

GOLDCREST VILLAGE AT CAMPUS LIVING

Students enjoy high-speed video streaming and reliable computing services at campus accommodation, thanks to an Aruba Wi-Fi network, designed and deployed by Agile Networks


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Overview

Opened in 2018, Goldcrest Village is a state-of-the-art student residence, located on the NUI Galway campus.

It consists of 76 non-smoking apartments with 3 apartment types of 4, 5 and 6-bedrooms spread across a number of accommodation blocks. The facility caters for 459 students in total and demand is high all-year round.

The residence has enjoyed 100% occupancy for the 2018/19 and 2019/20 academic years.

When students are on leave during the summer, the accommodation is typically rented out to domestic and foreign tourists who value the high level of service and freedom to explore the Wild Atlantic Way and the vibrant city-life of Galway, right on its doorstep.

A variety of services are provided to students including a self-service launderette, automated to notify students when laundry is complete, sports facilities and of course, 24-hour wireless access.

Business Challenge

Standards in the provision of on-campus student accommodation have soared in recent years. These co-living spaces are bright, airy and well-furnished with a contemporary design. Separate, spacious bedrooms act as sleeping quarters and private study areas, with shared kitchens and living rooms as communal spaces.

And the quality of residential high-speed wireless internet access is the one service that exercises students above anything else.

Arguably, wireless internet has never been more important at a time when blended learning is growing in popularity. Distance learning combined with on-site teaching hours is the order of the day post-Covid so it's important for NUI Galway's students to have access to the computing resources they need to carry out vital research or complete their assignments when off campus.

Following a tender process, Campus Living selected Agile Networks and its technology partner, Aruba Networks to deploy wireless computing services for its latest suite of student accommodation at Goldcrest Village.

Resiliency and Redundancy Key to Meeting Expectations

In approaching the wireless network design, the Agile team anchored the architecture to principles of resiliency and redundancy. Where one access point (AP) was required, two were deployed with automatic failover to the second device in the case of outage.

This avoids a 'single point of failure' scenario and gives the team at Goldcrest great confidence in the stability and reliability of the network. After all, the speed and consistency of internet connectivity is always top of the agenda for students when on or off campus.

A total of 150 APs were deployed with underlying switching infrastructure from 30 Aruba switches.

A medium-density AP in the form of the Aruba AP303 was recommended, recognising the fact that students would be using a lot of high-bandwidth streaming services and on-demand video. The AP303 supports priority handling and policy enforcement for unified communication apps, with encrypted videoconferencing, voice, chat and desktop sharing.

"Real-time information is key to delivering a good service. At the click of a mouse, staff can see the total number of APs active and the total number of clients connected in real time. This reassures staff and residents that the Wi-Fi network is performing optimally."

Sean Nolan, Business Development Manager,
Agile Networks

Technology At A Glance

Aruba Hardware

- AP303 Access Point

The AP303 from Aruba Networks is an affordable mid-range campus access point, which delivers high performance 802.11ac with MU-MIMO (Wave 2) for medium density environments. With the integrated BLE and supporting 802.3af power, the Aruba 303 Series delivers up to 1.2 Gbps aggregate peak data rate.

Integrated wireless intrusion protection offers threat protection and mitigation, and eliminates the need for separate RF sensors and security appliances.

- Aruba Central

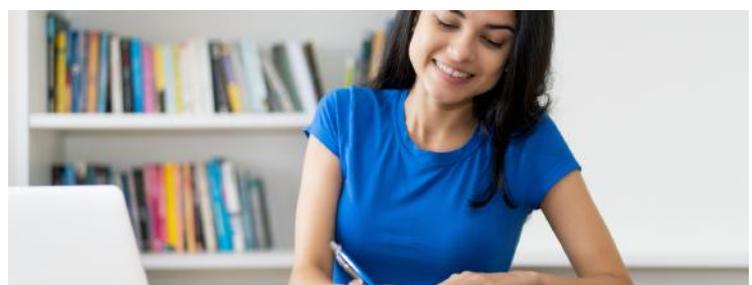
Aruba Central, a cloud-based management portal, forms the basis of the managed service delivered by the Agile Networks team. Its NOC support staff have access to full-service AI insights, security and performance data through an intuitive user interface. This facilitates quick and easy access to the data required to manage, analyse and maintain Goldcrest's wireless network.



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"Capacity planning was so important. We could see one student with 13 separate devices connected to the network and that's the performance standard we set for its design."

Ed Mannion, Technical Consultant,
Agile Networks



Managed Service Wrap with Device Status and Usage Insights

APPLICATION	CATEGORY	USAGE
netflix.com	Streaming	2 TB (23.44%)
YouTube	Streaming	1 TB (13.28%)
HTTPS	Web	943.6 GB (10.69%)
Instagram	Social Networking	486.5 GB (5.51%)
WhatsApp Messenger	Instant Messaging	213.8 GB (2.42%)
Apple FaceTime	Streaming	196.5 GB (2.23%)
Amazon Prime Video	Amazon SAAS	188.5 GB (2.14%)
Amazon Web Services/Cloudfront CDN	Amazon SAAS	168.2 GB (1.91%)
Akamai Technologies CDN	Web	148.1 GB (1.68%)
TCP	Network Service	142.4 GB (1.61%)
iCloud (Apple)	Mobile App Store	118.7 GB (1.34%)
iTunes	Streaming	107.2 GB (1.21%)

Sample dashboard report showing most popular application usage. No surprise to see that high-bandwidth video streaming is hugely popular with Netflix and YouTube in top spots.

Thanks to a full managed service wrap, the Agile team have eyes on the wireless network at all times. A user-friendly web GUI provides all the data insight they require to ensure that AP devices and switches are operating as normal. Device outages are easily identified and remote troubleshooting can be performed quickly.

Based on Aruba Central, the reporting is granular and as can be seen from the dashboard above, high-bandwidth video streaming is the most popular application, where students check out the latest movies on Netflix or other video content on YouTube, as they enjoy some well-deserved downtime.

In terms of network access, there are two login mechanisms. Long-term students use their eduroam credentials. Eduroam is a secure, world-wide roaming access service and is in use across academia in Ireland.

For summer visitors, a new SSID is broadcast and users can access the network using the SSID and wireless password, which is pinned to the back of each apartment door.

Overall Benefits At A Glance

- High-speed, high-performance, reliable Wi-Fi services available to 459 students, 24 hours per day
- No single point of failure with automatic failover to second AP in the event of device outage
- Full managed service identifies device issues and triggers remote troubleshooting where necessary
- Segmented login mechanisms for eduroam students and short-term visitors
- Peace of mind for Goldcrest staff in that they can concentrate on their core business, while forgetting about Wi-Fi provision

"There's nothing more frustrating for students than when Wi-Fi drops. Here, it just works. It's like switching on the lights. We know that students will probably spend more time at their desks here rather than on campus this year, but capacity isn't an issue for us."

Susan Clancy, General Manager,
Goldcrest Village at Campus Living

