# CAE

Branch or campus networks

# It's your nerve centre... are you in control?

# Introduction

Your network is the nerve centre to your organisation's entire operations. It's business critical that you keep your data secure, run your network and business operations continuously; by managing and optimising your network infrastructure with the best tools available.

Find out how to spot the weaknesses and gaps in your network, and how you can take control.

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# Understand your network

**Branch and campus networks serve different purposes, based mainly on the structure of your organisation. You need to understand your network to manage, optimise and control it effectively.**

## Branch network

Typically, if your operations are distributed geographically, you are likely to deploy a branch network. If you have several offices in different places or your organisation runs a chain of retail shops, your network needs to support a range of devices offering different levels of capacity, performance and cost-effectiveness.

Flexibility is the watchword. From compact all-in-one routers to high-capacity switches, branch networks can be customised to align with the unique requirements of each site.

A key characteristic of your branch network is dependence on WAN connectivity, with SD-WAN (Software Defined Wide Area Networking) providing a transformative solution. SD-WAN helps to empower your network by leveraging cost-effective Direct Internet Access (DIA) connections. These will give you reliable and efficient business connectivity while reducing expenses.

## Campus network

Universities, corporate headquarters and large facilities usually deploy campus networks. Designed to handle scale and high performance, campus networks manage thousands of devices. Segmentation to enhance security and optimise resource allocation is very important. Administrators can isolate traffic for different departments, user groups or applications.

High density environments demand high capacity and low latency. With a campus network you need advanced switching and routing technologies along with high-performance access points to ensure seamless connectivity for bandwidth-intensive applications such as video conferencing, real-time collaboration, and data analytics. Campus networks often integrate sophisticated redundancy and failover mechanisms to maintain uptime and support critical operations.

## Shared priorities

Branch and campus networks serve distinct purposes, but they share priorities and challenges. Both must address security, observability, and operational efficiency to meet the demands of modern organisations.

One of the most pressing is data security. Cyber threats are becoming more sophisticated. So, networks need to employ advanced measures such as Zero-Trust architectures, end-to-end encryption, and real-time threat detection to combat them. Equally important is observability—the ability to monitor, analyse, and troubleshoot network performance and user experience in real-time. By implementing tools that provide deep insights into traffic patterns and potential bottlenecks, organisations can maintain optimal uptime and user experience.

In recent years, many organisations have embraced wireless-first strategies across their branch or campus networks. With the proliferation of mobile devices, Internet of Things, and remote working practices, wireless connectivity has become a cornerstone of network design. Wireless-first prioritises robust Wi-Fi infrastructure, enabling mobility, flexibility, and scalability. New wireless technologies, such as Wi-Fi 6E and 7 support additional spectrum to ensure high-speed, low-latency connections.

By leveraging advanced technologies, you can ensure robust data protection, seamless connectivity, and optimal performance across your branch or campus network infrastructure.
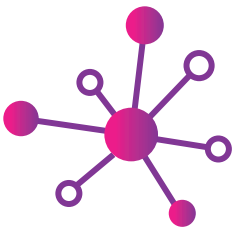
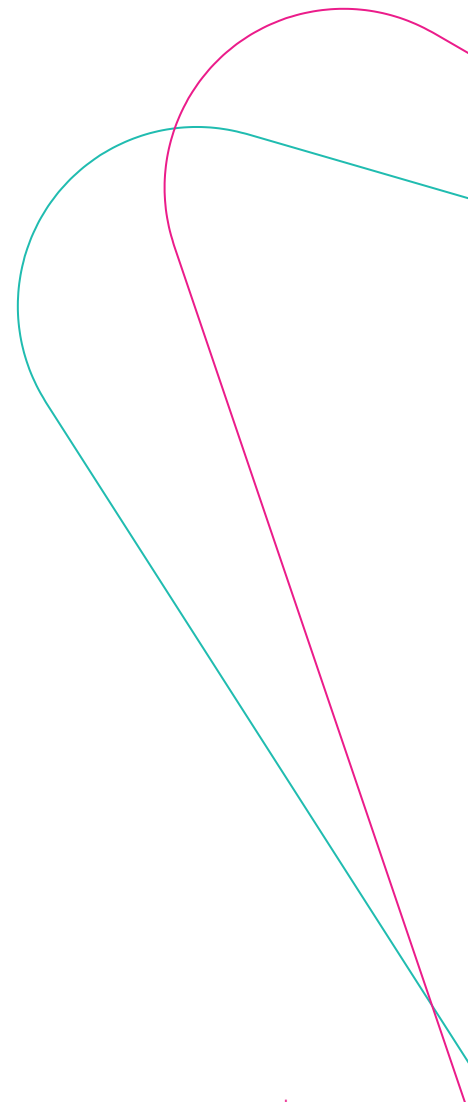# Growing your network - or building a new

**Get it right from the start with CAE. What's the right network for you? CAE will work with you to help you choose on premise or cloud-based network, using our network management platform approach to keep your network agile and efficient, easy to scale, and simple to manage.**

Cloud is often more appropriate for multi-site organisations wanting access to commonly used applications through a branch network. On premise is popular with organisations needing campus networks, where granular levels of security are crucial.
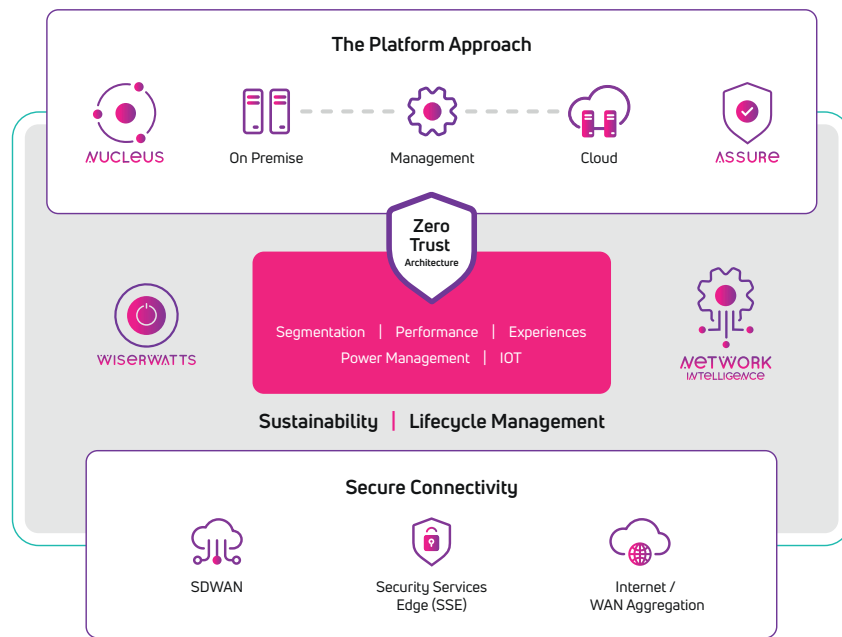
We deliver full connectivity.

For branch networks, we provide flexible, device-specific solutions that incorporate SD-WAN technology and optimised WAN connectivity, including Direct Internet Access (DIA), to ensure consistent performance across all locations.

For campus networks, our blueprint ensures scalability, high performance, and robust segmentation, enabling organisations to support tens of thousands of users and devices with ease.

# Do you really know what's on your network?



**The Platform Approach**

NUCLEUS · On Premise · Management · Cloud · ASSURE

Zero Trust Architecture

Segmentation | Performance | Experiences
Power Management | IOT

WISERWATTS · NETWORK INTELLIGENCE

**Sustainability | Lifecycle Management**

**Secure Connectivity**

SDWAN · Security Services Edge (SSE) · Internet / WAN Aggregation

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CAE has developed a comprehensive solution blueprint to addresses security, observability, and operational efficiency for campus and branch networks. This enables us to design, implement, and optimise network infrastructures built to your specific needs.

With CAE as your trusted partner, your network infrastructure is primed to deliver exceptional performance, security, and scalability, regardless of the environment.

We have created unique solutions, to major network challenges. Built on platforms from proven technology leader Cisco, these innovative network tools are powered by our innovative API software development platform, CAE Labs.

## Disaster Recovery for Cloud Networking

**Assure** is first line of defence against accidental change or a cyber security breach. Our service remotely backs up, protects, and rapidly restores the Cisco Networking Cloud configuration.
**Automated Service Delivery** Nucleus enables automated configuration at scale to save time, cost and resource for onboarding or any change project.

## Intelligence and Insights

**Network Intelligence** gives detailed insight into the network, optimising infrastructure performance, efficiency and security. and resource for onboarding or any change project.

## Sustainable Networking

**WiserWatts** optimises your investments and decarbonisation strategy through sustainable networking.

**Security** solutions are designed to meet the complex security needs of branch and campus networks, enabling secure connectivity, streamlined management, and enhanced threat protection.

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## NUCLEUS

## Automate configurations
## at scale with Nucleus

**Networks with a large number of devices can be a nightmare to manage. Traditional box-by-box configurations need a big support team. If anything goes wrong, costs spiral and deadlines are in jeopardy. Automation changes all that. Nucleus automates configurations at scale, reducing risk and ensuring deadlines are met for onboarding and migration projects.**

Nucleus ensures complete configuration consistency and standardisation. That means fewer configuration errors as automated data validation checks prevent input errors.

Engineering time and costs are reduced as engineers have read-only (observer role) mobile access from anywhere. Increased efficiency can be measured to device level. A recent CAE automation project involving 2,500 devices saved over 60 days' work, equivalent to more than £50,000 saving.

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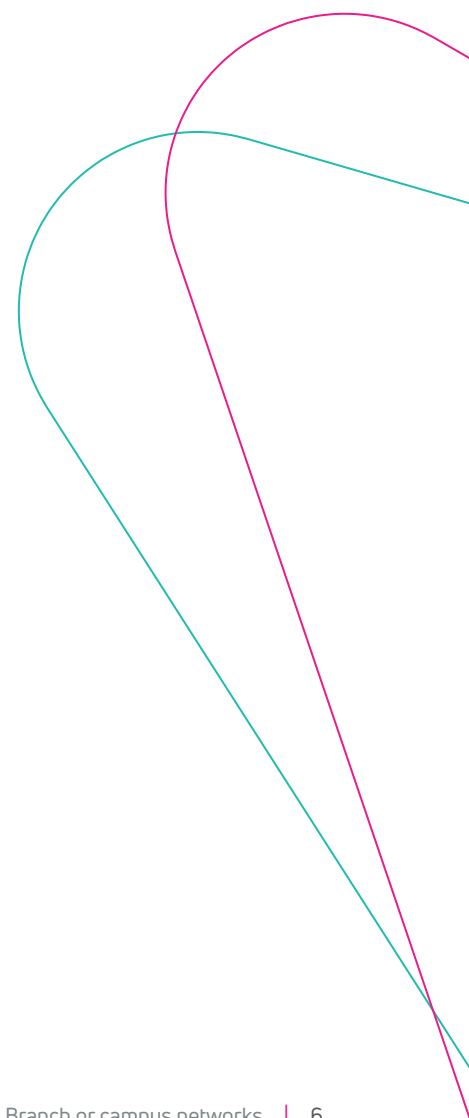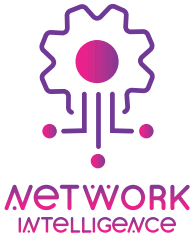
## Understand your network

Knowing exactly what's happening within your network at any time is key to maintaining control. Network Intelligence offers detailed intelligence and insights into the full lifecycle of the network, so that network managers can optimise performance, efficiency and security.

Network Intelligence can automatically identify, classify, and monitor all Cisco network devices and their minor serviceable parts, regardless of location or quantity. This also provides you with an up-to-date view of assets, for configuration backups and timely software upgrades. Today's network analytics use machine learning and AI to constantly update the model it compares data against.
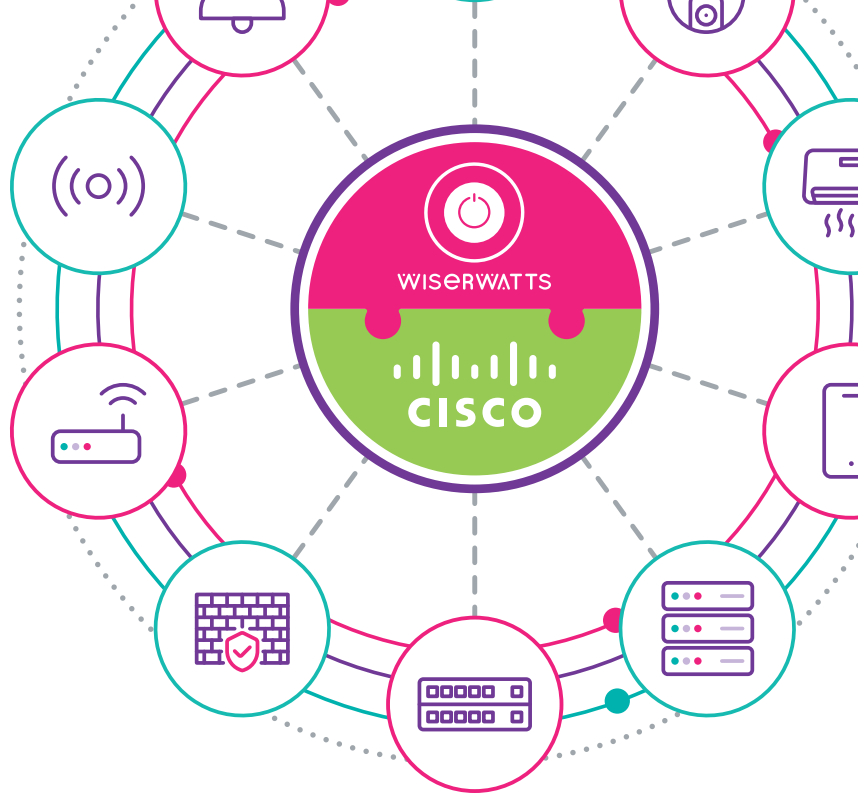


## Intelligent energy management and cost savings with Wiserwatts

CAE's cutting-edge intelligent energy-saving solution will seamlessly integrate with the Cisco Networking Cloud platform to implement our intelligent power management policy, instantly reducing your power consumption. CAE customers have reported noticeable performance and cost improvements resulting from the daily hardware cycling facilitated by WiserWatts.

By ensuring that the wireless network remains inactive during non-business hours, the likelihood of unauthorised access attempts is reduced. The move away from an 'always-on' approach to devices, has demonstrated to save organisations energy costs by turning off their network services when not in use. Energy usage can be adjusted to align to an organisation's needs.

# Zero Trust security strategy built on proven CAE solutions

As cyberattacks grow more sophisticated, organisations face increasing risks from access breaches, ransomware, and other threats. To stay protected, networks require end-to-end security strategies built on proven CAE cybersecurity solutions and services.

CAE provides assessments and workshops to help organisations identify their unique security challenges and align with a Zero Trust strategy.

We empower organisations to implement robust network segmentation, secure remote access, and adopt advanced technologies like SD-WAN for optimised and secure branch connectivity, network access control (NAC) to safeguard campus environments, and Managed Detection and Response (MDR) for continuous threat monitoring and response.

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**Click here to book your call today**

T: 0845 643 0033

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