VMware Smart Experience: Real-Time Streaming Analytics for CSPs

Customizable, Real-Time Insights for Rapid Actions

VMware Smart Experience is a real-time streaming analytics solution that provides Communications Service Providers (CSPs) the ability to generate actionable insights from their network data, improve customer experience, optimize resources and create new revenue streams. VMware Smart Experience ingests, manages, and enriches high volumes of streaming data from various mobile network elements and correlates it with subscriber details for comprehensive insights. Fast, in-memory stream processing enables CSPs to understand exactly what is transpiring in their network and take swift action – a key value proposition for future 5G networks and edge computing.

VMware Smart Experience

Correlating real-time information from deep packet inspection (DPI) probes and virtual probes with subscriber-level information and network statistics, VMware Smart Experience provides analytical insights to tier 1 service providers today. CSPs have the ability to rapidly create new analytics workflows through an interactive UI, selecting pre-built key performance indicators (KPIs) from an available menu or creating their own on the fly. From there, KPIs and subscriber stats can easily be stitched together to create and deploy an analytics workflow, taking analytics use cases from concept to reality in a very short time.

At-a-Glance

- Customer experience and network analytics at a subscriber level for actionable insights by CSPs
- Enable marketing promotions based on subscriber's location and interest
- Detect fraud through real-time analysis of unusual traffic patterns
- View roaming status to offer proactive roaming incentives
- See real-time data QoS to improve network operations, optimize network planning and understand application performance
- Drive higher Net Promoter Score (NPS) through correlation of customer experience data with location, network quality, and subscriber data
Actionable Insights Through Streaming Analytics

Real-time Customer Experience Analytics
VMware Smart Experience analyzes streaming data to provide CSPs with real-time customer experience metrics and analytics at a subscriber level for actionable insights.

Real-time Network Analytics
Improve customers' experience by understanding call quality and data performance on a per cell site and per app basis. Measurements such as calls dropped, jitter, and data latency are available in real-time.

Real-time Data Usage Correlation
VMware Smart Experience provides CSPs with automated smart notifications when subscriber data package limits are reached, allowing the product team to offer new plans in a relevant, tailored format.

RAN and Mobile Core KPIs and KQIs
VMware Smart Experience provides the ability to track and report KPIs and KQIs across the remote access network (RAN) and mobile core network through integration with probe and mediation servers.

Subscriber-level Analytics for Marketing
By understanding subscriber’s location and interest in real-time, marketing teams can offer personalized offers and promotions at the right time, in the right place.

Putting the User in Control
VMware Smart Experience offers streaming analytics needed for today’s 4G and tomorrow’s 5G networks based on a real-time processing engine suited for latency-sensitive applications and services. Rather than locking service providers into predefined use cases and workflows, VMware Smart Experience puts the control in the hands of the operator, giving users the ability to rapidly create new analytics streams on an ad-hoc basis and quickly operationalize them.

Benefits
Open & Extensible
- Extensible and pluggable components
- No vendor lock-in
- Open APIs

Real-Time Intelligence
- In-memory stream processing engine
- Real-time analytics at Big Data scale

Carrier-Grade
- High velocity (millions of events per sec)
- High volume (petabytes processed per day)
- High variation of data

Customizable
- Design your own KPIs
- Create your own analytics workflow
- Deploy as needed
- Share as desired
Features

KPI Workflow Designer
Leveraging an interactive UI, CSPs can create new analytics workflows, selecting pre-built key performance indicators (KPIs) from an available menu or creating their own on the fly.

KPI Workflow Manager
KPIs, network stats and subscriber data can easily be stitched together to create and deploy an analytics workflow via a graphical user interface. Workflows are stored and can be shared.

Telco Specific Plugins
Pre-built functional components (anonymization, subscriber profile, cell tower type, etc.) are available out-of-the-box to create new analytics workflows via drag and drop menus.

Extensible, Open Architecture
Flexible data bus provides common interfaces for downstream systems to easily consume data outputs and insights. A normalized data framework allows operators to normalize, curate, and correlate varied data sources.

Carrier Scale
VMware Smart Experience processes millions of continuously streaming events (from devices, mobile infrastructure, network and virtual probes) within seconds for actionable insights.

Benefits, continued

Built-in Telco Features
- Anonymization
- Geo-coding
- Data QoS formulas
- Filtering data opt-outs & opt-ins
- Cell tower plug-ins
- Schema-less transform

Fast Time-to-Value
- KPI Workflow Designer & Manager enable rapid deployment of new use cases
- Pre-integration with multiple vendor data sources
- From concept to realization in shortest time possible
Use Cases

VMware Smart Experience provides contextual analytics insight to enable a wide variety of use cases for CSPs.

Understand Real-time Data QoS
Improve network operations & do network planning based on data quality metrics such as throughput and packet loss on a per application, per subscriber basis.

Location-Based Marketing
By understanding customers’ interests based on content and app usage, operators can offer targeted advertisements and promotions to an anonymized set of subscribers when they are in specific geographic areas.

Customer Experience Management
VMware Smart Experience can contextualize the voice, data and messaging usage and performance with the content used and the customer ID to determine the subscriber QoE.

Fraud Detection
Leveraging real-time analysis of unusual traffic patterns, operators can detect fraud such as unauthorized SIM swaps and device swaps.

Increase Net Promoter Score (NPS)
Through correlation of customer experience data with location, network quality, subscriber data and application usage, VMware Smart Experience provides insights to help CSPs improve their NPS.

Learn More
For additional information about VMware Smart Experience:
1-877-VMWARE (outside North America, dial +1-650-427-5000)
telco.vmware.com