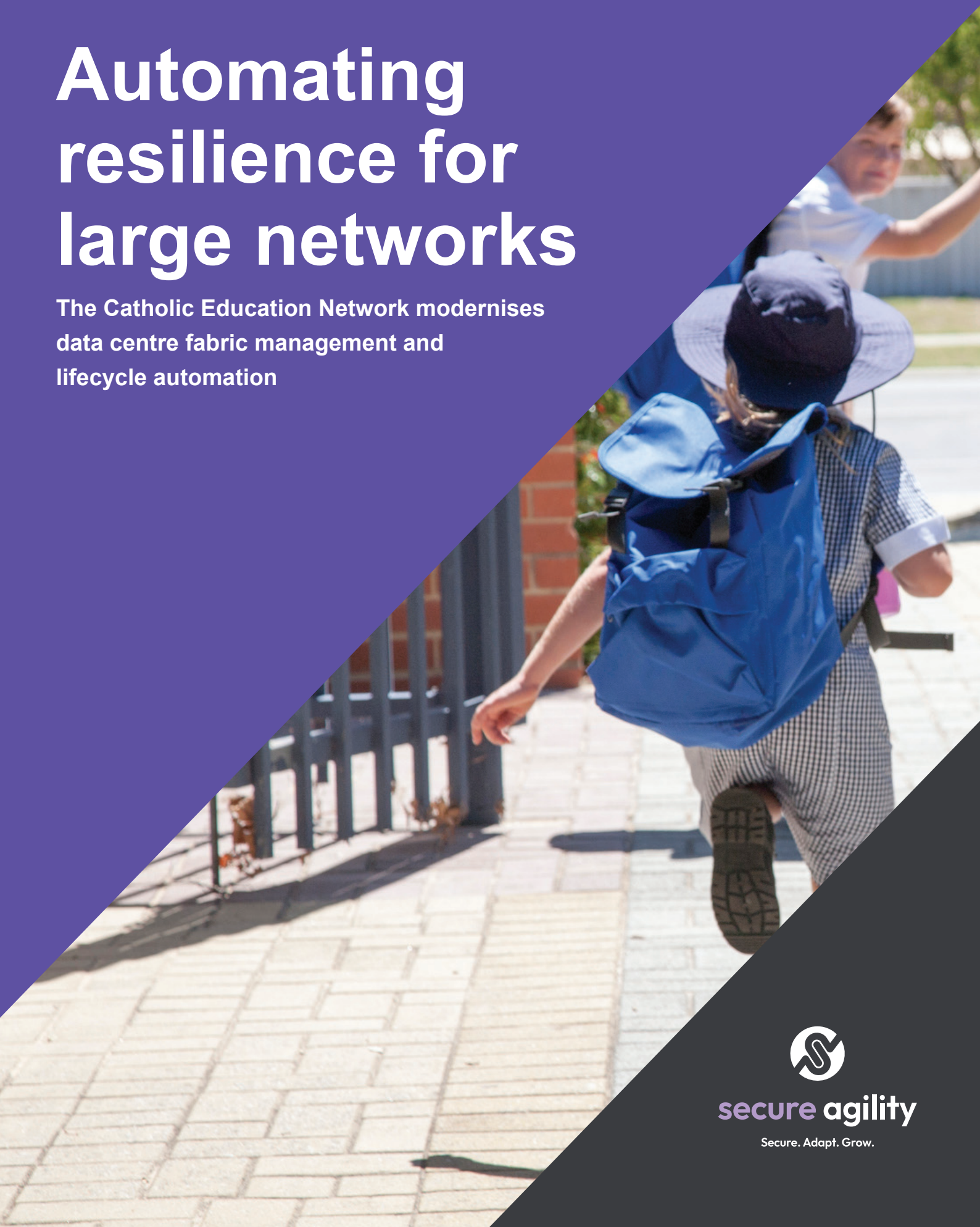
CASE STUDY

cenet
Catholic Education Network

Automating resilience for large networks

The Catholic Education Network modernises data centre fabric management and lifecycle automation



secure agility
Secure. Adapt. Grow.

Challenge

“As a member-owned organisation, CEnet focuses on enhancing educational value so our services can be spread further and felt by more,” said David Jenkins, Infrastructure Manager at CEnet. “We believe education is the right of all, and our internet and data services are the bedrock on which that vision depends.”

CEnet provides educational and business applications, infrastructure, data analytics, and cybersecurity to its members. Schools’ internet connectivity needs are growing 20% year over year.

To deliver applications and services to members more quickly and efficiently, CEnet wanted to modernise its data centre services. It wanted to refresh its primary data centre and establish a secondary data centre for greater resiliency, performance,and operational agility.

Transformation

Secure Agility led the end-to-end transformation of the Catholic Education Network’s infrastructure, simplifying and modernising the network while delivering a resilient, automated, and scalable Juniper-based foundation with minimal operational disruption.

CEnet adopted Juniper’s automated data centre solution to improve business resiliency, accelerate IT service delivery, and simplify operations by automating fabric operations across its highly available data centres. It massively scaled capacity to meet members’ growing demand for data, applications, and infrastructure services.

“Juniper was the obvious choice to reimagine and rearchitect our network,” said Jenkins. “We could achieve our goals for a full data centre transformation within the allocated budget to replace the previous WAN aggregation while streamlining data centre operations and accelerating service deployments.”

Serving the digital needs of 370,000 students and educators

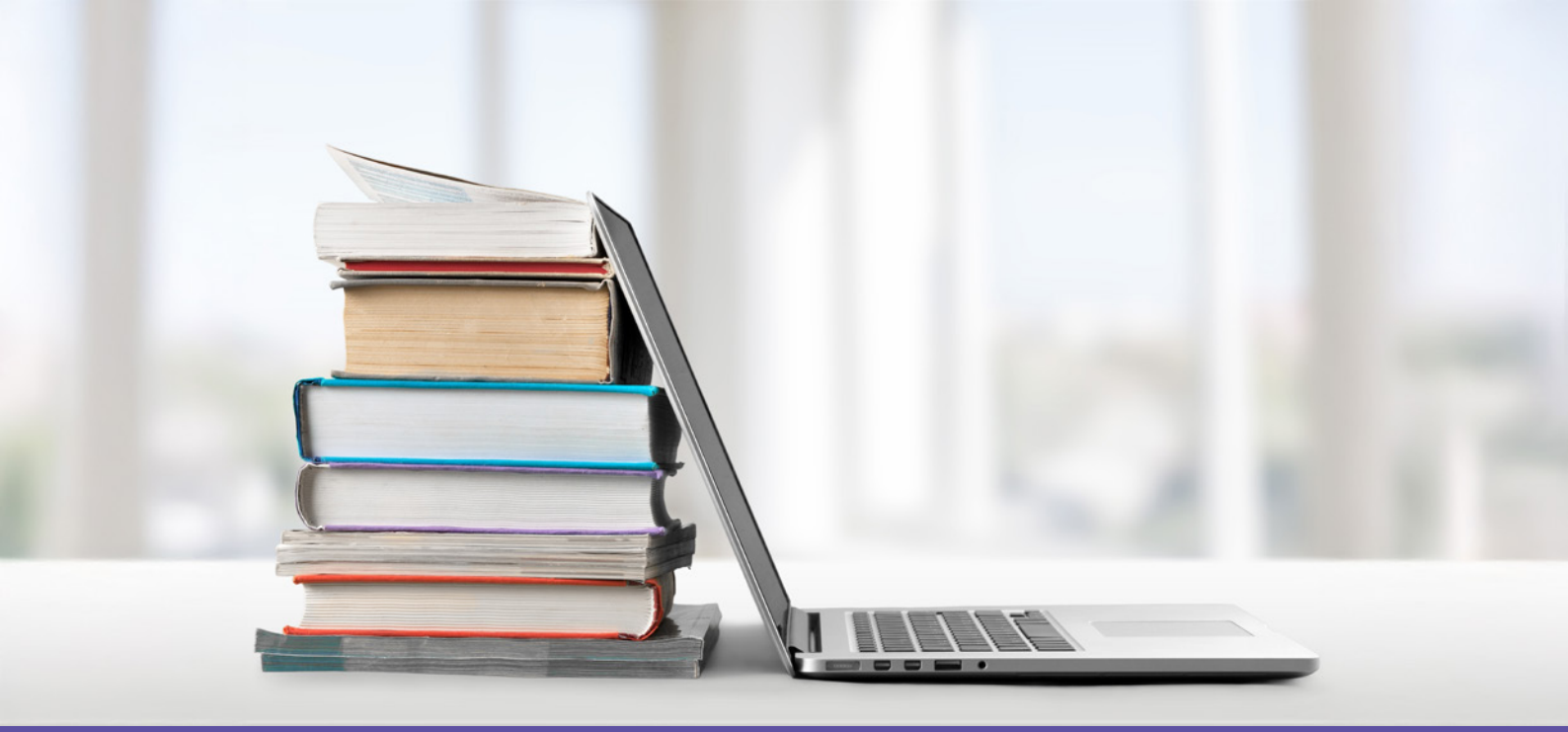
The Catholic Education Network (CEnet), a not-for-profit information, communication, and learning technology services organisation, connects Catholic dioceses school communities across Australia.

CEnet supports the digital needs of 370,000 students, teachers, and staff at over 816 schools.

CEnet relies on an automated, secure data centre network to assure application reliability, speed up IT service delivery, and streamline network operations.

“Our focus was on reducing complexity without compromising continuity – by redesigning the architecture, automating the fabric with Juniper Apstra, and carefully migrating thousands of legacy configurations, we delivered a network that’s both simpler to run and built for the future.”

Mike Merit, Principal Cyber Solution Architect, Secure Agility



Outcomes

ICT services to 816 schools

370,000

Students, teachers, and staff served

Speed of service delivery

Minutes

To provision network services vs. 4-8 hours to make manual changes, including travel

Scale network capacity

20%

Year-over-year growth for internet bandwidth from schools

Automated secure data centre simplifies operations and unlocks agility

CEnet uses Juniper Apstra Data Center Director to manage the data centre fabric and automate the full lifecycle – from Day 0 design through Day 2 operations. Data Director's intent-based networking and blueprints ensure accurate configurations from the start and continuously validate against the blueprint to assure performance. The IT team has actionable, real-time insights that drive great application experiences.

The high-throughput EVPN-VXLAN fabric enables workload mobility, enhances scalability, optimises resource efficiency, and improves resilience for CEnet's applications and infrastructure services.

CEnet uses Juniper MX304 routers on the edge to aggregate traffic from its members' schools. Delivering scale and efficiency for space- and power- constrained environments, enabling CEnet to meet schools' growing bandwidth and service demands.

"Given the critical nature of the environment, a phased, after-hours migration was essential. It allowed us to modernise the platform and significantly improve resilience while ensuring the network remained fully operational for the many organisations that depend on it."

Mike Merit, Principal Cyber Solution Architect, Secure Agility

We reduced complexity, improved resilience, and delivered a future-ready network without disruption."

Mike Merit, Principal Cyber Solution Architect, Secure Agility

Continuously assure network services and simplify operations

With an automated secure data centre network from Juniper, CEnet's team can focus on advancing innovative services like cechat, the human-centered, AI-powered platform where educators create and control their own custom teaching and administrative agents.

Increase service agility

"Data Center Director's intent-based networking and orchestration allows us to be responsive when our members need new services or changes," said Jenkins. "We can make changes in minutes versus spending a half day or full day driving to the data centre to make physical changes like we did before."

'Our data centre ops and network teams love Data Center Director.'

"With Data Center Director, we can design changes that are abstracted from the live environment and make those changes at off-peak times when it won't impact schools, childcare centres, or parish communities," Jenkins continued. "Data Center Director returns quality of life to our network engineers."

Driving down costs as bandwidth consumption rises

"CEnet strives to continue to deliver more value to its members, even as bandwidth consumption rises. High-throughput internet peering and WAN aggregation contributes to that value, as CEnet can deliver affordable connectivity to its members. "Our members downloaded 27 petabytes of data last year," said Jenkins. "We have seen a 2,381% volume increase in internet traffic and saved $15 million over 10 years because of our on-net network strategy."