



KPMG Netherlands Counts on Aruba for Network Rightsizing

As one of the largest professional services firms in the world, KPMG depends upon digitally-connected employees to deliver timely and effective solutions to clients. As the number and variety of user devices expanded, KPMG had to continuously upgrade their network. Networking costs were becoming a major concern. KPMG realized that network edge rightsizing provided them an opportunity to save money and make money, by reducing their net networking costs and by gaining experience that might apply to their clients as well.

To build a new 2,800-person headquarters near Amsterdam, KPMG's IT group realized their traditional wired network approach would have required 18,000 cable pulls, more than 55 chassis and 260 switches. The up-front cost was expected to exceed \$6,000,000, and the recurring ownership costs would run into the millions annually as well. KPMG wanted to know if there was a more cost-effective way of providing pervasive network connectivity.

Upon investigation, KPMG found their access layer requirements for high performance, security and manageability could be met by either Fast Ethernet or Aruba 802.11n WLAN. They found that enterprise-class wired switches tend to cost about four times as much as 11n AP in capital costs, yet support about the same number of devices in real-world deployments. Wired network build-out costs were much higher than wireless. Many users preferred WLAN because of the perceived collaboration and productivity benefits. However, not all users were ready to take advantage of increased mobility, so no single access layer technology met the preferences of all users.

KPMG did not want to overspend on two redundant networks, so they decided to make a single blended access layer, via a concept called "Network Edge Rightsizing." KPMG reduced the number of ports, cables, chassis and switches by about 50%, and at the same time deployed a pervasive 802.11n WLAN from Aruba Networks, all while spending less.

"By shifting a substantial percentage of our users to wireless data access, KPMG was able to reduce the capital costs of our new headquarters building by more than US\$2,000,000," said Hans Zwart, CIO, KPMG's Netherlands. "KPMG estimates that network rightsizing with Aruba helped reduce recurring networking costs by more than \$760,000 per year. Annual savings should increase as a greater percentage of users migrate to wireless LAN for data access."

KPMG deployed over 500 Aruba 802.11n AP 125 access points throughout the new facility to provide blanket coverage for data, voice, and to pave the way for future applications such as video, fixed mobile convergence and tele-presence.

KPMG installed two Aruba 6000 chassis with 10 gigabit Ethernet interfaces to connect to different core switches. This provides KPMG with a fully-redundant high-availability WLAN network. Failure of one of the Aruba6000 chassis will not lead to any service interruption of the WLAN network. Unique features like Aruba's VLAN pooling make it possible to design a network with a large amount of access points per chassis without creating large Layer 2 broadcast domains to avoid potential negative effects on WLAN performance.

Network rightsizing also allowed KPMG to reduce the size of Intermediate Distribution Frame (IDF) wiring closets and save valuable building space. The new headquarters building had 26 satellite wiring rooms. By halving the number of chassis and switches, the amount of closet space required



Requirements:

- Reduce Ethernet costs for new 65,000 square meter (700,000 square feet) headquarters near Amsterdam
- Provide high-reliability pervasive WLAN connectivity to increase productivity
- Centrally manage enterprise WLAN
- Secure voice over wireless support

Solution:

- Aruba 6000 Chassis
- Aruba 3600 Wi-Fi switches
- Aruba AP 125 802.11a/b/g/n APs
- Aruba Policy Enforcement Firewall
- Aruba Wireless Intrusion Prevention applications

Benefits:

- Saved more than \$2,000,000 in network build-out costs for new headquarters
- Reduced annual network costs by an estimated \$760,000.
- Provided high-speed mobile connectivity for employees in headquarters, in addition to 14 regional offices.
- Simplified and strengthened administration over previous Cisco WLAN system
- Delivered high performance mobile connectivity used as primary data access for more than 1,000 users and growing.

CASE STUDY

Enterprise

was reduced by more than half. This is because airflow requirements do not scale linearly with changes in rack space. For adequate heat dissipation, the volume of air has to increase at a greater rate than the floor space allocated to racks. This is true even with top notch cooling gear. By halving the number of switches, KPMG was able to save substantial closet floor space, which is particularly valuable near Amsterdam.

Network rightsizing also delivered substantial green benefits. Network Rightsizing eliminated the need for kilometers of copper cable. Access Points use about 5% of the electricity that 48-port switches use for power and cooling. By eliminating half the switches, network rightsizing helped KPMG eliminate over 350 metric tons of carbon dioxide emissions each year.



Why Aruba?

KPMG considered carefully which WLAN vendor could best meet the needs of their global enterprise. Aruba Networks was chosen because of key unique capabilities.

Aruba's identity-based security offered the most granular and powerful security policy. KPMG could allocate access privileges and quality of service priority based on the identity of the user, the device, the application, the time of day, etc.

Aruba's Adaptive Radio Management (ARM) capability automatically optimizes performance and reliability, even in high-density environments. ARM's ability to minimize contention, improve airtime fairness, and enhance user experience is crucial as the number of devices per employee continues to

grow. KPMG intends to support fixed-mobile convergence for cell phones that are wireless enabled, so high-density performance was a particularly important consideration.

Aruba's Airwave Management Suite offered the most efficient and effective way to ensure high service levels. Aruba's real-time heat maps, ability to track where a wireless device had been over a period of hours, and remote packet capture allow help desk professionals to rapidly resolve trouble tickets remotely. Aruba was simply the most cost-effective enterprise WLAN to manage.

Aruba's enterprise WLAN architecture could scale with KPMG. Aruba's mobility controllers can handle 80 Gbps of throughput, allowing KPMG to scale the savings from network rightsizing across their entire headquarters.

"KPMG selected Aruba to rightsize our network because Aruba WLAN solutions delivered the best security, reliability, performance and scalability," said Hans Zwart, CIO, KPMG Netherlands. "To achieve KPMG's cost saving goals, we needed a WLAN solution that could completely replace Ethernet for a large percentage of our users. Only Aruba gave us the confidence they could make our network rightsizing project succeed."

Ultimately, for KPMG, the choice of Aruba came from having a positive experience with Aruba wireless solutions in earlier implementations. KPMG had previously deployed more than 500 Aruba 802.11n access points across its 14 other facilities in the Netherlands. With the completion of the new Global Headquarters facility, KPMG employees can now freely roam between all of the Dutch facilities with the assurance that network access will be available and security policies uniformly enforced.

Organization Overview:

KPMG Netherlands provides audit, tax and advisory services and industry insight to help organizations negotiate risks and perform in the dynamic and challenging environments in which they do business. Member firms have 137,000 people operating in 144 countries worldwide, and generated more than \$22.7 Billion in revenues for 2008.

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CIO
KPMG Netherlands



WWW.ARUBANETWORKS.COM

1344 Crossman Avenue, Sunnyvale, CA 94089 | Tel. +1 408.227.4500 | Fax. +1 408.227.4550