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Solution/Use-case overview

Fixed-Wireless-Access Smart-Traffic QoE Management

June 2024

Solution/Use case overview

The solution: Fixed-Wireless-Access Smart-Traffic QoE Management

Value Proposition

The FWA SmartTraffic-QoE Management solution is a comprehensive platform for FWA Providers. It empowers them to efficiently manage network congestion, prioritize services and applications, enforce fair usage policies, and leverage detailed analytics for business and operational insights. This comprehensive solution not only enhances subscriber satisfaction through improved quality of experience but also brings significant cost reductions by optimizing bandwidth utilization and deferring infrastructure upgrades. Deployed at the network's core, it ensures fast time-to-market and simple deployment, providing a secure and well-equipped stance in today's dynamic digital landscape.

Problem Statement

FWA operators are tasked with delivering high-quality, reliable internet service in a rapidly increasing landscape of broadband connectivity demand. They face challenges in managing network congestion during peak usage times, ensuring high QoE for subscribers, and maintaining fair usage. The basic traffic management implemented by the integrated network scheduler doesn’t provide an efficient solution for QoE optimization during congestion as it is not application-aware. This necessitates network expansion and requires significant investment in radio equipment, towers, and spectrum.

Solution Description

Allot’s Smart-FWA application-aware Traffic Management solution is a testament to efficiency and effectiveness. It is designed to identify and prioritize user traffic and applications dynamically. With its sophisticated and granular app recognition and congestion management policies that are applied per subscriber and per application, it ensures a high-quality experience for sensitive apps and high-end service plan customers. This approach empowers operators to serve more users over existing infrastructure, thereby **increasing revenue potential while managing CapEx and OpEx efficiently.**

Key Features:

Allot's superior Traffic Classification is based on Dynamic Application Recognition Technology (DART), which employs multiple inspection methods to identify applications' behavior, network performance, and user QoE.

Our solution incorporates advanced congestion management techniques by utilizing application detection capabilities to enforce prioritization policies in real-time. As a result, subscribers benefit from optimal speed and Quality of Experience (QoE), even during peak traffic periods. Our solution dynamically adapts to maintain performance, ensuring efficient and equitable access for all users.

Service/Application Prioritization: Dynamic prioritization of services and application types during network congestion based on app sensitivity and subscriber service plans.

- Prioritization between different service tiers: automatically adjust capacity allocation during congestion time on a per service tier level, continuously maintain tier priority SLA.

- Fair Usage Plan Enforcement: Implement fair usage policies with speed measuring to ensure equitable access to network resources across subscribers.

QoE and Usage Analytics with App Detection: These detailed analytics offer insights into application usage patterns, network performance, and Quality of Experience (QoE). Our solution enables data-driven decision-making by incorporating app detection capabilities, ensuring optimal service delivery and user satisfaction.

Benefits

- Enhanced Subscriber Satisfaction: Improved QoE and service differentiation increase subscriber loyalty and reduce churn.

- Reduced Costs: Our approach can achieve up to 30% bandwidth savings, directly reducing the necessity for immediate infrastructure investments. As a result, capital expenditures (Capex) and operational expenses (Opex) are minimized, providing a cost-effective solution for network management.

- Scalability: Our solution is designed to scale seamlessly, supporting unlimited capacity across the network. This ensures that it efficiently meets the needs of a growing subscriber base and evolving network demands. Deployed at the network's core, it provides a robust framework for expansion, catering to future advancements without compromising performance.

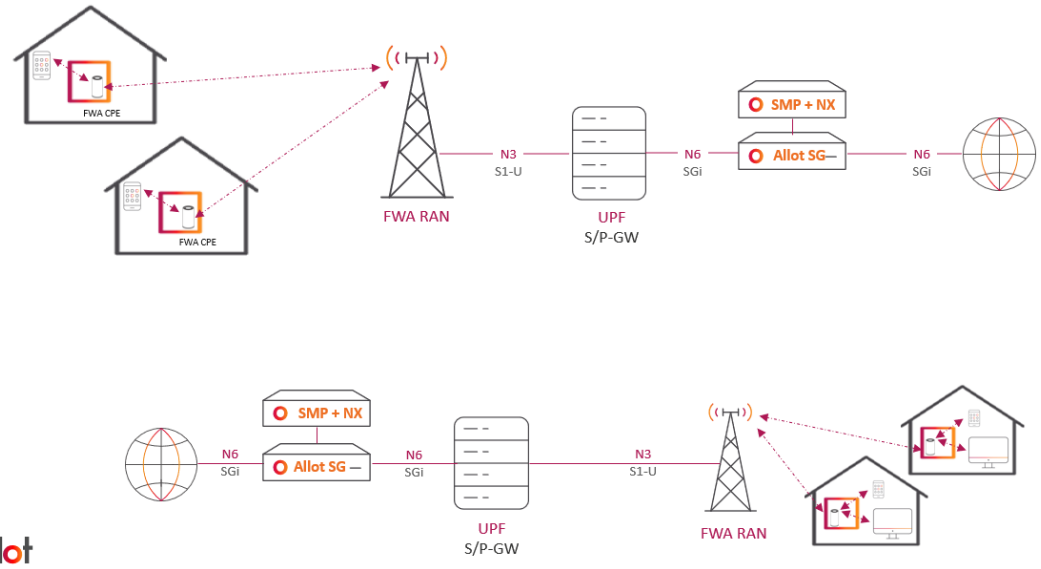
- Operational Efficiency: Automate and streamline congestion management and policy enforcement, reducing operational complexities and Opex.

Implementation

The solution operates in the following order:

- User Traffic and Application Identification: The system identifies user traffic and associated applications.
- Cell Traffic Calculation: It calculates the traffic load on each cell.
- Congestion Policy: A congestion policy, per subscriber, per application, is applied when cell traffic surpasses the threshold.
- QoE assurance: The policy prioritizes sensitive applications' Quality of Experience (QoE).

The solution integrates seamlessly with existing network infrastructure, offering a flexible and scalable approach to traffic management and QoE enhancement without a significant upfront investment.



About Us:

Allot stands at the forefront of **network management innovation**, empowering **communications service providers (CSPs)** with **cutting-edge, cost-effective solutions**. Our **SmartTraffic QoE Management solution** exemplifies our unwavering commitment to **excellence** and **customer satisfaction** in telecommunications. But we're not just about solving today's challenges; we're **future-focused**, ensuring our partners stay ahead in a dynamic digital world. Join us in **redefining connectivity**, where every solution is designed with your success in mind.

Learn more about us at ALLOT CORPORATE.