Powering World Motor-Racing Events

A Cisco Wi-Fi network gives racing community highly secure communications and consistent web access anywhere

EXECUTIVE SUMMARY

Customer Name: MST

Industry: Sports and Entertainment

Location: UK

Number of Employees: 20

Challenge
· Provide a robust, resilient Wi-Fi network for rapid race setup all over the world
· Protect data security and separation among race organizers, race teams, and the public
· Provide remote IT management and instant engineering feedback for race teams

Solution
· Wireless Mobility with Cisco Identity Services Engine

Results
· Successful debut season as race teams see the solution's benefits
· Quick shutdown of unauthorized access to confidential data
· New project under way to save substantially on cost

Challenge

MST plays a crucial role in the provision and honing of ultra-precise data for international motor racing events. At such ferocious speeds, timing must be accurate to the millisecond. To date, its technologies have been used at numerous racing circuits worldwide.

Today, MST is an integral part of the FIA World Touring Car Championships (WTCC), staged at a dozen international circuits each year. It also has a core communications role at most of the world's major golf championships, supplying real time graphics to broadcasters.

Wi-Fi challenges facing MST are unlike those of ordinary corporate infrastructures. A wireless kit, including servers, is flown from one venue to another and set up in two days. It must work flawlessly. These demands call for a solution that offers multiple highly secure channels while functioning smoothly amid concrete pit walls and potential interference with radio frequency emissions from touring cars' engines.

Solution

After talking to industry colleagues, MST chose a Cisco® solution. Karl Nicholson, motor sports project engineer and wireless systems manager at MST, says, "Cisco ticked all the boxes. We'd done our own legwork, and we had people telling us its technology works really well in the motor sports environment."

MST chose to provide two networks, supported with a global managed service from wireless specialist Axonex. One is for race organizers, up to the race director, and the teams; another is laid on for those providing hospitality at the track. Both have to work equally well with any device—a fully open bring-your-own-device (BYOD) instance. Access has to be accorded instantly to any device without needlessly restrictive policies.

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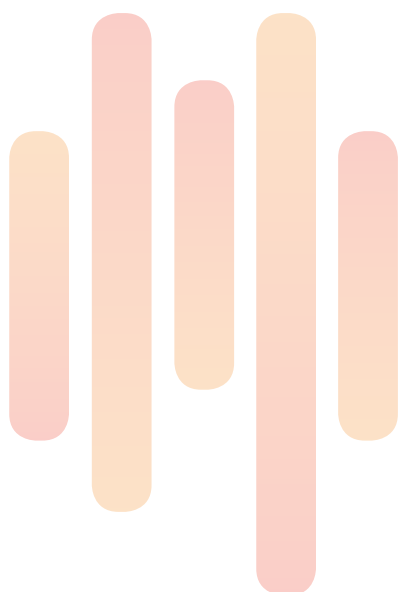
Karl Nicholson
Motor Sports Project Engineer and Wireless Systems Manager
MST

MST has to guarantee that the network will not fail during the short but intense period from practice sessions, right through to live races. A fully redundant Wi-Fi architecture means everything is doubled, from switches to wireless controllers to access points. That insures that even if two adjacent access points fail, there will be no interruption of service and the user experience remains consistent.

The portable wireless local area network equipment comprises Cisco Aironet® 1600 and 2600 Series Wireless Access Points overseen by a Cisco 5500 Series Wireless Controller. It was critical to see who was doing what on the network, where, and on what device, so Cisco Identity Services Engine (ISE) was another key component. Cisco ISE protects sensitive data, provides instant network visibility, and supports user segmentation.

With exceptional systems integration experience implementing fixed and wireless network solutions, Axonex played a critical role in the success of the project. As a Cisco Silver Certified Partner it holds virtually unrivalled knowledge across Unified Communications, Data Center, Security, and Borderless Network infrastructures.

Karl Nicholson says: "The Axonex-designed and deployed solution is a great package, backed up with first-class support, enabling us to manage everything in one place."

Results

The first time the new system went live, someone tried to gain access to restricted content. Nicholson says: "The network even told me the access point where this was happening, which narrowed things down to three garages." Another team didn't want to pay for access and tried to hijack the system to rebroadcast its communications. Nicholson adds: "I saw it on my laptop in about three seconds flat and blocked them off for the rest of the season."

Cisco ISE provides differentiated, highly secure access for teams and race officials. Each team can capture its live race data but can't see that of its rivals. "The Axonex Cisco solution dovetails perfectly with our Active Directory service, which contains everyone's name and account details at events," explains Nicholson. "They have one password for everything they're allowed to see. So we can use Active Directory as a tool to administer our network. We can see how they connect, and what VLAN they're in."

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The teams' attitudes shifted from indifference and complaints about having to pay for wireless connectivity to great enthusiasm. Nicholson recalls: "Several team leaders came up to me and admitted that they now couldn't live without it." By season's end, the teams had started feeding wireless race information directly to senior engineers at their home factories.

Cisco ISE also lets MST control what people are allowed to look at on its intranet. "It's a nice package, enabling us to manage everything in one place," Nicholson concludes. "It was a proven system, and the decision really paid off for us."

Next Steps

MST is developing a new project to transform its business. It uses Cisco Integrated Services Routers (ISR) on the WAN at its U.K. headquarters, with ISR security and the Cisco ASA 5500 Series Adaptive Security Appliance, and it is working on a new business model.

Using both Cisco AnyConnect® Secure Mobility Client and VPN Client will enable remote management of events from anywhere, eliminating travel and hotel bills for two staff members throughout the season.
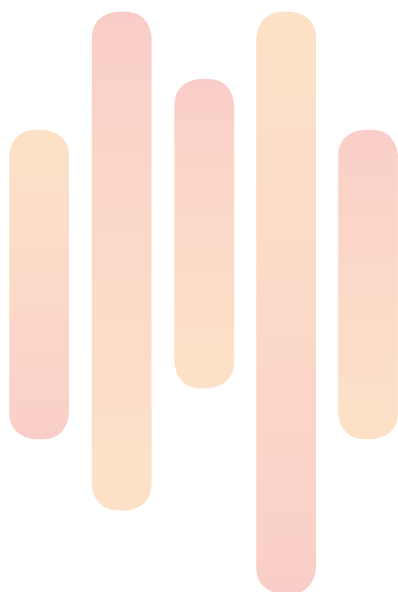
For More Information

To learn more about the Cisco solutions described in this case study, go to:
www.cisco.com/en/US/products/hw/wireless/index.html

Product List

Wireless
- Cisco Aironet 1600 and 2600 Series Wireless Access Points
- Cisco 5500 Wireless Controller

Security
- Cisco Identity Services Engine
- Cisco AnyConnect Secure Mobility Client
- Cisco VPN Client
- Cisco ASA 5500 Series Adaptive Security Appliance

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