

Customer: Prolite Event GmbH**Market: Hospitality/Sport****Location: Dormettingen,
Zollernalbkreis,
Germany**

Music festival a success thanks to Allied Telesis, m² IT solutions, and Prolite Event



Whether it's a music festival attended by tens of thousands, a spectacular wedding, or an industry trade fair, an event has a short time span, and everything must run smoothly to give guests the best experience. There is no "do-over" if something critical fails. That's why Prolite Event GmbH leaves nothing to chance.

Prolite Event is an innovative company based in Haigerloch-Owingen in Zollernalbkreis. Its core business is the rental, sale, and installation of event technology, including electrical engineering and system technology. The company offers comprehensive equipment for all sectors of modern event technology from a single source, along with a dedicated staff to engineer, install, and support everything.

Prolite Event created a site-spanning network platform for the open-air Elements Festival, which is held annually each May in Dormettingen, Germany. Prior to Prolite Event's work, the festival had no formal network infrastructure. Instead, the festival's different trades – sound/audio, lighting, video, ticketing, commerce, etc. – were on their own to implement the technology needed for that specific aspect of the event.

In most cases, the various trades did what they could for themselves. For example, the Event Technology team had to lay its own cable routes. Media and Production Technology used mobile radio hotspots for its Internet connectivity. Ticketing/Admission Control also used mobile radio. The haphazard way of addressing the overall technology needs often led to availability issues, which were detrimental to the customer experience. Instead, the music festival needed a solution that could provide reliable, fixed network Internet connections as well as increased system availability in its entirety.



CHALLENGE

- Prolite Event provides a range of technology for various types of short-term events, such as weddings, concerts, and conferences. The company was tasked with providing a reliable and highly-available network for the annual Elements music festival in Germany. Requirements to support multi-type traffic for audio and video, lighting, and general Internet access in a vast temporary outdoor venue made network design a challenge.



SOLUTION

- Allied Telesis core and access switches for all trade areas
- Numerous wireless access points throughout the festival venue
- Network management and automation software for all wireless and wired devices
- Built-in redundancy for maximum reliability and uptime



RESULT

- Stable and trouble-free operation of the core network and access areas
- Support for all festival "trades" that previously had to create their own networks
- Clear and simple monitoring and management of the network
- Reliability through redundancies in the infrastructure

“We couldn’t be more pleased with the performance of this network solution. We will definitely work with both m² IT Solutions and Allied Telesis on future projects.”

Raphael Herrmann

Managing Director for Prolite Event

A Festival’s Trades Have Varied and Complex Network Requirements

Raphael Herrmann – the Managing Director for Prolite Event – oversees the team that came up with the optimal network solution for the Elements Festival. “The challenge for such an event is knowing the requirements of the different trades,” says Herrmann. “A network for sound has different requirements than a network that ‘only’ provides Internet access or serves as a transport platform. Our team had to know about the peculiarities of the trades and the function of the protocols used. An event needs a mix of a classic IT network paired with individual special requirements for single networks.”

Herrmann adds that it’s possible to plan extensively for the event, but some planned things will certainly vary, or new requirements will spontaneously pop up. “So, we needed a platform and a flexible network design that allows us to react spontaneously to all kinds of requirements,” he says.

Prolite Event turned to its technology partner m² IT Solutions to come up with a comprehensive solution to serve the varied and dynamic needs of the Elements Festival. First, they established the basic requirements for the network platform. The top priority is continuous availability. An event takes place in “this very moment” and there is no time for errors or failures. Other requirements include:

- The overall platform must be failure-proof, with no single points of failure.
- The platform must allow for the creation of individual networks for the separate trades, securing them from each other.
- It must allow for the provision of WAN access and the permanent monitoring of all components and services.
- The network must support a mix of “traditional” IP real-time traffic as well as multicast and broadcast-based protocols.

There are at least eight trade areas that must be accommodated, including:

- Event technology sound (audio, management and sound control)
- Event technology lighting (lighting control)

- Event technology video (transport network)
- Media technology
- Ticketing/Admission control
- Cash register systems/digital cash
- Authorities (police/fire department/emergency services)

A Converged Network from Allied Telesis Fills the Need

Given there was no existing network for the Elements Festival, there were no “legacy considerations” to deal with. The network platform could be designed from scratch with the best possible options.

“We recommended Allied Telesis equipment and software for the entire platform for its absolute versatility and reliability,” says Martin Mayer of m² IT Solutions. “An Allied Telesis converged network can support the many different functions, protocols, and services of the different trades. The sophisticated yet easy-to-use network management platform and tools allow for single pane of glass management of the entire network. What’s more, Allied Telesis solutions are much more cost effective than those of competitors.”

m² provided deployment, operation, and on-site support at the venue. “We are confident in the Allied Telesis network solution designed and operated by m² IT Solutions,” says Herrmann. “Once again, our technology partners exceeded our expectations to perfectly address the needs of this annual event.”



The Solution

The Elements Festival only takes place for a few days a year, and it doesn’t have a permanent set of buildings or other facilities. Thus, the network can’t be a permanent installation either. The entire system with switches, routers, WLAN, wireless bridges, monitoring, and management servers, etc. has to be completely configured in advance and installed in portable cases so that everything can be transported roadworthy and simply unfolded and put into operation on site.

It isn’t necessary to have Wi-Fi cover the entire campus. Only certain festival employees and the ticketing system/admission control have access to the Wi-Fi network, because they need to have connection to their managed devices, Internet access, or simply make Wi-Fi calls when mobile radio is unreliable due to the huge cell phone count.

The main distribution of the network consists of a two-node VCStack™ of x530 Series switches. This serves as the connection point for two AR4050S UTM firewalls, which provide redundant WAN access using multiple ISPs. In addition, the firewall rules for the inter-VRF traffic are mapped on these. The intra-VRF routing is mapped directly on the switches (L3-switched). The switch routing core also serves as the DHCP server and the master for the Allied Telesis AWC (Autonomous Wave Control) and AMF Plus (Autonomous Management Framework Plus) software.

At the individual sites, x230 Series switches are installed as access switches. Additional x230 Series switches are included as spares so that they can be restored automatically via AMF Plus Recovery in the event of a failure.

The Main Stage and Front of House of the Main Stage each have a dedicated two-node x930 Series VCStack. This is because these two sites have the highest availability requirements and also have QoS and multicast policies mapped to them.

PoE for the wireless access points is provided by the switches at all switching locations. All sites – with the exception of one remote site that is connected via microwave – are redundantly served with at least two fiber links. So, even a single remote x230 switch has at least two connections to a VCStack. Most WLAN Access Points (APs) are installed in such a way that they are weather-protected. These are joined by exterior TQ5403e hybrid APs, which are mounted outdoors on antenna masts. The resilient connections can overcome link failures due to SFP faults or cable damage.

Key Features Provide Reliability and Manageability

The network solution uses several key Allied Telesis features, including AWC, AMF Plus, and VCStack.

By analyzing signal coverage gaps and Wi-Fi Access Point interference, Autonomous Wave Control (AWC) automatically delivers a high-quality wireless experience with lower deployment and operating costs. This enables the wireless connectivity around the festival grounds to automatically adapt to users' dynamic bandwidth demands and environmental changes.

Autonomous Management Framework Plus (AMF Plus) is a suite of network automation features that reduce management and maintenance overheads, while improving the network's responsiveness in handling equipment failures. Virtual Chassis Stacking (VCStack) also provides resiliency, ensuring absolutely minimal network downtime in the event of a problem.

These three key features, amid others, make the network more reliable, more available, and more manageable.

Successful Results, As Expected

The network has been deployed for at least two festivals so far, and the results were as expected—no failures and successful operation for all the trades.

“We couldn't be more pleased with the performance of this network solution, and of course our client, the Elements Festival management team, is thrilled to have such a high-performance network supporting their dynamic event,” says Herrmann. “We will definitely work with both m² IT Solutions and Allied Telesis on future projects.”

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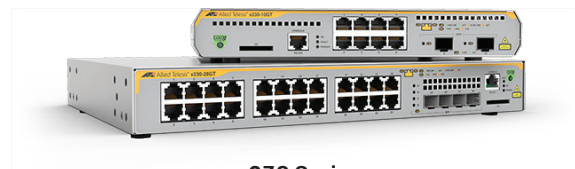
x530 Series



AR4050S



x930 Series



x230 Series