

SOLUTION OVERVIEW

Esports in Education

Ensuring your school stays in the game with Aruba's esports solution

With scholarships and jobs on the line for Gen Z students, K-12 and higher education institutions are embracing esports like never before. From varsity teams to curriculum inclusion, esports are appearing across the education landscape. Even STEM funding grants are at stake as esports fills new roles academically and competitively.

Naturally, it adds up to more IT demands: your network must supply ultra-high performance, low-latency experiences and your IT staff must deliver exceptional QoS to meet player and fan expectations. Answering the call takes smarter wired, wireless, security and management solutions that ensure you can uphold your end of the esports bargain while keeping overhead low and staying within budget constraints.

Fortunately, we're here to help. Our deep expertise with educational institutions like yours, combined with best-in-class networking solutions, can help you meet new esports infrastructure needs so your students can achieve their goals.

CONSIDERATIONS FOR ESPORTS SUCCESS

Although professional esports competitions tend to favor wired connections at this time, developing an esports facility for your K-12 or higher ed institution isn't as easy as "wired or wireless." Instead it's critical to consider the various networking capabilities and other technology requirements you need for esports success at the intelligent edge.

Reliability and Resiliency

To ensure they're in the game, players rely on your network to be responsive. Although esports-specific network bandwidth requirements are typically minimal, around 1-2 Mbps, having enough bandwidth to accommodate all of your school's Internet traffic also requires appropriate backhaul and traffic allocation. Additionally, esports requires exceptionally low latency, optimally 5-10 ms, achieved by installing a solution that includes intelligence, visibility and advanced QoS tools.

As network resiliency is also critical, expect to take high availability (HA) to the next level. Solutions engineered for esports HA supply next-generation approaches and architectures along with operational simplicity for fast troubleshooting.

Hassle-free Flexibility

Schools using existing facilities for esports competitions and tournaments require the ability to augment their wired and wireless networks for bandwidth-hungry live streaming to fan devices. The ability to add infrastructure flexibly and simply is critical for keeping overhead low.

Unified Management

Administrating wired and wireless networks as a unified solution is becoming an increasingly preferred strategy for schools seeking to reduce day-to-day management burdens as well as fulfill new esports expectations. Look for innovative and intuitive technologies proven to deliver streamlined, simplified and automated administration by unifying your LAN and WLAN.

AI-Powered and Self-Healing

To maximize QoS while minimizing management tasks, you need an intelligent solution with leading-edge automation and self-healing capabilities. The most advanced options are designed to operate as unified wired and wireless solutions, boosting security while also improving your ability to leverage AIOps for significantly reduced manual troubleshooting, pre-emptive issue identification and proactive optimization.

Analytics-Rich with Intuitive Insights

Lets' face it, when something does go wrong it's faster to fix with actionable information that's quickly understood. Innovative networking solutions include intuitive dashboards supported by extensive analytics capabilities to extract troubleshooting and configuration insights from the thousands of data points your network generates every day. Although the goal is always a trouble-free esports experience, having the tools to respond rapidly can minimize or even prevent disruptions.



Zero-Trust Security

No matter whether you host tournaments or not, all esports programs need a security solution capable of keeping players secure from hacks. When spectators are present, you must simultaneously provide fans a seamless connectivity experience. To accomplish these zero-trust tasks, adopt a fabric-based network along with an access control solution that can work in concert with your venue's switching infrastructure for automated, role-based traffic management.

Location-aware

For schools hosting in-person competitions and tournaments, location-aware infrastructure provides additional opportunities for keeping participants safe while generating revenue. Whether it's contact tracing to improve public health or app-enabled participant engagement for navigation and concession sales, location awareness ensures you're prepared for whatever experience imperatives you'll be asked to support.

Expert Support

It's not enough for you to adopt advanced networking solutions. It's critical you're backed up by experts who understand both educational institutions and esports. From your design and implementation team to senior support engineers, insist on rapid access to experts for addressing complex concerns. Best-of-breed support also provides your IT department with training and certification resources for further empowering your IT staff.

FUTURE-PROOF ESPORTS SOLUTION

Ready to get started? Here's our list of expert recommendations for smart infrastructure solutions that will delight your esports players and their fans for years to come.

CX Switches

As wired switches remain the most reliable and resilient choice for ultra-low latency gaming, Aruba recommends the **CX Switching** family for your esports backbone. Modern, intelligent and highly available, these switches feature the fully-programmable **Aruba-OS CX** operating system for automation, flexibility and simplicity. They also deliver advanced insights with Aruba's **Network Analytics Engine (NAE)**, which automatically interrogates and analyzes any event that impacts your network's health.

ESPORTS VENUES IN EDUCATION

As esports are such a recent phenomenon, facilities vary widely. However, typical esports venues include:

Classroom Labs

Similar to former wired computing labs, many schools are now establishing dedicated wired esports facilities in classroom-sized spaces. Teams use these areas for practices and competitions where spectators aren't physically present. Academically, teachers conduct classroom gaming activities in these labs as well.

Sports Arenas and Auditoriums

At both K-12 and collegiate levels, varsity esports competitions and tournaments with spectators are frequently held in existing arenas or auditoriums. However, schools are also considering purpose-built facilities in their remodeling and new construction plans.

Recreation Centers and Student Unions

Like traditional athletics, esports are also played as an intramural activity at colleges and universities. For intramurals, an esports space is frequently constructed within a student union, recreation center or similar facility that provides an informal location for the action. Some also double as varsity team practice space.

Residence Halls

Similar to residence facilities dedicated to housing athletes, higher education institutions are developing plans for esports-centric residences. Due to offering additional networking amenities, pricing tiers for these spaces can be developed to generate related revenue.



Wi-Fi 6/6e

In some regions, wireless gaming is actually preferred over wired and more students are starting to favor mobile devices for esports. Also, with the advent of **Wi-Fi 6e** access points (APs), more educational institutions may begin conducting gaming competitions over wireless as well as wired networks.

Regardless, spectator involvement during in-person competitions and tournaments is a key attraction of esports, making Wi-Fi the best technology for providing fan connectivity and event live-streaming at physical venues such as arenas, auditoriums, recreation centers, student unions and other gathering spaces.

No matter how your school proceeds, **Aruba Wi-Fi** supplies you with flexibility, simplicity and powerful management capabilities. This includes AI-enabled **NetInsight**, which arms you with intelligence for proactively optimizing data, voice, and video. Aruba's Wi-Fi also provides **RFProtect™** for preventing denial-of-service and man-in-the-middle attacks while mitigating other over-the-air security threats.

Aruba Central for Unified Management and AIOps

A single pane of glass for overseeing every aspect of wired and wireless LANs, WANs, and VPNs across campus and remote locations, AI-powered **Aruba Central** is the intuitive management and orchestration console for the **Aruba ESP** (Edge Services Platform). Flexible as well as powerful, Central can be implemented as cloud-delivered or deployed as Central On-prem.

Benefits of Central include a full-service **AIOps solution** for reducing trouble tickets and associated costs. It's comprised of:

- **AI Insights:** Automatically surfaces and diagnoses an array of common network-impacting issues.
- **AI Assist:** Uses event-driven automation to collect diagnostics, post them to a shared location, generate a ticket and even notify Aruba for proactive customer support.
- **AI Search:** A natural language processing (NLP) engine of the Aruba Central data lake that points to solution guides, troubleshooting tips, and more.

Eliminating manual troubleshooting with Central can help you solve issues up to 90% faster. You can also tap into anonymized peer benchmarks for optimal configuration settings based on performance levels at sites with similar network characteristics, such as esports venues.

User Experience Insight (UXI)

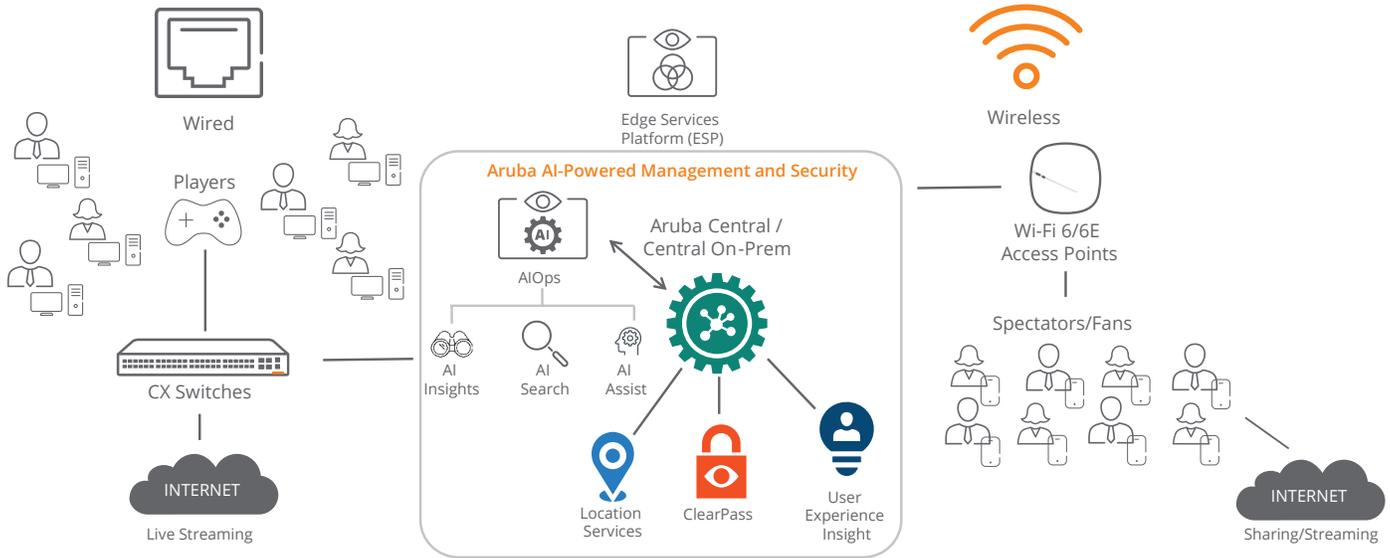
To complete your understanding of application and network health, measure it from the perspective of end users with **Aruba User Experience Insight (UXI)**. Another AI-powered tool, UXI sensors deliver continuous monitoring and testing of wireless, wired, and WAN performance to help you diagnose, troubleshoot, and even detect anomalies before issues arise. Anomalies can be reported directly to the Aruba Central dashboard or accessed via the dedicated UXI interface.

ClearPass for Real-Time Zero Trust

As a long-term leader in **Zero Trust Security**, Aruba's **ClearPass Policy Manager** supplies role-based access and enacts real-time policies governing how users and devices connect and what they can access. Additionally, ClearPass integrates with the CX Switching family to unify policy enforcement across wired and wireless networks via Aruba's **Dynamic Segmentation**. And, by adding **ClearPass Device Insight**, you can gain the visibility and intelligence needed to address the risk of unidentified and unmanaged devices on your network.

Location Services

Using Aruba's Wi-Fi 6/6e you gain location awareness built into APs with integrated Bluetooth Low Energy (BLE) and Zigbee for cost-effectively implementing location services. Aruba APs can be a beacon for mobile engagement, a reader for asset tracking, or a platform for contact tracing. In your esports venue, BLE-enabled APs can assist you with public health mandates while enabling you to deliver proximity based refreshment and merchandise offers for improved participant engagement and enhanced team revenue opportunities.



Foundation Care and Pro Care

At Aruba, we've staked our reputation on providing you with **exceptional support** no matter what your school's size. Our Aruba Technical Assistance Center (TAC) engineers are trained to aggressively and quickly troubleshoot your hardware and software issues. You can also step up to priority services with **Aruba Foundation Care** or **Aruba Pro Care**. Aruba offers comprehensive training and certification programs to extend your IT department's knowledge base. No matter which option you choose, our goal is helping you keep your esports program strong.

CONCLUSION

With over 15 straight years in the Gartner Wired/Wireless Leader's Quadrant, Aruba's leadership and innovation in secure connectivity provides you with a proven foundation for your esports program. As we've also demonstrated our dedication to fulfilling the needs of K-12 and higher education, you can count on us to understand your environment and supply you with reliable, flexible, simplified, secure and intelligent infrastructure to create exceptional esports experiences for your school.