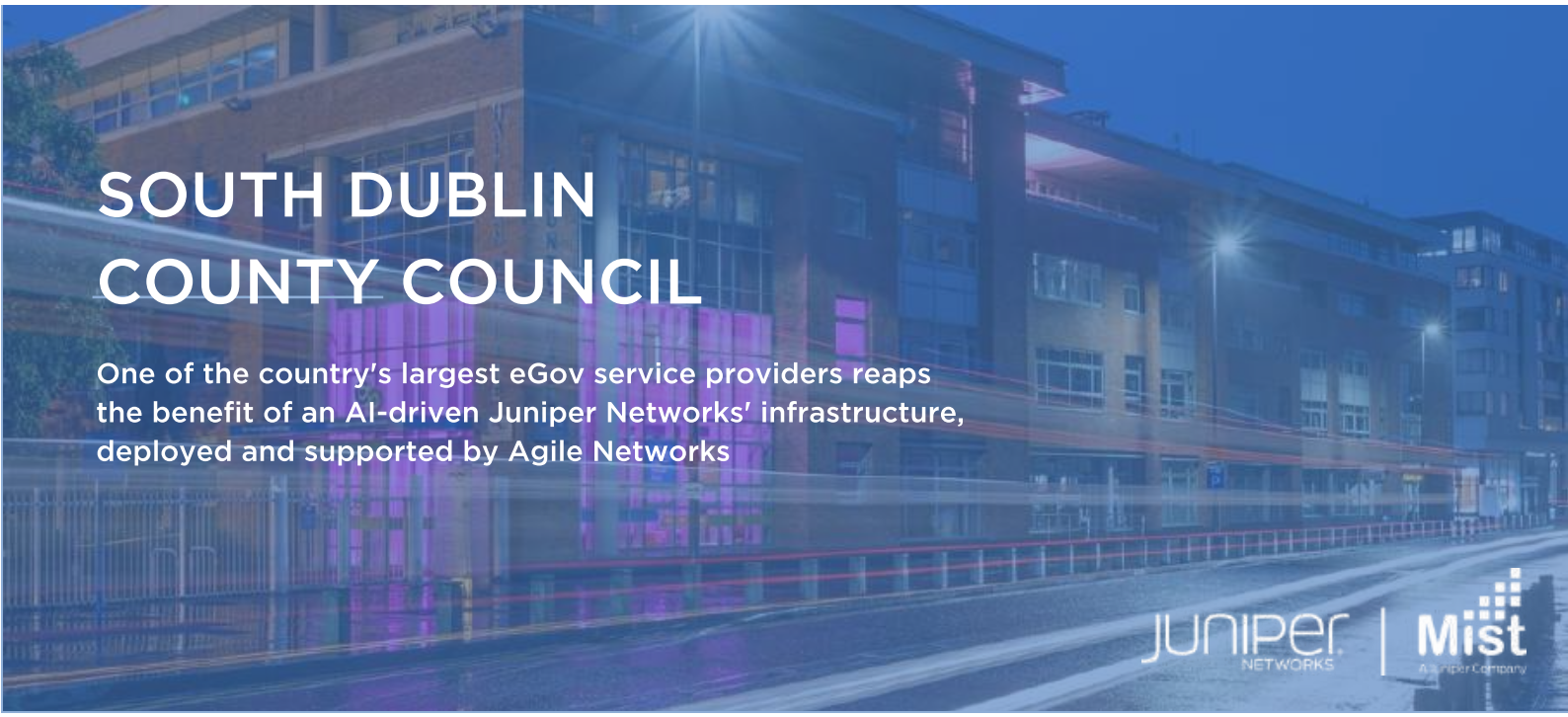
Local Government



SOUTH DUBLIN COUNTY COUNCIL

One of the country's largest eGov service providers reaps the benefit of an AI-driven Juniper Networks' infrastructure, deployed and supported by Agile Networks

Overview

South Dublin County Council (SDCC) was formed in 1994 and supports a population of almost 280,000 and over 7,000 businesses. Its primary function is to provide local government services, including housing and community, roads and transportation, urban planning and development, tourism and culture, as well as environmental sustainability.

With over 1,200 employees, it's one of the largest county councils in the country.

Agile Networks has a long-standing commercial relationship with the council, having originally won a public tender with Juniper Networks to deploy its firewalling technology to protect the council's network perimeter.

From there, the relationship has steadily grown, to the point that SDCC has continued to expand its LAN/WAN infrastructure with Agile Networks, standardising on Juniper Networks from core to edge.

Business Challenge

In 2019, the council signed the Declaration on Public Service Innovation, a program which recognises the power of innovation to solve some of the most pressing challenges faced by citizens. This committment to innovation and to the council's five-year development plan, is reflected in a sustained investment in technology. A core tenet of this is to secure and protect the IT infrastructure required for efficient service delivery by its staff.

This latest project involves an upgrade to the Council's wireless network infrastructure at its headquarters and satellite depots, dotted throughout the county.

With Juniper Networks now providing secure core to edge network connectivity, the council is able to realise many operational benefits, unique to the Juniper Networks' solution set.

"In designing network architecture, our aim is always to future-proof the infrastructure to protect investment and to allow the client to easily grow and scale beyond the current project parameters."

Andrew Byrne, Technical Consultant,
Agile Networks

Technology At A Glance

Original Infrastructure Deployment

- **EX3400 Ethernet Switch**

  A cost-effective solution for demanding converged data, voice, and video enterprise access networks. A compact, fixed-configuration 1U device, which supports Juniper's unique Virtual Chassis technology for interconnecting up to 10 switches that can be managed as a single device.

- **QFX5110 Switch**

  The QFX5110 line of switches is Juniper Network's versatile fixed-chassis solution for hybrid cloud deployments. The small form-factor data centre switches are designed for either core or aggregation environments with high performance and low latency.

- **SRX1500 Services Gateway**

  A high-performance security appliance, the SRX1500 provides ultra-fast, high-speed firewalling and intrusion protection. It protects distributed enterprise campus locations for small to midsize data centres. The SRX1500 easily extends to protect end-user devices.

Latest Upgrade

- **Juniper Mist Wireless LAN Platform**

  An AI-driven platform built on a microservices cloud architecture. Over 60 Mist access points have been deployed at headquarters and at regional depots to deliver exceptional network user services by simplifying and automating network operations and troubleshooting.

- **Juniper Connected Security**

  Including Security Director, Juniper ATP Cloud, and Junos Space Security Director with Juniper Policy Enforcer. This builds defenses into the network to automatically protect data, devices and workloads across the organisation.

Service Wrap with Maximum Network Uptime

Juniper Mist Wired Assurance allows the team at Agile to easily integrate management and monitoring of the SDCC infrastructure to their Network Operations Centre, performed on a 24x7 basis.

Using an overlay of Solarwinds, a powerful IT management tool, staff can immediately identify network issues. For example, the Mist platform will visually identify the user, switch or access point that is not conforming with the set SLA in less than 10 seconds. It will then proactively turn these insights into automated actions to identify and resolve issues, ensuring swift responsiveness, consistent network performance and maximum network uptime.

Securing Digital Assets

Agile Networks deployed a trio of integrated security solutions from Juniper to protect the local government's citizens and government apps and services.

Juniper Networks Connected Security takes a 360-degree approach, safeguarding users, applications, and infrastructure by extending security to all connection points across the network. It combines policy, detection and enforcement that centralises and automates security, while creating a smaller attack surface.

The central platform, Juniper Security Director, is a security management application that supports security policy administration. Policy Enforcer, built into Security Director, ensures that policies for multivendor network elements and firewalls are enforced closest to where the threat was detected.

Juniper Advanced Threat Protection Cloud (Juniper ATP Cloud), the third solution in the trio, provides cloud-based malware detection to identify known and unknown threats through threat feed information and sandboxing, machine learning, and threat deception techniques. Juniper ATP Cloud blocks or quarantines threats to prevent north-south or east-west threat propagation in the South Dublin County network.

For example, the council is constantly targeted with sophisticiated phishing attacks as staff email addresses are so public. However, its security office can easily add the IP addresses in ATP Cloud and it blocks them straight away.

The combination of the three connected security solutions creates a highly automated, threat-aware network that protects the council and its residents.

High Performance Wi-Fi

Mist Access Points, deployed at headquarters and at eight satellite offices throughout the county, support 802.11ax (Wi-Fi 6), have patented virtual Bluetooth® LE, and Internet of Things (IoT) integration.

They work in conjunction with the Mist Cloud and AI Engine to collect and analyse metadata in near real-time from all wireless clients. This enables rapid problem detection, predictive recommendations and proactive correction, realising the self-driving network™.

Mist leverages the council's existing investment in Juniper LAN infrastructure with a cohesive approach to managing wired and wireless networks. With Mist, the focus is on user experience, underpinned by solid, consistent network performance and simplified operations for the SDCC infrastructure team.

"Juniper Mist access points have the industry's most accurate and scalable location services. They could easily be used for contact tracing applications without the need for battery-powered BLE beacons."

Sean Nolan, Business Development Manager, Agile Networks

AI-Driven Enterprise

SDCC is on the path to an AI-driven enterprise where experience is the new uptime. Having a single-vendor network and support structure for wired, wireless and security means fewer administrative headaches.

Mist delivers amazing user experiences to council staff, from the mayor to the finance teams to planning applications and maintenance teams by bringing insight into user experiences and proactively turning these insights into automated actions to identify and resolve issues.

The overlay of Agile Networks' management and monitoring service, gives SDCC the confidence and assurance that issues are identified and resolved in the quickest possible time, minimising user impact and adhering to SLAs.

The Mist Cloud provides unique client-level insight, rapid network troubleshooting, trending analysis, anomaly detection, and proactive problem remediation with its AI engine.

The ICT team can set, monitor, and enforce service level expectations for key wired and wireless performance metrics, such as throughput, capacity, roaming, and uptime.

Mist's Marvis Virtual Network Assistant, based on natural language inputs, provides predictive recommendations to avoid problems or fix them quickly and automatically. And with a cloud architecture, network upgrades and patches are on demand, taking minutes unlike legacy controller-based solutions.

Overall Benefits At A Glance

- Reduced IT support and management overhead thanks to an AI-driven infrastructure with self-healing, self-protection properties
- Enhanced security posture through automatic protection of data, devices and workloads across the organisation
- Superior user experience with consistent, high performance networking services
- Ability to provide staff with reliable and secure remote working capability during the Covid-19 pandemic
- Investment protection with future-proofed technology that supports the strategic objectives of the council

"Troubleshooting is so much easier, thanks to a standardised core-to-edge network infrastructure. The introduction of policy enforcement and AI-driven network automation reduces support overhead even further."

Sean Nolan, Business Development Manager, Agile Networks

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