

The Catholic Education Network

Education IT service provider modernizes data center fabric management and lifecycle automation

Optimize resources and enhance agility with intelligent automation

[Learn how →](#)

Industry

Education

Region

APAC

Overview

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 organization, connects Catholic dioceses school communities across metropolitan, regional, and rural New South Wales, Queensland, Tasmania, Victoria, the Australian Capital Territory, and the Northern Territory. CEnet supports the digital needs of 370,000 students, teachers, and staff at over 816 schools.

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

Challenge

“As a member-owned organization, 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 modernize its data center services. It wanted to refresh its primary data center and establish a secondary data center for greater resiliency, performance, and operational agility.

Transformation

CEnet adopted Juniper’s automated data center solution to improve business resiliency, accelerate IT service delivery, and simplify operations by automating fabric operations across its highly available data centers. 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.

“With Juniper, we could achieve our goals for a full data center transformation within the allocated budget to replace the previous WAN aggregation while streamlining data center operations and accelerating service deployments.”

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David Jenkins
Infrastructure Manager,
CEnet



Outcomes

Deliver ICT services
to over 816 schools

370,000

Students, teachers,
and staff served

Speed 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

Solution and implementation

[Juniper Apstra Data Center Director](#)

[Juniper QFX5130 Switch](#)

[Juniper QFX5120 Switch](#)

[Juniper MX304 Router](#)

“Data Center Director
allowed our team
to **step out of the
weeds of the CLI**
and design what our
environment should
look like using
business intent.”

David Jenkins
Infrastructure Manager,
CEnet

Automated secure data center simplifies operations and unlocks agility

CEnet uses Juniper Apstra Data Center Director to manage the data center fabric and automate the full lifecycle—from Day 0 design through Day 2 operations. Data Center 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, optimizes resource efficiency, and improves resilience for CEnet’s applications and infrastructure services. Juniper QFX5130 switches are used for the spine and Juniper QFX5120 switches are used for the leaf nodes.

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



Key takeaways and outcomes



Continuously assure network services and simplify operations

With an automated secure data center 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 center to make physical changes like we did before."

● 'Our data center ops team loves Data Center Director. Our network team loves 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 centers, 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."

More information

Juniper Data Center Director

To learn more about Juniper data center solutions, visit <https://www.juniper.net/us/en/solutions/data-center.html>

For more on designing, deploying, and operating networks for AI, visit <https://www.juniper.net/us/en/solutions/data-center/ai-infrastructure.html>

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