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Case Study Wi-Fi/Wi-Fi Analytics

The Cincinnati Zoo & Botanical Garden welcomes over 1.5 million visitors each year. To further enhance their infrastructure, marketing and guest tracking capabilities, the Zoo integrated Powernet's Wi-Fi & Beyond Wi-Fi solutions. The Wi-Fi network fulfilled many goals, but was put to the test during the annual PNC Festival of Lights event.

A Wild Task

Powernet engineers would have to design and install a solution to fit the unique needs of a nationally recognized Zoo. The network would need to be able to handle 10,000 daily visitors and span the entire 80-acre outdoor venue.

Site surveys indicated that roughly 170 high density access points would cover and support the needs of visitors over the demanding outdoor campus. Ruckus Zoneflex T300 access points were installed, providing a reliable outdoor connection while handling the demanding environment.

The Zoo's new network is capable of sustaining 30,000 users on 1GB transport. Users are able to enjoy network speeds of up to 200meg throughout most of the venue.

Preserving a Jungle

The greatest obstacle during implementation was maintaining the natural environment that blankets the Zoo. The white, boxlike Wi-Fi devices would stand out in the natural greenery, ruining the effect of the engaging atmosphere. Extra measures were taken to ensure the Zoo's historic buildings and natural areas were well preserved.

Some simpler solutions were to hide the devices on the inside of nearby buildings or out of sight in more dense environments. In open areas, engineers had to get creative. AP's were concealed within styrofoam rocks throughout the complex, maximizing network efficiency while blending in seamlessly with the surrounding environment.

Enduring the Stampede

During the 2016 PNC Festival of Lights celebration attendance hit a yearly peak, putting the intelligent Wi-Fi network to the test. Visitor averages reached 6,000+ a day over the 6-week

Annual Zoo Celebration Utilizes Outdoor Network For Nearly 300k Attendees

Cincinnati Zoo & Botanical Garden

Industry: Zoo; Large Outdoor Venue

Number of Visitors: 270,000 (event total)



Challenge

- Provide complete indoor and outdoor Wi-Fi coverage to an 80-acre venue
- Build a network supporting a high-user density environment
- Enhance the customer experience
- Preserve natural/historic look and feel of Zoo and Garden experience

Solution

- Installed 170 Ruckus access points all meeting the 802.11 AC standard
- Network capable of supporting 30K Zoo visitors
- Modernized procedures within a reliable network environment
- Flexible and creative installation of network access points

Results

- Dependable Wi-Fi network
- Minimum 24meg per client (up to 200meg)
- 1,920 gigabytes of data saved
- Uninterrupted natural environment

event. During those 6 weeks users were able to upload over 1,900GB worth of memories to social media.

The Wi-Fi allows the Zoo to better handle large crowds. Staff can deploy tablets connected to their POS system throughout the facility to sell tickets at different entry points, complete food and merchandise transactions and scan train tickets without being tethered to a stationary scanner. This enables the zoo to better compensate for high traffic entry points, reduce wait times for visitors and creates more opportunities for staff to interact with guests.

The Zoo is also able to analyze visitor traffic via the Beyond Wi-Fi portal. Staff can see which paths visitors travel from start to finish during their visit. These analytics, along with micro-surveys presented within the visitor access portal, help determine which exhibits are the most popular. Inversely the data can be used to indicate which areas could use additional promotion to increase foot traffic and ensure visitors get the most out of their experience.

Connecting the Animal Kingdom

Overcoming the many obstacles presented by the Zoo led to one of Powernet's most successful intelligent Wi-Fi integrations, leaving Zoo staff satisfied with their decision to partner with Powernet.

Dutch Mulholland, AV/IT Engineer at the Zoo, said, "Powernet was very thorough throughout the entire Wi-Fi project from start to finish, delivering on everything they promised."

The Zoo continues to utilize the Wi-Fi network with connected devices that enable them to replace paper surveys with tablet based versions, manage wheelchair and stroller rentals and present digital waiver forms for behind the scenes tours. The network has even had a procedural impact for the Zoo.

"Having consistent access to our network via Wi-Fi allows our team to manage our mechanical and water filtration systems on mobile platforms. This reduces time spent troubleshooting and lets us manage our infrastructure in real time, saving time and money," said Mark Fisher, Vice President of Facilities & Sustainability.

Powernet's Wi-Fi solution continues to provide opportunities for growth and innovation within the Cincinnati Zoo.

About Powernet

Powernet enables businesses to connect through innovative telecommunications solutions. With Wi-Fi networking, voice, data, IT managed services and carrier services, we have the technology and expertise to meet the needs of any size business.

Contact us for more info:

powernetco.com

Enhancing the Visitor Experience

- Mobile ticket stations reduced entry and ride wait times.
- Visitor experiences can be easily shared over social media, data-free!
- Users are presented with a digital map upon sign-in, reducing print costs.
- Tablet based surveys, wheelchair/stroller rental and waivers.
- Access portals notify users of upcoming events and promote Zoo membership opportunities.



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