AppLogic NETWORKS

Fair Usage and Congestion Management

KEY BENEFITS

- **Improved Subscriber Experience:** Ensures consistent network performance and minimizes congestion-related disruptions.
- **Deferred CAPEX:** Reduces the need for immediate capacity upgrades by optimizing resource utilization.
- **Regulatory Compliance:** Delivers effective congestion management within regional and net neutrality guidelines.

ENSURE EQUITABLE RESOURCE ALLOCATION AND SEAMLESS NETWORK PERFORMANCE

Congestion is a persistent challenge for network operators, irrespective of network size or access technology. As demand for network resources grows, understanding where and how capacity constraints impact Quality of Experience (QoE) is critical. Effective decision-making requires detailed insights into the areas, subscribers, and devices affected by congestion to enable precise and targeted interventions.

AppLogic Networks' Fair Usage and Congestion Management (FUCM) solution equips service providers with advanced tools to monitor and manage congestion intelligently. By leveraging real-time insights and adaptive traffic policies, FUCM empower operators to allocate network resources fairly, enhance operational efficiency, and ensure super QoE for all subscribers.

FEATURES, FUNCTIONALITY AND CAPABILITIES

Fair Usage and Congestion Management provides a holistic, real-time approach to managing network congestion, ensuring fairness and compliance with regulatory requirements. Key features include:

- **Dynamic Congestion Detection:** Identifies congestion at the network, cell, or beam level in real-time, enabling immediate corrective actions.
- **Intelligent Traffic Management:** Balances network traffic by prioritizing critical applications and ensuring fair bandwidth distribution among subscribers.
- **Policy-Driven Control:** Implements granular traffic policies based on user, location, device, plan, and QoE metrics to maintain compliance with net neutrality regulations.
- **Cross-Access Support:** Functions seamlessly across mobile, fixed, satellite, and WiFi networks, ensuring uniform performance management.
- **Comprehensive Analytics:** Provides insights into congestion patterns, application behavior and user activity to drive informed decision-making.
- **Heat Map Visualization:** Highlights congestion hotspots with geographical mapping for targeted optimization.
- **Proactive and Reactive Management:** Combines predictive analytics with real-time insights to address congestion before it impacts subscribers.

HOW FAIR USAGE AND CONGESTION MANAGEMENT IS PACKAGED

AppLogic Networks offers three Packages; Analyze, Optimize and Monetize:

ANALYZE	OPTIMIZE	MONETIZE
Gain Insights to Drive Decisions	Maximize Efficiency and Improve Spending	Unlock Revenue Potential

Fair Usage and Congestion Management is part of AppLogic Networks' Optimize Package, alongside complementary solutions:

- **Video Streaming Management (VSM)**
- **Heavy User Management (HUM)**

Together, these solutions empower service providers to manage network congestion, optimize resource allocation, and deliver consistent subscriber satisfaction.

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HOW FAIR USAGE AND CONGESTION MANAGEMENT FUNCTIONS IN APPLOGICS' FUNCTIONAL ARCHITECTURE

The solution operates across AppLogic Networks' core architecture layers, ensuring seamless integration and robust functionality:

Figure 1

How Fair Usage and Congestion Management leverages AppLogic Networks' Functional Architecture

Value Delivery	Dashboards & Workflows	Advanced Traffic Management	Integration & Automation
Data Enrichment	Data Orchestration & Export		
	Data Contextualization and Advanced KQIs (incl. QoE Scoring)		
Data Intelligence	Real-time line-rate data plane analysis	ML/AI based app classification and categorization · Granular KPI creation	Policy Enforcement
Deployment Options	Certified Server & Qualified Software Appliances, Virtual, and Cloud		

- **Deployment Options:** Variety of access-agnostic deployment options for fixed, mobile, and converged operators to deploy a single solution to manage network congestion

- **Data Intelligence:** Real-time data collection for detecting and managing congestion by measuring the usage and contribution of various types of traffic per location categorized by application and content.

- **Data Enrichment:** Flexible and contextualized manual or automated application and content-category specific policies per location and KPI data for location congestion analysis

- **Value Delivery:** Per-location analytics-driven granular control on all types of application traffic using industry-standard interfaces for CAPEX deferral while complying with QoE expectations and regulatory laws.

BENEFITS

AppLogic Networks' Fair Usage and Congestion Management provides measurable advantages for service providers:

- **Improved QoE:** Reduces buffering, latency, and packet loss to deliver consistent, high-quality experiences.

- **Deferred CAPEX:** Delays costly capacity expansions by maximizing the use of existing network resources.

- **Compliance with Regulations:** Adheres to net neutrality and regional traffic management standards.

- **Enhanced Operational Efficiency:** Reduces time-to-resolution for congestion-related issues, minimizing operational costs.

- **Data-Driven Decisions:** Offers actionable insights to support capacity planning and network optimization strategies.

KEY USE CASES

Fair Usage and Congestion Management offers valuable applications across different network types:

- **Congestion Management:** Identifies and resolves congestion issues dynamically across network segments.

- **Traffic Prioritization:** Ensures critical applications and services maintain performance during peak times.

- **Subscriber Fairness:** Balances resource allocation to minimize the impact of heavy users on the broader subscriber base.

KEY SOLUTION COMPONENTS

AppLogic Networks' use cases feature key software components, visualizations and tools, across each layer that enable each use case's full value:

Value Delivery	Deep Insights
	3rd party Data Lakes
Data Enrichment	Insights Data Storage
	App QoE Engine, ANI Score Engine, Maestro Policy Engine, Maestro Automation Engine, Maestro Security Engine
Data Intelligence	ActiveLogic, AppLogic, Intelligent Feeds
Deployment Options	iQ42100, iQ42300, iQ52600, iQ2080 Dell PowerEdge XR-12, R760, VNF, CNF

OUR COMMITMENT TO PROVIDING VISIBILITY

Our industry-leading AppLogic core technology delivers deep visibility into network traffic, unlocking new opportunities across every department. Key features include:

- **Accurate Application Identification:** Over 95% coverage, including encrypted traffic, ensuring precise network insights.

- **Content Classification:** Granular categorization of applications and services to enhance decision-making.

- **QoE KPIs and Sentiment Analysis:** Provides critical metrics and behavioral insights to optimize user experience.

AppLogic's capabilities empower operators with actionable insights, driving operational efficiency, customer satisfaction, and revenue growth.

Contact us today to learn how Fair Usage and Congestion Management can enhance your network capabilities.

Our Industry-leading
unique core technology

App QoE Scoring
14 Content Categories Classification
14 Application Categories Classification
AppLogic
95% Application Classification

Unlock New
Business Opportunites

Department	Business KPIs Improved
Ops	Operational Efficiency
Planning	Reduced CAPEX
Performance	Improved QoE
Customer Care	CSAT, Retention & ARPU Growth
Marketing	New Revenue Streams
Big Data	Enhanced Data Modeling
Regulatory	Compliance
Security	Rev Assurance & Fraud Prevention

ABOUT APPLOGIC NETWORKS

AppLogic Networks' cloud-based App QoE portfolio helps customers deliver high quality, optimized experiences to consumers and enterprises. Customers use our solutions to analyze, optimize, and monetize application experiences using contextual machine learning-based insights and real-time actions. Market-leading classification of more than 95% of traffic across mobile and fixed networks by user, application, device, and location creates uniquely rich, real-time data that significantly enhances interactions between users and applications and drives revenues. For more information visit **https://www.applogicnetworks**.com or follow AppLogic Networks on X **@AppLogic Networks**.

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