RUCKUS WI-FI CALLING

TECHNOLOGY OVERVIEW MAY 2019

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VOICE OVER WI-FI

Advanced Voice for Enterprise

In today's "wireless first" world (or is it "wireless only"?) hotels, apartments, condos, student housing, and other multi-tenant/guest facilities must meet their customers' high expectations, for data, voice, and messaging services. Customers make booking and conference decisions based on services provided by the property. The expectation of connectivity, both data and voice, is of critical importance to the guest. The quality of these services shapes their opinion of a facility and ultimately affect their decision to do business with one property or another. Wi-Fi networks and reliable Wi-Fi calling, or LTE available networks have become not just a need but a necessity in these deployments and the quality of those offerings to tenants and guests have a direct effect on the properties' bottom line. Ruckus Networks has developed a Calling Ecosystem that can support not only the new CBRS LTE calling but a Carrier grade Wi-Fi calling offering in the same footprint. This provides Carrier grade Voice coverage for existing Voice devices as well as supporting the new CBRS and 5G devices coming into the market.

Where Wi-Fi Calling Fits

Wi-Fi calling has several possible uses and can enhance the client experience anywhere it is used.

- MDU deployments benefit greatly from Ruckus Wi-Fi calling's ability to ensure that each tenant or guest has LTE grade service for their devices. Especially in MDU the ability to attract new and retain current tenants is a real concern. Ruckus Wi-Fi calling combined with a best in class Ruckus wired and wireless network help MDU operators and MSPs to maintain profitability and create stable network that is very attractive when presenting to a potential tenant.

- Hospitality deployments are another place Ruckus Wi-Fi calling can help. Many buildings are difficult to cover due to stringent building standards, LTE coverage from the outside can be very difficult and DAS systems are complicated and expensive to deploy. With Ruckus Wi-Fi calling an existing Ruckus Wi-Fi deployment can be easily optimized for a carrier grade calling experience by enabling a feature that is already available. This gives a better overall guest experience in a extremely competitive field where business travelers rely on their guest room as their mobile office.

- Any deployment that Ruckus Wi-Fi has been or will be deployed that needs stable LTE/carrier grade voice capability.

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LTE Problems

Many properties have many problems with providing quality voice services to their occupants and guests. These range from being in a remote area with no cell coverage to structural issues impeding available LTE signals. Wi-Fi calling has been the go-to solution for most of these problems but is still plagued with intermittent dropped calls and low voice quality. The Ruckus Wi-Fi calling feature solves these issues wherever Ruckus Wi-Fi systems are deployed.

e-Glass

High Floor

Remote Area

Interior Room

Low Floor/Urban Canyon

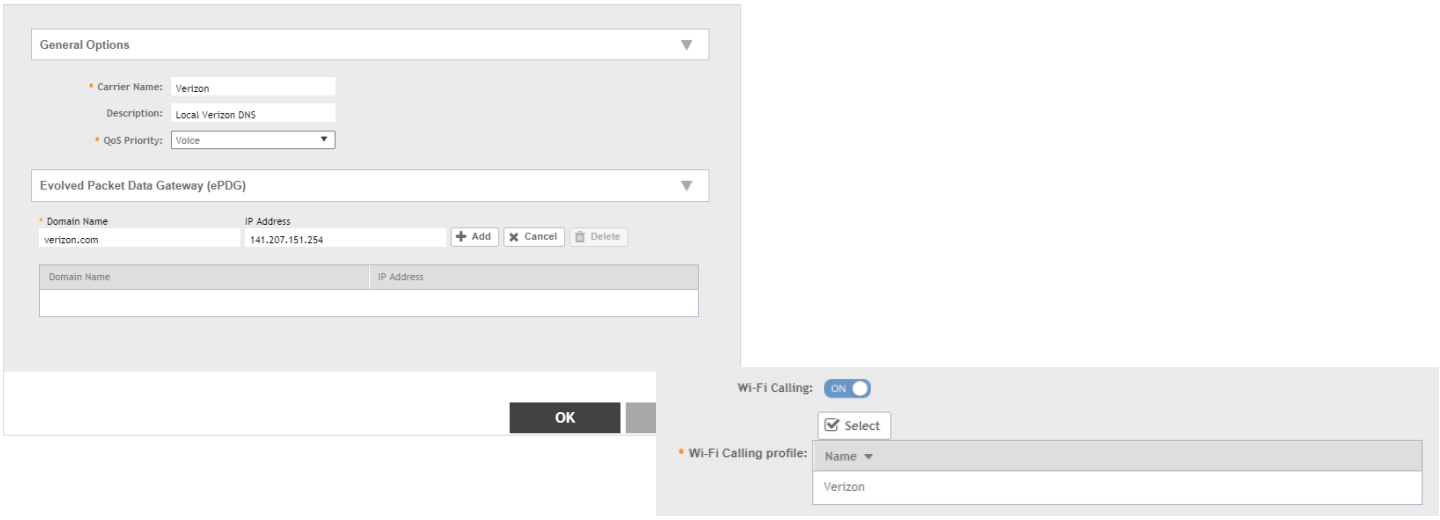
Nearby Events

Ruckus Wi-Fi Calling Solves Tough Connectivity Problems

Ruckus' proven performance and ease of use tackles Wi-Fi calling challenges

Wi-Fi Calling feature

- Existing Ruckus Wi-Fi infrastructure can be utilized with a simple Wi-Fi calling policy implementation on the SmartZone platform.
- Wi-Fi calls are tunneled to the carrier's Evolved Packet Data Gateway eliminating dropped calls when switching from Wi-Fi to LTE and vice versa.
- Multiple Carriers EPDGs can be supported on a single WLAN.



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HOW WI-FI CALLING WORKS

Ruckus W-Fi calling creates a voice ecosystem that is not only robust and best of class in reliability in service but also on the leading edge of the Voice over Wi-Fi standard.

In current Wi-Fi calling scenarios the client device connects to the local WLAN and a call is established with little problem, however when that device roams over to a cellular signal the call is dropped. This is due to the lack of visibility of the carrier system to the client traffic prior to establishing an LTE link. Ruckus enables the ability to identify a Voice Wi-Fi call through Ruckus QOS and establish a tunneled connection to the local carrier Packet data Gateway. These settings allow the roaming from the Wi-Fi initiated call to an LTE connection without drops or interruptions. The Data flow can be seen in the two Network Diagrams below. The connectivity to the carrier is maintained just as it is in standard LTE networks by using the Ruckus Wi-Fi calling feature enabled on any WLAN deployed on a Ruckus SmartZone managed system.

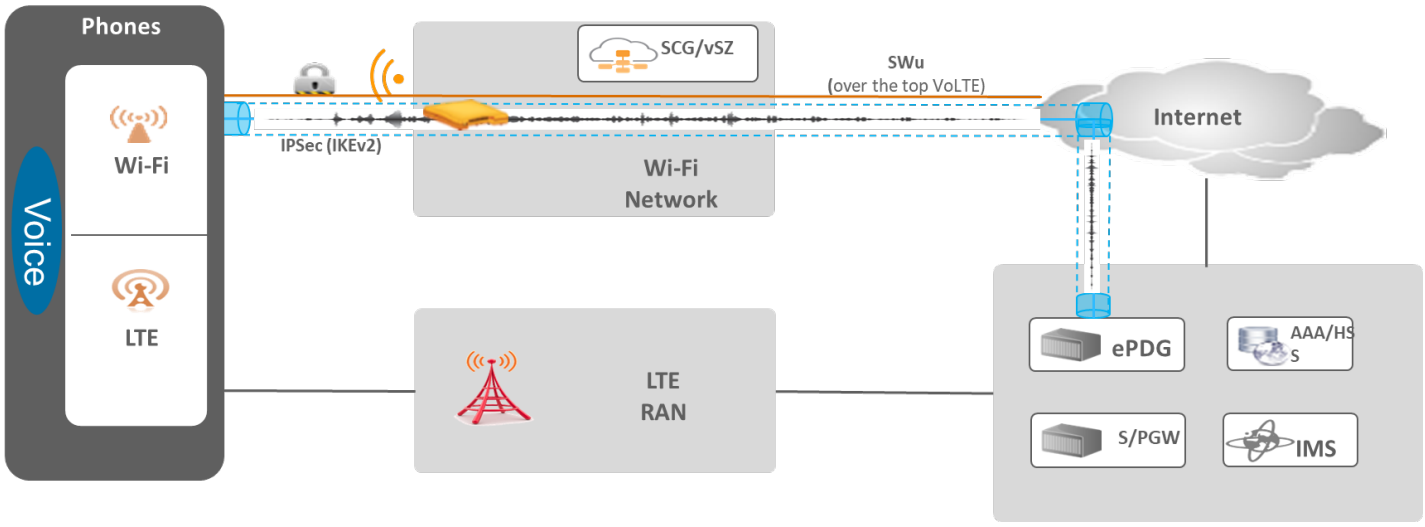

Figure 1. Network Diagram

SUMMARY

Ruckus Wi-Fi and wired networks provide a best in class grade of network connectivity. Combining superior Wi-Fi and switching along with the Ruckus Wi-Fi calling feature creates an ecosystem that greatly enhances the end user experience. In the world of Hospitality and MDU/MXU deployments the ability to simply get online is not enough to keep current guest/tenants or attract new ones, operators are continuously pressured to provide networks that are as good or better than a home of home office network. The ability to have not only reliable data but also carrier grade voice communication on the same platform is becoming more and more of a challenge and a superior connectivity experience can be the differentiator between someone returning to a hotel or remaining in or signing a new tenant contract in an apartment. With emerging LTE voice technologies some legacy phones may be incompatible with newer standards, Ruckus Wi-Fi calling will ensure the quality and legacy support needed by our partners for years to come.

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About Ruckus Networks

Ruckus Networks enables organizations of all sizes to deliver great connectivity experiences. Ruckus delivers secure access networks to delight users while easing the IT burden, affordably. Organizations turn to Ruckus to make their networks simpler to manage and to better meet their users' expectations. For more information, visit www.ruckuswireless.com.

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