Customer Case Study

Essex County Fire and Rescue Service Save Lives

with a Talari SD-WAN

Essex has one of the UK's largest Fire and Rescue organizations. The service employs approximately 1,295 fire fighters to respond to potential hazards in the county, and it is on constant standby to save people's lives in case of fires, accidents, explosions and severe weather.

Essex County Fire & Rescue Service

Executive Summary

Company
Essex County Fire and Rescue Service

Location
Essex County, UK

Six administrative sites and 51 fire stations

Key Applications
Emergency communications systems

Challenge
Eliminate intermittent service when Incident Command Units have been mobilized

Solution
- Talari SD-WAN

Results
- Significantly increased speed and connection reliability between Headquarters and Incident Command Units
- Delivered a faster solution at a much lower cost versus their 3G coverage and satellite backup connection
- Increased available bandwidth with full disaster recovery backup

Besides the firefighters, Essex County Fire and Rescue Service employs 46 control personnel and 266 support staff. The service operates from central service headquarters at Kelvedon with six other administrative sites and 51 fire stations. So it is fair to say that they have a heavy need for technology to support these operations.

Emergency calls are currently answered at the Control Centre at Hutton, but this will be relocating to a new purpose-built call center at Service Headquarters at the end of this year. At that time, Essex County Fire and Rescue Service, which tends to be very forward-thinking in its use of new technology, is installing a new state-of-the-art mobilizing system, to use in the new control room.

The service has around 350 concurrent users based at over 50 sites, and its computer systems are heavily virtualized. It runs on Microsoft Servers with an MPLS network connecting all of the locations to the Kelvedon Service Headquarters.

Essex County Fire and Rescue Service Challenge

John White joined the service as ICT Communications Manager to look after networking, telecoms and communications, including the mobile communications to the Incident Command Units (ICU). He heard about Talari through a conversation with the sales manager from systems integrator Teneo. He was curious to learn how Talari appliances work, as he could see an interesting opportunity to use them in the mobile Incident Command Units.

"We know the communications will work reliably when we need them – and that's reassuring to know, if we ever have to deploy the ICUs to a major incident."

John White
ICT Communications Manager
Essex County Fire and Rescue Service

If there should be a major incident, Essex County Fire and Rescue Service has two Incident Command Units, based at Basildon and Clacton, which can be sent to the location of the emergency to provide communications for the officers in charge to coordinate the rescue service. These vehicles are equipped with all the technology required to manage the communications for a major incident and as such are vital in providing a communications infrastructure with 100% uptime.

Essex County Fire and Rescue Service uses a Vector Command Support System with a server in each Incident Command Unit linking to a server at headquarters. The two Incident Command Units each carried a 3G modem on board, plus a satellite modem and a WiFi connection, as well as the relay switches between these different networks. The 3G coverage had been patchy at best, so for most of the incidents where the Incident Command Units had been mobilized, there had been either no 3G connection at all, or only intermittent service.

"The big difference now is that we now have faster, reliable communications and guaranteed bandwidth in our Incident Command Units. We didn't have this before – the connections had been slow at best and not usable at all for a lot of the time."

John White
ICT Communications Manager
Essex County Fire and Rescue Service

This meant that the Incident Command Units were usually relying on satellite connections, which are slower and very expensive.

Talari Solution

Realizing that the Talari units might be able to find the fastest route across the network and increase the bandwidth available, White decided to test whether the connections to the Incident Command Units would be better with Talari SD-WAN with Adaptive Private Networking technology on board. They tested this idea by installing Talari in a vehicle with four 3G modems, one on each of the Vodafone, O2, Three and EE networks, and driving it around the countryside, and found that there was a marked difference — it worked very well. It worked so well that it was very clear they should purchase Talari to install in the Incident Command Units.

Results

The Talari appliances were installed, along with the extra 3G modems in every vehicle. The links became far more reliable, and significantly faster. In addition to this, the Talari Appliances manage which connection is used so they can rely less on the satellite connections which are charged per minute.

The Talari appliances also provide disaster recovery. Should communications at one location fail, Talari would maintain the connection by routing the communications via the other locations on the network.

Implementing the Talari solution in the Incident Command Units was relatively straightforward, and they soon had the connections working the way they wanted them, using WiFi first, then the four 3G modems, and finally the satellite modem.

The installation proved its worth during the floods of the 2013 winter when an ICU was deployed at Jaywick to coordinate a multi-disciplinary team of services, operating from a temporary command post based in a local golf club. Fortunately the floods at Jaywick were not as serious as anticipated and serious incidents are relatively rare. So while the ICUs are not used frequently, Essex County Fire and Rescue Service can now rely on the communications working effectively when they are needed.

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About Talari Networks

Talari Networks, the trusted SD-WAN technology and market leader, engineers the internet and branch for maximum business impact, delivering superior application reliability and resiliency, while unlocking the benefits of branch consolidation. Incorporating years of innovation into five generations of product, Talari is deployed across thousands of sites in 40 countries.

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