COMMSCOPE®

RUCKUS®

Chesapeake Energy Arena

Arena scores revenue-generating, crowd-pleasing services with CommScope RUCKUS® infrastructure

CUSTOMER

Chesapeake Energy Arena

COUNTRY

United States

OVERVIEW

The Chesapeake Energy Arena in Oklahoma is a popular venue for events, from concerts to bull riding competitions. Its resident sports team, basketball's Oklahoma City Thunder, is known for its commitment to giving fans an outstanding in-game experience. But stakeholders like the Thunder were frustrated with the arena's limited, unreliable network infrastructure. The IT manager for the stadium's management company chose RUCKUS high-performance Wi-Fi and switches to enable a big jump in supporting new services and monetization opportunities.

CHALLENGES

- The limitations of both the wired and wireless networks made it impossible to support high-density, high-bandwidth demands

- Applications like point of sales (POS) were constrained by an unreliable wired network

- Existing Wi-Fi limited support for mobile applications and the ability to collect demographic data and monetize the network

SOLUTION

- 400 indoor and outdoor 802.11ac access points (APs)

- 100 ICX core, aggregation and access switches

- SmartZone controllers

BENEFITS

- RUCKUS wireless and wired network handles terabytes of data at every event, enabling every arena stakeholder to make the connections they want with anyone from anywhere

- SMG can now monetize the Wi-Fi for back-of-house use and new outbound marketing campaigns

- The network supports new services for vendors and guests, including Bypass POS and Ticketmaster Presence

Poor wireless and wired networks limit connections with fans

On any given day, you might find the floor of the Chesapeake Energy Arena covered in two feet of dirt (for professional bull riding), or a concert stage (for top music artists like Carrie Underwood and Paul McCartney), or a hard-wood court (for the resident Oklahoma City Thunder basketball team).

The 581,000-square-foot stadium is located in downtown Oklahoma City, Oklahoma. The arena has a capacity of approximately 19,000. Christopher Nelson is the Manager, Information Technology for SMG OKC, which manages the arena and the 100,000-sq.-ft. convention center across the street for the City of Oklahoma City. When Nelson

joined five years ago, the arena had Aruba access points (APs) at gates for ticket scanning. There was no Wi-Fi for fans or staff. They had a Cisco wired network, but the capacity of the Cisco switches was too low and support costs too high.

Many companies require network services in the arena, including the Thunder's management, the food and beverage distributors, and Ticketmaster. "Our stakeholders had so many constraints and limitations because we didn't have the right infrastructure in place," says Nelson. "We had to get ahead of the game."

Phase one was replacing the wired network. Nelson worked with Rectitude 369, LLC, a national networking consulting company based in Houston, TX, to replace all of the Cisco switches with RUCKUS. They installed ICX switches at the core, distribution and access layers. "We went from a 1 GB backbone to 20 GB with scalability up to 160 GB," says Nelson. "Network performance went through the roof. The stability was rock solid. But, even with all that power, the network was incredibly easy to manage. CommScope's RUCKUS solutions were simply in a different league from what we had before."

Phase two was an arena-wide Wi-Fi network. They evaluated vendors based on price, security, ease of management, and other requirements. But the ultimate test was actually installing APs in the arena to see what each vendor's equipment could

handle. "Our seats are retractable up to the 200th row. Instead of mounting APs behind the seats, we have to deploy them in the trusses and catwalks at the top of the arena," says Nelson. "Only RUCKUS could span from the top of the arena to the floor level, a distance of almost 100 feet. My goal was to create a Wi-Fi cloud around the arena—the perfect blanket of coverage. I wasn't even sure it was possible, but we did it with RUCKUS Wi-Fi."

Nelson says he prefers to standardize vendors when possible, "but only if you're getting best-of-breed solutions in each area. We had that with RUCKUS. We evaluated switching and wireless technology independently, and RUCKUS was the best choice in both areas."

"In order to future-proof our network, we went with the latest 802.11ac access points paired with the multigigabit switches," said Nelson. "This allows us to take advantage of the Wi-Fi speeds and positions us to deliver 4K video streaming and technologies like virtual reality in the future."

Rectitude 369, LLC, based the design of the Chesapeake Energy Arena on the Golden 1 Center in Sacramento, CA, which also uses RUCKUS access points (APs) and switches. A core of the design is silos. The first silo is the corporate network. The second silo is the Wi-Fi network. The third silo, which will be deployed next, is for streaming audio and video. There are about 70 VLANs securing different traffic segments, like point-of-sale (POS) transactions, security cameras, multi-cast traffic and so on. "It's a very streamlined design that gives us a lot of visibility and control. In addition, both the city and the federal government have stringent security requirements. We've been able to ensure compliance—and even go beyond what's required—with RUCKUS," says Nelson. "It's easy to use and easy to administer."

"Fans are obviously happier and so are we. We asked for comprehensive connectivity and we got it. We've got reliable connectivity in every part of the arena, out to the gates, the parking areas and Thunder Alley—everywhere we hoped."

Tyler Lane
Director of Technology, Oklahoma City Thunder

THE THUNDER COURT FANS WITH NEW WI-FI-ENABLED SERVICES

The Oklahoma City Thunder consistently ranks in the top five for in-game experience of all the National Basketball Association teams. "Keeping those metrics high and our fans happy is a top priority," says Tyler Lane, Director of Technology for the Thunder. "But, in order to enhance the fan experience, we needed reliable, high-performance Wi-Fi inside and outside Chesapeake Energy Arena. We needed end-to-end connectivity, which would give us the ability to engage fans whether they're walking to the arena, in their seats or visiting concession stands. We also wanted better coverage in Thunder Alley, an area adjacent to the arena where we hold family-friendly events prior to games."

The Thunder has a mobile app that's a major channel for communications and engagement with fans. Once the RUCKUS Wi-Fi was deployed, Lane says there's been a notable increase in fan engagement using the Thunder app. There has also been a welcome drop in complaints about connections and slow speeds. "Fans are obviously happier and so are we. We asked for comprehensive connectivity and we got it. We now have reliable connectivity in every part of the arena, from Thunder Alley to clubs and restaurants to the seats.

Lane says the RUCKUS network has increased confidence in adding features they know fans will love, like interactive in-game promotions, scanning loyalty cards to earn points at concession stands, and increased fan engagement on social media while watching the game. "Now that we have this network, we're just getting warmed up."

TM PRESENCE, BYPASS POS AND MORE MONETIZATION OPPORTUNITIES

Before the free guest Wi-Fi was available, visitors had to use a cellular provider. But there was no way for SMG to capture and monetize that traffic. With the free guest Wi-Fi, SMG and the Thunder management, in a co-op effort, have created a captive portal. SMG can now collect demographic information for outbound marketing and promotions.

For the first time, SMG can sell Wi-Fi for back of house use. "The Aruba Wi-Fi wasn't reliable enough for us to treat as a value-ended capability. Now our Wi-Fi is a marketable, revenue-generating service."

Previously, reliability problems affected POS connections and there was no Wi-Fi in the arena to support mobile POS terminals. Today there are 330 wired and wireless tablets running Bypass POS. Ticketmaster also brought TM Presence to the arena. "We were actually one of the pilot sites, which wouldn't have been possible before we deployed RUCKUS," says Nelson. "Having digital ticketing gives us another source

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> **Chris Nelson**
> **Manager, Information Technology for SMG OKC**

of information to get closer to our visitors, as well as helping to eliminate ticket fraud."

"The guest Wi-Fi is handling terabytes of data during any given event," says Nelson. "And our wired network pulls an insane amount of data for all the video, streaming, ESPN, TNT and other networks who come here for games." The network, as Nelson hoped, will take them a long way in supporting new services. In the near future, Nelson plans to add Bluetooth beaconing support and location-based services to drive more traffic to vendors.

"Our experience with RUCKUS has been absolutely fantastic. We liked RUCKUS before, but this is the largest deployment we've ever done and the most ambitious in terms of our vision for the future. Chesapeake Energy Arena is the home of champions and remarkable performances. RUCKUS fits in perfectly here," says Nelson.
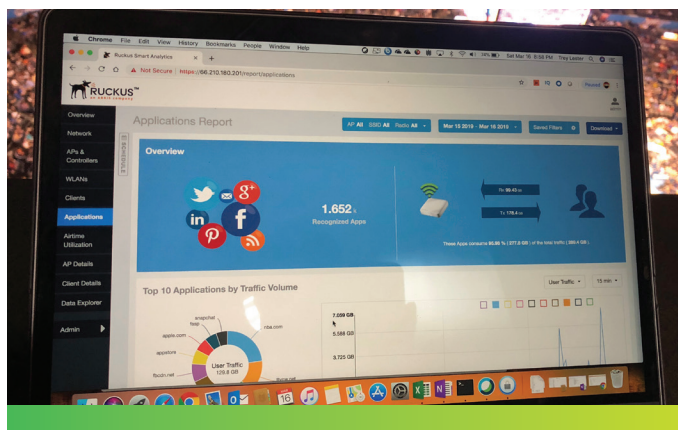
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