



The Digital Retail Banking Landscape

Executive Summary

Today, financial institutions face a convergence of challenges unlike any other time in the recent past. While many customers still walk into the branch to conduct business, more and more are turning to alternative channels, such as contact centers and the Internet. The development of this digital retail banking landscape has left many institutions in doubt about whether their existing technological infrastructure can keep pace with growing demands.

Few events were as instrumental in building this digital landscape as 2003's Check Clearing for the 21st Century Act, better known as "Check 21." Check 21 revolutionized the payments industry by enabling financial institutions to process checks electronically rather than manually. Now, instead of physically transporting checks, institutions can capture and forward images of the checks.

Image capture technologies drastically cut operational costs, speed processing, and enhance customer service; however, image quality is sensitive to the size of the data file containing the image—the larger the data file, the better the image quality. So while financial institutions can reap significant rewards from Check 21, they must invest in expensive upgrades to their network in order to support it.

To help financial institutions take advantage of the benefits of Check 21 sooner, ARGO and Cisco have partnered to expand the capacity of the institutions' existing infrastructure. Through joint testing using ARGO's BANKPRO Teller with Image solution, Cisco has developed technologies that allow financial institutions to enjoy the benefits of imaging technologies while using their existing network infrastructure.

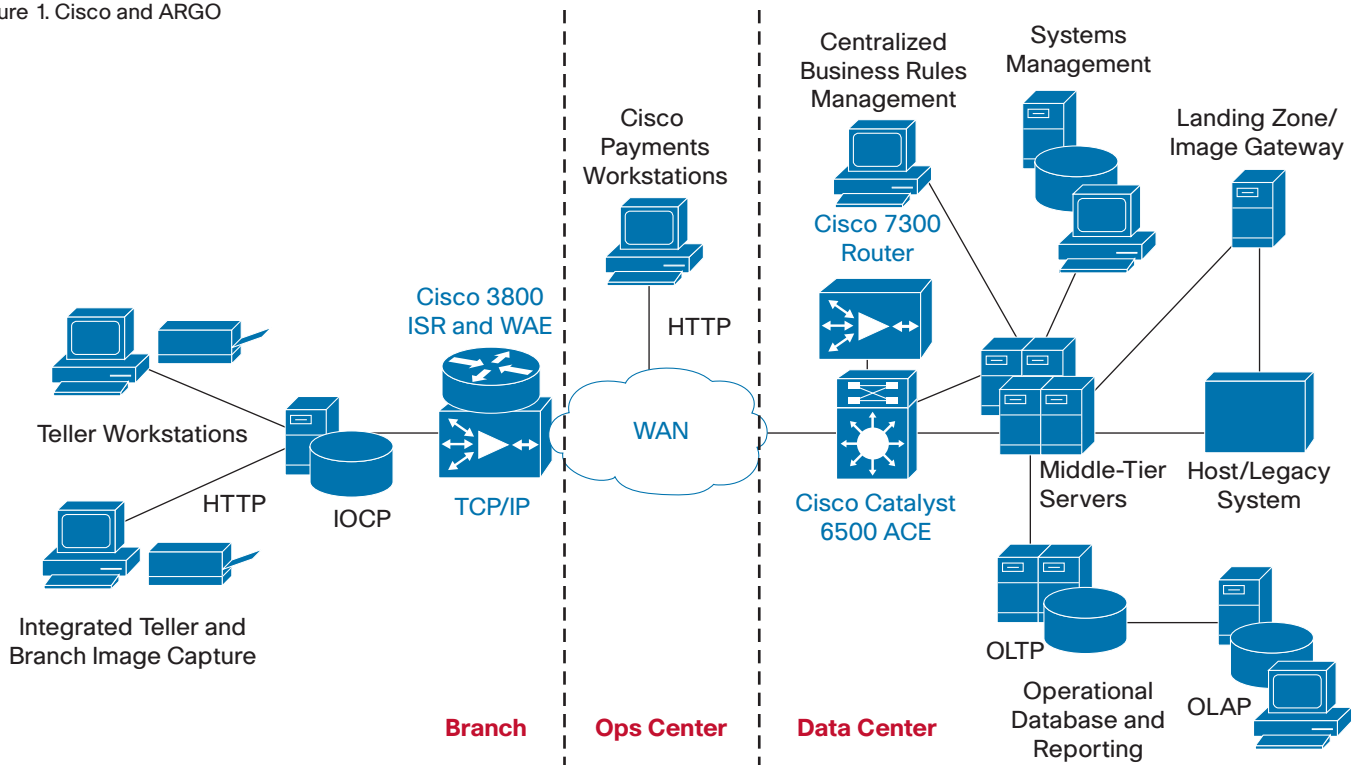
Solution

Cisco has identified three key areas that allow institutions to get more out of their existing networks:

- **Wide area network optimization:** By implementing Cisco® Wide Area Application Services (WAAS), institutions can reduce their bandwidth requirements through caching and compression techniques built into the WAAS device.
- **Quality of service (QoS):** Through the use of QoS, institutions allocate the bandwidth necessary to maintain high SLAs while allowing other applications to continue to operate on a best effort basis by the network.
- **Low-cost, redundant network connectivity:** The costs associated with the dedicated circuits already in place—and, more importantly, the costs associated with upgrading those circuits—can be extremely high. By implementing a low cost redundant network using third-generation (3G) or broadband connections, institutions can keep the dedicated bandwidth available for high SLA applications and offload the lower SLA traffic to the redundant connection. If either connection fails, all the traffic will flow over the redundant connection, but QoS will ensure that the high SLA applications continue to take precedence.

Figure 1 depicts a possible implementation of ARGO's BANKPRO Teller with Image solution.

Figure 1. Cisco and ARGO



Key Benefits

Cisco performed a series of tests by simulating a typical branch/ data center environment using ARGO's BANKPRO solution. Cisco configured the branch side to resemble a typical 10-person branch location. The data center side was built to support 10 branches. Because this situation is significantly less than typical, Cisco could simulate the expected load based on the processing available. Cisco expects the results in a larger environment to be linear as volumes grow.

Cisco performed the testing over a 256-kbps link configured for 0.1 percent packet loss and 100 milliseconds (ms) latency. It used a typical load based on a 10-person branch, which consisted of 152 teller transactions with 712 individual requests along with 59.4 MB of check images. Figure 2 shows the before and after as Cisco added the WAAS device as well as QoS.

As Figure 2 illustrates, WAAS significantly accelerates interactive teller traffic. Because the images being transmitted are pre-compressed by the check image capture software, the compression techniques in the WAAS have less impact

The impact of QoS shows how institutions can control available bandwidth and allocate what is necessary in order to maintain SLAs for interactive traffic. The "WAAS enabled with QoS" bar on the Maximum Link Utilization section shows the impact of limiting the bandwidth available for sending check images.

The Future

Using Cisco's approach to intelligently managing connections, financial institutions can add additional bandwidth inexpensively and still maintain their existing SLAs. Additionally, they can:

- Use their available bandwidth more effectively

- Deploy additional services such as voice over IP, video, and training, and additional applications like workforce optimization and cash management, over existing network infrastructure without impacting their high SLA applications
- Effectively offload less important traffic, such as web or email, to the best-case connection to avoid impacting mission-critical applications

Summary

Financial services institutions have a decision to make: do they upgrade existing infrastructure or make better use of what they have in place today? ARGO and Cisco have performed joint testing to show how to take advantage of your existing infrastructure and maintain high SLAs on your mission-critical applications. This testing has resulted in a partnership that will continue to provide enhanced design and deployment options that will allow you to address the issues you are facing today with a robust and validated solution.

Additional Information

Check 21: <http://www.privacyrights.org/fs/fs30-check21.htm>

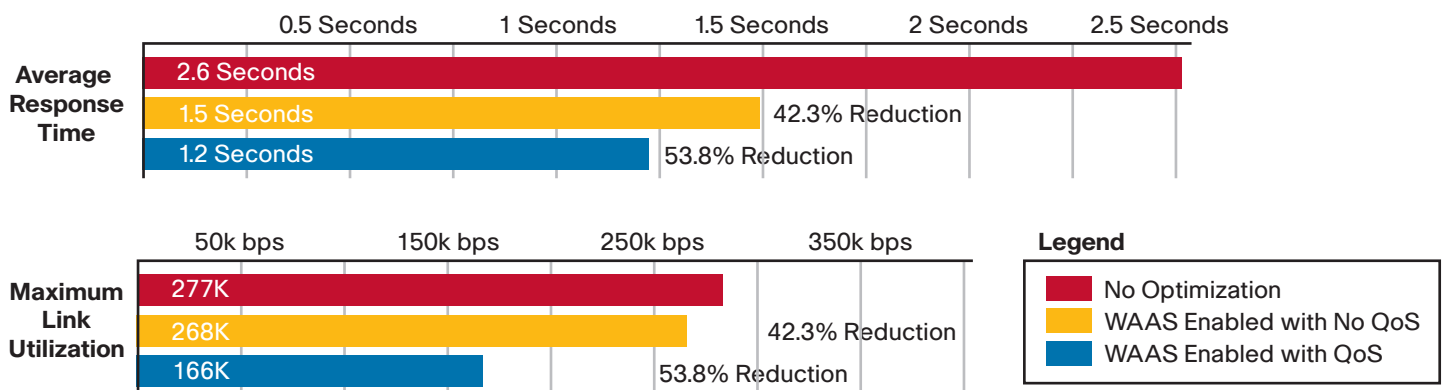
Cisco Solutions for Financial Services Industry: <http://www.cisco.com/go/financial>

ARGO Data: <http://www.argodata.com/>

Digital Image Management and Lean Application Management: <http://www.cisco.com/web/strategy/financial/dim-lam.html>

Cisco Collaborative Customer Experience—Digital Image Management: <http://www.cisco.com/en/US/docs/solutions/Verticals/digitalimagmgmtadg.html>

Figure 2. Results With and Without Optimization





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