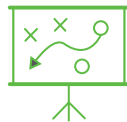


BRONKEN'S DISTRIBUTING

RUCKUS Networks helps warehouse improve efficiency with new wireless network.



Since 1977, Bronken's Distributing has been a captain of industry in the wine and beer industry. This Bozeman wholesaler serves seven counties across southwest Montana, representing dozens of wineries and breweries. Today, with more than 6,500 unique SKUs under one roof, this local institution is Big Sky country's leader for alcoholic refreshments.



Requirements

- Complete coverage throughout warehouse and offices
- Reliable real-time connections
- Ample capacity for internet of things (IoT) automation

Solution

- R650 Wi-Fi 6 access points (APs)
- RUCKUS® 8200 switches
- RUCKUS Virtual SmartZone™

Key outcomes

- Faster order fulfillments
- Improved order accuracy
- Higher operations efficiency

BACKGROUND

Originally located in downtown Bozeman adjacent to local breweries, Bronken's Distributing was experiencing a good problem: too much work. They were having trouble keeping up with the increasing number of orders, in addition to finding room for the myriad new product offerings. In a few short years, their operations grew from one warehouse to several, making inventory tracking and order fulfillment a bit chaotic.

"We were very disjointed in how we went about our business," admits Derek Bronken, general manager at Bronken's Distributing. "In our old facility, it was paper pick sheets that were physically printed out and then checked off as people were selecting and loading orders. It was very inefficient, to put it very mildly."

The only way to address these growing pains was to seek a new facility. In 2023, Bronken built a new warehouse to accommodate their thriving business. The new building would consolidate roughly 24,000 square feet of warehousing into a facility of just over 72,000 square feet along with 32-foot-tall ceilings.



Locating everything under one roof would make order fulfillment more convenient, but a new operating system would also need to be adopted. To increase efficiencies, Bronken's decided to depend more heavily on technology. Processing and tracking inventory and customer orders would now go fully digital. To modernize their new warehouse, Bronken tapped their premier technology provider, Pine Cove Consulting, which, in turn, selected RUCKUS Networks for wireless technology solutions.

Banking on trusted network solutions

The size of this new warehouse meant Pine Cove would need to carefully consider how to deploy a number of APs in order to consistently deliver coverage, capacity and speed. Since the new operations would rely heavily on employees using wireless devices, they needed to avoid dead zones, interference and outages as much as

possible as they would adversely affect productivity and, ultimately, profits.

Pine Cove is no stranger to deploying networks in crowded, active, contained environments. They knew that only the right kinds of network solutions would create desired wireless network. "We do a lot with school districts," said Michael Morrison, account manager at Pine Cove. "Those are always pretty high-density areas. We've [also] done deployments [using competitor solutions] at some mom-and-pop sort of places. But anything that actually has some technical challenges or high-density areas, it's always RUCKUS."

"We wanted to help make sure that they won't have any network issues," said Morrison. "I mean, one of the main things is just overall reliability, right? We have tried some other brands in the past. [But] for a deployment like this, I don't think we would have even considered any other solution aside from RUCKUS. It's really a no-brainer for us."

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Account Manager, Pine Cove Consulting

Custom design the right network

To get the network design just right, Pine Cove visited the new facility a number of times. "We did some site walks to make sure everything was matching up with what we were seeing on those floor plans," said Morrison. "A flat piece of paper looks a little different than when you're actually in the space."

When building this wireless network, the sheer size—coupled with building materials that could interfere with Wi-Fi® signals—proved to be the most challenging. “Being able to touch every square inch of that floor with 100% connectivity and signal with a lot of concrete and a lot of metal steel racking obscuring, that was something that I know the technical team had to overcome,” said Bronken.

“The shelving was a major concern because of all the metal shelves blocked with a lot of metal cans,” conceded Morrison. “[But] one of the other big concerns we were focused on was the logistics of people moving throughout that facility with those iPads, making sure those signals were staying connected and not dropping around.”

By strategically placing RUCKUS Wi-Fi 6 APs on both ceilings and walls, the wireless network’s signal strength flourished despite metallic shelving, aluminum cans and active order pickers. One major reason stems from the RUCKUS patented smart antenna system.

RUCKUS patented BeamFlex® technology

allows the APs to adapt the antenna pattern based on where the signal is located and what obstacles lie between it. Using a “spotlight approach” to home in on a transmission instead of the “floodlight approach” (which competitors use), the network is able to connect to more robust signals without creating interference to neighboring devices on the warehouse floor.

Delivering clear signals in keg cooler fortress

Another challenge on the warehouse floor was the keg cooler. As a beer distributor, Bronken’s also stores cold metal kegs stacked in a refrigerated room with walls having 18 inches of insulation. For the average network solution, this would cause some headaches. But for RUCKUS Networks solutions, communications were unaffected.

Because the IT closet was located next to the keg room, in the center of the warehouse, delivering strong transmissions was never a problem. By deploying an AP close by, Pine Cove avoided having to breach the integrity of the cold room. “There’s one right on

the outside and above it,” said Morrison.

“We have an integrated 8,400-square-foot keg cooler that is 100% refrigerated within our superstructure. We’ve never experienced an issue in that room.”

Derek Bronken
General Manager, Bronken’s
Distributing

“We have an integrated 8,400-square-foot keg cooler that is 100% refrigerated within our superstructure,” said Bronken. “Being able to penetrate that [structure], I’m sure, was another issue for the engineering team. [But] the fact that I never heard about it specifically means that they were able to negotiate it in a relatively successful manner.” Bronken adds, “We’ve never experienced an issue in that room.”

Stretching the network to the max

Beside communicating with 30-some-odd tablets navigating the massive



floor—receiving up-to-the-minute instructions for orders and broadcasting real-time tracking locations for each device—the wireless network was also leveraged to accommodate IoT technology.

“The first thing they do, of course, is log on to the network. They’re all adding traffic to that network. [But] I have never experienced any issue with bandwidth.”

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From access key cards and security cameras to environmental sensors, Bronken’s wanted to capitalize on their new network to boost their surveillance system and the facility’s efficiency. “[C]oming from where we were, we [wanted] a very high emphasis on access control as well as surveillance,” said Bronken. “So, the network also handles all of our lighting and security. All of our lighting inside and out of the office and warehouse areas and a lot of areas on the exterior, for that matter, are all controlled on the network.”

In addition to the R650 APs, Pine Cove also deployed RUCKUS 8200 series switches to power the network. By coupling these RUCKUS solutions, Pine Cove was able to achieve the coverage, capacity and speed needed for all the warehouse floor devices, all the IoT technology, as well as all communications in the on-site offices.

In addition to a busy warehouse floor, the corporate offices also needed to have impeccable connectivity—especially for new business meetings. “When they come in, you know they may bring a

team of half dozen [executives] and we’ll sit down in the war room,” said Bronken. “The first thing they do, of course, is log on to the network. They’re all adding traffic to that network. [But] I have never experienced any issue with bandwidth.”

Raising the bar for alcoholic beverage distribution

Comparing their previous downtown location to operations at the new facility, it’s night and day. “We’ve gotten better with our efficiencies,” said Bronken. “We’ve gone from 75-85% order accuracy — on really a good day—to, now, a bad day for us is 98% accuracy.”

Bronken explains why order accuracy is so crucial to their bottom line: “Our business, being a consumable, if we miss a product being delivered and placed on...a convenience store shelf, we do not have the opportunity then to make that order correct for another 24 hours at best, typically 48.”

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The outcome of their new warehouse success can be directly tied to their RUCKUS wireless network. “Everything outside of the actual equipment used to pick and load in inventory is connected. Workers log into the WMS software to start their day. From there, they have all of their orders on their screen. They’re directed to bin locations. They can be tracked in real time in terms of where they’re moving about the warehouse.”

Being able to easily manage product distribution through their network allows Bronken’s to duplicate their efficiencies across multiple shifts. “Between receiving and fulfillment, we’re running three shifts daily now,” said Bronken. “We are plus or minus a 20-hour operation where we are open and operating internally. And that entire time, every minute of it, we rely on being online not only through our internal wireless network but also connected to the outside world through ISP.”

Knowing that orders are being filled in a timely and effective manner also allows Derek Bronken to become more proactive on how to best configure the warehouse floor. “The entire warehouse is mapped out by product sales velocity, maximizing the picking routes, so to speak, that the employees are taking to fulfill orders,” explains Bronken. But as sales change, the warehouse map needs to evolve as well. “We’re reorganizing bin and slot locations to the ever-changing sales velocity of product lines,” said Bronken. “[B]eing able to better route the pick lanes, those are things that we never had the luxury of looking for and actually acting progressively because we were always in reaction mode.”

Scaling for future success

Being that this distributor continues to thrive in a growing market, Bronken is also anticipating future expansions in their Bozeman warehouse. “Our structure is modular. So, in terms of scaling and looking ahead to the next 50 years, we have roughly 250 linear feet on the north side of our lot in which we can quite literally knock our north wall down, add enough linear feet to fill the rest of our lot, and then put the wall back up.”

“It’s not a matter of if Bozeman remains on the straight line of growth that it’s

been on," said Bronken. "It's a matter of when. So, that's why we chose this construction method and, obviously, when that happens, we'll need to scale our network to be in line with that."

Fortunately, by choosing RUCKUS and Pine Cove, Bronken's flexible Wi-Fi network can easily expand in the future. "They will probably have to add an extra switch and some additional APs just for the distance to cover," said Morrison. "We just run a couple cables, plug them

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in. We're good to go in the existing network infrastructure we have. I don't think that's going to cause any load issues on the system."

Looking back, Bronken is pleased with their investment in their new property

and a new network that's paying dividends. "We're light years ahead of where we were just 18 short months ago," said Bronken. "It's really hard to even comprehend where we came from and where we all cut our teeth. It's pretty incredible."

To manage this wireless network, Pine Cove has opted for RUCKUS Virtual SmartZone (vSZ), an NFV-based and cloud-ready WLAN controller. Able to support up to 30,000 APs, 3,750 switches and 450,000 clients per cluster, vSZ is ideal for growing enterprises. But more importantly, it's simple to use. "The user interface, we just find it to be a lot easier for our team to utilize," said Morrison. "And for our customers that want to manage it themselves, it's really seamless."

**Everything. Everywhere.
All at once.**

"To use a cliché, we're moving at the speed of business," Bronken said. "And we're carrying out literally millions of tasks a day in terms of sales individuals on the streets transmitting to our facility, those internally slotting freight and picking orders. We live and die by our connectivity and our Wi-Fi signals."

"Every second that we need to wait for next connectivity or for a task or action to process within the system is a minute that I'm paying an employee using equipment and not providing my customer what they expect. That's just unacceptable in 2024. The Achilles heel cannot be technology; it needs to be our weapon and we need to use it to our advantage."

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In the end, Bronken's has found the perfect pairing with RUCKUS and Pine Cove. "I'm very naive in terms of what it takes to actually make my business move technologically, but I expect perfection," said Bronken. "All of the inner workings—of not only our network and systems, but also the team at Pine Cove—has ensured that they hear from me very infrequently. Again, this is something that I try not to think about and luckily don't have to."

About RUCKUS Networks

RUCKUS Networks designs and builds truly purpose-driven network infrastructure that meets the most demanding requirements of all kinds of enterprise environments. Together with our dedicated go-to-market partners, we enable customers to deliver exceptional network experiences, making RUCKUS Networks one of the most trusted brands in the business—a loyal companion ready to help get the job done. RUCKUS Networks is backed by the corporate resources of CommScope, which powers many of the world's most advanced networks.

www.ruckusnetworks.com

Visit our website or contact your local RUCKUS representative for more information.

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