

Fortinet Controls Secure Wireless and Wired Internet Access at Kerry County Council

Situation

One of the most famous counties of Ireland, County Kerry is nearly 2,000 square miles of natural beauty. Steeped in rich cultural heritage, embodied by its significant Gaelic-speaking population, Kerry is home to 145,000 people using government services such as libraries, recycling facilities and affordable housing, provided by its local authority Kerry County Council (Kerry CC).

Padraig Daughton is Network Analyst for Kerry CC, responsible for delivering network services for the organisation's 70+ sites and 800 staff throughout the county. Charged with new responsibility for providing 'walk-in' authenticated secure wireless network access to citizens using their own WiFi-enabled devices at each of the county's nine branch libraries, Daughton was initially certain he would face with an expensive bill to make it happen.

"We'd researched all the wireless vendors and already knew of what Cisco for example had to offer as we had some of their wireless technology deployed elsewhere at the Council," explained Daughton. "Fortinet wasn't in the frame at that point. It was only when the maintenance contract on our Internet proxy server was due for renewal, and we starting talking to Fortinet about a better filtering solution to replace it, that our eyes were opened to how they could provide and secure wireless connectivity among all the libraries too."

Solution

Using a FortiGate security appliance as a wireless network controller negates the need for a separate controller to centrally command APs (Access Points), reducing cost through smarter consolidation of network elements. Having previously supported DSL Internet access to each of the nine libraries, Daughton cancelled the broadband contracts and brought the libraries Internet connectivity over an already established private network running back to Tralee county hall. There he deployed two FortiGate-80C's in a HA (High Availability) cluster, using the active FortiGate to scan traffic to/from each library (using identity-aware firewall policies and UTM engine inspection to ensure only authorised wireless traffic is forwarded), and the passive FortiGate for failover.

"The active FortiGate also acts as the wireless controller for the nine lightweight APs we have networked out in the field – one at each library," explained Daughton. "It was incredibly easy to set up and separate VLANs for the wireless Internet traffic from the static PCs and Kerry CC administration systems at each library. As well as the FortiGates and the FortiAPs (220B), we also deployed a FortiAnalyzer logging and reporting console in order to analyse traffic growth and behaviour, and forensically inspect any abuses on the network. The FortiAnalyzer is great for generating detailed reports, most of which came from the pre-loaded templates."

Meanwhile, within Kerry CC's main production network, Daughton was equally keen to resolve the issues that had been mounting up with its legacy Internet proxy solution. "We'd been suffering problems for quite some time; authentication issues, bypassing problems, and lots of legitimate radio and video/TV

Challenges

- Secure 'walk-in' wireless access within tight budgetary constraints
- Overcome sluggish and erratic Internet filtering policy problems

Objectives

- Create a sound business case
- Maintain flexibility for cost-effective growth of wireless services

Deployment

FortiGate-110C
FortiGate-80C
FortiAP-220B
FortiAnalyzer-100C

Industry

Local Government

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- Padraig Daughton,
Network Analyst
Kerry County Council

streaming content being blocked,” he recalled. “We’d fix them soon enough but it was becoming a losing battle, especially as we found rules and policies would only seem to work sporadically. The final straw came when maintenance renewal was up and we found that the box still hadn’t been certified to run on vmware and we would have to purchase another physical unit to gain the high availability that the business now required.”

Daughton worked closely with Fortinet pre sales engineers to design and test the optimum replacement solution from Fortinet’s extensively scaled product range. The FortiGate-110C was selected, again in a HA cluster for maximum redundancy. A second FortiAnalyzer is deployed for the production network environment.

The FortiGate-110C and FortiGate-80C alike are part of the latest generation of Fortinet platforms providing organisations globally with integrated multi-threat protection. Both feature the latest version of FortiOS 4.0, Fortinet’s purpose-built operating system that leverages the power of the FortiASIC content and network processors, and support new features, including data leakage prevention, WAN optimisation, identity based policies, and application control. The FortiGate-110C is capable of higher-scale processing and security performance than the 80C, achieving firewall throughput of up to 1Gbps with capacity for up to 400,000 concurrent sessions. Like all FortiGates, they both enable a comprehensive suite of security services: Firewall, VPN, intrusion prevention, antivirus/antispyware, antispam, web filtering, application control, data loss prevention, and end point network access control.

Success

“We’ve architected the network to place the FortiGate-110C in-line between the primary firewall and core router, rather than using it as a proxy,” explained Daughton. “We run an access list on the router and anything destined for HTTP/HTTPS traffic gets sent through the Fortinet box. I must say that its flexibility and high-performance characteristics met all our requirements, and I’m extremely pleased that we chose to adopt this solution.”

For Kerry CC’s wireless library service, Daughton is equally positive about the role Fortinet technology has played. “Rather than simply acting as a security gateway, the wireless controller capabilities make it a single pane of glass for that portion of our network. The complete solution has saved us a great deal of cost, a great amount of operational time and expense, and gives us tremendous control and flexibility over this important and increasingly popular network service.”

In the future, Kerry CC will consider how to extend their use of Fortinet technology, as needs escalate and as further renewal opportunities on other legacy systems time-out. “I won’t promise we’ll replace our existing firewall when it comes up for renewal, but I’m sure Fortinet would be a compelling alternative and one we’d have good cause to examine closely. As far as the wireless libraries initiative is concerned, I’m convinced at how cheaply and easily we could add extra APs into the network. Our other existing wireless provision doesn’t have anything like the flexibility for adding wireless either tactically or for long-term deployments.”

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