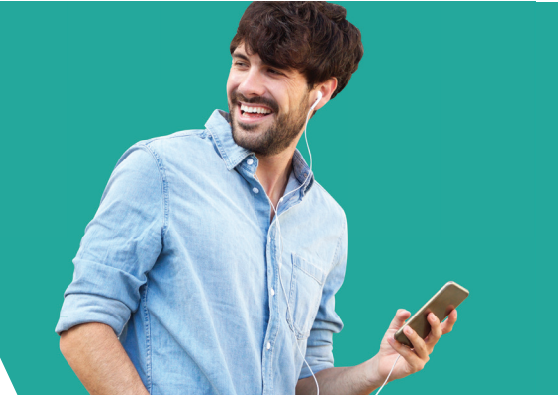


INTERNATIONAL VOICE OVER LTE

Expanding the Reach for Rich Voice Communication



iBASIS' international Voice over LTE (VoLTE) delivers the rich voice services you need, as well as the ability to make or receive VoLTE calls while abroad.

KEY TO YOUR EXPANSION

iBASIS' international VoLTE service provides a cost-effective, high-quality and seamless VoLTE interworking and roaming service between operator networks, using the iBASIS global multiservice IPX network. The service meets GSMA specifications and provides value-added features such as HD Voice and CLI. In addition to your enhanced user experience, iBASIS' VoLTE will help you achieve the highest voice quality, accelerate time to market, and minimize service delivery costs.

VoLTE INTERWORKING

iBASIS routes customer VoLTE traffic to either VoLTE or non-VoLTE (e.g. 2G/3G or fixed) operators as appropriate, and vice versa (see diagram). Any interworking/mediation or transcoding is performed by the iBASIS IPX network. iBASIS interworking capabilities also include unique functionality to ensure the highest quality when transcoding is required.

VoLTE INTERWORKING



KEY BENEFITS

Enhances end-user experience and reduces churn

HD Voice quality

Allows faster call setup than circuit switched fallback

Lower handset battery usage than application-based voice

Reduced MNO international interconnect costs

Eliminates need for signaling interworking or media conversion for international interconnect of VoLTE calls

Single connection to iBASIS IPX provides global delivery of VoLTE interworking and roaming traffic

Readies operator networks for future delivery of Video over LTE (ViLTE) services

BE THERE FIRST

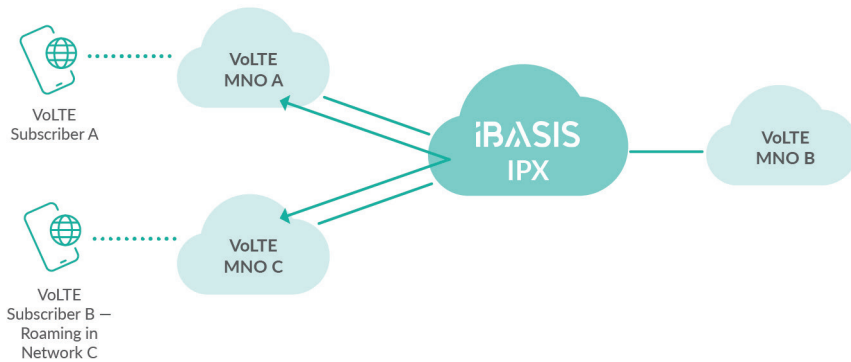
Looking for a customized solution?

Talk to one of our specialists at solutions@iBASIS.net.

VoLTE ROAMING

VoLTE roaming covers the case of a VoLTE subscriber originating or receiving calls while roaming in another VoLTE network, as shown in the following diagram:

VoLTE ROAMING



VoLTE operators can choose from different models for servicing VoLTE roamers around the world. There are two IMS-based models, Local Breakout (LBO) with home network or visited network routing, and the S8 Home Routed (S8HR) model, which uses LTE S8 to transport VoLTE traffic as data. iBASIS’ VoLTE solutions support all of these models. The S8HR model is a service provided by iBASIS as part of our existing S8/GRX solution for LTE data roaming. Each model has its advantages and disadvantages with respect to time to market, full telecom features and optimized voice quality.

iBASIS IPX HUB BREAKOUT ROAMING – FAST TIME TO MARKET WITHOUT SACRIFICING QUALITY

IPX Hub Breakout (HBO) is a value-add offering of iBASIS’ global multiservice IPX network. It enables operators to overcome the disadvantages of the LBO and S8HR roaming models.

As shown in the following table, HBO combines the advantages of LBO and S8HR within one solution. HBO optimizes voice quality for all calls and allows home operators to provide a full suite of services to its roaming end users, while still providing fast time to market.

	LBO	S8HR	HBO
No IMS interoperability testing required between home network and each visited network – accelerates time to market for VoLTE roaming	✗	✓	✓
Supports local routing for regional calls – ensures optimal quality for both regional and homebound roamer calls	✓	✗	✓
Support for emergency call and lawful intercept is well defined – enables delivery of full voice services functionality	✓	✗	✓
No dependency on visited network for future IMS services deployment – simplifies deployment of future IMS services	✗	✓	✓

ADVANCED FEATURES

- IMS inter-operator functionality
- Roaming functionality
- Local Breakout with Visited Network Routed and Home Network Routed
- S8 Home Routing
- iBASIS IPX Hub Breakout
- Number portability
- Optional fraud management

In addition to overcoming the LBO and S8HR disadvantages shown above, HBO allows operators who have not yet deployed domestic VoLTE to participate in inbound VoLTE roaming business. The solution can also be used to bridge the interoperability gap between operators who want to collaborate for roaming, but employ different models (either LBO or S8HR).

iBASIS also provides solutions to address other specific S8HR challenges by supporting:

- Availability of Location Information for VPLMN identity
- Number translation from all VPLMNs for numbers with local special formats
- S8HR challenges can be addressed individually or as part of HBO. See the iBASIS Hub Breakout datasheet for further details about HBO.

INTEROPERABILITY

- SIP-IMS to SIP-IMS mediation
- SIP-IMS interworking with SIP/SIP-I and SS7
- G.722.2 (AMR-WB) transcoding with G.722, G.711 (μ A-law)
- AMR-NB, EVRC, G.729 and SILKV3

CUSTOMER SUPPORT AND QUALITY ASSURANCE

- Priority in customer support
- GSMA IPX SLAs
- 24/7 customer service desk
- Central network management with 24/7 quality and network monitoring
- Near real-time monitoring of key performance indicators such as delay, packet loss, jitter, ASR and NER
- Proactive and regular testing on advanced feature delivery

ABOUT iBASIS

iBASIS is the leading communications solutions provider enabling operators and digital players worldwide to perform and transform. Powered by Tofane Global, iBASIS represents an estimated USD 1+ billion in annual revenue, is the third largest wholesale voice operator, ranks as the Top 3 LTE IPX vendor with 700+ LTE destinations and serves 1,000+ customers across 18 offices worldwide. iBASIS optimizes access, connectivity, and value-added solutions, so customers achieve high return on voice, mobile data, and IoT requirements to be first in their respective markets and in the digital era.

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