CASE STUDY

SKYWIRE LEVERAGES WIRELESS BROADBAND CONNECTIVITY THROUGHOUT THE FAMOUS INNIBOS FESTIVAL IN SOUTH AFRICA

ISPs

AFRICA

The famous annual Innibos Festival in South Africa takes place at Hoërskool Bergvlam in West Acres Mbombela (Nelspruit). This multicultural educational institution showcases a truly South African experience, featuring a diverse range of musical acts, stage productions, and other artistic attractions.

Skywire, a long-standing customer of Siklu by Ceragon, is the largest independent wireless network provider in South Africa. They have established themselves as a top-tier telecommunications service provider, offering premium enterprise connectivity solutions across a unified, nextgeneration network. In addition to various other services, they specialize in client-specific design and build solutions.

Further, Skywire's nationwide network of operations and partnerships has ensured its ability to continuously provide a suite of innovative, carrier-grade products and services throughout South Africa. Given this level of expertise and their reputation, Skywire won the contract to provide a high-capacity wireless backhaul link to the event venue and then blanket connectivity for Wi-Fi access points, and other devices throughout the venue.

THE CHALLENGES

The Innibos event organizers were anticipating 40,000 attendees each day. Based on their previous experiences and events, it was clear that public cellular networks would not be able to handle the high demand for connectivity in such a crowded area. The main challenge was ensuring that there would be enough capacity to meet the event's expectations within the venue at any given time.

Additionally, after a quick calculation, it became evident that Innibos would require massive bandwidth, reaching multi-Gigabit levels to account for the expected amount of video content that would be transmitted wirelessly from performance stages and other areas to a central production studio located on the premises.

In order to provide multi-gigabit bandwidth, many operators and solutions providers would typically consider using a fibre link, but laying fibre for a temporary event is simply too expensive and time-consuming. On the other hand, fixed wireless has increasingly become the preferred method of connectivity in this region, as it offers a faster deployment time coupled with the ability to move the solution from place to place.
The other requirement was to ensure connectivity to a dozen Wi-Fi access points spread out across the wide venue.. This area includes two separate stages and , a relaxation zone, and commercial areas. Typical Wi-Fi access points have a limited range, so it was important to find a solution that would allow for sustainable and uninterrupted service delivery.

THE SOLUTION

To meet the backhaul requirement, Skywire looked for their nearest fibre PoP (point of presence) with a clear line-of-sight to the event's arena. A path analysis to the nearest fibre PoP, ~3.8Km (>2 miles), revealed a marginal line-of-sight, that could only be executed with a very narrow beam based fixed wireless solution. As a result, the decision to select Skywire's favorite fixed wireless solution, a Siklu EtherHaul™ multi-Gigabit 80 GHz radio, was quick.

For onsite connectivity, Skywire would need to backhaul a dozen high-end Wi-Fi 6, dualband access points operating at the highest rate. To ensure carrier-grade, multi-gigabit service delivery, those access points must be backhauled with a non-Wi-Fi frequency wireless distribution network. After reviewing all options, Skywire selected the Siklu by Ceragon's MultiHaul™ TG solution, which utilizes the ultra-wide, interference-free, and license-exempt 60 GHz band.

The Siklu by Ceragon's MultiHaul TG solution operates over millimetre waves in a redundant mesh topology. For Innibos, Skywire deployed the business-class long-range Terminal Units (TU) that can also operate in PtP mode with two identical units on each site, for even longer ranges. These were serviced by meshed nodes, installed at each stage area. The integrated solution enabled instant fibre-like backhaul connectivity to all Wi-Fi APs and other devices throughout the venue.

THE RESULT

Using their vast experience installing and operating Siklu by Ceragon's EtherHaul™ PtP links over many years, even with marginal line-of-sight, Skywire's engineers managed to connect the event's arena to their remote fibre-PoP within a few hours and turned to establish the mesh coverage at the event's area. To further simplify and accelerate the installation, Skywire's engineers utilized the integrated gigabit switch capable of delivering PoE-out, to both serve and power Wi-Fi access points. Skywire was able to complete the deployment of this robust temporary network in a few days.

Key to this deployment was its temporary nature, as Skywire quickly identified the high re-use value of all of the equipment installed at Innibos, as it can be easily "reassembled" within days and reconfigured for future events.

"Adcomtec, a partner of Siklu, was contacted by Skywire to provide a wireless solution with a large capacity in a short amount of time (less than 6 weeks). Adcomtec helped by gathering the necessary equipment, determining the cost and delivery schedule, speeding up the shipment, and delivering on time (even on a Sunday) to meet the deadline and ensure a successful and smooth event", said Ted de Boer, Senior Business Development Executive from Adcomtec.

This wireless network made it possible to provide broadband connections to thousands of users in an area the size of a small neighborhood delivered on time and with excellent performance.