



IMS and VoLTE Services

IMS AND VOLTE SERVICES DELIVERS:

Video over LTE (ViLTE)

ViLTE is an extension of VoLTE which enhances voice services with a high quality video channel. It is a conversational video service which is based on IP Multimedia System (IMS).

Rich Communication Services (RCS)

Network operators can upgrade their voice and SMS services and leverage on QoS guarantees and network advantages to differentiate their services from competition in the OTT world.

Voice over WiFi (VoWiFi)

VoWiFi is a complementary technology to VoLTE and uses IMS technology to provide a packet voice service that is delivered over IP via a WiFi network.

VoLTE Roaming

With Sandvine's PCRF, network operators can:

- Provide global roaming coverage for VoLTE services with guaranteed QoS
- Support local breakout
- Accurately apply appropriate QoS and charging parameters

OTT Partnerships

Network operators can generate revenue by partnering with OTT providers to deliver application-specific content with a guaranteed QoS.

Deliver superior and reliable Voice-over-LTE services

MARKET OVERVIEW

To compete and stand out in the market, network operators are focusing on quality as a point of differentiation for customer acquisition and retention. At the same time, the network continues to evolve from 3G to LTE, which sees calling technology shift circuit-switched to IP-based packet architectures.

With this shift, where voice services now share the same pipe with other data services – web browsing, video, and social media – the ability to manage the speed, quality, volume, and diameter signaling associated with Voice over LTE (VoLTE) is critical to providing a differentiated experience.

VoLTE creates a win-win scenario for operators and consumers. Specifically, users benefit from a high quality of experience (QoE), improved device battery life, and a significantly faster call connection, while operators enjoy greater delivery efficiency and improved customer satisfaction.

More than that, VoLTE creates cost-savings and revenue-generating opportunities for network operators by simply consolidating control plane architecture with a PCRF element that leverages the LTE quality of service (QoS) architecture across other services.

For example, operators could use the same PCRF to enable QoS for non-IMS applications, such as gaming and video streaming, and apply universal policy control across all access networks, while conserving radio resources by enabling WiFi offload.

Although there is a strong motivation to transition to this all-IP approach, operators are faced with expense of maintaining two separate networks until they can support real-time IP voice services that meet the high expectations for call quality and reliability set by traditional circuit-switch networks.

To successfully make the leap, network operators need a PCRF that is up to the task of managing a multi-access network and the complex requirements needed to deliver reliable VoLTE. The majority of legacy systems (particularly PCRFs) either don't support the necessary interfaces to enable VoLTE or cannot cope with VoLTE's unique performance and scalability challenges.



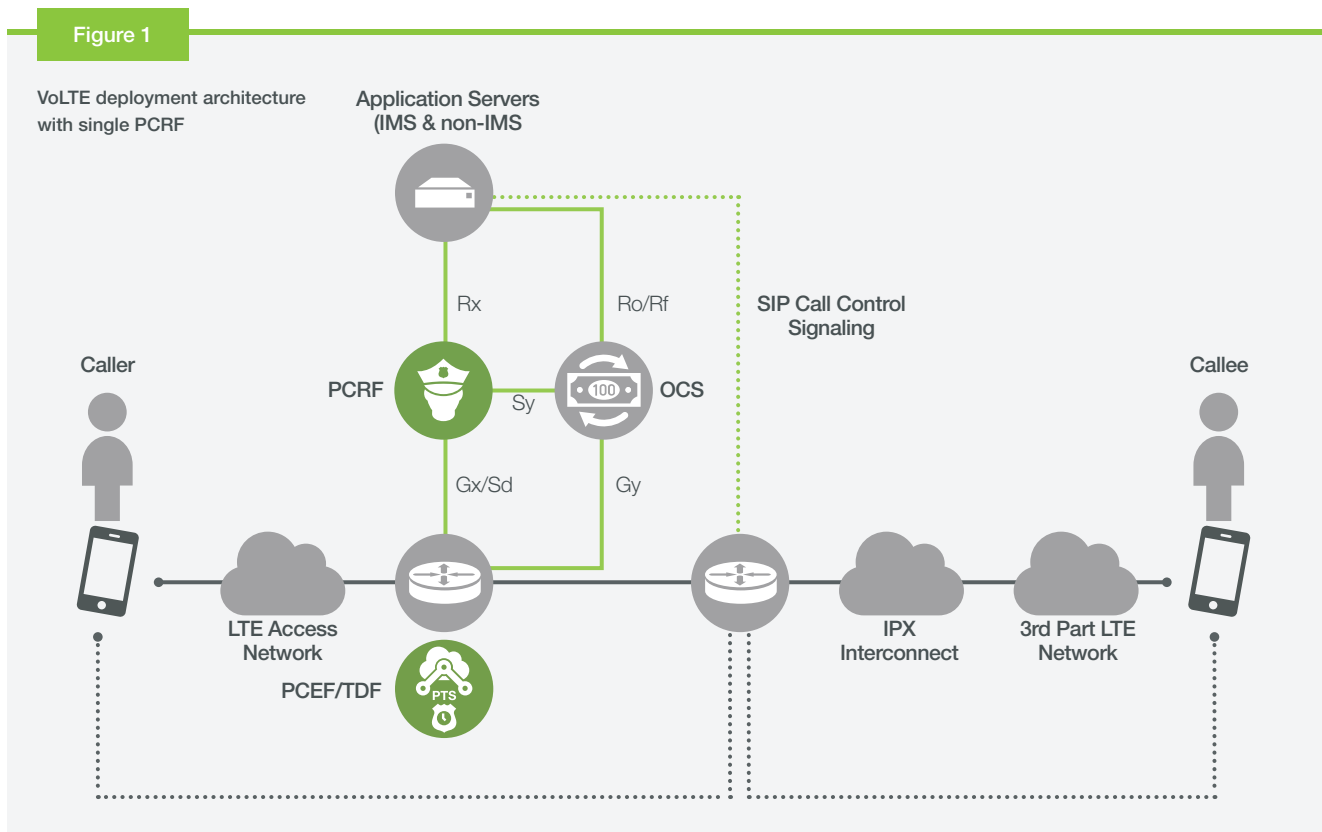
SOLUTION OVERVIEW

Sandvine's standards-compliant PCRF offers operators, especially those running converged networks, universal policy control. The ability to implement network-wide policy control drastically simplifies operations, lowers overhead, and reduces control plane complexity for the operator.

- Sandvine's PCRF signals to network elements via the 3GPP Rx interface so that the whole network applies the correct QoS.
- Sandvine's PCEF elements can enforce QoS directly and also provide quality measurements as a vital form of feedback to network operators, both for real-time operational insight and for long-term trending.

As VoLTE continues to gain in popularity, operators who make the switch can benefit from network-wide policy control that enables additional revenue-generating services.

Figure 1



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ABOUT SANDVINE

Sandvine helps organizations run world-class networks with Active Network Intelligence, leveraging machine learning analytics and closed-loop automation to identify and adapt to network behavior in real-time. With Sandvine, organizations have the power of a highly automated platform from a single vendor that delivers a deep understanding of their network data to drive faster, better decisions. For more information, visit sandvine.com or follow Sandvine on Twitter at [@Sandvine](https://twitter.com/Sandvine).



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