

Trellisworks, UK

InfiNet Wireless and Trellisworks Provide High-Speed Ethernet Network Connectivity for Red Funnel Ferries

Challenges

- To guarantee stable and continuous connectivity between moving vessels and an on-shore control centre;
- To provide uninterrupted Wi-Fi connection to passengers on board all the vessels.

Solution

- InfiMAN 2x2 backbone consisting of a number of high capacity base stations deployed all along the ferry routes;
- Remote wireless units installed to every vessel, allowing it to connect with the operator's network regardless of actual location or sailing direction.

Red Funnel is one of the UK's oldest ferry operators, running a modern fleet of passenger and vehicle carrying ferries 24 hours a day, 365 days a year. Launched as the very first Isle of Wight ferry company, Red Funnel carries over 3.4 million passengers each year. In order to ensure customers received the best possible service, the operator decided to significantly overhaul its ship-to-shore Ethernet network connectivity.



Red Funnel wanted to establish a new platform which would allow it to have uninterrupted connectivity with all its ferry routes running between Southampton and East and West Cowes on the Isle of Wight. The operator stressed, as part of its technical specifications, the importance of increasing data rates and reducing the latency levels experienced with previous solutions, as well as providing passengers with high-speed internet access throughout the 19km journey, with no black spot whatsoever along the sailing routes.

As one of the busiest passenger ferry fleets in the UK, carrying up to 3,240 passengers at any point in time, they estimated that their passengers can easily consume over 100GB of data daily, a figure that usually increases three-fold during busy periods or around the dates when festivals are held on the Isle of Wight. Red Funnel required a reliable, flexible and always-on solution from its potential suppliers in order to meet such a demand.

Red Funnel approached Trellisworks, a UK-based company that specialises in wireless connectivity, IP-CCTV and mobile data routing to find the best fit solution, one that is future proof and scalable. After an initial consultation period, detailed surveys and operational field trials, Trellisworks selected the InfiNet Wireless InfiMAN 2x2 Point-to-Multipoint, coupled with the InfiMUX, a special switch designed specifically by InfiNet for nomadic units and mobile vessels.

During the initial field trials, a number of wireless base stations were deployed along the sailing routes to support the required high level of guaranteed connectivity from each vessel to the Red Funnel on-shore network.

Benefits

- Red Funnel now offers free Wi-Fi to all its passengers as part of its customer service and experience;
- A robust, stable connection is maintained during the voyage from the UK mainland to East and West Cowes, a distance of 19 km;
- A vastly improved ship-to-shore communication.

This solution required installation of mobile antennas at strategic locations on each vessel, a task rendered particularly difficult as the existing navigation systems had to remain operational throughout the trials without any interruption, and free from any radio interference.

The InfiNet ship-to-shore communication solution deployed in the end utilises multiple channels of communication between the mobile vessels and the on-shore base stations, in such a way that before the vessels move away from one base station, a second connection is automatically established with the next base station, thus ensuring trouble free roaming and uninterrupted connectivity. Each vessel was fitted with a number of remote subscriber units to ensure connection to the network is maintained permanently regardless of the ship's moving direction or location. These client radios were ultimately able to provide a minimum of 100 Mbps throughput and with very low latency.

Thanks to InfiNet's robust solutions, complemented by Trellisworks' expertise in designing and deploying mobile solutions for the sailing market sector, the entire fleet of Red Funnel has been upgraded with the same solution, ultimately resulting in a significantly improved user experience on all vessels.

"We're thrilled with how this solution has helped us to provide first rate connectivity for our passengers. We are committed to providing the best services for our customers, and the expertise, hard work and ingenuity of Trellisworks and InfiNet Wireless in deploying a solution capable of meeting and exceeding our needs has been integral in achieving this." - Jonathan Green, Marketing and Communications Director at Red Funnel.

"Working within the constraints of physics and regulations, we are extremely proud that we have overcome the specific obstacles we encountered for this requirement. Now, Red Funnel can deliver seamless, high-speed connectivity and secure internet access throughout the vessels' journeys, ultimately enhancing the user experience. It's great to see that Red Funnel are exceptionally happy with the outcome and services we have provided using the InfiNet Wireless solutions and the positive impact this has had from day one on their level of service." - Grant Holman, Trellisworks Project Manager