Telco Cloud and Using Big Data to Improve Customer Experience and to Drive new Revenue Streams

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Operator Cloud Opportunities

Operator’s Role

- Time to market
  - OTT Cloud Services Packaging
  - Managed Cloud Services
  - Internal IS/IT Private Cloud
  - NFV Telco Cloud

Efficiency

New revenue streams

Operator’s cloud

Customer’s perspective

Key differentiators
- E2E SLA assurance, QoE, Security
- Simple packaging, Ease of use, TTM

End2End performance

OSS/BSS integration

Enterprise

Mobile growth

BYOD

End user

E2E SLA assurance, QoE, Security

Simple packaging, Ease of use, TTM
Telco Cloud
Enterprise wide Transformation

Highly Specialized

Broad Functionality

Highly Standardized

APIs, Exposable Services & Assets

Cross-Domain Orchestration

Integrated Network Analytics & Control

Virtualized Network Functions

Abstraction & Virtualization
The network enabled Cloud Ericsson Cloud System (ECS)

Managing virtual infrastructure resources, vDCs, vApps in a multi DC context.

Cloud Manager
NW&DC Infrastructure: Compute+Storage+Networking

ESXi

Access Module, SSR, EBS, EBS@DC Site, Partner HW DC

“NEBS” Different PODs to meet different demands
“COTS”
BUILDING TELECOM GRADE PERFORMANCE

- Complete knowledge for building integrating & managing solutions
- Integration with existing OSS
- Tools and Processes for e2e telecom and IT operations
- Security hardened, virtual FW, advanced Load Balancer
- Resilience, redundancy, latency, availability, power efficiency

Telecom Grade

Ericsson Cloud Execution Environment

Ericsson Cloud System

Network & DC Infrastructure

Ericsson OSS Manager

Ericsson Cloud Manager
Big Data Analytics
Understanding data

What is data? A Customer’s record, Subscriber’s telephone # and address, a retail ticket, an insurance claim, an inventory list, a sales order, a flight ticket...etc.
The manifestation of data has changed dramatically over the last few years. Data today is quite different from what data used to be a few years ago!
Evolution of big data

Big Data = Transactions + Interactions + Observations

Petabytes

Terabytes

Gigabytes

Megabytes

Increasing Data Variety and Complexity

Source: Contents of above graphic created in partnership with Teradata, Inc.
The pillars of big data

Big Data: Expanding on 3 fronts at an increasing rate.

Data Variety
- Social
- Video
- Unstructured
- Mobile

Data Velocity
- Real Time
- Near Real Time
- Periodic
- Batch
- Table
- MB
- GB
- TB
- PB

Data Volume
- Social
- Video
- Web
- Audio
- Mobile
Traditional BI limitations

- Prohibitively expensive solutions to handle Volume
- Expensive, Complex and Unfeasible in handling Variety
- Design and Architecture not able to handle high Velocity
- Inefficient and Expensive in handling Complexity

Solution

- A reliable and shared storage system.
- Storage provided by HDFS
- Processing provided MapReduce
- Non SQL DB such as Cassandra or MongoDB or New MPP DB such as GreenPlum
Ericsson Expert Analytics

E2E ACTIONABLE INSIGHTS
- Closed Loop Actions
- Cross-Domain & Embedded Analytics
- Real-Time Insights

PRODUCTIZED APPLICATIONS
- Marketing
- Monetization
- IoT
- Engineering
- Operations
- Customer Care

ADVANCED BUSINESS LOGIC
- DATA MODELS, CORRELATION & ALGORITHMS
- Service Level Index
- Resolve & Retain
- Unlock ARPU

Subscribers
Service/ App
Product
Device
Network
Location

Unlock ARPU
Correlated, End-to-End, Multi-source View of every customer session

End-to-End Session Record (ESR)
Every Customer, all the time, in real time.
Service Level Index (SLI)

- Individualized & reflecting that each user has different perception, preferences & expectations
- Available for every user, & continuously updated
- Calibration with real users
- Predictor of customer satisfaction & correlates with Net Promoter Score
VIP/Enterprise
Dynamic experience Management

KEY HIGHLIGHTS:
- Dynamically resolve customer problems for VIPs
  - Track each VIPs Quality of Service
  - If Quality is not at objective, issue Alert to Policy Control
  - Policy Control takes action to improve customer’s service
  - When service improves, restore policy to standard

KEY BUSINESS BENEFITS:
- Ensure high quality for most valuable customers
- Respond automatically before customer calls
- Reduce churn, enhance opportunity for upsell
KEY HIGHLIGHTS:

Utilize unique Ericsson Expert Analytics insights about each subscriber to drive revenue and reduce churn

- Powerful micro-segmentation using real-time network insights correlated with traditional customer and BSS insights
- What is the satisfaction of each and every subscriber? (Service Level Index)
- What is their profile and behavior (e.g. Social media fanatic, Heavy Netflix Usage in evening etc.)

KEY BUSINESS BENEFITS:

Drive ARPU

- Which customers are most satisfied and most likely to buy additional services and products?
- What Upsell/Cross-sell offers are best fit?

Reduce Churn

- Which customers are most unhappy, and what are the contributors to their dissatisfaction?
- What can be offered to make them stay?
Empowered Customer Care

KEY HIGHLIGHTS:
Proactive handling of customer experience issues in Customer Care

- **Predict Reason for Call** – Why might the customer be calling? How to resolve the call?
- **Validate the Complaint** – Did the customer really have an issue? If so, when and where did it happen?
- **Take Action** – Identify the “Most Probable Cause” and trigger the “Next Best Action”

KEY BUSINESS BENEFITS:

- 48% Reduction of Average Handling Time (AHT)*
- 35% Increase in First Call Resolution Rate*
- Reduced number of trouble tickets created
- Increase Net Promoter Score