



RISHON LEZION EXTENDS DIGITAL LEARNING REACH WITH 100% JUNIPER INFRASTRUCTURE REFRESH

Summary

Company:
Rishon LeZion

Industry:
Education, Government

Business Challenges:
Deliver fast, reliable connectivity to schools and libraries to support in-classroom and distance learning for 42,000 students, teachers, and administrators.

Technology Solution:

- QFX5100 Switch
- EX3400 Ethernet Switch

Business Results:

- Established a digital foundation to teach students concepts and skills critical for success
- Delivered a responsive user experience for educational, administrative, and physical safety systems, despite dynamic traffic patterns due to remote instruction
- Migrated to a new data center core and school networks without interrupting learning
- Simplified network operations from classroom to data center

Education is a priority in Rishon LeZion, the fourth largest city in Israel. Digital learning helps students become active learners with skills for today’s world, and it serves as the foundation of a citywide network that brings the vast resources of modern learning into the classroom. After six years of no downtime with its Juniper-based network, Rishon LeZion refreshed its network infrastructure to meet the expanded need for digital learning during the pandemic.

“Our schools emphasize concepts and principles that are relevant to the changing reality of the twenty-first century,” says Itzik Carmeli, CIO at Rishon LeZion Municipality.

Digital learning helps students develop problem solving skills and become engaged, self-directed learners. In Rishon LeZion’s schools, information is shared in different ways: text, visual, and auditory. Hands-on familiarity with technology starts in elementary school, helping students develop logical thinking and critical collaboration skills.

“Rishon has one of the biggest digital educational projects in Israel,” says Yoav Ludmer, founder and CEO of SMBIT, the information and communications technology (ICT) integration provider that designs and operates the network that supports the Rishon LeZion municipality and its schools.

Several years ago, Rishon LeZion built a metropolitan network to support city services and connect elementary schools, middle schools, high schools, and locations like public libraries, a teachers’ school, special needs school, gifted school, and agricultural school with the vast resources of digital learning. Operating its own fiber network has allowed Rishon LeZion to deliver superior network service quality while substantially lowering costs.

“Operating its own citywide network has been a building block of success for education in the city,” Ludmer says.

“With the expert guidance of SMBIT and a reliable Juniper-based network, teachers can intelligently implement tools for digital environments to help students acquire essential skills.”

- Itzik Carmeli, CIO, Rishon LeZion Municipality

Modernizing for Today's Digital Learning

After years of successful network operations with Juniper, Rishon LeZion refreshed its data center and school site networks. The decision to migrate to the latest Juniper switching infrastructure was based on proven network reliability and simplified operations.

"Juniper equipment is stable and sophisticated, but it is the people behind the technology who make the difference."

- Yoav Ludmer, founder and CEO, SMBIT

"Over six years, we have never experienced downtime in the data center core network—not even once," Ludmer says.

The data center is powered by Juniper Networks® QFX5100 line of Switches. Virtual Chassis technology enables easy network scalability and simplified operations by allowing multiple interconnected QFX5100 switches to operate as a single chassis. Cost-effective 10GbE connectivity at the city's schools is delivered by Juniper Networks EX3400 Ethernet Switches.

All network migrations are high stakes, but the network refresh took place during Israel's national high school matriculation exams—and the COVID-19 pandemic.

"There was no downtime when we migrated to the new QFX Series switches in the data center," Ludmer says. "It was a big challenge, because our schools were occupied with the national exam."

Adaptable for Dynamic Learning

"With the expert guidance of SMBIT and a reliable Juniper-based network, teachers can intelligently implement tools for digital environments to help students acquire essential skills," Carmeli says.

"Almost 50,000 students and teachers use the network at the same time in Rishon," Ludmer says. "If the network doesn't work, teachers will go back to blackboards and chalk."

Fortunately, it's unlikely that the teachers and students will revert back to the old ways, as the new network was immediately put to the test to meet the expectations of remote instruction as COVID-19 swept the world.

"Now with COVID-19, the network supports many hundreds of concurrent Zoom sessions," Ludmer says. "Imagine 800 teachers using Zoom at the same time. The network based on Juniper solutions has proven its performance."

The new network is ready for any and all education and administrative uses, including digital learning and collaboration, student attendance, accounting, physical safety, and, of course, voice and video. Soon, the schools' building management systems will also share the network to efficiently control heating, cooling, and ventilation at schools and administrative offices.

Students are slowly and safely returning to the classroom, but traffic patterns are likely to remain variable as at-home learning continues.

"Now in the COVID times, network traffic patterns have changed dramatically," Ludmer says. "We see very high upload rates, which is opposite from what we saw when the students were in the classroom. But because the network was designed properly, we have no problems and plenty of capacity for years to come."

Partner Value and Streamlined Operations

SMBIT designs, builds, and operates the network for the city. With customers across Israel, the ability to manage clients' networks remotely is critical. SMBIT created EKRON, an SDN-enabled management system, to manage and secure the network, including Juniper switches, and user devices, both traditional and IoT.

"With a single view of the customer, our team can manage Rishon's entire network," Ludmer says.

"Over six years, we have never experienced downtime in the data center core network—not even once."

- Yoav Ludmer, founder and CEO, SMBIT

A Relationship that Delivers Real Value

Delivering connectivity that "just works" so that students and teachers can stay focused on learning takes more than just great technology.

"Juniper equipment is stable and sophisticated, but it is the people behind the technology who make the difference," Ludmer says.

"We have received very good service from Juniper's Israeli engineers," he continues. "We can talk with the head of Juniper in Israel in the middle of the night. Issues are solved quickly and directly with JTAC (the Juniper Technical Assistance Center). The relationship really shows us that Juniper delivers the most value for our money."

For More Information

To find out more about Juniper Networks products and solutions, please visit www.juniper.net.

About Juniper Networks

Juniper Networks brings simplicity to networking with products, solutions and services that connect the world. Through engineering innovation, we remove the constraints and complexities of networking in the cloud era to solve the toughest challenges our customers and partners face daily. At Juniper Networks, we believe that the network is a resource for sharing knowledge and human advancement that changes the world. We are committed to imagining groundbreaking ways to deliver automated, scalable and secure networks to move at the speed of business.

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