Cubro supports Polystar's Roaming Analytics Solution: Maximizing Roaming Revenue Streams and Ensuring Service Quality

Roaming extends the coverage of a home operator's services, allowing its mobile users to use those services within another operator's network, which may be in another country (international roaming) or in the same country (national roaming).

Voice roaming first emerged in the early days of GSM and was followed by the introduction of data roaming as part of the General Packet Radio System (GPRS). More sophisticated data roaming became available with the 4G LTE, which went on to support voice services as well.

Today, the Mobile networks support a variety of Mobile Broadband (MBB) use cases such as internet access and operator-provided services like voice and messaging. In some cases, network deployments have already been upgraded for support of 5G.

Roaming within LTE requires operators to support a complex technology with a number of frequency bands, protocols, interfaces, and network elements. IP Exchange backbone networks (IPX) also play a significant role as inter-service provider, since it operates as a dedicated roaming and interworking network that is separated from the traditional IP-based internet.

The Challenge

With Roaming, there are many performance and quality of experience (QoE) challenges, since partner operator networks in other territories don't guarantee the same quality as a user's domestic provider. They also can't guarantee the same levels of operations and billing support, meaning the user experience can be negatively impacted. Furthermore, it will be very important to have a roaming service in place with existing older legacy networks.
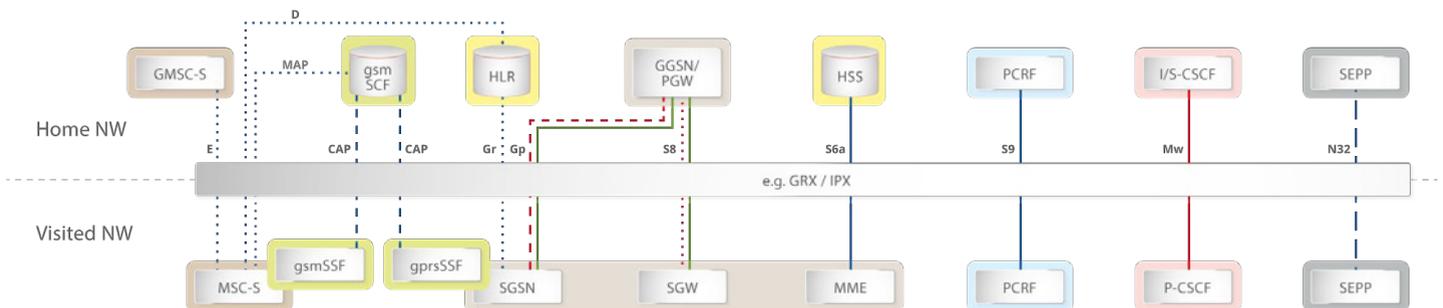
|		
CSCF	Call Session Control Function	HLR	Home Location Register	NW	Network	SGSN	Serving GPRS Support Node
GGSN	Gateway GPRS Support Node	HSS	Home Subscriber Server	P-CSCF	Procy CSCF	SGW	Serving Gateway
GPRS	Generic Packet Radio Service	I/S-CSCF	Interrogating / Serving CSCF	PCRF	Policy and Charging Rules Function	SIP	Session Initiation Protocol
GRX	GPRS Roaming Exchange	IPX	Internetwork Packet Exchange	PDN	Packet Data Network		
GTP-C v1	GTP Control Plane version 1	MAP	Mobile Application Part	PGW	PDN Gateway		
GTP-C v2	GTP Control Plane version 2	MME	Mobility Management Entity	SEPP	Security Edge Protection Proxy		

Benefits: Polystar Roaming Analytics

- Manage both in-bound and outbound roaming

- Maximize revenue by capturing more available roamers

- Maximize roaming revenues by selecting preferred roaming partners based on facts.

- Negotiate better roaming agreements based on delivered performance.

- Provide roaming partners with objective information on the usage and the quality of experience of inbound visitors

- Assist in managing existing Service Level Agreements.

- Increase roaming usage, ensure customer retention, and strengthen your brand.

- Speed up resolution of roaming QoS issues.

- Dramatically improve user experience stimulating roaming revenue growth.

- Reduce customer churn

- ONE SOLUTION TO COVER ALL TECHNOLOGIES:

  Voice, Data, VoLTE, SMS

Polystar is a leader in Analytics for managing Mobile Network Roaming

Polystar's Roaming Analytics solution provides extensive support and tools for roaming operations. They help to maintain and increase roaming revenue streams, manage roaming partner relations and quickly resolve QoS issues.

A complete picture of the service quality delivered is provided with multidimensional KPIs and reports, presented as dashboards with a seamless drill-down capability to individual signaling flows of a specific event.

The solution's intuitive user interface presents service availability information in near real-time as well as historical and trend-based reporting on performance indicators per node and service. This enables quick re-routing in case of a node or service failure, as well as drill-down to the actual cause of the problem. These essential features are supported by storage of the release cause distribution and records of every roaming event that takes place.
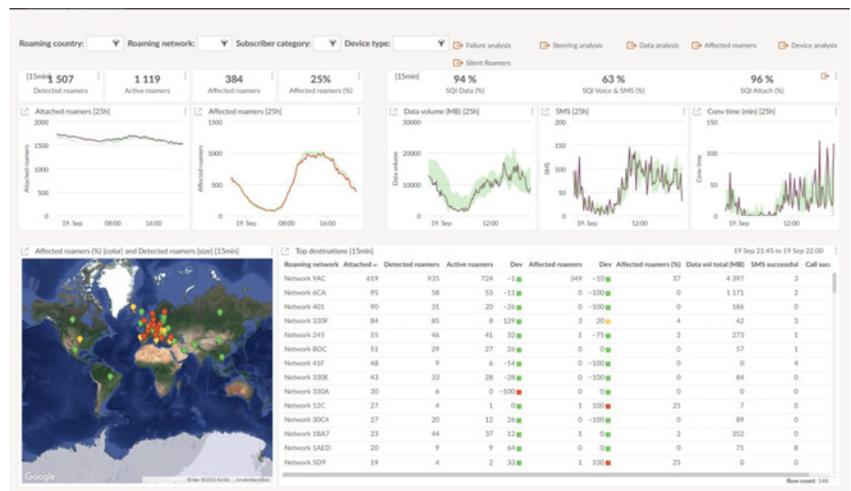
Cubro visibility solutions interface Polystar Analytics into complex carrier networks

Cubro is a leading manufacturer and global supplier of IT network visibility products for Service Providers and Enterprise networks. Our product range includes Network TAPs and Advanced Network Packet Brokers that ensure Polystar probes receive the right packet data to perform their function efficiently.

Why Use Cubro TAPs and Packet Brokers with Polystar Roaming Analytics

- Technically elegant solutions that provide **the best 'features to price' ratio**

- **Unique, advanced and standard,** high performance product capabilities

- Solutions have **low cost of entry, are easy to budget for, implement, expand and operate**

- **Easy to do business with** - Cubro commercial and technical flexibility

- **World class technical support** delivered from a local time zone

- **Widely deployed** and proven products, technology and support

Cubro products copy relevant data from any part of the network and the copied data is then optimized and passed to the Polystar Roaming Analytics in the format required to ensure there are no monitoring 'blind-spots'.

As a result, the Roaming Analytics system has full visibility of all relevant roaming related network traffic and is able to execute its function completely and efficiently .

Polystar implementations in mobile networks typically use a two-stage design. Network packets collected from passive fiber optics taps or forwarded from the SPAN ports of top–of-rack switches, are aggregated and filtered layer to ensure that only the packets needed for Roaming Analytics are forwarded to the tool.

Since packets are collected from multiple locations, any duplicate packets are removed, and other advanced processing is applied on the filtered, aggregated packets before sending to the Polystar platform.

Sessionmaster: Cost effective ASIC based filtering and aggregation, with industry leading performance

Header modification, Packet slicing; VLAN, MPLS, GRE add/remove; Session aware load balancing; VNI, GTP inner IP filtering.

Omnia: Additional CPU for IMSI Filtering, GTP/SIP correlation, Deduplication, Data Masking, REGEX Filtering, Netflow Probe, and other advanced capabilities

▼ Cubro Network TAP
Span or ErSpan Port

Cubro Network Visibility
EMEA USA APAC Japan
support@cubro.com

THANK YOU