

# The Netherland's Largest Consumer Electronics Retailer Delivers a Consistent Experience for its Customers

## Summary

### Company:

BAS Group

### Industry:

Retail

### Challenges:

After continued expansion, the BAS Group needed to:

- Upgrade connectivity to over 200 stores
- Provide a consistent customer experience across all of its brands and at every store
- Increase availability of critical systems and applications
- Increase control and manageability of its in-store networks

### Selection Criteria:

The BAS Group was looking for a complete, integrated solution from a single vendor along with "best-in-class" technology.

### Network Solution:

- EX2200 and EX4500 Ethernet Switches
- SRX110 and SRX550 Services Gateways
- WLA532 Wireless LAN Access Point
- WLC2800 Wireless LAN Controller

### Results:

- Significant improvements in network stability, including zero outages in its core headquarters network
- Higher availability for its in-store point-of-sale systems, with built-in network redundancy
- Greater control of in-store networks and enhanced troubleshooting capabilities



The BAS Group is the largest multi-brand electronics retail channel in The Netherlands, supplying more than half of the country's consumer electronics.

Founded 13 years ago, the BAS Group was the first company in The Netherlands to offer consumers an online retail store with home delivery. Since then, it has grown from a single distributor to an operation that includes more than 200 stores, encompassing brands such as MyCom and Dixons.

To underpin its expansion, the BAS Group has relied heavily on its use of IT as a business platform, and has always built its most critical infrastructure, such as its e-commerce platforms, using in-house expertise.

## Challenge

A critical part of the BAS Group's business ethos has been to provide a consistent customer journey across all of its stores—physical as well as online. This has become more challenging as the number of stores has grown under the umbrella of multiple storefront brands and franchising agreements.

As part of its drive for consistency and excellence, BAS Group decided to upgrade its network and improve connectivity in every one of its stores. The existing network had grown piecemeal, with a variety of vendors' equipment, and was proving unreliable and difficult to manage. The company needed to connect each of its stores back to its data center, as well as provide extremely high levels of availability for its e-commerce and trading platforms. It also needed to deliver wireless connectivity in each store.

"We are a technology company, so we need to use technology to give us total control of our operation—which is why we build our critical systems in-house," says Lub Ten Napel, BAS Group's CIO.

*"When a store had an issue with wireless or its POS system, we used to try all sorts of fixes as we attempted to troubleshoot the problem. But now we can see exactly what's happening and have complete control."*

Lub Ten Napel, CIO, BAS Group

## Selection Criteria

The BAS Group wanted to find a complete, integrated solution, including switching, firewalls, and wireless access, from a single vendor. However, it was also looking for “best-in-class” technology in each category.

BAS Group decided to evaluate a Juniper Networks solution, as it met all of their requirements.

## Solution

The new network was built using more than 300 Juniper Networks® EX2200 Ethernet Switches, along with over 200 Juniper Networks SRX110 Services Gateways. Several WLA532 Wireless LAN Access Points are also deployed in each store.

Juniper Networks SRX550 Services Gateways were used to provide connectivity and security in the BAS Group's data center, while WLC2800 Wireless LAN Controllers were deployed in the company's headquarters.

The entire network was designed with full redundancy. Approximately 50 host servers are running in the data center in a virtual structure, connected by EX4500 Ethernet Switches, each of which has a redundant backup.

Besides providing data connectivity, the network also provides a VoIP service on a separate VLAN, and each store has been provisioned with at least three VLANs to support different applications. The in-store SRX Series devices also manage the quality of service (QoS) of voice calls directly over their Internet connections.

The project was implemented using a combination of in-house resources alongside those of the local Juniper Networks partner. BAS Group also took out an extensive service and support contract on most of the equipment, alongside a rapid-response onsite support service for the core systems, provided by Juniper's local partner.

*“In the last two years, the network has suffered from zero outages in the headquarters, and failover connections in many of the stores now allow us to work around wide area network failures, even using 3G as a backup option. Every store now has an ‘enterprise-level’ network like the headquarters—it’s not just hanging off the far side of a cheap consumer modem. This has delivered very high availability for our POS systems, which are the revenue source for the company.”*

Lub Ten Napel, CIO, BAS Group

## Results

With the rollout nearly complete, the BAS Group has already seen significant improvements in network stability, including zero outages in its core headquarters network over a two year period. There is higher availability for its in-store point-of-sale systems, with built-in network redundancy, and the IT team has greater control of in-store networks and enhanced troubleshooting capabilities.

As Lub Ten Napel explains, “When a store had an issue with wireless or its POS system, we used to try all sorts of fixes as we attempted to troubleshoot the problem. But now we can see exactly what’s happening and have complete control.”

He added, “In the last two years, the network has suffered from zero outages in the headquarters, and failover connections in many of the stores now allow us to work around wide area network failures, even using 3G as a backup option. Every store now has an ‘enterprise-level’ network like the headquarters—it’s not just hanging off the far side of a cheap consumer modem. This has delivered very high availability for our POS systems, which are the revenue source for the company.”

## Next Steps and Lessons Learned

The network was designed to run at about 40-50% of its total day-one capacity, so it still has significant room for growth.

To continue its drive to offer the best customer experience, the BAS Group now has plans to move to a new hosting provider, where it will implement its own hosting with direct connections to Amsterdam's Internet exchange. Following the success of the network rollout around its stores and data center, BAS Group currently anticipates upgrading its core routers to the Juniper Networks MX5 3D Universal Edge Router, which is capable of supporting the large routing tables necessary for direct connection to the Internet peering point.

## For More Information

To find out more about Juniper Networks products and solutions, please visit [www.juniper.net](http://www.juniper.net).

## About Juniper Networks

Juniper Networks is in the business of network innovation. From devices to data centers, from consumers to cloud providers, Juniper Networks delivers the software, silicon and systems that transform the experience and economics of networking. The company serves customers and partners worldwide. Additional information can be found at [www.juniper.net](http://www.juniper.net).

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