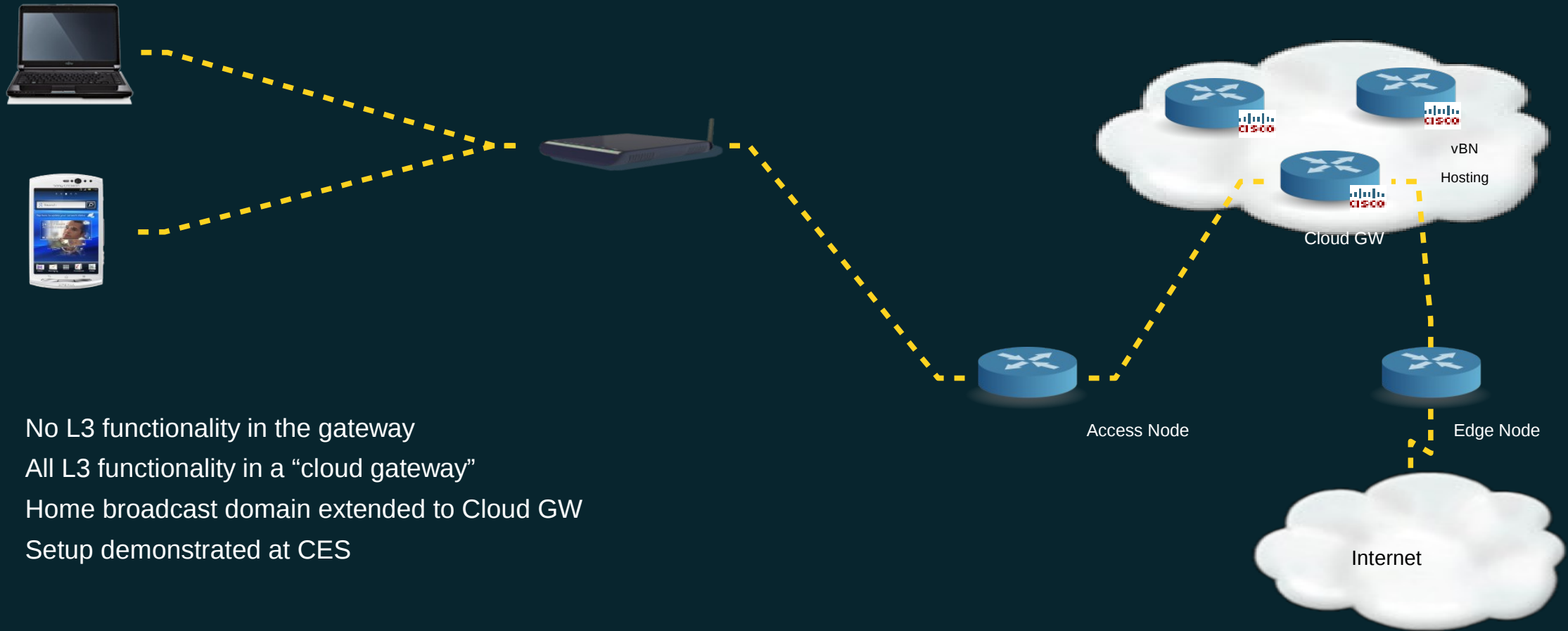
A software based virtualization system that runs standard broadband CPE code and services in the cloud

Q-vBN Environment

- Network Overlay
 - CPE tunnel to Data Center where services are located
- Virtualization Infrastructure
 - CPE lifecycle can be extended as intelligence moves to the cloud
 - Allows for rapid deployment of broadband services
- Enable Service Orchestration
 - API driven service control plane
 - Integrated control of vCPE, overlay and services using APIs

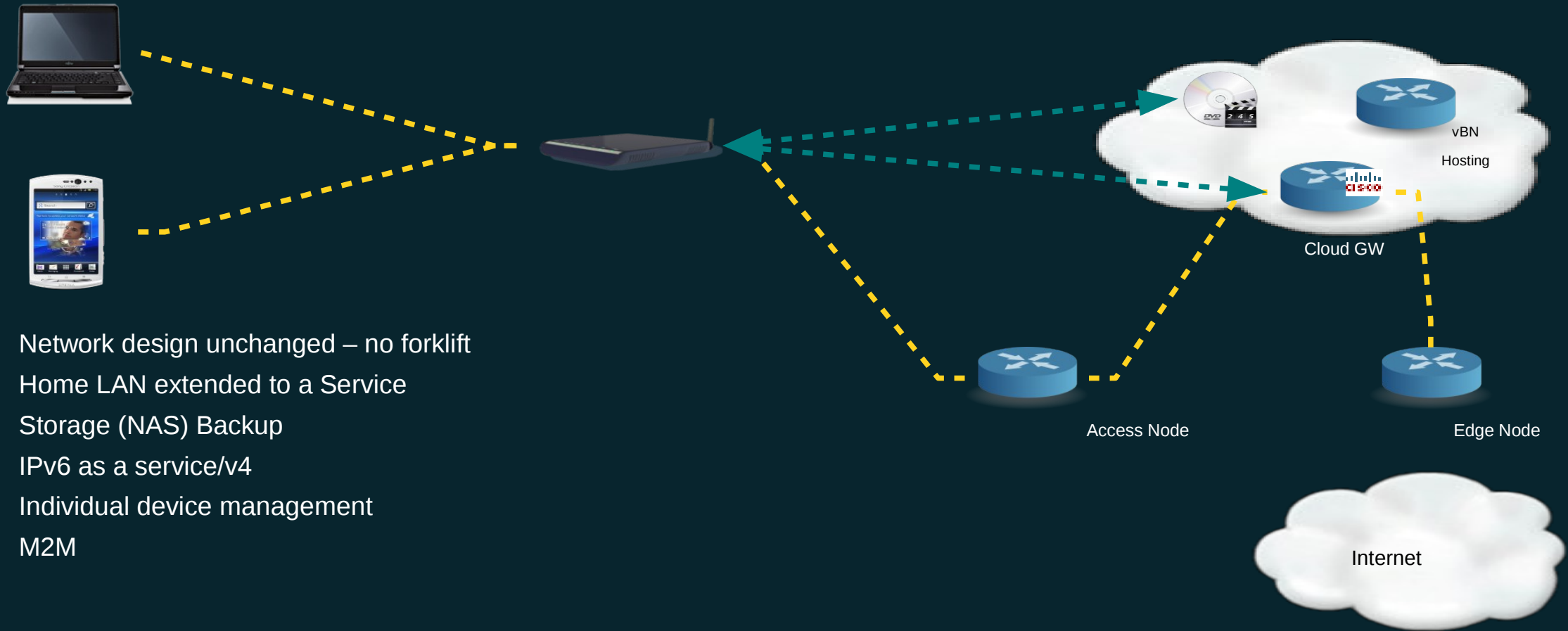


Q-vBN for Minimal Virtual CPE Application



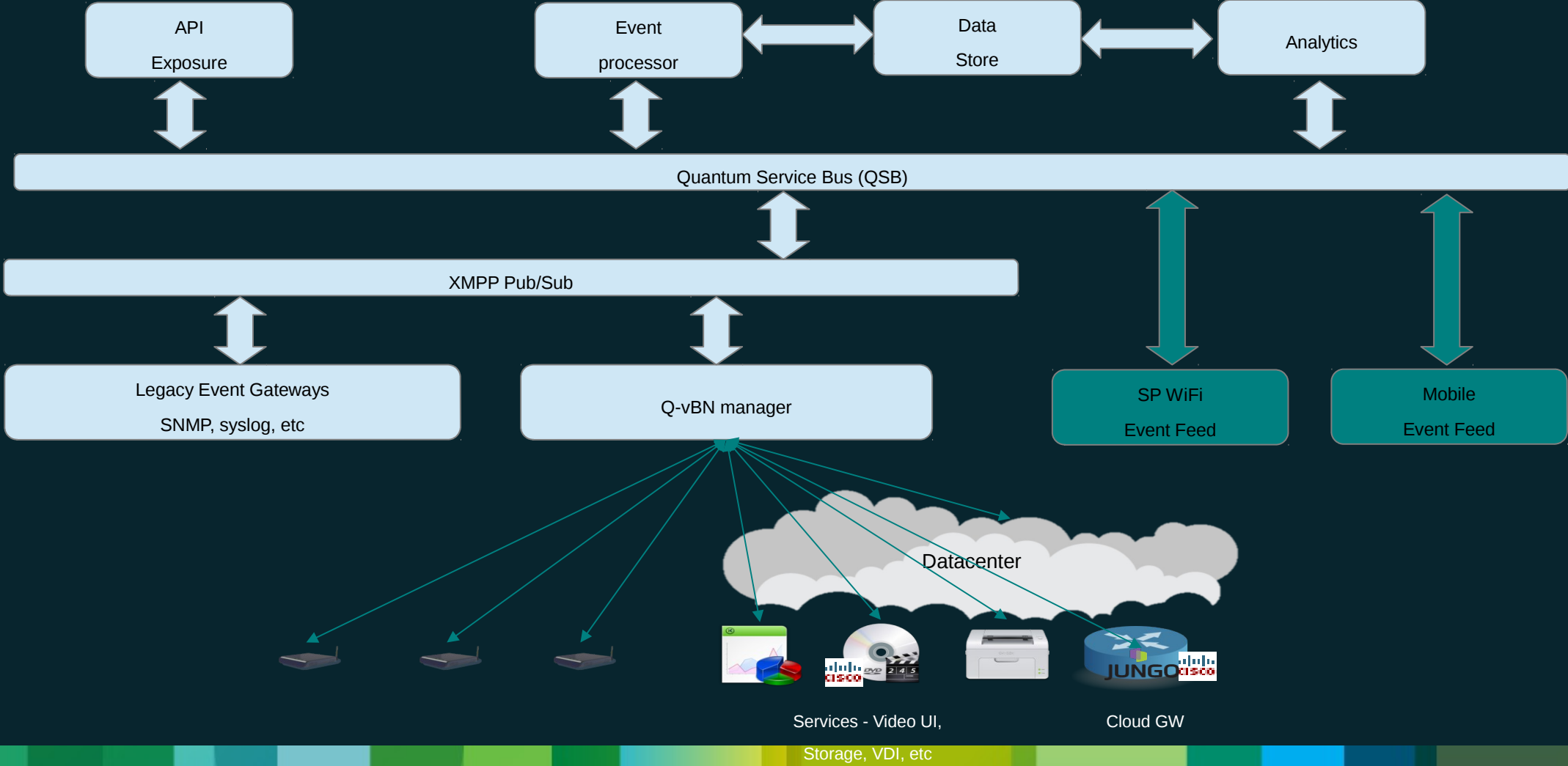
- No L3 functionality in the gateway
- All L3 functionality in a “cloud gateway”
- Home broadcast domain extended to Cloud GW
- Setup demonstrated at CES

Q-vBN: LAN Extension to the Cloud

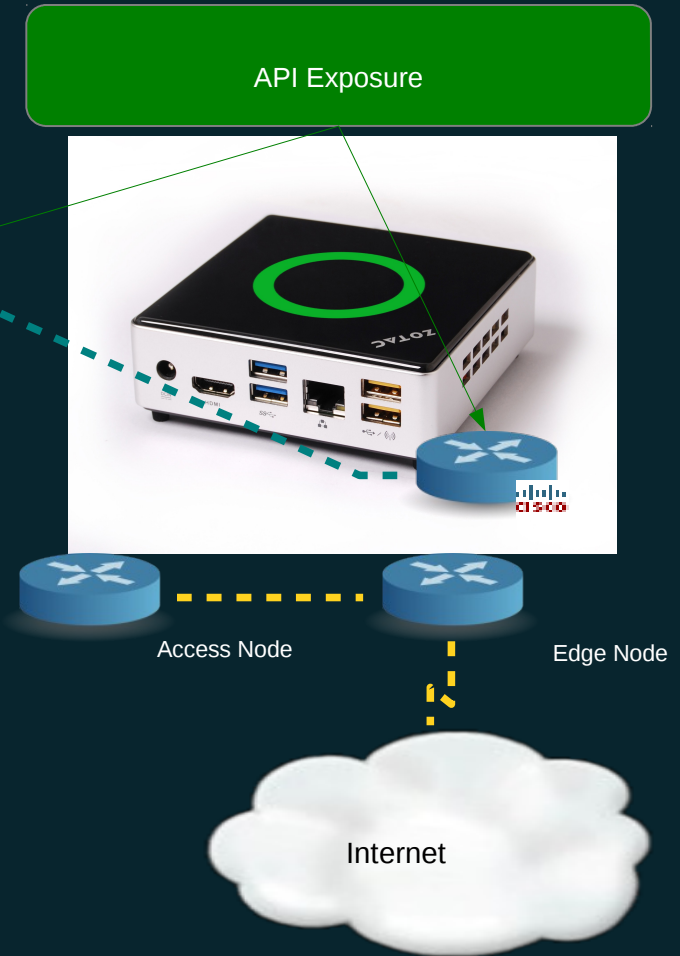


- Network design unchanged – no forklift
- Home LAN extended to a Service
- Storage (NAS) Backup
- IPv6 as a service/v4
- Individual device management
- M2M

Control Plane



Demo Setup



- QvBN + Control Plane - Zotac A12, AMD E1700, 8G RAM, SSD
- Test cases – VMs using direct overlay attachment on a generic laptop
- Demos
 - VCPE – Firewall, NAT, QoS
 - Virtual Storage

Thank You