

## Sohonet selects Arista Networks for major wireless LAN upgrade at leading film and TV studios to deliver enhanced performance for production workloads

### Highlights

#### Challenge

With increasing demand to support high-bandwidth production workflows and its legacy Wi-Fi deployment struggling to maintain network stability, Sohonet installed an Arista Wi-Fi 6E solution using a controllerless architecture that has boosted performance while offering robust multi-tenant support and service provider-oriented management capabilities.

#### Solution

- Arista C360 series Wi-Fi 6E for high performance and reliability
- CloudVision® CUE for centralized management within a controllerless deployment for no single point of failure
- 5Gbps deployment scaling capacity to grow to 10Gbps to meet future demands

#### Results

- Best performance in real world testing across signal strength, user density support, roaming capabilities
- Distributed controllerless design increase's reliability with local polling for faster channel switching
- Over 1300 access points successfully deployed with plans to extend to several other facilities
- Arista technology now included by default when specifying the architecture and design for new facilities

Sohonet, an international provider of connectivity, collaboration and production services for the media and entertainment industry, wanted to upgrade its wireless LAN connectivity to support remote working and higher-quality video streaming. Sohonet's transition to Arista's Wi-Fi 6E solution has delivered enhanced wireless connectivity capable of supporting the most challenging production environments, including high user density and variable staging conditions at prominent studios in London, UK and Georgia, USA.





### Company Background

Sohonet, established in 1995 in London's vibrant Soho district by a consortium of leading VFX companies, has emerged as a key network service provider for the TV, film, and media production industries. It connects film studios with the post-production community, offering Internet access and international private links, confirming it as an essential networking hub.

Sohonet streamlines the production workflow at every stage, providing tools for pre-production, production, editorial, audio, VFX, and more, to facilitate collaboration among media and entertainment professionals. Their network extends globally, linking various media entities across the US, Canada, New Zealand, Australia and Europe, facilitated by Sohonet's private optical fibre networks in major cities and high-speed storage solutions. This worldwide reach, along with innovative solutions for seamless collaboration and communication across both production and post-production processes, resulted in Sohonet winning Primetime Engineering Emmy Awards in 2022 and 2024 for its platforms.

### Challenge

Alongside its portfolio of IT, LAN, and WAN services, Sohonet delivers Wi-Fi connectivity at numerous production studios, including significant installations at some of the largest studios in Europe and the US. The reliance on Wi-Fi has surged in recent years; a decade ago, Wi-Fi usage at these locations primarily supported tasks like email and back-office activities, without consideration for heavy production workflows. Now, as Wi-Fi technology has evolved, it is integral to production workflows and so challenges the infrastructure with greater demands for availability, performance and durability. For example, in studio environments where setups and conditions can vary dramatically, the necessity for adaptable and reliable Wi-Fi solutions is crucial to support the diverse and dynamic needs of production activities.

"The main issue is user density and unpredictable distribution of users in event spaces," explains Oliver Pennington, Director of Engineering for Sohonet, "You might have a big stage area but inevitably there will be a video village in one corner, where potentially 100 people are congregated in a small space. The primary challenge was ensuring stable connectivity without frequent swapping and channel changing due to the limited spectrum available."

Maintaining network stability while supporting high-bandwidth production workflows - particularly live video feeds from cameras on set, which require reliable and mobile connectivity for critical personnel like directors - became increasingly challenging for the legacy Wi-Fi deployment.

"This became even more pertinent during the Covid-19 pandemic," Pennington adds, "as measures to reduce on-set personnel led to the creation of remote working environments around the stages, necessitating a robust network that supported seamless connectivity both inside and outside the stage areas".

### Solution

In the process of selecting a suitable Wi-Fi vendor, Sohonet evaluated four vendors to find a solution capable of supporting the unique challenges of film production environments. The testing process was comprehensive, taking place in real-world film set environments to ensure the findings were relevant to real-world working conditions. The criteria for selection included factors like signal strength, user density support, roaming capabilities, and the ability to handle interference from external sources such as lighting rigs and sound equipment.

Ultimately, Arista's Wi-Fi platform was chosen for its robust performance under demanding conditions. "Across all our criteria, Arista came out as the leading solution," says Pennington, "However, the decision was not only based on technical capabilities but also on the flexibility and control the system offered for managing multiple, simultaneous production demands."

Pennington explains, "We might have six or seven productions within the same studio, and this requires flexible network configurations to cater to the specific needs of different types of devices or more aggressive client management strategies. Arista's platform emerged as the most beneficial because it also offered multi-tenant support and a service provider-oriented control portal that the other vendors lacked."

Sohonet has deployed an Arista VX-based Wi-Fi 6 solution which provides performance improvements by ensuring higher capacity and more efficient use of the available spectrum, ideal for networks with a high volume of diverse clients and applications. All access points are managed through Arista CloudVision® Cognitive Unified Edge (CV-CUE), which offers cloud-based and on-premises management within a controller-less design that removes any single point of failure to ensure high reliability, scalability, and security. The addition of units from the Wi-Fi 6E series further enhances the environment by future-proofing Wi-Fi networks with access points that support 2x2, 2 stream MIMO, and 4x4, 4 stream MIMO on all three access radios. This allows for a maximum combined peak data rate exceeding 10 Gbps on the high-end model.

## Conclusion

Pennington confirms the performance, reliability, and seamless roaming that Sohonet validated during its testing phase has extended into its active deployment, and the Arista Wi-Fi solution has proven highly capable within some of the most demanding production environments.

By the end of 2023, over 1300 access points had been deployed, alongside new Arista 7000 series leaf and spine switches as part of the underlying network upgrade. And with successful deployments in London and Belfast in the UK, as well as at sites in Hollywood, Los Angeles, and near Atlanta in the USA, Sohonet is now looking to deploy Arista in several other facilities worldwide.

In terms of support over this extended period, Pennington says candidly, “We have found some small bugs, these things occur, but I think the important part of our engagement with Arista is that we are highly confident they are going to be resolved. Engineers troubleshoot them quickly and there is helpful feedback as they are resolved... so I would say the support is excellent.”

Although Sohonet has built its own network provisioning and automation tools, it has chosen to use CV-CUE for Wi-Fi management, with the potential to integrate it into Sohonet’s overall platform as needed. Looking to the longer term, the future-proofing inherent in the Arista design means that Sohonet has an upgrade path to Wi-Fi 6E supported by 10Gbps switching.

With so many sites and an overall estate of over 10,000 access points currently under Sohonet’s management, Pennington and his team have been deploying Arista WAP’s for over two years and have been able to gain a good understanding of both the technology and the company. “Arista has exceeded our expectations,” he says, “Generally, the kit just works straight out of the box and overall, I think our experience with Arista has been great... It’s the kind of tech I would definitely recommend to a friend as it were” he quips.



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