AppLogic NETWORKS

Zero-Rated Fraud Management

Get paid fairly by detecting and mitigating a range of zero-rating fraud techniques

5G AppLogic Networks' **application and network intelligence capabilities** can be leveraged in 5G core and edge environments, delivering critical contextual and slice awareness to feed new service creation and strengthening a service provider's position in the 5G value chain for consumer and enterprise markets.

ZERO-RATED FRAUD MANAGEMENT DELIVERS:

Zero-Rating Fraud Prevention
Detects and prevents attempted fraud leveraging zero-rating exploits

Prevention of Unauthorized Access
Restricts specific applications that are not allowed with certain plans

Terms and Conditions Fraud Prevention
Blocks attempted circumvention of terms and conditions that can lead to network abuse (e.g., tethering or line sharing)

MARKET OVERVIEW

Service providers are challenged with attracting new users and improving the trend of declining ARPU. In order to solve these problems and grow market share in a fiercely competitive landscape, service providers must innovate their service offerings to gain new customers and retain existing ones.

One popular tool is zero-rating, as it allows service providers to achieve market differentiation and offer value to attract new users, as well as retain existing ones. However, the use of zero-rating creates a new and attractive surface for unscrupulous users wanting to exploit weaknesses in the network and bypass payment for the services offered, which directly impacts the service providers' revenue and the brand perception.

To successfully implement zero-rating, service providers need to be aware of the cost of zero-rating – fraud – and apply careful planning and market awareness to ensure they get paid for the services they deliver. Specifically, service providers need to be able to detect and act to prevent various methods of zero-rated fraud. Misclassification of traffic and unmanaged fraudulent behavior can have heavy financial consequences due to charging errors, unnecessary capacity expansions, and deteriorating quality of experience for regular users.

There are a variety of techniques used in zero-rated fraud, such as HTTP header injection, domain fronting, and DNS spoofing, but data fraud is not limited to zero-rating.

Additional target areas for fraud:

- Subscription mismatch between IT and network (e.g., prepaid subscriber connecting as postpaid)
- Abuse of commercial terms and conditions for plans (e.g., tethering restriction)
- Billing charges for events (e.g., ringtones or music on demand)
- Access to unauthorized content

The challenge for service providers is not isolated to only detecting fraudulent behavior, but also taking the right action and preventing abusive usage, not only targeting zero-rating practices, but in the network overall to protect valuable revenue.

USE CASE OVERVIEW

AppLogic Networks' Zero-Rated Fraud Management use case uses the ANI Classification Engine to deliver superior traffic classification and policy enforcement to strengthen service providers' defense towards fraudulent behavior in the network. The right policy enforcement empowers the right response to fraud when detected and, with behavioral analysis, heuristics, and machine learning, prevent future fraud as well as potentially recover lost revenue even if the traffic is encrypted.

AppLogic Networks has partnerships with OTT application providers to ensure that traffic associated with these applications is classified correctly through the AppLogic Networks Gateway API. In the case of sponsored data opportunities, this API has the ability to build

Zero-Rated Fraud Management

AppLogic Networks' frequently updated signature library ensures accurate identification of attempted data fraud and enables active management to prevent fraud

Data Fraud Management Lifecycle

1 Analyze & Deep-Dive

Identify suspicious traffic and subscribers and understand the underlying protocol usage and behaviour through deep-dive

2 Isolate

Segregate the traffic and subscribers from regular traffic

3 Build Signature

Create a custom signature to detect suspicious traffic

4 Take Action

Apply blocking, shaping, and/or reporting action

trust between service providers and content owners, minimizing billing errors. With correct classification and billing, service providers can confidently implement zero-rating and take advantage of sponsored data opportunities as they can mitigate revenue loss associated with fraud, misclassification, or billing errors.

AppLogic Networks' Zero-Rated Fraud Management delivers these key capabilities to any zero-rating data practice:

- Advanced traffic classification powered by ML/AI, heuristics, and behavioral analysis, to deliver accurate application and traffic identification, even for encrypted traffic
- Rich policy enforcement options to empower service providers to respond appropriately when fraud is detected, prevent fraud, and potentially recover lost revenue
- Advanced reporting and analytics that provide insight into the prevalence of data fraud and the impact of management policies
- AppLogic Networks Gateway API for partnerships with OTT and application providers for ensuring accurate traffic identification for high-profile OTT traffic

AppLogic Networks' rich visibility and reporting visualization ensures that the service provider can see the scope of the fraud that is occurring on their network, and then determine the appropriate actions to take, including drilling down to determine the exact techniques being attempted to commit data fraud.

Zero-Rated Fraud Management enables service providers to detect and act on fraudulent behavior occurring inside the network. With traffic visibility, fraudulent users that have abused service agreements can be moved to a higher volume plan and charged for their usage, and service providers can recover valuable revenue.

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