Bezeq Telecom's new headquarters benefits from Arista Networks Cognitive Campus technology to deliver performance, reliability and enhanced automation

Highlights

Challenge

Moving to a new, larger campus provided Bezeq Telecom with the perfect opportunity to upgrade its network to a spine and leaf-based design from Arista Networks and take advantage of new Cognitive Management Plane technology to automate and simplify deployment and ongoing administration tasks.

Solutions

- Arista 720XP Cognitive Campus PoE Leaf Switches for performance and reliability with flexibility
- Arista C-130 Cognitive WIFI access points with CloudVision AI
- CloudVision software delivering a single view of the entire fixed and Wi-Fi network for automation, rich real-time telemetry and simplified management
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Results

- Rapid deployment through zero touch provisioning and unified network visibility
- Open standards-based approach to simplify support, upgrades, and automation
- Consistent Extensible Operating Systems including Cognitive Management Plane across entire network simplifies management tasks

As Israel's biggest telecom provider, Bezeq Telecom had started to outgrow its Tel Aviv headquarters and decided that the move to a new, enlarged campus offered the perfect opportunity to modernise its network architecture. Following a detailed Proof-of-Concept, Bezeq selected Arista Networks Cognitive Campus technology to deliver rapid deployment, improved performance, and reliability with a single-plane-of-glass approach to campus wide network automation and management.

Project Background

Bezeq Telecom is Israel's largest telecommunications provider. Since its foundation in 1984, Bezeq Telecom has grown rapidly and maintains over 30,000 km of fiber-optic lines to deliver a full range of value-added services to 2.27 million fixed-line customers and 1.2 million high-speed broadband customers.

Challenge

The company had started to outgrow its original headquarters in the heart of Tel Aviv and decided to build a new campus in Holon. The new campus offered more room for thousands of Bezeq's employees and provided a perfect opportunity for the company to deliver enhanced network connectivity.

As Eldad Feiles, Core Networks and Cyber Security Director at Bezeq the Israeli Telecommunication Corp explains, "The move to a new campus required us to rethink our campus networking strategy. We needed a network with high performance, increased bandwidth, easier operations and included a single management solution to deploy, automate and troubleshoot both the fixed and wireless elements."

Ahead of the new campus move, Bezeq evaluated several networking architectures and vendors and as Feiles explains, "For us, the best option was to move from our existing layer 2 network to a layer 3 alternative utilising a Layer 3 IP fabric with EVPN and VXLAN technologies. In effect, we wanted to build a campus smart fabric that offered us many advantages around flexibility while overcoming traditional legacy layer 2 network issues, such as spanning tree and convergence times."

Solution

With such a significant upgrade, Bezeq underwent a major vendor selection exercise including deep technical evaluation and proof of concepts. Following this multi-month process it was decided that the highly integrated, yet open standards approach of Arista Networks was deemed as the best fit for its needs. "We were also impressed by the Arista CloudVision solution," Feiles explains . "The system provided us with extensive automation capabilities and deep visibility in real time which allowed us to deploy and operate the new network in a blazing fast timeframe."

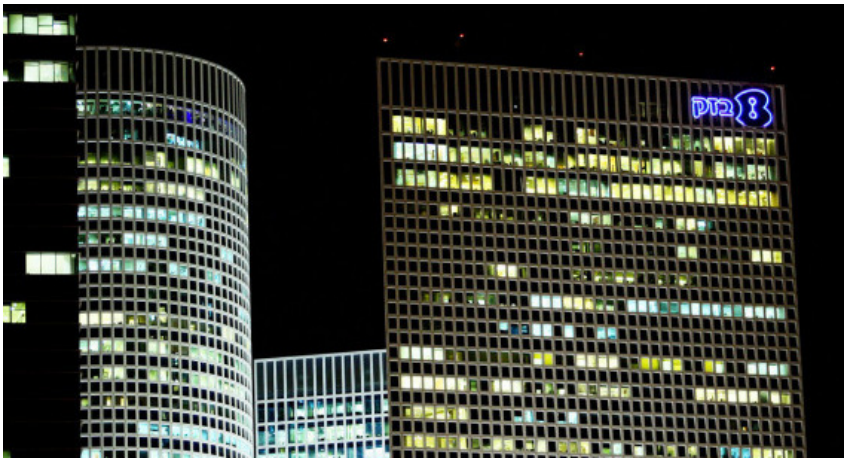
Over the space of just one month, Feiles and his networking team deployed 300 Arista campus leaf switches and Wi-Fi access points and setup the new network architecture in time for the opening of the new campus in September of 2020.

The entire campus uses Arista 720XP Cognitive Campus PoE Leaf Switches designed for a variety of connection options for user desktops, PoE appliances and IoT devices. The series includes managed 802.3af/at/bt power services that deliver up to 60W per RJ45 port, with speed options ranging from 10Mbps to 100Gbps.

The new campus wide Wi-Fi network uses Arista C-130 series, an enterprise-grade 4x4 MU-MIMO tri-radio access point with dual concurrent 5 GHz and 2.4 GHz band radios supporting 802.11a/n/ac Wave 2, 802.11b/g/n, four spatial streams, and data rates of up to 1.733 Gbps and 600 Mbps data rate, respectively.

The entire network across both fixed and Wi-Fi connectivity uses the Cognitive Management Plane in Arista's EOS and CloudVision that provides rich control and telemetry used to simplify and automate the deployment and maintenance of campus infrastructure, while also providing real-time monitoring of the campus users, applications, and devices.

As with all Arista platforms, EOS supports auto provisioning by way of Arista Zero Touch Provisioning (ZTP) to simplify device administration through CloudVision, or popular DevOps toolsets. In addition to legacy polling management, EOS delivers real time telemetry streaming for vast visibility into the network state both for the control plane and the data plane.



Conclusion

This openness, flexibility and simplicity were key benefits as Feiles explains, "The Arista solution provided us with a fast deployment in an automated way along with high visibility. This saved us a lot of time with the Arista solution and we've successfully achieved our management targets, and the whole organisation has managed to move into the new campus on time"

The benefits offered by the ability of CloudVision to deliver a single, unified view of the entire network along with the seamless automation capabilities has proven a major advantage over the legacy architecture and showcased the potential of this innovative approach to the wider Bezeq Group. "The success of the Campus project has provided us with many tangible benefits," says Feiles, "and as a result, we have also decided to deploy Arista Networks in some of our Data Centers."

Feiles also highlights the importance of the relationship in helping to deliver a successful project, "I would also like to add the close engagement of the Arista team – the technical and sales teams have supported us all the way and we feel we have a great partner that has helped to deliver a state-of-the-art campus network."

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