

Multi-Channel Food Provider Reaps Nearly \$8 Million in Benefits with Lucent VitalQIP™ IP Management Solution

IN BRIEF

- **Goal:** Ahold needed to centrally manage all of its IP resources on its multiplatform, heterogeneous network serving six U.S. supermarket chains along with its central office. They also needed to reduce the amount of time and resources required to make IP changes.
- **Solution:** Lucent's VitalQIP™ DNS/DHCP IP management software for configuring, automating, integrating, and administering IP services across the diverse network.
- **Results:** A cumulative five-year net benefit of nearly \$8 million in cost savings and increased efficiency, driven by staff efficiencies, equipment savings, and increased speed and flexibility in managing IP objects. An ROI of 1,774%, and a payback period of one month.

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In the fast-changing world of retail food stores, the ability to use network services and devices to react quickly to change is a key to success. Modern supermarkets utilize networked devices for everything from point-of-sales equipment to inventory control, credit card payment, marketing, warehousing, pricing and virtually every other aspect of the business. So when the U.S. division of Ahold, which operates six supermarket chains on the East Coast, needed to find a solution for managing its IP network for its tens of thousands of networked devices, it turned to Lucent's VitalQIP™ IP management software. It found that the Lucent software allows for centralized management of a multiplatform, heterogeneous network; network-wide two-minute turnaround of IP address replication; dramatically reduced need for staff and hardware; and a simple way to retain central control of the network while still allowing for distributed administration.

Benefits

OBJECTIVE	BENEFITS ACHIEVED
Centrally manage IP resources, while allowing individual operating companies local network management.	VitalQIP™ allows for distributed administration services while retaining central control and management, so the overall architecture is managed by central IT, while individual networks are managed locally.
Reduce the amount of time it takes to make configuration changes across the entire Ahold network.	IP configuration changes are replicated across the Ahold network in two minutes, compared to 45 minutes previously.
Support multiple hardware platforms and operating systems.	VitalQIP™ supports the IBM AIX UNIX operating system as well as Windows 2000Active Directory, HP-UX, Solaris, Linux, and Windows 2003.
Make more efficient use of staff managing IP services.	With VitalQIP™, fewer than three full-time IT staff members are devoted to managing IP resources, compared to 14 full-time staff members who would have been required to manage the IP network without the software.
Easily inventory all IP objects across Ahold's U.S. network.	VitalQIP™ can quickly create customized reports based on a variety of criteria, such as listings of all routers or workstations on individual networks or on the entire network.

About Ahold

Ahold, an international, multi-channel food provider, serves 40 million customers every week in 27 countries on four separate continents. Under their own local brand names, Ahold companies operate approximately 9,000 supermarkets, hypermarkets (supermarkets combined with non-food services such as restaurants and photo processing), and convenience stores in the U.S., Europe, Latin America, and Asia.

"Every person in every one of our stores, whether a customer or employee, relies on our IP network. It's like a basic utility for us – without it, we couldn't run our business."

BRANDON CHABOT

AHOLD ENTERPRISE SYSTEMS MANAGEMENT
ADMINISTRATOR

Ahold's U.S. operations had \$43.67 billion in sales in 2002, accounting for 60 percent of the company's total sales. Its six U.S. retail operating companies operate more than 1,600 stores along the eastern seaboard. Managing the approximately 125,000 IP objects on the network that connects these stores to the operating companies and main U.S. Ahold operations is key to continuing Ahold's U.S. growth, which rose by 24 percent in 2002.

The Business Challenge: Managing IP Objects

At the core of Ahold's U.S. business is its network, which connects its six supermarket divisions on the East Coast with its central offices based in Chantilly, Virginia and its central IT organization (Ahold Information Services) based in Greenville, South Carolina. Every division functions as a hub, networking between 250 and 450 supermarkets. Each individual supermarket has thousands of IP objects connected to the network, including UNIX servers, hand-held scanners, point-of-sale devices, and personal computers. All told, the network currently has approximately 125,000 IP objects connected to it.

The network and IP devices are used for virtually every aspect of managing and running the supermarket chains. When customers pay with credit and debit cards, for example, payment is processed electronically. Marketing programs, such as those that use supermarket store cards, require the network, as does check processing, all financial reporting and transactions, warehousing, distribution, and inventory. Sales data is routed via the network, and pricing for individual items is done via the network as well.

Additionally, the network is used to host Ahold's Web-based supermarket presence Peapod, and to connect to business partners via a virtual private network.

Driving the Need for a Solution

In 1998, when Ahold installed a new network, it recognized that it needed a better way to manage its IP infrastructure. It was looking for a new IP management solution for several reasons:

- **To balance central management with distributed responsibilities.** Each operating company has a certain amount of autonomy and its own IT staff. Ahold was looking for a way to allow for distributed network management while retaining central control over the overall architecture with the central IT staff in South Carolina.
- **To support multiple platforms.** The Ahold network is multiplatform and heterogeneous, including servers with IBM AIX UNIX systems, servers with Windows 2000 software, and a variety of other devices. The IP solution had to be able to integrate with Windows 2000 Active Directory as well as UNIX software.
- **To be able to make IP changes centrally.** In order to make changes to DNS and DHCP servers, IT staff had to connect to every server individually, and make changes manually. Ahold wanted to be able to make IP changes from a central location, without having to manage individual servers.
- **To have IP changes take effect immediately.** Because IP changes had to be made manually, it could take a great deal of time for them to propagate throughout the network – as long as 45 minutes for a single change. Frequently, multiple IP changes are made daily. If these IP changes are too slow in propagating, there is a chance that transactions might fail, such as credit card payments or orders made to suppliers by individual supermarkets.

“VitalQIP™ has helped us maintain the integrity of our network. It gives us the leverage to ensure that people follow naming standards and host-name conventions, and lets us do audits and track the activity of devices added to our network over time.”

BRANDON CHABOT
AHOLD ENTERPRISE SYSTEMS
MANAGEMENT ADMINISTRATOR

Ahold chose Lucent’s VitalQIP™ for DNS/DHCP and IP management because VitalQIP™ was the only solution that handles a multiplatform and heterogeneous network and provides centralized IP management while allowing for distributed administration.

Ahold Meets the Challenge

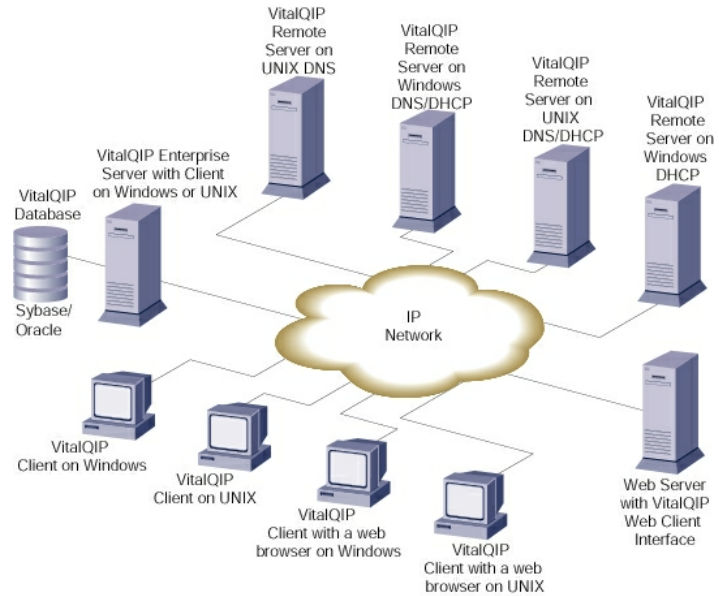
The Ahold team considered several choices for IP management of its network. The objective was a centralized solution that would cut down on the time required to make IP changes, and that would work in a network that includes UNIX as well as Windows 2000 servers. Ahold chose Lucent’s VitalQIP™, because it was the only solution that could meet all of their IP management requirements.

An Inside Look at the Lucent Solution

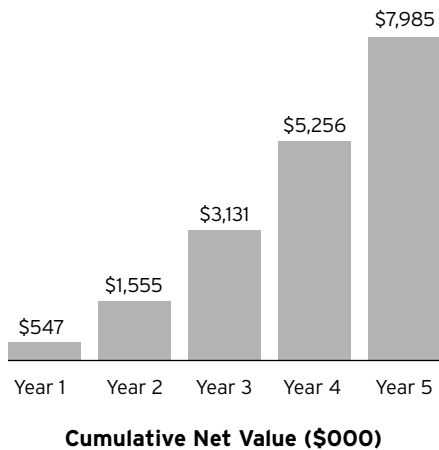
VitalQIP™ configures, automates, integrates, and administers IP services across diverse networks, such as Ahold's. The following figure shows how VitalQIP™ works.

"Lucent helped us with design of the overall architecture and did training and implementation for us. Their help made sure that everything went smoothly – it was only a matter of weeks between architectural design and final implementation."

BENNY MAYNARD
MANAGER OF THE AHOLD ENTERPRISE
SYSTEMS MANAGEMENT TEAM



VitalQIP™ supports a wide variety of hardware and operating systems, including the IBM AIX UNIX operating system as well as Windows 2000 Active Directory, HP-UX, Solaris, Linux, and Windows 2003 as well as many others. The VitalQIP™ Enterprise Server, running on Windows or UNIX, manages DNS and DHCP using the VitalQIP™ database, in Sybase/Oracle.



The Bottom Line for Ahold

Ahold has reaped significant benefits from the solution since it was implemented. IP changes now take two minutes instead of 45 minutes – and the changes can be made centrally, using VitalQIP™'s graphical user interface. There have been substantial savings in IT staff as well, because there is no longer a need to have network administrators at each operating division make IP changes – it can all be done centrally, and with far fewer personnel.

There have also been savings in hardware. Before VitalQIP™, every DHCP server required its own backup DHCP server because there was no automated "failover" to a backup server should a primary IP server go down. With VitalQIP™, the many-to-one failover feature is automated so that a single server can back up multiple DHCP servers.

Business Analysis of the Implementation

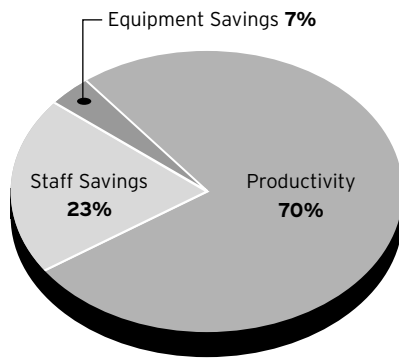
Ahold's bottom line for the project: A cumulative five-year net benefit of \$7,985,073, an annual ROI of 1,774% and a payback period of one month. The project yielded a total five-year savings of \$21.29 per IP object.

A detailed analysis of the implementation shows that Ahold will reap a cumulative five-year net benefit of \$7,985,073 from the installation. It yields an annual ROI of 1,774% with a payback period of one month. It has a total five-year savings of \$21.29 per IP object.

The benefit is made up of equipment savings, savings in staff salaries, and increased productivity. Ahold will have to buy 42 fewer backup DHCP servers than it would otherwise have had to because of the "failover" feature. To support IP services, it now requires fewer than three people. If Ahold had not purchased VitalQIP™, a total of 14 IT staffers would have been required to manage IP services. And because each IP change can now be made in two minutes rather than 45 minutes, there is a substantial productivity boost.

The following chart provides a detailed, five-year analysis.

BUSINESS ANALYSIS OF THE SOLUTION



Cumulative 5 Year Benefit = \$7,985,073

Project Summary	
Annual ROI	1774%
Total 5 Year Saving/1000 IP Objects	\$21,294
Cumulative Five Year Net Benefit	\$7,985,073
Payback Period (months)	1

Project Costs (\$000)	Startup	Year 1	Year 2	Year 3	Year 4	Year 5
Total Project Costs*	\$90	\$83	\$94	\$104	\$114	\$125

Benefits (\$000)	Year 1	Year 2	Year 3	Year 4	Year 5
Equipment Savings	\$0	\$28	\$112	\$196	\$294
Staff Savings	(\$6)	\$116	\$358	\$620	\$894
Productivity (revenue from increased uptime)	\$188	\$274	\$346	\$407	\$476
Productivity (revenue from earlier software implementation)	\$538	\$684	\$864	\$1,016	\$1,190
Total Benefits	\$720	\$1,102	\$1,680	\$2,239	\$2,854

Financial Analysis (\$000)	Startup	Year 1	Year 2	Year 3	Year 4	Year 5
Net Value	(\$90)	\$637	\$1,008	\$1,576	\$2,125	\$2,730
Cumulative Value	(\$90)	\$547	\$1,555	\$3,131	\$5,256	\$7,985
Net Present Value	\$5,695					
Annual ROI	1774%					
IRR**	1728%					
Payback Period (months)	1					

Key Performance Indicators (KPIs)

Total 5 Year Saving/1000 IP Objects	\$21,294
Total IT Cost/1000 IP Objects	\$4,183

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* Total Project Costs include Software, Maintenance, Services, and People costs to run and exploit the software.

**Internal Rate of Return (IRR) is the interest rate that makes net present value of all cash flow equal zero. IRR, in this case, is more meaningful because the initial costs understates the actual costs over the life of the project. IRR more fully recognizes these costs because it considers costs over the life of the project (not just initial costs).

Looking to the Future

“VitalQIP™ makes our data more available and timely. We’re able to put our applications in more quickly, and it frees up our administrators to work on other important tasks.”

BENNY MAYNARD

MANAGER OF THE AHOLD ENTERPRISE
SYSTEMS MANAGEMENT TEAM

VitalQIP™ has allowed Ahold to grow its network at a rate of 25,000 additional IP objects a year, from 25,000 in 1999 to 125,000 in 2003, without having to add extra staff for IP management. The software has freed up IT staff to perform additional tasks that they otherwise would not have been able to perform. It has also allowed the company to save substantial amounts of money on backup servers. The network will be able to add tens of thousands of IP objects a year into the foreseeable future without having to add additional staff, and so the company is well-positioned to be able to take advantage of a fast-growing network without having to spend substantial resources on staff time and hardware.

Market Leading Enterprise Software – backed by World-Class Service and Support

VitalQIP™ DNS/DHCP and IP Address Management Software is a key component of the Lucent Network Operations Software portfolio. Only Lucent offers multi-vendor, multi-technology, multi-service software solutions developed on extensible, programmable platforms, open APIs and advanced system architectures. These carrier-grade solutions provide the reliability, scalability and flexibility to deliver advanced services across current and next generation networks – while improving efficiencies, significantly reducing operating expenses and delivering the Quality of Service that today’s enterprise users demand.

And with more than 10,000 network consultants, engineers, and service professionals around the globe, Lucent Worldwide Services can address all your IP address management support requirements. Let our experts assess the readiness of your current network; plan, design, and build solutions that optimize your particular environment; integrate our market leading software solutions with your existing infrastructure; and provide ongoing maintenance support.

To learn more, contact your Lucent Technologies sales representative, authorized reseller or sales agent. You can also visit our web site at <http://www.lucent.com/vital> or call 1-888-426-2252.