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Network Cost of Ownership: Benefits of Vendor Standardization *Retail Case Studies*

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Retail Case Study #1 (Primary Vendor)

Background and Network Approach

A Dallas-based retail grocery company standardizes on Cisco as its primary network vendor. The organization has 6,100 employees, 46 network sites, 900 network-connected PCs (400 of which service the check-out lanes at stores), and 38 full-time IT/Network staff.

Exhibit 1: Retail Case Study #1 Snapshot

Industry Vertical	Retail
Company Size	Approximately 6,100 employees
Network Strategy	Primary vendor network (standardize on Cisco)
Top Benefits	<p>Minimal downtime, consistently reliable products, strong support, less staff training time</p> <ul style="list-style-type: none"> • Spent only \$5,600 on IT staff training last year (less than \$1 per employee organization-wide) • Centralized network monitoring saves 10-15 hours per week in staff time • Saved 30% on staff time when installing a firewall system
Current Concerns	Concerned that they do not get as broad a picture of new technology developments as they could by speaking with multiple vendors

The company standardizes on Cisco primarily because of the quality of Cisco's products and the lack of downtime their network experiences using Cisco gear.

Key Findings

By standardizing on a "primary vendor" across its network, the company has realized multiple benefits:

- (1) Lack of downtime: The low downtime incidence is primarily due to the quality of Cisco's products, according to the company's CIO. The fact that they have standardized on a primary vendor, however, virtually eliminates system instability as a result of compatibility issues among different network elements. In the rare event that trouble does occur, the problem-resolution process in a primary vendor network environment is much quicker than it would be with a multi-vendor network because there is no finger pointing between vendors.

- (2) Single network management interface: By standardizing on a primary vendor the IT department is able to monitor all of the network hardware at every site location using the CiscoWorks network management suite. The software allows them to determine the source of a network problem at any of their stores. It can easily establish whether the issue is with their carrier (MCI) or with their internal network hardware. The integrated network management software lets the company take a much more proactive approach to problem prevention and trouble-shooting. It also saves them staff time for network monitoring because they no longer have to send IT personnel out to the various stores as regularly. *The CIO estimates that centralized network monitoring saves his department 10-15 hours per week in staff time.*
- (3) Less staff training time: This particular company has a small group of individuals that have been continuing their education with Cisco and, at this point, have a very profound knowledge of multiple product lines and technologies from the vendor. If this were not the case, the CIO would be worried about not having the best information and the most up-to-date knowledge of the latest technologies in development. *In fact, the CIO reports that the company spent only \$5,600 on out-of-pocket IT staff training expenses during the most recent fiscal year (not accounting for staff time), which is less than \$1 per employee at an organization-wide level.*

Adding New Technologies to the Core Network

The company's decision to standardize on a primary network vendor has reaped increasing returns over time as it adds on new, emerging technologies to its core network.

Security

The company standardizes on Cisco for the bulk of its network security needs. At its headquarters, the retailer has two Cisco PIX firewalls that it installed in 1999. All e-commerce traffic such as purchase orders going out and invoices coming in goes through these firewalls, as does all email. They do not have firewalls at each of the individual stores. Instead, the company sets parameters on the Cisco routers at each of these site locations to define the types of transactions that are going into and coming out of the stores.

The main advantages of using their primary network vendor for the firewalls are the ease of connectivity with the rest of the network and having a common interface for the equipment (Cisco IOS is the operating system for the firewalls, and CiscoWorks is the common network management software). The original installation of the firewalls took between 45 and 60 days to get everything configured and tested from start to finish. The combined staff-time and consultant-time amounted to a total of 80 hours. *The CIO estimates that it they easily saved over 30% of the time it would have taken them to install*

a firewall from a different vendor because of the familiarity their staff already had with Cisco gear and because of the long-standing relationship they had with their local Cisco-certified VAR that had intimate knowledge of their entire network. Now that the firewalls are in operation, they are virtually trouble-free, according to the CIO. In the rare event there are problems, the company gets a very fast response from its local VAR and is able to resolve the issue in short order.

They also use Cisco for their VPN (two VPN gateways at the headquarters that can handle up to 10 concurrent users). Although they are still in the early phases of development, the VPN was extremely easy to integrate with and bridge through the Cisco PIX firewalls.

Wireless LAN

The company currently uses Symbol for both its bar-code scanners and the wireless LAN (WLAN) access points that connect these mobile devices to the wired corporate network. In total, the company has approximately 250 WLAN access points in its network (four in each of its stores and 65 in its distribution center).

Moving forward, however, it is going to start to transition its WLAN infrastructure to Cisco. It is launching a new store location in the Dallas-Fort Worth area on September 3rd that will have Cisco WLAN access points. The manager in charge of the decision cited three main reasons for standardizing on Cisco WLAN infrastructure in the future:

1. **Open architecture.** After evaluations and trials, the IT department felt that Cisco's Aironet architecture was better able to interact with any kind of mobile device. The original decision to deploy Symbol access points was driven largely by the mobile devices, which have all been Symbol scanners to date. In the future, the company sees opportunities to make greater use of cell phones and Windows CE devices. They believe that the Cisco WLAN access points will have a greater chance of being compatible with these devices than Symbol.
2. **Price.** The actual installation of the Cisco WLAN infrastructure was less expensive than their typical installation using Symbol WLANs because Cisco's Aironet has in-line power (through Ethernet cabling). Running electrical wires to each access point has traditionally been a significant component of the WLAN deployment at new store locations.
3. **Direct web access.** The Cisco WLAN enables the company to provide web access in the stores without going through the corporate network.

Conclusion

The next major project on the horizon is an IP PBX. And while the jury is still out on which vendor they will choose for this deployment, the benefits they've reaped to date by standardizing on a primary vendor for the majority of their networking needs will play a

major role in the final decision. The accumulated knowledge and certification on Cisco gear across the board will be advantageous for deploying virtually any new networking technology at this point if they maintain their primary vendor for the new expansions.

Retail Case Study #2 (Multi-vendor)

Background and Network Approach

A 3,000-employee regional department store chain based in the Northwest has a multi-vendor network, but standardizes on a primary vendor for each technology category. The company has 62 retail stores and a corporate headquarters location in a hub-and-spoke configuration.

Exhibit 2: Retail Case Study #2 Snapshot

Industry Vertical	Retail
Company Size	Approximately 3,000 employees
Network Strategy	Multi-vendor network with a primary vendor for each technology category
Top Benefits	Competitive pricing, flexibility to select most appropriate solutions for their needs in each situation, less training time required, fast deployment by standardizing within categories <ul style="list-style-type: none"> • Each additional vendor within the same technology category would take a week and a half of training time
Current Concerns	Current approach meets their needs

The main reasons for taking the best-of-breed approach, according to the company's IT Director, is to have the flexibility to select the solution that best meets their needs for each part of the network. The IT department's main decision-making criteria when selecting a vendor are:

1. Cost
2. Ease of maintenance
3. Financial stability of the vendor

The retailer relies heavily on advice from its value-added resellers (VARs) for major network decisions, but in general wants to be assured that the vendor they purchase from will be around in the long-term to help support their products. The company does not try to maintain a high level of expertise in-house on most of its network technologies, so ease of maintenance and strong support from the local VAR are crucial.

Key Findings

While the retailer classifies its approach as multi-vendor, it actually standardizes on a primary vendor within each technology category.

Exhibit 3: Retail Case Study #2 Primary Vendor by Category

Routers	3Com
LAN Switches	Hewlett Packard
Firewalls	Cisco
Wireless LAN	Cisco
Frame Relay	Memotech
VoIP	Memotech

The most important benefit the company realizes by maintaining a primary vendor for each technology in its network is to minimize the training time required to support these problems. According to an IT manager at the company, “by standardizing on a single vendor for each technology category, we’ve been able to keep the training curve as shallow as possible.” In fact, the company reports that it actually spent no out-of-pocket money at all last fiscal year for training courses. With only five full-time technical staff members, the main goal is to keep as much of their time dedicated to actual network management as possible (rather than training time).

Adding New Technologies to the Core Network

While the retailer takes a multi-vendor approach to network development, it has nonetheless realized benefits by deploying new technologies with vendors that already had a presence in their core network.

Wireless LAN

The company has approximately eight Cisco Aironet wireless LAN (WLAN) access points deployed in its network currently. Those access points support a host of hand-held computers running RFGen, which is a terminal emulator that supports Symbol and Telxon mobile devices (Telxon has since been acquired by Symbol Technologies). They use their wireless LAN systems for bar-code scanning, inventory management in the warehouses, receiving, picking, and shipping.

The IT Manager reports that it took less than a day to train the IT staff on the new wireless LAN systems. The company is gradually becoming more familiar with Cisco’s products and the common IOS software that runs them as they use more Cisco gear across the network. “We have it down to a cookbook at this point,” according to the IT manager. “We can install a new access point in half an hour now.”

The new wireless LAN systems also integrated well with their Cisco PIX firewalls, allowing them to have the same passwords regardless of whether they’re accessing the network from a wired or wireless terminal, and standardizing on a single vendor for all

WLAN access points allows their employees to roam seamlessly between different access points.

VoIP

The company realized a lot of synergy by using its existing frame relay vendor to deploy VoIP for inter-office on-net voice traffic. The company began deploying VoIP on its WAN five years ago, and now has VoIP gateways at all 62 of its stores. By using the same vendor for frame relay and VoIP infrastructure, the retailer has managed to minimize the floor space required in its data centers. The VoIP gateways are actually add-on modules to the Memotech frame relay access devices (FRADs). A hardware gateway from any other vendor would have been a stand-alone device that consumed more rack space. Additionally, deploying VoIP as an add-on to the existing frame relay system helped the company do it extremely cost effectively (the upgrade only cost \$5,000, according to the IT Manager). The payback on this project was immediate: the company saves approximately \$25,000 per month on inter-office long distance calls.

Conclusion

The company's IT department has been very satisfied with the results of its approach to network development. "Each device fills its niche in the network, and they integrate with each other well," the IT manager explains. By standardizing on a single vendor within each of these niches, the IT department has been able to minimize the amount of staff time spent on training. *If they were to experiment with LAN switches from other vendors as their network grew, for instance, it would take at least a week and a half of staff time to learn the new product and configure it appropriately for their network.* The key of this strategy is to pick a vendor that is stable and a product that can scale and evolve easily to accommodate new features.