AV TECHNOLOGY: AV-OVER-IP

SIMPLIFYING AV NETWORK MANAGEMENT

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Marthesh Nagendra, APAC & MEA Senior Sales Director for Netgear's Commercial Business, leading the company's sales strategy across the region, shares this insightful feature with AV-ICN Expo Magazine. Nagendra's leadership and expertise has been pivotal in driving growth and meeting the evolving demands of AV-over-IP and commercial networking solutions across APAC. Sharing his expertise with the AV readers, Nagendra, in this feature, emphasizes on 'simplifying AV network management'.

As audiovisual technologies continue to evolve, the underlying network infrastructure that supports them is becoming more complex. With devices now connected over IP, the need for reliable, easy-to-manage network solutions has never been greater. That's where AV-over-IP network specialist vendors come in—offering innovative products and tools specifically designed to simplify AV network management.

WHY AV NETWORK MANAGEMENT MATTERS

Modern AV installations often involve a mix of video encoders, decoders, control systems, and displays, all communicating over a network. The traditional approach of using off-the-shelf IT switches can lead to headaches: configuration is tricky, troubleshooting requires specialized knowledge, and ensuring stable performance across multiple devices is a constant challenge. AV professionals need network solutions that cater to their unique needs—simpler setup, optimized performance, and reliable operation.

PURPOSE-BUILT AV SWITCHES

Manufacturers like NETGEAR have responded to these challenges with special series of switches, tailored for the AV industry. These switches come pre-configured with settings specifically designed for popular AV over IP protocols, such as Dante, AES67, NDI, and AVB. What sets them apart is their AV-centric interface that removes much of the guesswork. Instead of diving into command-line configurations, integrators can select from preloaded profiles that match their AV devices. This reduces setup time, minimizes errors, and ensures compatibility right out of the box.

STREAMLINING CONFIGURATION WITH AV GUI AND SITE CONTROLLERS

A cornerstone of a great approach is a user-friendly Graphical User Interface. Unlike traditional IT switch interfaces, such a UI presents a simplified, intuitive layout that speaks the language of AV professionals. With just a few clicks, users can assign VLANs, apply multicast settings, and prioritize audio and video traffic. This GUI is ideally available both on the switch's web interface and through an on-site controller app, giving installers the flexibility to configure and monitor one switch or entire networks.

AUTOMATED MULTICAST MANAGEMENT

In many AV-over-IP environments, multicast traffic—used to distribute high-quality video streams—can overwhelm an improperly configured network. Recent innovations take the complexity out of multicast setup. Features like IGMP Plus streamline multicast configuration. AV integrators can deploy systems faster, with fewer hiccups, and end users benefit from consistent, high-quality streaming experiences.

REMOTE MANAGEMENT AND MONITORING

Another standout feature of modern networking solutions for the IT market is remote management. Through, for example the NETGEAR Insight platform, integrators can monitor their networks in real time, receive alerts about potential issues, and even push firmware updates from anywhere. This not only reduces downtime but also allows integrators to offer proactive support, ensuring that clients' systems run smoothly long after installation.

THE FUTURE OF SIMPLIFIED AV NETWORKING

Real dedication to the AV industry goes beyond hardware. The winning companies regularly engage with integrators and end-users to gather feedback, refine its products, and add new features that address real-world challenges. Emerging leaders of the future partner with leading AV manufacturers to ensure that their network devices, like switches and wireless access points, are certified and tested for seamless interoperability.

By making AV network management simpler and more reliable, network manufacturers are helping the industry move forward. Their innovations empower AV professionals to focus on creating great experiences rather than wrestling with complex network configurations.