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RUCKUS®



Solution Overview

Ruckus and TraknProtect: Tracking and Alert Services
February 2020

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Overview

IoT networks and devices have emerged as a problem-solving tool as well as a way to differentiate and delight customers with a better than home experience. IoT devices can track assets, employees, and connect environmental controls back to a central control point at a given facility. IoT can also be used to provide better experiences such as faster room pick up services and door locks that can be operated with the guest's phone instead of a clunky key card.

IoT has been both a blessing and a complication in that each IoT device type requires a separate hub to provide network access. These devices are managed by a myriad of separate vendor specific management suites that operate as standalone silos. TraknProtect IoT and the Ruckus IoT Suite, combined with SmartZone controllers, Ruckus IoT ready access points, and Ruckus ICX switches provide a centralized and secure system for not only network access but management of TraknProtect IoT networks.

Room Tray Tracking

Room service is a part of every hotel experience; the luxury of having a meal delivered directly to your room is a must have in all hospitality deployments. The retrieval of these trays can be challenging. When trays are in the hallways, they are unsightly and can cause a tripping hazard. Until now a staff member must roam from floor to floor to retrieve each tray. With the Ruckus IoT Suite and TraknProtect's room tray tracking tags, the trays can trigger events when they are placed in the hallway and provide the location of that tray to make recovering them a much easier task.

- Improve guest environments with clean and clear hallways and public service areas
- Improve productivity with automatic work orders via your service optimization app. Also reduce labor costs and the staff downtime required to manually check tray locations
- Improve service times and use data analytics to track time to guest and time to retrieve used room trays

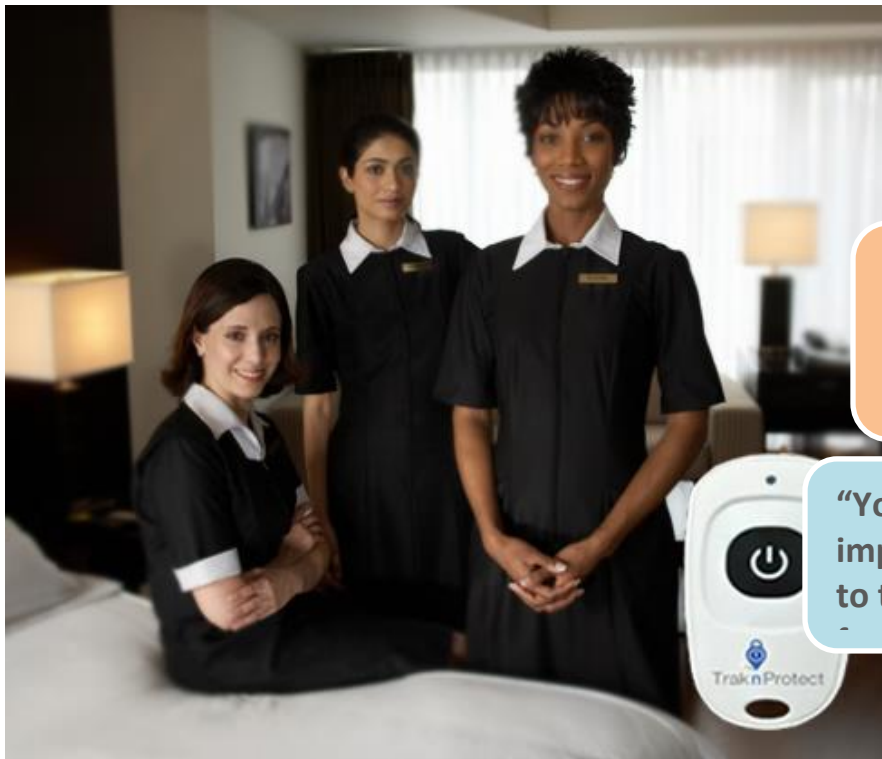


Staff Safety

Staff safety and tracking have become industry requirements for all hospitality operators. The ability to provide quick access to help for staff in case of an emergency is paramount in any staff safety IoT deployment. The Ruckus IoT Suite combined with TraknProtect's safety buttons provides a secure and manageable staff safety solution that provides actionable data when it is needed most.

Combined with TraknProtect the Ruckus IoT Suite can provide:

- Real-time alerts when staff trigger for help
- Staff locations before and after an alert is triggered
- A hospitality-focused platform to protect your staff and provide a safer work environment
- False alarm and safety call tracking to provide reports on work environment in order to optimize security



“It’s an excellent idea. Tremendous idea that they carry an alert device that they can keep with them and it should alert a central station. ... It should have

“You can never underestimate the importance of empowering employees to take appropriate steps where they

Inventory Tracking

One of the easiest ways to keep customers coming back is by providing an enjoyable and memorable experience. The more satisfied a guest is with their stay at hotel, the more likely they are to choose that establishment over a competitor for future accommodation needs. Traditional ways of achieving customer satisfaction and attachment have included loyalty programs and exemplary customer service. Asset tracking can contribute to the overall experience through increased guest satisfaction and a personalized, better than home experience.

The Ruckus IoT Suite and TraknProtect's inventory tracking tags can not only enhance things like guest experiences in a hotel but can assist in streamlining facilities management. Tool kits, fire extinguishers, and luggage carts are just some of the assets that can be tracked.

- Improve staff productivity and inventory utilization by always knowing the exact location of hotel equipment and ancillary guest items.
- Reduce asset down-time with the benefit of real time location on all your inventory.
- Make better purchasing decisions with analytics-based inventory data always at your fingertips.



Vendor tracking

In every hospitality facility there will be the need to allow outside vendors limited access to facility resources. While the facility managers want to provide adequate access, they also need to maintain site security and be able to track and manage any vendors on site. With the Ruckus IoT Suite and TraknProtect's vendor tracking tags each facility has the ability to allow vendors the appropriate level of access and track where they are in real time and record events during the workday in case of any incidents that arise.

- Heatmaps: Enabling historical movement & analytics
- Safety: Restrict vendor access to specified areas and provide better peace of mind for guests
- Timesheet: Verifiable location & time stamps
- Insights: Smarter labor management and improved cost control



Ruckus IoT Suite

The Ruckus IoT Suite enables operators to manage and view their IoT deployments from a single point. Ruckus IoT ready APs eliminate the need for installation of vendor specific IoT bridges by using the access points to transport the beacon information to the Ruckus IoT controller and on to the specific IoT partner's services engine, on or off site. When leveraged with Ruckus's API integration, this allows seamless management and integration of multiple IoT partner's devices and services on to a single platform.

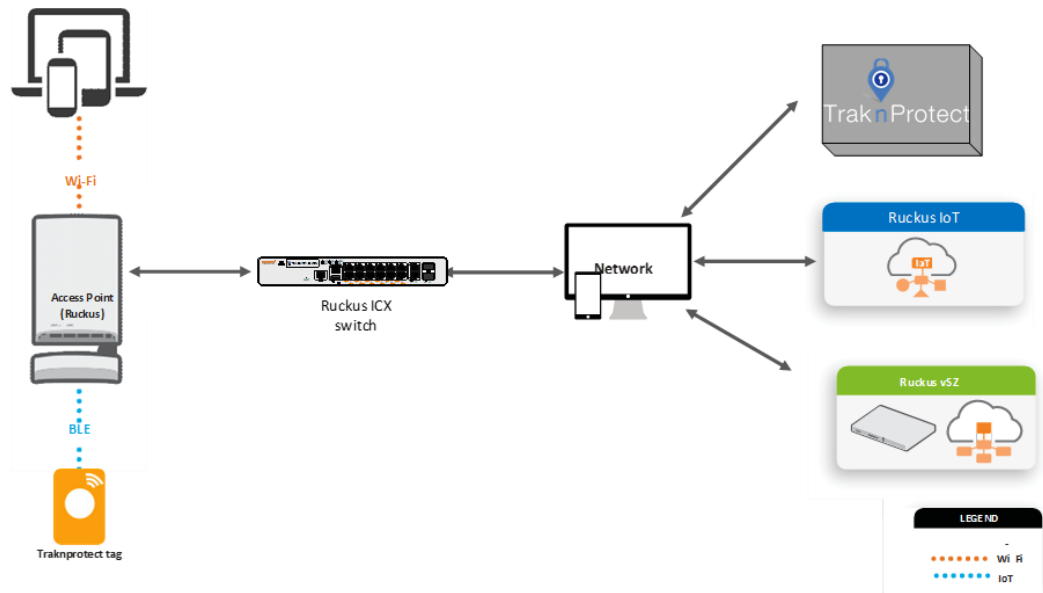


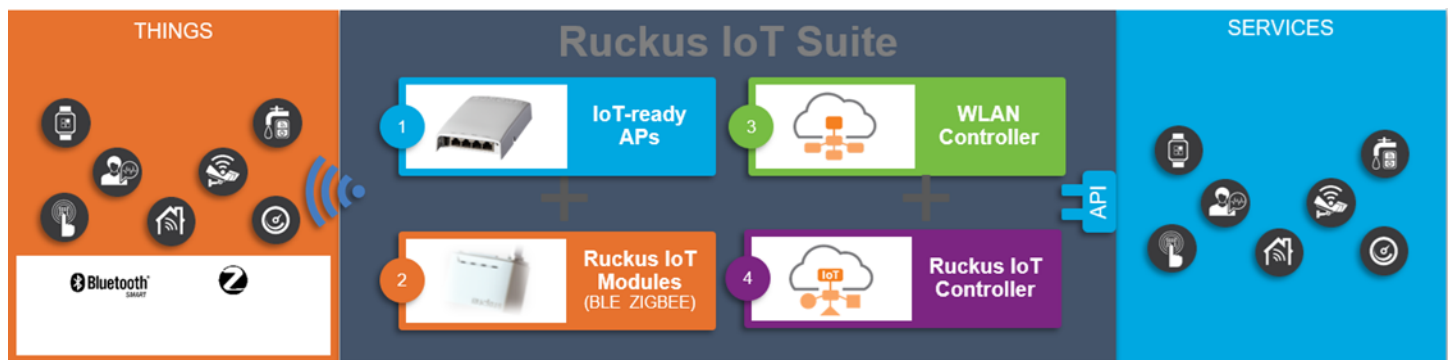
FIGURE 1: EXAMPLE TOPOLOGY WITH RUCKUS IoT SUITE

- **Beacons and Tags Collect:**
 - location data,
 - sensor data
 - event data (triggered with a press of a button)
- **Access Point**
 - Collects Beacons Data Using BLE/Zigbee Interface
 - IP'fies using MQTT protocol, send data to MQTT Broker (IoT Controller)
 - Provides Secure Transport, MQTT(s)
- **IoT Controller**
 - Aggregates MQTT data from Access Points
 - On premise or Cloud API Server
 - Provide Secure Transport, HTTP(s)
- **IoT Service Platform**
 - Digital Workflow Management
 - Asset Location Visibility
 - Condition Monitoring
 - Alert Engine & Incident Handling
 - Analytics Dashboard (e.g. Heatmaps, Actionable Insights) & Dynamic Reports
 - Predictive Maintenance
- **IoT Server**
 - Manages Devices: Beacon & Tags (DM)
 - Collects from IoT Controller
 - Decapsulates data to extract Beacons Content

Summary

More people travel across the world today than at any other time in human history. They travel extensively, not only for work, but for pleasure as well. This increase in the amount of travel worldwide has driven a significant increase in the number of high-end or luxury accommodations. The goal of these types of properties is to provide a “better than home” experience. Hospitality operators strive to know what the customer needs before they ask. With the guest being very much in the forefront of any operator’s mind, there is also the requirement for safety for not only the guest and facility but staff as well. This, combined with facility requirements in environmental monitoring and security controls, creates a daunting balance of priorities and resources for any operator.

The Ruckus ecosystem already provides best in class Wi-Fi and switching systems in hospitality. When this is combined with the Ruckus IoT Suite and IoT ecosystem partners, Ruckus can provide a secure and manageable hospitality IoT environment with the flexibility of managing multi-vendor and multi technology IoT devices from a single Ruckus pane of glass.



There are many use cases that IoT Suite lends itself towards. Smart operators are realizing the power of IoT solves both age-old problems of guest satisfaction and loyalty as well as newer challenges arising from more tech-savvy “digital natives” and the ever-escalating drive to differentiate and excel.

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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