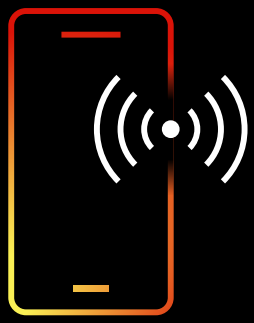
Arelion

IPX roaming signaling solutions



IPX solutions empowering roaming opportunities

Arelion's IPX signaling and transport offering provides trusted, scalable, high-quality solutions to capitalize on new roaming opportunities

Evolution or revolution?
Roaming requirements are evolving rapidly, driven by new consumer use cases enabled by travel eSIM providers and 5G Standalone (5G SA). At the same time, the expansion of IoT and M2M international use cases has made global connectivity and the ability to support new traffic patterns essential.
These developments drive higher quality demands, increase traffic volumes, and introduce complex requirements for protocol support and enhanced security. As one of the pioneers of IPX services, Arelion delivers comprehensive and flexible IPX solutions designed to meet these evolving roaming demands, with a strong focus on quality, reliability, and efficiency.

Arelion's IPX services are delivered over our **wholly owned AS8837 network,** providing full geographical diversity with no single point of failure. All IPX traffic is fully managed across the Arelion network, with priority QoS applied and routing maintained entirely under our control. The network is fully compliant with industry standards, including IR.34, IR.88, IR.67, IR.65, and IR.77.

Beyond IPX, Arelion's physical infrastructure also carries **the AS1299, consistently ranked as one of the world's most connected backbones since 2017 (Kentik/Dyn).**

Capacity options range **from 100 Mb to 400 Gb**, and our global scale and operational expertise enable rapid bandwidth expansion to meet growing customer demands.

Multiple signaling and data services can be delivered over a single connection to Arelion. In addition, IoT connectivity solutions are available to support specific customer requirements:

The **RoamConnect** solution provides SS7 and SIGTRAN signaling capabilities for 2G and 3G roaming services, with ITU/ANSI protocol conversion available for signaling conversion as required. Geographically diverse platforms ensure resilience and deliver robust, flexible, and cost-effective solutions.

The **DRX service** delivers Diameter signaling capabilities for 4G roaming services. This solution is supported by geographically diverse platforms, providing a resilient, high-quality service.

Benefits in brief

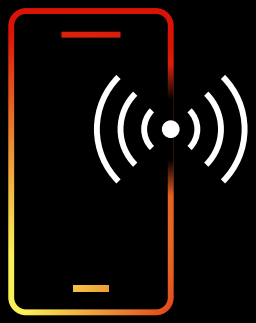
- Alleviate pressure on roaming profitability resulting from regulation, traffic growth, increasing complexity, and alternative services
- Capitalize on growth in IoT roaming traffic while protecting networks and subscribers
- Enable 5G roaming monetization by supporting differentiated user experiences for new rich media and enterprise use cases
- Manage increasing roaming network complexity and address resource constraints
- Competitive pricing based on combined signaling transaction volumes
- Fully supported by Arelion's customer service centre offering 24/7/365 coverage

What makes us unique?

- Unparalleled, cost-efficient scalability
- End-to-end visibility and full quality control
- Reduced time to market through rapid upgrades
- Competitive pricing through bundled wholesale agreements
- A trusted, independent, and experienced partner supporting roaming solutions and the evolution to 5G and beyond

Arelion

IPX roaming signaling solutions



The **GRX service** (IPX Transport) enables customers to exchange data with their roaming partners over the Arelion IPX network.
Our direct connections to mobile operators, together with local access to other IPX Peering providers, enable us to control network routing across and support a high QoS for our GRX service.

5G SA solutions are currently being trialed to meet anticipated roaming demand. These solutions align with the GSMA specifications (NG.113), and we welcome trial partners to help pave the way towards commercial readiness.

Arelion's **hosted SEPP (Model 2.2)** solution provides customers with fully encrypted, end-to-end certification to verify the origin of roaming traffic. This is a one-to-one solution, with direct end-to-end routing established between the customer and individual roaming partners as required.

Arelion's **TLS hop-by-hop IPX SEPP (Model 3)** solution offers a fully encrypted end-to-end signaling framework, with each party providing its own certificate chain within the signaling flow. This approach enables customers to establish 5G SA signaling connectivity with multiple roaming partners using a single, common connection into Arelion.

Coverage
All continents with access at over 350+ own PoPs worldwide.
Using local peering connections with all key IPX providers ensures we offer the highest quality services in all regions

Performance
Arelion roaming signaling services delivered over the AS8837 IPX network and supported by our network SLA of 99.999%

Value Added Solutions (VAS)
A comprehensive suite of VAS applications in conjunction with leading third-party providers, including:

- **Hosted security** - protects networks from SS7, Diameter and GTP fraud, intrusion, and signaling abuse in real time
- **Roaming VAS** - enables the steering of roaming traffic, with Welcome SMS and campaign profiling available to enable operators to optimize traffic flows
- **Network analytics and intelligence -** provides real-time visibility of roaming traffic flows to support data-driven decisions, performance tuning and faster problem resolution

Note: This document provides indicative service information and is not contractually or legally binding. Updated April, 2026. Discover more at arelion.com.