



Queenstown Educational Foundation Chooses Supernicro Server to Keep Students Safe from Cyberattacks

The New Firewall Server Protects Students from Inappropriate and Malicious Websites and Protects the Entire Network against Cyberattacks



Supernicro A+ AS -1014S-WTRT

Introduction

Queenstown Educational Foundation (QEF) was set up as a nonprofit organization in 2013 and is dedicated to working with a network of diverse schools of excellence. There are 11 schools affiliated in the network and work with students to learn the skills needed for the 4th Industrial Revolution.

Challenges

The QEF works with a cluster of schools, ages 5 to 18 (Grade 0 to Grade 12). On their laptops, the students can perform research on the internet as well as complete classroom assignments. Without proper cybersecurity functioning correctly, the students' work was at risk and the integrity of the entire networked system. Their existing firewall and security server ran at over 85% utilization to detect malware, computer viruses, and other forms of cyberattacks. A new solution was needed to handle the increased workloads that additional students who were using the network would need.

QEF was also installing a fibre optic intranet ring between a number of the schools that would enable students to work on collaborative projects. In collaboration with the relevant Schools' Maintenance Teams, the QEF IT Managers dug the trenches, laid down the fibre cable, and made the connections to the servers.

Solution

The QEF surveyed several single-socket server solutions from various vendors that would serve their needs for a powerful yet inexpensive firewall and a secure server. Eventually, a Supernicro A+ AS -1014S-WTRT server was selected, containing a single AMD EPYC 7502 processor with 128 GB of DRAM. QEF determined that a server containing a modern processor with a single CPU had the performance that was

INDUSTRY

Education

CHALLENGES

- Protect Students from Cyberattacks
- Encourage Collaboration

SOLUTION

Supernicro A+ Server

- 2nd Gen AMD EPYC™ processor
- 128 GB RAM
- 4x 10Gbps Ethernet Network Controllers

needed for their specific application. In addition, QEF realized that a single socket system would reduce power and cooling costs, and still meet SLAs.

The new system allows for sharing of files between students and between the different schools, increasing collaboration for projects, all done in a safe environment.

BENEFITS

- More Secure Educational Environment
- Project and File Collaboration Between Students and Facilities

PRODUCTS

- Supermicro A+ Server

SUPERMICRO

Supermicro is a global leader in high performance, green computing server technology and innovation. We provide our global customers with application-optimized servers and workstations customized with blade, storage, and GPU solutions. Our products offer proven reliability, superior design, and one of the industry's broadest array of product configurations, to fit all computational need.

For more information, visit <https://www.supermicro.com>



"We are very pleased with our new firewall server from Supermicro. With this new technology, we can offer our students a safe environment to do their work and access the resources available on the internet. We are also able to encourage collaborative projects between different schools, which is a critical skill that is needed for 21st century jobs."

Stephan Coetzer and Johan Bester, IT Managers

Queenstown Educational Foundation

Queenstown, South Africa

Benefits

With the new server in place, students can use the internet for homework research much more safely than before. With the new system and networking in place connecting six schools securely, a blueprint has been established that can be replicated elsewhere in South Africa. The systems, networking, and security issues have now all been researched and implemented, which will lead to replicating this environment, helping school-aged children learn to use the internet, and gaining knowledge and skills that they would not have been able to experience previously.

The Supermicro A+ server demonstrated the ability to keep up with the demands from the students, protecting their sessions from malware. The I/O performance, consisting of 4 x 10Gbps Ethernet ports with SFP+ connectors has enabled many students to collaborate with other students and to share files safely concurrently. The AMD EPYC processor has the horsepower needed to allow the Queenstown Education Foundation to give more students access to the network and further their education. Cyberattacks can be reduced with a low-cost but powerful system. As processor performance increases, certain workloads such as firewall implementations may only need a single processor to meet rigorous SLAs.

Additional Resources:

Queenstown Educational Foundation <https://www.queenstowneducation.co.za/>

Supermicro A+ Servers – <https://www.supermicro.com/en/products/aplus>