ORACLE

Oracle Communications EAGLE

Industry Leader in signaling since 1994

Oracle Communications EAGLE is an innovative and sturdy common signaling platform that extends signal transfer point (STP) and serving gateway (SGW) assets to long-term evolution (LTE), machine to machine (M2M) and Wi-Fi domains for enhanced efficiency, connectivity and newer revenue models.

OVERVIEW

With EAGLE, operators can gain seamless connections to PSTN SS7/TDM links and manage intelligent routing, screening services, mobile number portability (MNP), equipment identity register (EIR), integrated performance and service management. In order to address regulatory requirements, operators need to carefully plan and optimize the existing infrastructure without much changes to it. Instead of taking up expensive and time-consuming forklift methods, service providers need to adopt efficient methods which are most appropriate.

PRODUCT DESCRIPTION

Oracle Communications EAGLE is a mature signaling solution with breadth and depth that is globally recognized. It has three key elements:

Home Location Register (HLR)

The HLR flexibility allocates numbers across multiple routers in a network and overcomes the limitations of traditional range-based routing that ultimately waste capacity. It provides the mapping between subscriber numbers and HLR's. This enables operators to fill every register to 100 percent capacity, eliminating the need to maintain subscriber routing tables in every mobile switching center (MSC).

Signal Transfer Point (STP)

The STP delivers ANSI / International Telecommunication Union (ITU) international gateway functionality in addition to centralized signaling routing and bridges the existing circuit- switch and packet- switch networks. It offers advanced routing and screening functions while supporting multiple link interface types and industry standards. This helps in fostering flexible configuration and connection of network devices.

Key Features

- Common signaling license that offers investment protection
- Most advanced SS7 solution in the market that provides unmatched features
- Scalable solution and range of deployment options
- Network security addressing both stateful and stateless security cases
- Trusted ELK framework to visualize attacks
- Enhanced discovery and monitoring of traffic
- Flexible configuration and connection of network devices
- Support of CAT2 SS7 security and advanced Triggerless ISUP

Serving Gateway (SGW)

The SGW is a complement to STP. It transfers signaling messages relevant to call establishment, billing, location, short messages, address conversion and other services. Operators can migrate to packet switched networks without modifying their existing infrastructure. With zero additional nodes, EAGLE SGW can manage changes in the traffic and signaling in the most complex networks. These three components yield compelling use cases around 3G-VoLTE migration, mobile number portability (MNP) and equipment identity register (EIR):

3G Voice over LTE (VoLTE) Migration: This solution identifies, and routes calls destined for VoLTE subscribers by managing two critical variables, namely: identifying whether a call is destined for a VoLTE subscriber and establishing the location of the called VoLTE subscriber.

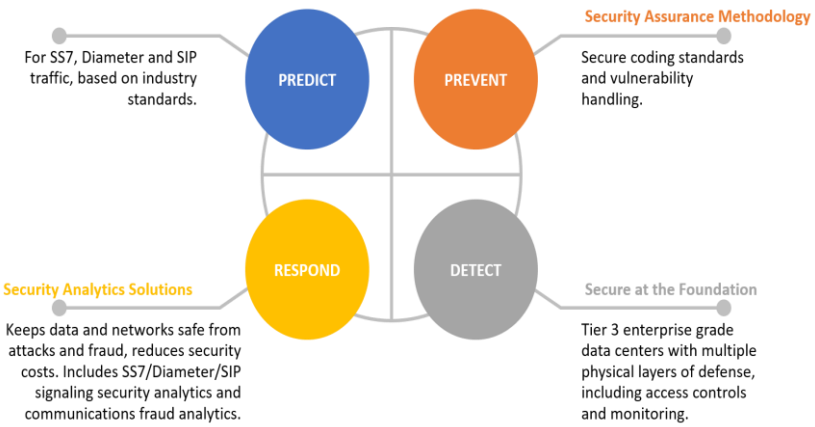
Mobile Number Portability: This simplifies number portability by integrating advanced database management and signaling functions onto a single platform, providing unmatched support with throughput, avoiding link congestion, and bottlenecks in the network.

Equipment Identity Register: This database can block list stolen handsets on 2G, 3G. It also tracks the stolen handsets in accordance with the guidelines of Federal Communications Commission (FCC) and other regulatory bodies.

By providing the above use cases and solutions, the EAGLE unified platform goes beyond just signaling and offers much more in terms of security, analytics and monitoring. All this and complete peace of mind for the operator at any given point in time.

Specific applications supported by EAGLE:

- Voice, SMS, prepaid
- Advanced routing
- Prepaid optimization
- Mobility, roaming, authentication
- Number Portability (480MIL), EIR (600MIL), HLR Router Feature
- Reliability, Security, Screening
- 3G/IMS migration
- Signaling firewall
- Agility, Scalability, Load Sharing
- Interworking functions, Trouble Shooting, Visibility



Oracle Communication Signaling and Policy Solutions

- Oracle Communications Virtual Signal Transfer Point (vSTP).
- Oracle Communications Diameter Signaling Router (DSR)
- Oracle Communications Policy Control Function (PCF)
- Oracle Communications Common Signaling, Security and Edge Protection Proxy (SEPP)
- Oracle Communications Common Signaling, Network Repository Function (NRF)
- Oracle Communications Common Signaling, Service Communication Proxy (SCP)
- Oracle Communications Common Signaling, Binding Support Function (BSF)
- Oracle Communications Common Signaling, Interworking and Mediation Function (IWF)

The latest EAGLE platform now comes with Service and Link Interface cards (SLIC) that eliminates the need for investing in multiple nodes or hardware redundancy. It is a multipurpose asset capable of replacing multiple EAGLE modules.

Benefits attributed to the SLIC:

- Single slot feature
- Higher capacity and throughput
- Footprint reduction and simplified sparing strategy
- Significantly reduces maintenance costs
- Increased number of supported service modules
- Single source of innovative functionalities

Figure 2. Oracle Communications SLIC functionalities

Enhanced Visualization

Oracle Communications EAGLE leverages the ELK framework for data analysis and visualization. EAGLE ELK GUI can be used to analyze network traffic, to categorize and address anomalies according to the geography. It provides a powerful front-end dashboard capable of visualizing information from the elastic cluster. The dashboard is real-time and is easily configurable.

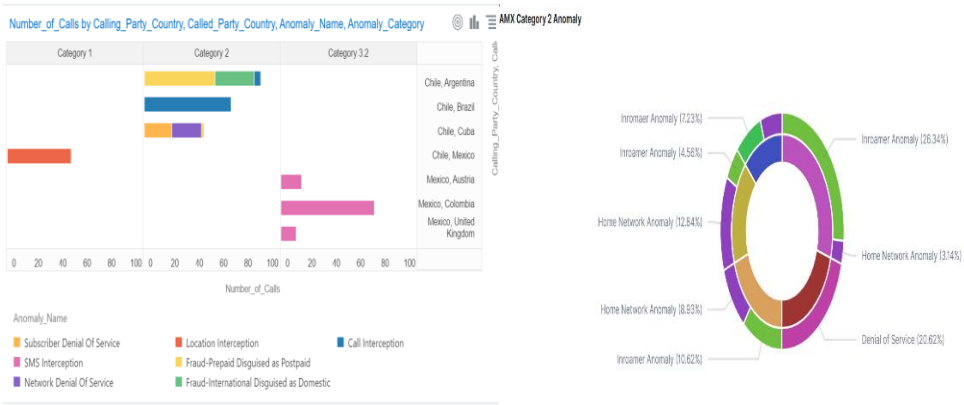


Figure 3. ELK GUI Sample for EAGLE

SUMMARY

Oracle Communications solutions enable service providers to both manage and monetize the explosive growth in mobile data traffic and multimedia applications. They help service providers analyze subscribers' quality of service, set policies to improve customer experience and optimize network performance.

Oracle Communications helps billions of people, devices and machines intelligently connect and engage over any network. With proven capabilities, scalable solutions, network security, common intelligent signaling platform, Oracle Communications solutions guarantees high availability and continued support.

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