EAGLE XG Product Family

The Tekelec EAGLE XG platform is purpose-built to deliver the most demanding next-generation network services and database applications.

Overview

The demand for mobile and media-rich applications is increasing, and operators worldwide are retooling their networks to make the shift from voice- to data-centric services. As they make that transition, providers must navigate a host of new challenges to maintain and grow their business. New network elements, technology and protocols must interwork seamlessly with existing resources to ensure a transparent service experience.

Product Description

Tekelec understands these challenges and leverages years of experience in signaling and session control solutions to create the EAGLE XG platform, standards-based and purpose-built to deliver the most demanding next-generation services. The high-availability EAGLE XG platform, hosts multiple applications for virtually any type of network – time division multiplexing (TDM), 2G/3G/4G, next generation, cable and Internet protocol multimedia subsystem (IMS). Open, industry-standard interfaces create a flexible service delivery environment that enables operators to deliver new applications while reusing existing network resources. The EAGLE XG platform features a large-capacity, integrated database that provides subscriber and network data for a number of applications, including number portability (NP), e164 number translation (ENUM), home location register (HLR) routing, short message service (SMS) routing, and voicemail routing.

The platform consists of:

- A telco-grade, field proven Linux-based operating system – Tekelec Platform Distribution (TPD)
- A middleware layer, AppWorks, providing application and OAM&P framework
- Intel-based hardware equipped with advanced telecommunications computing architecture (ATCA) blade servers and/or NEBS-compliant, rack-mounted servers

Applications

- **SIP Signaling Router (SSR)**. Creates a centralized session framework for next-generation networks (NGNs) that enhances routing capabilities, increases service and network flexibility, and lays a foundation for adaptable network migration. In this application, the EAGLE XG platform serves as a session initiation protocol (SIP) proxy with enhanced routing capabilities, relieving the endpoints of session management duties. Introducing SIP routing directly into the core network enables systematic and cost-effective growth to support the increasing demand for voice over IP (VoIP) and multimedia services. Operators can realize many benefits by deploying a SIP signaling router in their next-gen networks, including access independence, multimedia support, home service control (HSC) model, and subscription-based service orchestration.

- **Service Broker**. Forms a flexible, service-control framework in the network control layer that enables operators to creatively blend intelligent network (IN) services with new, SIP-based applications. The EAGLE XG platform provides the signaling, service orchestration and mediation required to create complex service packages across multi-technology networks. Operators can blend multiple IN services - like prepaid and personal ring-back tone – using a single trigger to support mixed service delivery. The application also enables existing service platforms to interact with SIP-based platforms to create new service compositions. It bridges networks by interworking domain-specific, signaling components in the control layer -- signal transfer points (STPs), SIP signaling routers (SSRs), and call session control function (CSCF) -- with platforms in the service delivery layer such as service control points (SCPs) and SIP application servers.

- **Call Session Control Function (CSCF)**. Provides the SIP signaling and session control required to interwork the transport, control and application planes within the IMS network. The application, built to 3GPP standards, enables operators to deliver next-generation, multimedia services over virtually any network to any device. Its capabilities include: proxy-CSCF (P-CSCF); session-CSCF (S-CSCF) and interrogating-CSCF (I-CSCF). Carriers can implement just the functionality they need to begin rolling out new services, while creating an evolution path to the IMS architecture.

- **Home Location Register (HLR) Router**. Enables operators to flexibly allocate numbers across multiple HLRs in the network. With this turnkey, HLR routing application, operators can fill each HLR to 100 percent of its capacity and eliminate the need to maintain subscriber number routing tables in every mobile switching center (MSC). Subscriber number ranges can be split over different HLRs, and individual subscriber numbers can be assigned to any HLR in the network, making it easier to move subscribers from one HLR to another. The EAGLE XG application optimizes the use of subscriber numbers and number ranges by mapping the subscriber number (MSISDN/IMSI) to an HLR.

- **Number Portability**. The EAGLE XG platform consolidates subscriber and network routing data into a converged database. Various applications, including number portability, can access this data using different query protocols such as SIP, ENUM, lightweight directory access protocol (LDAP), and intelligent network application part (INAP). Merging NP and other application data into a single database facilitates the creation of new applications that leverage high-performance, low-latency access to subscriber and network data - without the burden of maintaining separate systems or provisioning channels.

- **ENUM Server**. The EAGLE XG ENUM Server is a high-capacity, portability-corrected ENUM routing database that consolidates both IP and TDM address information in a single network element to enable efficient service routing. The ENUM server converts a ported or non-ported telephone number (TN) into a domain name, which is used to retrieve the uniform resource identifier (URI) of the carrier or network device associated with that TN.

Benefits

- **Simplify network consolidation and migration**. Operators can normalize network resources with different protocols or variants of the same protocol without costly switch upgrades or re-architecting the network. The EAGLE XG platform simplifies network migration, enabling providers to introduce new resources and applications that interwork seamlessly with existing, legacy components. Operators can deliver rich, multimedia applications without deploying a full-blown IMS network
- **Upgrade and expand the NGN**. The EAGLE XG platform introduces a session control framework to the NGN. It fully supports NGN expansion and facilitates the interworking with and migration to IMS or whatever comes next. Operators can deploy the EAGLE XG platform to meet a variety of needs – enhanced application server selection, SIP trunking, SIP number portability, centralized SIP routing, and specialized SIP proxy

- **Improve network routing**. Operators can consolidate network routing information in a single, unified database which can be accessed by multiple clients over a variety of query protocols. With the platform's flexible routing tool, operators can manipulate the SIP session to enable routing features such as time-of-day, least cost, and load sharing

- **Simplify database provisioning**. By consolidating subscriber and network routing information into a single subscriber routing database (SRDB), the EAGLE XG platform eliminates the need to manage, maintain and update multiple databases

- **Increase average revenue per user (ARPU)**. Tekelec's solution enables "sticky," high-end, blended services in intelligent, pre-IMS and IMS networks by coordinating and managing the interaction of multiple applications for a single session. Operators can mix services from multiple domains to create unique service packages that increase revenue and improve customer retention – all supported by a variety of billing options. The platform's rules-based service logic enables operators to rapidly develop and verify interaction and mediation logic as they create and package applications. New standards and protocols can be deployed and engaged quickly with the platform's simple plug-in modules

- **Lower operations cost.** The EAGLE XG supports multiple applications on a single platform, reducing operator equipment, maintenance and back-office integration costs