Susquehanna Bancshares, Inc.:
Where the Center Holds

"Our staff used to spend time on break- fix, repair type of work. Now they spend time working with users to automate processes, data warehousing initiatives, and application integration. They produce value rather than just keeping the organization running."

Rod Lefever

Senior Vice President and CTO

Susquehanna Bancshares, Inc.

For financial institutions, technology presents both opportunity and risk. By consolidating data and improving access to it, technology gives employees the tools they need to improve customer service and productivity. However, data consolidation without security and redundancy puts the whole operation on the line.

To upgrade a decentralized, aging IT infrastructure and connect people to the information they need, Susquehanna Bancshares, Inc. adopted server-based, thin-client technology. The new system enables better access to more data and technology with more control and monitoring capability to improve security.

Headquartered in Lititz, Pennsylvania, Susquehanna has 170 locations and 2,400 employees in Pennsylvania, Maryland, New Jersey, and West Virginia. The financial services holding company has more than $7.5 billion in assets and consists of eight community banks, two leasing companies, a credit life reinsurance company, a trust and investment company, an asset management company, and a property and casualty insurance brokerage.

Upgrade On Budget

In 2001, Susquehanna Bancshares, Inc. operated independent IT departments within each business area of its financial holdings. The aging and decentralized infrastructure included multiple platforms, different processes and strategies that were difficult to support, and an inefficient Wide Area Network (WAN) with weak remote access. Users found it difficult to share data and the IT staff spent too much time fixing technology rather than using it to improve the organization. The new management team set IT standardization and upgrades as a priority for improving IT efficiency and customer service.

Under Senior Vice President and CTO Rod Lefever, the IT group ran financial analysis on two options: sustain the decentralized IT model of the company with standards for

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Solution Architecture

- Wyse Products
  - Wyse® Winterm™ thin clients
  - Wyse™ Rapport® software
- Servers
  - Citrix® MetaFrame® Presentation Server
- Applications
  - Core banking application
  - Platform automation (automated account signups, disclosure forms)
  - Microsoft® Office
  - Internet Explorer
  - More than 100 applications (42 unique applications)

equipment, platforms, and user setup, or reorganize into data centers with server-based computing to the client sites. The up-front hard dollar costs were nearly identical, but the second option offered easier support for end users, more efficient use of the network, and better security.

Next, Susquehanna compared acquisition and support costs of computing options. They found that desktops cost twice as much as thin clients, and laptops were three times as expensive as thin clients over three years. Lefever realized that he could install three thin clients to replace a laptop for a mobile user.

A Better Solution: Wyse Winterm Thin Clients

Susquehanna embarked on a major reorganization to centralize support, redesign the network, consolidate data, and replace desktop computing devices. Using server-based computing, Susquehanna consolidated data onto servers in primary and secondary data centers. The 170 locations connect to the data centers through a hub and spoke configuration with improved perimeter security and redundancy. All of the applications and data reside on powerful servers in these secure locations, eliminating duplicate data sets and inconsistent desktop configurations.

Susquehanna adopted the Wyse® Winterm™ 1200LE as the standard thin client for deployment because of its efficiency and low overhead. The devices use DHCP to connect to the server and download their configuration, making setup and updates easy. To upgrade or roll-out a new application, the IT department updates the servers and, when the thin clients are rebooted, they receive the new settings. Because thin clients have no moving parts, they tend to run without failure well beyond the three-year evaluation scenario.

Server-based computing did not decrease bandwidth required on the network, but made more efficient use of network capacity. Thin clients send keystrokes and mouse clicks to the server and receive image updates constantly, creating steady, low-bandwidth network traffic rather than the spikes generated by moving files from one location to another or printing.

Better Control, Easier to Use

With thin clients and server-based computing, users have the benefit of a portable desktop without the hassle of a portable device. Thin clients are on in an instant, easier to support, and much more secure. Because the data remains on the server rather than laptop, no one can access it without server access. If staff members need to work at home, they can connect through a browser and Internet connection. "I don't need a laptop anymore," said Lefever, "at home or when I go to a conference hotel. It's a lot easier than carrying a laptop, especially when traveling through airports."

Because data is neither transmitted across the WAN nor stored locally, monitoring data security is much easier than with a scattered desktop infrastructure. To certify that data is secure, the IT department verifies the security of the servers and uses Wyse™ Rapport® device management software to take an inventory of devices. Issues of rogue software or

backed up multiple data sets do not exist in a thin-client environment.

Not only is the new IT infrastructure easier to support and more reliable, the IT department has a more robust recovery plan. If the primary data center goes down, the IT department can swing to the secondary data center. At least a quarter of the users will be backed up and running with a scaled recovery to full capacity. If a location is closed, the IT department can quickly set up a new office with a high-speed connection, a VPN appliance, and new thin clients.

Added Value for IT

Susquehanna began their thin client roll-out by identifying the largest group of users with the same application needs. Based on the success of the first implementations, they plan to continue the migration to 1,800 thin clients with 250 Windows®-based desktops and 150 laptops for users with particular needs.

The IT department has shifted focus from desktop support to more value-added tasks. "Our staff used to spend time on break-fix, repair type of work," said Lefever. "Now they spend time working with users to automate processes, on data warehousing initiatives and application integration. They produce value rather than just keeping the organization running."

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