'Broadband in a Box' Delivers High Speed Internet Access for Exercise Unified Response

Rapid Site Mobile Set-Up: ISN delivers on-the-spot instant 4G broadband connectivity for London Fire Brigade

About Exercise Unified Response

Designed to test the response of London's emergency services to a mass casualty event, Exercise Unified Response is the largest multi-agency exercise ever to be run in the UK. Organised by London Fire Brigade on behalf of the London Resilience Partnership, the four-day exercise involved London's emergency response organisations, local and national authorities, and specialist teams from across the UK and overseas.

Conducted simultaneously at four separate venues across London and a disused power station in Dartford Kent, around 2,000 volunteer 'victims' - some wearing dramatic make-up to simulate terrible injuries – were involved in the exercise.

At the derelict power station in Kent, London Fire Brigade simulated a major incident event – the collapse of a tower block onto Waterloo Tube station. This highly realistic exercise scenario featured eight redundant tube carriages – two of which were buried out of sight – and a fake underground station, complete with ticket foyer and 'street entrance'.

The complex live training event provided a critical opportunity for London Fire Brigade to practice its urban search and rescue skills, and its coordination capabilities with other partner response agencies – including the police and ambulance services.

During the exercise these agencies were also able to test how they share information about missing persons and victims. At the power station simulation site, for example, disaster victim identification teams worked alongside other forensic specialists at the disaster scene.

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- **Graham Walmsley**, Senior Network Engineer at London Fire Brigade.

Throughout the training exercise the response of all emergency teams was rigorously observed by independent evaluators, so important lessons for the future could be learned.

The challenge

When you're organising the largest multi-agency training exercise ever conducted in Europe, you need to be confident everything is in place for a successful event. That includes ensuring those observing and monitoring the scenario as it unfolds can access secure and bullet-proof internet connectivity.

"Those involved in the emergency response simulation exercise itself would utilise standard emergency services communications networks – such as Airwave Network," explains Graham Walmsley, Senior Network Engineer at London Fire Brigade.

"But the exercise command and control team, along with the observers and evaluators working on-site needed an additional communications infrastructure featuring fast reliable Internet access so they could collaborate and communicate with confidence, upload video reports and access specialist applications for the duration of the four-day event."

The abandoned power station presented a unique set of challenges. London Fire Brigade needed to create a resilient wired-like communications experience for approximately 200 temporary users, within an extremely tight timeframe. The solution needed to support dual 4G service providers so that the best service/signal could be prioritised in real time to ensure critical recording and evaluation processes were not interrupted.

With just weeks to go, Graham turned to ISN to create and implement a solution to its mission-critical connectivity requirement.

The solution

ISN joined Graham and his team at the disused power station to undertake a site-wide evaluation of the location. Alongside buildings that would house the exercise control and command teams, the site's primary incident staging areas – located in the original building's boiler house and turbine hall – would also contain a viewing gallery and observation areas for monitoring personnel.

"We needed a site-wide temporary, yet highly secure, WiFi solution we could configure and control to give individual user groups their own 'mini-LANs'. Enterprise-grade mobility was a must, as users needed a high speed data network to support video streaming and access to applications like Exonaut, a specialist exercise training evaluation tool," continues Graham.

ISN devised a bespoke '4G solution in a box', featuring a wireless WAN that would deliver all the IP connectivity needed without a terrestrial link. Having pre-configured all routers and access points, ISN joined Graham's team at the power station to set-up and implement the mobile WiFi network.

"We were up and running with a fully operational solution in just two days," confirms Graham. "I was impressed by the wireless coverage we were able to achieve across what was a highly complex site."

Results

For the duration of the exercise, the mobile WAN performed flawlessly, as Graham explains; "We were able to monitor and control access on the WiFi network at all times to ensure Exonaut users had priority access and would not encounter network congestion issues."

"This solution has given us a reusable resource we can deploy again, whenever we need to get a wired-like communication experience up and running at speed and with minimal expense," concludes Graham.

ISN solution

- Ultra-broadband connections in an instant
- Wireless WAN that delivers end-to-end IP
- Engineer and implement a secure 'public' network
- Cabling, IT engineering resource for the set-up
- Telephone support for duration of the event

Benefits

- Fully managed and monitored PCI DSS compliant infrastructure
- No need to wait for fixed-line provisioning – economical and fast to set up
- Uninterrupted 'out of the box' connectivity with lots of bandwidth
- Re-usable – and cost effective – use for just a few hours or for days as a temporary communications solution
- Create a private 4G hotspot giving users a secure, always-on, reliable connection for email, browsing, video chats and more

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