

Multi-Dwelling Units



Keeping Students Unplugged but Well Connected with ZoneFlex Smart Wireless LANs

Given their density, size and complexity, multi-family and student housing facilities are one of the most difficult environments to provide consistent and uniform Wi-Fi services. Just ask Pavlov Media.

A specialized provider of voice, data and digital entertainment services to multi-family housing, Pavlov Media (Pavlov) was tapped by Education Realty Trust to figure out a way to make Wi-Fi work better at Players Club apartment community in Statesboro, Georgia.

Players Club is a 31-building, 214 unit and 624 bed student housing community for college students. The existing Wi-Fi system, installed years ago, was beginning to become more of a problem than a benefit. Spotty coverage,

dropped connections and erratic performance were the top causes of headaches for students that rely heavily on use of the Internet.

"Providing a high-speed, consistent and reliable Wi-Fi service to students within such a large facility with so many variables was a huge challenge," said Scott P. Casey, VP of Information Technology at Education Realty Trust, Inc., owner of Players Club Student Apartments. "Our existing Wi-Fi system was so unstable I seriously considered converting the entire property to a hard wired solution which would have been costly."

Instead, Casey asked Pavlov to look into "smarter Wi-Fi" technology that could deal better with interference, range and performance problems, but still be easy to administer and centrally manage. "We really wanted a managed 802.11 system that could deliver more reliable signals farther with fewer access points," said Casey.

Players Club was among the first apartment communities to install Wi-Fi. Some 70 commercial-grade access points from Deliberant were installed across the property. A fiber ring around the perimeter of the property provided service to point-to-multipoint Motorola Canopy nodes used for trunk connections between buildings.

Over time, as Wi-Fi became more popular, the Wi-Fi network struggled to keep up. Hundreds of trouble calls each month indicated that interference caused slow performance and connection issues for many users. In addition, the Players Club complex was constructed with a significant amount of brick which inhibits Wi-Fi signal propagation. And because the access points weren't centrally managed, network administration was costly and cumbersome.

Pavlov needed a Wi-Fi system that could provide ubiquitous coverage throughout the property. However Ethernet cabling didn't exist in all the buildings so access points that could service a larger area were needed.



The Players Club is a 200+ two, three and four bedroom housing facility. Each of the 30 two-story buildings has seven units per building, 1,500 sq. ft. per unit.



COMPANY OVERVIEW

Located in Statesboro Georgia, Players Club is a 31-building, 214 unit/624 bed student housing community and one of the most popular student apartment communities in Georgia. Players Clubs is owned by Education Realty Trust, Inc. headquartered in Memphis, Tennessee, a self-administered, self-managed real estate investment trust that owns, develops and manages high-quality student housing facilities across the United States.

REQUIREMENTS

- Provide high speed and reliable Internet services to residents
- Deploy centrally-managed Wi-Fi environment to service over 600 residents in 214 apartments
- Eliminate any Wi-Fi dead spots
- Minimize the number of access points
- Reduce network administration and trouble calls, improve user experience
- Remote management

SOLUTION

- Redundant ZoneDirector 1050 Smart WLAN controllers
- 35 Ruckus ZoneFlex 2942 802.11g APs

BENEFITS

- Reduced Wi-Fi network administration
- Complete coverage with half the number of access points
- Reduced user trouble calls by a factor of ten
- Eliminated Wi-Fi coverage gaps/holes
- Improved user experience
- Entire system less than half the capital and operational cost of previous system
- Realized better Wi-Fi signal reach and reliability



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PLAYERS CLUB
STUDENT APARTMENTS

"I became so frustrated with our existing Wi-Fi solution that I considered switching to a hard wired solution, which ultimately would have been extremely expensive

Once we installed the Ruckus ZoneFlex wireless LAN, residents surveyed expressed their satisfaction with the system and were pleased with the reliability and high speed access to the Internet."

Scott Casey

VP of IT
Education Realty Trust, Inc.

Additionally, since IT support was offsite, the Wi-Fi system needed to be easy to administer and remotely manageable.

Finally, it was imperative that the Wi-Fi system deliver more consistent performance at further distances. As traffic demands grew, students wanted the network to support more sophisticated multimedia applications so data rates needed to remain high wherever they were.

After extensive comparisons, Pavlov decided on the Ruckus ZoneFlex Smart Wireless LAN system.

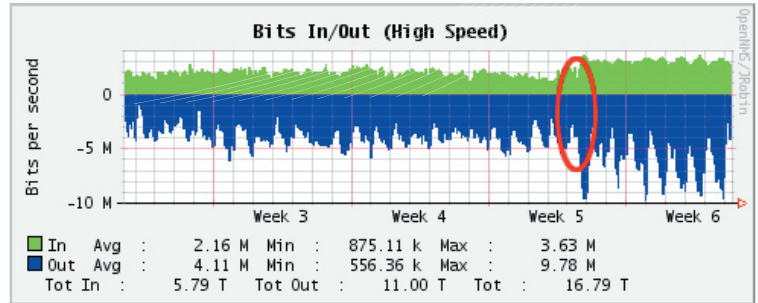
"The Ruckus ZoneFlex system caught our eye because it was developed as a long-range WLAN that could adapt automatically to environmental changes," said Robert Grosz, Executive Vice President of Pavlov.

Pavlov began by eliminating the 900Mhz wireless network and running fiber to each building. They replaced the 70 legacy APs with half the number (35) of Ruckus ZoneFlex Smart Wi-Fi APs (one per building) along with redundant ZoneDirector controllers. According to Pavlov, other Wi-Fi systems required twice the number of access points and could not provide extended signal coverage, or adapt to interference issues.

"Even though we used less radios we saw a dramatic increase in data usage," said Grosz. He noted that residents were finally able to connect a much higher speeds and that monthly trouble calls were reduced from over 100 per month to fewer than ten.

In terms of cost, the Ruckus ZoneFlex system was a fraction of the price of the three-year old legacy Wi-Fi system already in place, and was deployed in a quarter of the time. According to Pavlov, in their comparisons, the price for a similar system from Colubris or Trapeze was 50 percent higher without the ability to dynamically focus and steer Wi-Fi signals to provide high reliability.

"The ZoneFlex system is the first solution we've seen that transforms Wi-Fi from a technology of convenience into a robust and reliable utility," concluded Grosz.



Above: MRTG graph - After installing the Ruckus ZoneFlex system, data traffic at the Players Club nearly tripled.
Below: Layout of the Players Club housing facility.

