



Case Study: Outdoor concert venue Wi-Fi

Managed Services Team provides Wi-Fi for CMAC

Reliable and predictable wired and wireless connectivity for staff, performers, and concertgoers

MST remotely monitors and manages network equipment through its private cloud

On-demand technical support for the venue and artist, critical for concert load-in days

Background

The Constellation Brands – Marvin Sands Performing Arts Center in Hopewell, NY is an outdoor amphitheater run by the not-for-profit Friends of CMAC, made up of representatives from local companies and organizations, individuals, and public officials who invest their time in running and constantly improving the venue.

Faced with increasing competition from other outdoor venues within a two-hour drive, a short summer concert season, and a growing requirement for bringing in and supporting bigger performing acts, CMAC recognized the need to significantly improve their IT infrastructure.

Challenges

MST faced a number of challenges during the design and implementation of the new network. While the radio frequency (RF) environment is very quiet most days, there is a lot of interference from other access points added to the venue by the artist production staff on concert days to support their own internal operations, as well as Wi-Fi access points dedicated to TicketMaster™ scanning devices.

The main building construction is primarily concrete and steel, which significantly reduces Wi-Fi signal coverage especially through narrow corridors.

South of the main building is the vendor area, which also required network access. Complicating the

installation was that the vendor area did not have cabling to support the new network requirements, existing underground conduit was unavailable, and it was unrealistic in both cost and time to bury new cable.

Solution

MST's plan considered the high-density user environment during concerts, mobile device power limitations, re-use of limited frequencies, as well as the challenges above. A new router was installed along with a gigabit network switch capable of remotely powering of the wireless devices. Six indoor access points in the main building were added to provide coverage in the office, stage, and basement areas while also providing some intentional spill coverage to a portion of the seating area and the roadway, where the artists' buses park. A low-latency point-to-point network bridge was installed to bring gigabit Ethernet connectivity to the vendor area where an outdoor access point was installed on a centrally-located roof. Wi-Fi service under the shell is provided through additional outdoor access points coupled with high-gain antennas, chosen to better receive the low-power cell phone Wi-Fi transmitters.

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