

# Newcastle University

AI-Native Networking brings smart campus to life

Discover how to make every connection count with Juniper's AI-Native Networking Platform

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## Industry

Higher education

## Region

EMEA

## Juniper and Mist AI unleash university research and collaboration

Newcastle University, with campuses in the U.K., Singapore, and Malaysia, pushes the boundaries of knowledge through innovation and creativity. The research-intensive university is ranked among the top 130 universities globally and is renowned for its world-leading research and teaching.

To build a smart campus network that attracts the brightest researchers and students, Newcastle chose Juniper's AI-Native Networking Platform. The university generates huge amounts of data and wants to harness that data with Juniper and drive value to students, faculty, and every research effort.



## Overview



"We don't want to deploy **yesterday's technology** tomorrow."

**Gary Atkinson**  
Head of IT Infrastructure,  
Newcastle University

## Challenge

Looking to break away from a past of static networking, Newcastle University wanted a more flexible, future-oriented platform that supports data-intensive research and collaboration. The university also needed a network that could support rich user experiences.

Students wanted a home away from home. The university's IT service wanted to simplify network management and face down rising cybersecurity threats. The university's Vice Chancellor wanted a smart campus that improves student experience, enhances teaching, and enables operational efficiency. To get everything on the network wish list, Newcastle needed excellent performance, location-based services, IoT options, AIOps, and more.

## Transformation

Newcastle recast its network for the future with Juniper's AI-Native Networking Platform, the only fully integrated AI-Native portfolio of campus and branch solutions. With the full stack Juniper solution, Newcastle can manage wireless access, wired access, SD-WAN, indoor location, NAC, and firewalling under a common Mist AI engine and microservices cloud infrastructure. The university has everything it needs to deploy quickly and securely, operate easily, and realize lower TCO and OpEx and superior end-to-end assured user experiences.



## Outcomes

World-class, research-intensive

Global educational institute

**35,000+**

Students, faculty,  
and staff

**3**

Campuses in the U.K.,  
Malaysia, and Singapore

## Solution and implementation

[Juniper AP45 Access Point](#)

[Juniper AP63 Access Point](#)

[Juniper Mist Edge](#)

[Juniper EX4100 Switch](#)

[Juniper EX4400 Switch](#)

[Juniper EX4650 Switch](#)

[Juniper QFX5120 Switch](#)

[Juniper Mist  
Wireless \(Wi-Fi\) Assurance](#)

[Juniper Mist  
Wired Assurance](#)

[Juniper Marvis  
Virtual Network Assistant](#)

## A network for now and the future

Juniper's AI-Native Networking Platform prepares Newcastle University for now and the future. At every layer of the network, from core to edge, Juniper EX switches provide exceptional performance and reliability. Plus, the cloud-based switches mean Newcastle has no scheduled downtime for software updates.

Users connect to the wireless LAN through Juniper AP45 and AP63 access points over Juniper Mist Edge, which extends microservices to the campus network. The flagship AP45 access points deliver high performance and vBLE technology for location-based services and wayfinding inside, and the ruggedized AP63 access points handle campus connections outside the buildings.

Newcastle University's IT service relies on Juniper Mist Wired Assurance to onboard switches quickly and securely with zero touch provisioning, and Juniper Marvis Virtual Network Assistant minimizes network downtime and disruptions with its AIOps. Now that they have AIOps, IT is realizing a faster MTTR and has visibility across the full network stack to ensure excellent user experiences.

The team also deployed indoor location services with proprietary vBLE for wayfinding and understanding when and how buildings are used on campus. They will have full visibility into the location of people and things on all campuses, improving engagement and workflow while saving time and money over traditional, physical beacon-based location technology.



## Key takeaways and outcomes

See how Juniper is outpacing the competition in this wired and wireless LAN comparison guide.

## Students and IT gain smart campus network transformation

“We can do brilliant work with AI, and it’s pushing our network transformation forward,” said Atkinson. Investing in Juniper and Mist AI is creating huge payoffs in visibility and resiliency that ensures excellent user experiences across the campuses.

### Happier, less stressed staff

Juniper’s AIOps gets ahead of problems. “We can see if there isn’t enough network capacity before calls come into our Service Desk,” said Atkinson. The mentality is changing from fighting fires to preventing fires. It’s a lot less stressful for the IT department.

### Wi-Fi first strategy takes hold

Students typically come into university with multiple devices and want instant connectivity. A Juniper network allows students to get it. “We want students to feel like the dorms are their home away from home,” said Atkinson.

### AIOps deliver real efficiencies

Simple templates, automated workflows, and zero touch provisioning speed up deployment and reduces errors. “We see a future of massive efficiency gains with Juniper and Mist AI,” said Atkinson.

## More information

## Learn more about Juniper cloud services

To learn more about wireless access points and edge, visit: <https://www.juniper.net/us/en/campus-and-branch.html>

To learn more about Juniper Mist wireless, visit: <https://www.juniper.net/us/en/dm/juniper-wireless-vs-cisco.html>

## Take the next step

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