



# How SingAREN Secures Its High-Performance Research Network and the Trust of Its Members

## INDUSTRY

Education/  
Research

## HEADQUARTERS

Singapore

## COMPANY SIZE

10-15 Member  
Organizations

## OVERVIEW

Singapore Advanced Research and Education Network (SingAREN) is Singapore’s national research and education network. It provides high-speed connectivity and other data services to Singapore’s universities, research institutes, the National Supercomputing Centre (NSCC), and other government and industrial partners.

## OUR SOLUTION



## CHALLENGE

SingAREN connects Singapore’s research and education community to similar networks in Asia, Australia, Europe and the U.S. through a bilateral peering arrangement. The society offers numerous services, including 10 Gbps-100 Gbps connectivity, secure roaming internet access, federated single sign-on



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*Prof. Francis Lee Bu Sung, Associate Professor and President, SingAREN*



capabilities, database mirroring and secure web-based file transfer. Members of the community routinely exchange high volumes of research data. In one instance, the National Environment Agency of Singapore (NEA) transferred more than 4pb of climate simulation and prediction data while collaborating with the NSCC Singapore and Australia's National Computational Infrastructure (NCI).

Securing a high-throughput network used by many different institutions can be challenging. Data transfers include complex folder structures with hundreds of thousands of individual files and folders to protect. At the same time, a security solution cannot slow network throughput. While member institutions had their own firewalls and various security solutions, user devices across the network remained a point of entry for malicious activity.

"Research data is a target for threat actors," said Prof. Francis Lee Bu Sung, associate professor and president of SingAREN. "As we faced an increasing number of global attacks, we needed better visibility into our attack surface and security posture." To ensure that SingAREN remained a trusted network for its community, Prof. Lee and Jon Lau, vice president, began looking for a security solution that could process extremely high throughput while delivering visibility into who is accessing the network and its research data.

## SOLUTION

Cybersecurity staff from SingAREN's stakeholders formed a special interest group to collaborate on identifying a new security solution that would benefit its members. The group evaluated solutions from numerous cybersecurity vendors and chose Check Point Quantum Maestro based on its ability to deliver hyperscale network security. "Check Point offered the best suite of tools and the most flexibility," said Prof. Lee. "They also provide a high level of support here in Singapore and a road map to the future, which was an important consideration for us. We want to be prepared today, but also for what's coming." Quantum Maestro is configured to handle SingAREN's maximum network throughput and Prof. Lee plans to activate more Check Point security features over time.



Check Point Quantum Maestro helps us build trust among our members. Our cybersecurity special interest group is sharing threat intelligence, and everyone can now take appropriate actions to enhance their own security.

*Jon Lau, Vice President, SingAREN*



SingAREN leverages Check Point's artificial intelligence (AI)-driven threat intelligence and reporting capabilities to enable collaborative security workflows. "Our cybersecurity special interest group is sharing threat intelligence, enabling everyone to take appropriate actions for enhancing their own security," said Mr. Lau. The society also used Check Point HyperSync technology within Quantum Maestro to create an agile, highly redundant demilitarized zone (DMZ) for a scientific-research partner organization. Even with exceptionally high volumes of data in transit, Quantum Maestro optimizes traffic performance to significantly increase throughput. "Check Point Quantum Maestro helps us build trust among our members," he said.

## OUTCOME

Previously, SingAREN members and their security teams were inundated by the sheer number of threats targeting their networks. Not only can they now prevent threats from entering their networks, but they can also see and address potential threats exiting their network and moving to their partner organizations' networks. "Check Point Quantum Maestro has given us comprehensive visibility into the threats targeting us," said Prof. Lee. "We can see the most frequent attacks, who and where attacks are coming from and we can extract logs. We can even see what's coming in from each member institution."

SingAREN is currently evaluating the use of Check Point Threat Intelligence and Check Point Horizon MDR/MPR to gain even more context around threat data. Working with the Check Point team, they plan to export data to an open-source malware information sharing platform (MISP). "Check Point has worked hand in hand with us to make this concept work," said Mr. Lau. "That's really what it's all about — working together to deliver value to our members and helping everyone learn from our experiences." Over time, the SingAREN team plans to build out additional threat prevention and remediation capabilities with Quantum Maestro to continually bolster the security of its digital footprint. "We see Check Point as a long-term partner," said Prof. Lee. "Check Point enables us to support our members, create value for them and be a trusted organization for secure connectivity."

## ABOUT CHECK POINT

[Check Point Software Technologies Ltd.](#) is the trusted cybersecurity solutions provider for over 100,000 SMBs, corporate enterprises and governments globally. With an industry-leading catch rate for zero-day, ransomware and generation V cyberattacks, Check Point Infinity's unified platform delivers unparalleled threat visibility, intelligence and prevention across enterprise environments — from remote users and cloud deployments to network perimeters and data centers. Together, our solutions work seamlessly to drive productivity, reduce costs and enable real-time security monitoring.

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