Turkish Bank Secures Services Across Public Lines to Cut Costs

Yapi Kredi relies on router-based encryption to secure data, voice, and applications across hundreds of offices and ATMs.

EXECUTIVE SUMMARY

Customer Name: Yapi Kredi Bank

Industry: Banking

Location: Headquarters in Istanbul, with branches and ATMs throughout Turkey

Number of Employees: More than 17,000

BUSINESS CHALLENGE

- High cost and limited speeds of leased lines drove high operating expenses, slowed network performance and growth

NETWORK SOLUTION

- Upgraded WAN from core to remote sites with Cisco router-based encryption, enabling use of Metro Ethernet and 3G wireless connectivity

BUSINESS RESULTS

- Annual telecom savings of US$1 million
- Faster network performance for improved user and customer experience
- More efficient regulatory compliance

Business Challenge

Yapi Kredi Bank of Turkey is one of the largest financial institutions in the country. In its primary retail banking business, it operates more than 900 branch offices, with an additional 1100 offsite ATMs, across Turkey. All of them are connected by the bank's WAN, as are a number of subsidiary banks and other businesses in Turkey and abroad. The network backbone consists of the bank's main data center and a few regional data centers that also serve disaster recovery functions. The network supports a full range of data and backup applications, voice and call center applications, and branch, ATM, and credit card applications.

For years, Yapi Kredi Bank operated its network over leased lines. Because such lines are privately owned and operated, they provided the security that the bank required for its often sensitive or confidential data and other communications. But such lines are also relatively costly, and would not support the higher transmission speeds required for large modern networks.

As the bank's WAN had grown, the cumulative expense of its leased lines had also grown, as well as its need for higher-bandwidth connectivity. So, in 2009 the bank's management decided to switch over to a relatively new alternative, public Metro Ethernet lines, for connecting to its branch offices, and 3G wireless for connecting to its offsite ATMs. Both technologies offered much higher capacity at a lower cost than leased lines.

If the bank was to use public lines, however, it would have to encrypt all its network traffic in order to help ensure its security.

Network Solution

"Because we were going to replace the network backbone as the first phase of the project, we took the opportunity to look at alternative methods and competitive solutions," says Ufuk Ersöz, network director for Yapi Kredi.

"We considered each solution from various angles," he says, "including encryption, compatibility, interconnectivity, and our other requirements."

Cisco was the bank's incumbent network supplier, with Cisco equipment already in place in the network backbone, regions, branches, and ATMs. But that was not the only reason that the bank's IT managers decided to stay with Cisco for the new deployment.

"Total cost of ownership was important to us, and Cisco's was lower than the competition," says Ersöz. "Our internal skill set, acquired over many years of experience and familiarity with Cisco equipment, added even more value."

Already under way with a project to convert the network core to Multiprotocol Label Switching (MPLS), Yapi Kredi's network managers decided to start the network transformation at the core, that is, at the backbone and regional level. As a first step, they replaced existing IGX switches with more powerful, versatile Cisco® 7600 Series Routers. To attain the secure network transport they needed, they installed Cisco Group Encrypted Transport VPN (GETVPN) modules on their existing regional Cisco 7200 Series Routers. (The bank also added 16 Cisco 1000 Series Aggregation Services Routers [ASRs] to the core, and plans eventually to replace its 7200 routers with 1000 series ASRs.) With GETVPN, a virtual private networking technology that provides secure any-to-any encrypted communication over a variety of network infrastructures, all central and regional traffic through the bank's WAN is encrypted before it passes to the Metro Ethernet circuits. Started in May 2009, the backbone transformation was finished in March 2010.

> "With the gigabit speeds of Metro Ethernet lines, we can transport more data and distributed applications in less time and at less cost. We're already seeing savings of US$1 million annually."
> **— Ufuk Ersöz, Network Director, Yapi Kredi**

To secure ATM data, the bank also implemented GETVPN between its offsite 1100 ATMs and regional head ends. Then it implemented Dynamic Multipoint VPN (DMVPN) at its 900 branches by adding DMVPN configurations to the Cisco 2811 Integrated Services Routers (ISRs) in place there. (In the future, the bank plans to replace the 2811 ISRs with 2911 ISR Second Generation devices [ISR G2s] and to upgrade the ATMs with 878 routers to 888G wireless devices.) Like GETVPN at the core and regional levels, the addition of DMVPN at the branches is crucial, because it helps enable secure direct branch-to-branch communications, including voice as well as data, over public circuits.

PRODUCT LIST

- Cisco 7600 Series Routers
- Cisco 1000 Series Aggregation Services Routers (ASRs), with security licenses for Group Encrypted Transport VPN (GETVPN)
- Cisco 2811 Integrated Services Routers (ISRs) and 2911 Integrated Services Routers Second Generation (ISR G2s) with security licenses enabling Dynamic Multipoint VPN (DMVPN)
- Cisco 878 routers and 888G 3G wireless ISRs, with GETVPN security licenses

Business Results

While the upgrading of Yapi Kredi's branch routers and ATMs continues, the higher-capacity backbone has already increased traffic and response times considerably.

"With the gigabit speeds of Metro Ethernet lines, we can transport more data and distributed applications in less time," says Yapi Kredi network director Ersöz, "and at less cost. We're already seeing savings of US$1 million annually.

By encrypting data at the router level, Yapi Kredi eliminated the need for separate encryption hardware, reducing its network ownership costs. "The Cisco encryption solution also helps us comply with some regulatory compliance requirements," says Ersöz.

Indeed, the benefits of the bank's "new" network are widely shared. Customers are pleased with the faster response times and better all-around service experience at Yapi Kredi's ATMs. The bank itself can distribute software upgrades to the ATMs quickly and easily. The bank has long used ATM-based graphical marketing campaigns featuring new products and services. Although it used to take 15 days to distribute a new campaign to the bank's total of 2500 ATMs, it now takes just 3 days.

Yapi Kredi's IT managers are already planning to deploy additional applications and services over the banks high-speed, high-capacity, and secure network, extending IP telephony to more branches and users and setting up video conferencing for internal training and other purposes.

Meanwhile, as the bank's network director explains, the router-based encryption solution that it chose continues to pay dividends as the bank builds it out to more and more sites. "It's transparent to our existing network design," he says, "so implementing it takes less time and effort than any other solution available."

For More Information

To find out more about Cisco ASR, ISR, and ISRG2 routers, go to: http://www.cisco.com/go/isrg2 and http://www.cisco.com/go/asr.

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Printed in USA C36-706674-00 05/12