Top 5 Ways to Leverage Network Analytics

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Mobile operators face a wide range of competitive, technical and revenue-related challenges. They must provide a great experience even though many device and app related issues are beyond their control. The pace of technical change, coupled with an unprecedented demand for bandwidth, wreaks havoc on infrastructure planning activities. Meanwhile, competition is no longer limited to other carriers. Over the top (OTT) apps are draining revenues. At the same time, many consumers are choosing providers based on devices or other factors that have nothing to do network quality.

Luckily, a mobile operator's best asset – the network – can offer insight into these issues. Embedded in the traffic it carries is vital intelligence companies can leverage to make smarter decisions across the organization. Included in these network data streams is information pertaining to:

- Applications – Not only do networks know which apps customers are using, they also track how well they perform and how much bandwidth they consume.

- Devices – Different devices behave differently when it comes to connecting and maintaining communications with the mobile network. Each mobile session contains data on the specific device being used.

- Geography/mobility management – Customers utilize many network types, elements, service delivery methods and connections as they move between locations and/or use different applications.

- Quality of Service (QoS) – Networks contain a tremendous amount of information on requested, negotiated and delivered service quality, for every mobile session.

Mobile networks generate tons of data – but what would they tell operators if they could speak?

1. **How Specific Devices, Apps and Customer Behaviors Impact Customer Experience:**

Each element in a mobile communication - device, app, location and available resources - can affect the individual experience. An in-depth understanding of the multitude of ways these factors combine and utilize resources allows operators to optimize investment and enrich customer experience in both the short and long term.

2. **How Quality Fluctuates:**

Network operators are accountable to their customers for the QoS they provide - whether they serve consumers, businesses or other providers. Understanding quality across all transfer points (ingress and egress) is extremely important for a tight control over profits, partner contracts and customer relationships. It also enables companies to implement tiered pricing plans and other programs that leverage LTE's differentiated QoS capabilities.

3. **Where the Next Failure Will Occur:**
Deteriorating conditions indicate a potential problem before it fully manifests itself. Alerting the right people and providing them with intelligence in real time on where the problem is occurring enables operators to preempt issues before they can impact the customer experience.

4. **Which Infrastructure Investment will have the Greatest Impact on Customer Experience:**
Given the complexity of today's mobile networks, the old practice of overprovisioning and waiting for demand to reach capacity is obsolete. Operators need a complete understanding of chokepoints – whether they are due to heavy demand for video, under-subscribed HSS servers or tower access – to pinpoint investments and effectively enrich the mobile experience.

5. **How OTT Usage is Impacting Traditional Business Models:**
By quantifying consumer OTT app usage, along with how much bandwidth these apps eat, operators can begin to understand the scale – and repercussions – of evolving customer behaviors. This type of intelligence can help operators design new business models and strategies for thriving in today's complex, evolving market.

Transforming endless streams of data into actionable information for solving complex issues can seem daunting. To get started, operators need to collect – and intelligently correlate – data on each mobile transaction from end-to-end. This requires a solution capable of tracking events as they traverse complex mobile environment, regardless of network protocol or service delivery method. It also must collect information from the network and application layers and properly correlating the user and control plane data streams.

This information provides a solid information foundation for network analytics. From there companies can trend, enrich and manipulate multiple data points and KPIs to reveal the intelligence they need to meet today's challenges. As companies begin to integrate network analytics into their decision-making processes, they will find answers to questions they didn't even know they had.

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