The Cloud and Software Defined Networking

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THIS PRESENTATION CONTAINS FORWARD LOOKING STATEMENTS. SUCH STATEMENTS ARE BASED ON OUR CURRENT EXPECTATIONS AND ARE SUBJECT TO CERTAIN RISKS AND UNCERTAINTIES THAT COULD NEGATIVELY AFFECT OUR BUSINESS. PLEASE READ OUR EARNINGS REPORTS AND OUR MOST RECENT ANNUAL REPORT FOR A BETTER UNDERSTANDING OF THESE RISKS AND UNCERTAINTIES.
Operator Cloud Business Drivers

**Internal efficiency**

Transform to Private cloud infrastructure

- SaaS for telecom services

**New business opportunities**

- Monetizing beyond best-effort connectivity

- Operators Cloud Services

- Operator Network

- Enterprises
Network Enabled Cloud

Compute
Create
Control
Connect
Customize

User
Mobile Network
Distributed Data Center

IT Data Center
Big Data Center
Internet
Baseline Industry SDN Definition

OpenFlow/SDN Difference

Network of vertically integrated, closed, proprietary switches

OpenFlow/SDN:
- Separation of control and data plane
- Open interface between control and data plane
- Open interface to the control plane
- Network control and management features in software

http://opennetsummit.org/why.html
Split Architecture in the Mobile Network

déjà vu: Scale, Service Velocity

New: Programmability and Virtualization
Virtualizing the Network & Data Center

Yesterday
Purpose Built
Support Systems, IT Systems…

Today
Split architecture, Multi applications

Tomorrow
Integrated
High efficiency rule-based forwarding

Virtualization
Network Applications
SDN
High Touch Packet Processing

OSS
BSS
IT…

Agg
Edge
Core

Appl.1
Appl.2
Appl.3

OSS
BSS
IT
The Service Provider SDN Advantage

Service Exposure
Orchestrated Network and Cloud Management
Integrated Network Control

OpenFlow/SDN:
SDN Breaks Out of the Data Center

Dedicated Model

- OTT

Business Drivers

- App Eco-System
- Monetization
- Optimization
- Virtualization

Integrated Model

- Applications
- Service Platforms
- Management
- Control
- Network Elements

Service Provider SDN
Service Provider SDN unifies control across both legacy and new network architectures, protocols, and systems.
Purpose-Built for Performance

Ericsson RBS 6000
- GSM
- WCDMA/HSPA
- LTE
- (Radio Access)
- IP Transport

Ericsson Blade Server
- MSS / IMS
- UDM
- EVO Controller
- (Control)
- SGSN-MME
- Policy Control

SSR 8000 Family
- Service Awareness
- Packet Gateway
- Border Gateway
- Caching / CDN
- L2/L3 PE Router
- 3rd party app
- (Data and Networking)

- User experience is dependent on network performance
- Ericsson systems deliver superior performance in mobile broadband
- Application separate from hardware in IP architectures
- True multi-standard, multi-application platforms deliver SDN benefits
Service Provider SDN Optimization: Service Chaining Use Case

Integrated Control and Management Plane

SDN Controller with Service Aware Policy Control

Network Resources
- Simplified
- Unified
- Optimized

Edge Functions
- CDN
- DPI
- NAT
- FW

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Service Provider SDN: Virtualization: Orchestrated Cloud Management

Network Automation and Control

SDN Controller integrated with NMS

Move Virtual Machines

San Jose

SDN Controller

Virtual Machine

Virtual Machine

Stockholm

SDN Controller

Virtual Machine

Virtual Machine

Helsinki

Montreal

Madrid
From Connectivity to Experience Provider

Service providers expand the definition of SDN:

- Enterprise cloud services
- Network and Cloud management
- Service exposure
- Purpose-built performance
- Integrated network control