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RUCKUS®



Solution Overview

Bumbee Labs: Location Based Services

Table of Contents

OVERVIEW	3
Bumbee Labs	3
Ruckus and Bumbee together	4
CONCLUSION	4

Overview

Ubiquitous network connectivity has evolved from what was a nice-to-have to a *must-have* amenity in virtually everyone's life around the globe. These days we are constantly connected. Whether in our homes or out in public, most people have a device of some type in their hands or close by 24 hours a day.

This increase in reliance on connectivity has not only changed our lives; it has changed the way we deploy and manage that connectivity. Cloud managed networks and analytics engines are increasingly the go-to solution for network managers around the globe. The ability to manage and monitor network devices, users, and user data from anywhere at any time has given operators an unprecedented level of flexibility.

With all the new tools and flexibility comes more demand. Having all of this data at our fingertips has fed the demand for tools to provide a better experience and give network operators the ability to adjust and optimize for client use trends. This has also made data collection and trending tools a commodity that can monetize that data in many areas, especially retail and mixed-use retail spaces such as public venues.

This document will cover how Ruckus Networks and Bumbee Labs have partnered together to address these new network demands.

Bumbee Labs

Bumbee Labs was formed in 2012 with the charter of collecting anonymous client data in retail space for large retailers. The company has evolved a great deal since then.

The Bumbee Labs system is a cloud managed location-based services (LBS) system that can accurately track client footfall in many spaces including retail, transportation hubs, offices, hotels, large public venues such as city centers and many others.

This data is sought after by small- and large-scale businesses as well as city planners, as it allows them to view traffic trends and understand client behavior. Bumbee Labs allow business operators to identify from where visitors enter and exit, through which zones and areas visitors journey, and how long visitors spend in an area. The gathered data can be used, for example; to evaluate and optimize staff and delivery schedules, it can be used to predict the need for maintenance, and it can be used for alerting operators when there is a surge of visitors. Put simply, the data allows operators and retailers to offer a better experience to their visitors, which helps drive return visits to the venue.

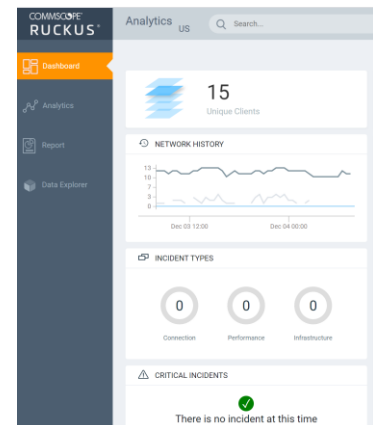
The Bumbee system can be used with an existing Ruckus network or a new deployment to collect and pass the data back to their cloud-based analytic system. This data analysis is available for large venues like malls or down to the individual shop owners.

Bumbee Labs is certified with the Swedish Data Inspection authority and is GDPR compliant, these are the European gold standard in client data and privacy protection.



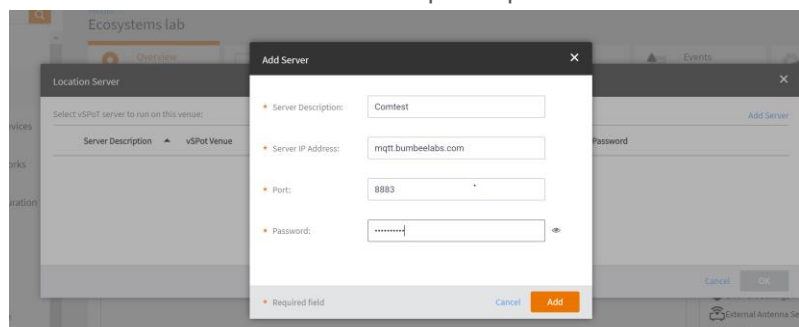
Ruckus and Bumbee together

Ruckus Networks has long been a leader in cloud based wired and wireless networks with millions of APs and switches deployed worldwide. Ruckus Cloud has onboard Ruckus Analytics using machine learning and AI to help operators not only create a great network but keep making that network better. Combined with Ruckus cloud-based switches and APs and our patented antenna technology, the Ruckus/Bumbee ecosystem gives operators a fully cloud based system that is easily managed from anywhere at any time.



A Ruckus Cloud network can be configured to work with Bumbee with three simple steps.

1. Pick the venue you want to use the Bumbee system.
2. Create the LBS/Bumbee server profile.
3. Turn on LBS in the selected venue.



How could we make things any simpler to get an operator going?

Conclusion

Creating great connectivity is what Ruckus Networks has been doing since 2004 and Ruckus Cloud is the very embodiment of network simplicity. Ruckus has created a cloud based wired and wireless system that is easy to set up and maintain, is intelligent, and evolving for the future. It makes sense that Ruckus and Bumbee Labs go hand in hand. Bumbee gives operators the tools to make networks better and puts the data in the hands of the operators in large complex networks down to individual shop owners. The combined solution gives operators an ecosystem that not only provides great connectivity but gives a clear view of how to maintain and make the client experience better for the present and the future.

Ruckus solutions are part of CommScope's comprehensive portfolio for Enterprise environments (indoor and outdoor).

We encourage you to visit commscope.com to learn more about:

- Ruckus Wi-Fi Access Points
- Ruckus ICX switches
- SYSTIMAX and NETCONNECT: Structured cabling solutions (copper and fiber)
- imVision: Automated Infrastructure Management
- Era and OneCell in-building cellular solutions
- Our extensive experience about supporting PoE and IoT

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