Bonnaroo Music Festival Launches “Instant Network” and Meets iPod Wi-Fi User Demands with Rugged, Energy-Saving D-Link® Networking Gear

The Challenge
When you put on the biggest, most popular festival in United States, there are some challenges. The Bonnaroo Festival is essentially an instant population of 80,000 that materializes over night. The site becomes the 6th largest city in Tennessee during the show. The instant population needs sewage, water, electricity, phones and Internet connectivity. The first workers arrive on-site in mid-May, and 10 days after that, there's running water, office trailers, showers and, of course, Internet.

“There are a lot of people involved in putting the show on,” said Thomas Porter, head of onsite networking at Superfly Productions. Superfly Productions is the co-owner and co-producer (with AC Entertainment) of the festival. They oversee all talent booking, festival profit centers, creative programming, corporate partnerships, content distribution, media and public relations.

“Email and Internet access is crucial to all the administrators, staff and production staff who are actually building the site and coordinating the show,” said Porter. The artists also require Internet connections. “Their contracts specify life, décor, food and beverage needs as well as internet to insure they have the experience they want while onsite.”

The network design includes five different VLANs for different geographies on the site and wireless access for the concert-goers. The popularity of Apple’s iPhone (and similar devices) makes the public wireless portion of the network even more critical this year. “We’ll see a tremendous number of client associations this year just because of all the devices that are now Wi-Fi capable,” said Porter.

The remote environment also presents challenges. “This is essentially a construction site,” said Porter. “It's harsh, dusty, wet and incredibly dirty. Terms like ‘agri networking’ or ‘farm networking’ have been used to describe it. This is a hayfield eleven months out of a year.” Power issues are also critical. There is no standard power on the site, so everything is provided by generators.

Bonnaroo needed a reliable, rugged and energy-efficient networking solution for building their “instant infrastructure.”
The Solution
Bonaroo installed a mix of indoor and outdoor D-Link® networking equipment to meet the demands of their trailer and farmland environment. They deployed ruggedized DWL-7700AP Wireless AG Outdoor AP/Bridges outside.

“The 7700 is great,” said Porter. “They’re relatively affordable and they take a beating. When we take them down off the pole you wouldn’t believe that they’d only been up there a week. The end connectors are very robust, very sturdy and stable… much more efficient than any other connector type. The fact that the 7700’s are totally field-ready and totally hardened to the elements is really nice. It saves us a lot of energy because we don’t have to use enclosures. We can just snail the radio off of a telephone pole.”

Inside the trailers, Bonaroo uses DWL-3200AP 802.11g Managed Access Points and DXS-3227P 24-Port PoE Gigabit Wireless-Ready Switches, which include Power over Ethernet (PoE). PoE equipment channels power over twisted pair wires in standard ethernet cabling, rendering electrical wiring obsolete for a variety of applications. The DXS-3227P includes four combo SFP ports, one fixed XFP port and two optional 10-Gig Copper/Fiber Uplinks. Bonaroo is also using the DES-3010PA Managed 8-Port 10/100 PoE Switch, which includes one Gigabit port and one SFP slot.

Power generators are trucked in to provide power for the festival and infrastructure. “The fact that everything we’re using, with the exception of switching, is all PoE-driven is very convenient, because getting power to a specific location is really a big pain,” explained Porter.

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Easy, Rapid Installation
Networking set-up for the 2008 festival began when Porter arrived on site May 19th. The network is designed for simplicity, since their budget is small and it only has to last for a month. “It’s simple by design and necessity,” said Porter. “I’m a big believer in keeping things simple.” As of May 28th, Porter’s team installed 15 bridge links, 70 radios and all the networking gear inside the trailers. The core network was up and running two weeks ahead of the show kick-off on June 13th. The show runs from the 13th through the 15th.

iPhones Covered and Back House Operations Run Smooth
Superfly Productions has seen significant growth in wireless device associations at their concerts, so they planned for a similar trend at Bonnaroo. “We provide a specific amount of address space for DHCP,” said Porter. “Lately, we’ve seen 85% of that utilized by on site associations. That’s a huge, huge number of people just basically going online because they can with their iPhones. Historically, we’d see less than 100 people with laptops or Wi-Fi devices on the public sections of the network.”

“It’s a great benefit to provide wireless Internet to festival attendees,” said Chad Issaq, head of corporate partnerships for Superfly Productions. “And our back of house operations would be severely compromised without the level of communication that we now enjoy thanks to partners like D-Link.”