



FINANCIAL SERVICES COMPANY

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Chief Information Officer, Financial Services Organization

Central American Bank Improves Network Availability and Resilience with F5 Solutions

A large financial services company in Central America faced critical application outages whenever a data link went down in any one of its five charter countries. Natural disasters also posed significant threats to user connectivity and productivity. Whenever a link went down, the organization’s reputation for fast, responsive client service was impacted. The financial services company needed a way to migrate its enterprise connectivity services from an unreliable collection of interdependent, country-based networks to a reliable and highly resilient virtual network. By deploying F5 BIG-IP® Solutions, the organization exceeded 99 percent network uptime; network recovery measured in hours, not days, and business continuity, even amid regional Internet outages.

Business Challenges

The financial services organization has provided funding for roads, hospitals, and other major infrastructure in Costa Rica, Guatemala, Honduras, Nicaragua, and Panama.

With offices in all five countries, the company required reliable, highly available connectivity for communications and applications for its more than 300 employees distributed throughout the region.

Critical applications include IBM Lotus Notes, Microsoft SharePoint, Microsoft Office Communications Server, especially

unified communications, and the Oracle E-Business Suite.

Of course, that’s not to mention the need for extended team members—including business and financial consultants who spend about half their time on the road—to communicate with clients across the region as well as with the organization’s many funding partners worldwide.

According to the company’s CIO, the previous infrastructure—mostly made up of Frame Relay-based data links and WANs—proved unreliable. Compounding this problem was

Overview

Industry

Financial services

Challenges

- Network reliability
- Network recovery
- Business continuity
- Secure remote access

Solution

- BIG-IP Local Traffic Manager (LTM)
- BIG-IP Global Traffic Manager (GTM)
- BIG-IP WebAccelerator
- BIG-IP Link Controller
- FirePass SSL VPN

Benefits

- Faster network recovery
- More than 99 percent network uptime, with less network risk
- Assured business continuity

Partner

01ZERO

the fact that the company's many applications and services were segregated and hosted on different country's servers in data centers in Honduras, Costa Rica and Guatemala, or offices in Nicaragua and Panama.

"We needed a way to make the most of our unique, highly dispersed connectivity setup across five different countries while geographically balancing our services so users could still enjoy a high level of availability," he added. "With an application service running only on a server in Costa Rica or only on a server in Honduras, it would become unavailable when the link to that server went down."

He said, for example, that email outages had occurred about 3 percent of the time, which may not seem like much, but each outage was tremendously disruptive to workflows, productivity, and the company's reputation for client responsiveness and speed.

Especially troubling was that many of those outages were asymmetric. That is, while the bank could not send email externally, it could still get email—and senders would still expect their emails to receive timely replies.

Critical outbound information like market alerts and deal presentations might also get held up, interrupting the cycles involved in crucial funding efforts. Also, when the company's links went down, employees couldn't access their applications, meaning productivity took a significant hit.

Another issue the company sought to address was to mitigate business continuity risks inherent in the region due to earthquakes, weather, and other natural disasters. Without comprehensive network integration across its Central America operating region, the organization would remain vulnerable to crippling outages should a natural disaster occur.

Solution

The company's CIO contacted F5 Networks reseller 01ZERO to assess what competitive options it might have for upgrading its networks and addressing its IT challenges. At the time, network products from Cisco

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were also considered, but 01ZERO made a compelling case for the much broader capabilities of F5's application delivery and remote access solutions.

"When we learned how F5's BIG-IP and FirePass solutions are uniquely designed to deliver high availability, automation, and optimization for mission critical applications, the decision in favor of F5 became obvious," recalled the organization's CIO.

The financial services company had no prior relationship with 01ZERO, but in the course of the F5 evaluation, the CIO and CTO were impressed with 01ZERO's engineering support and capabilities. "01ZERO's capabilities included 24x7 customer care and support for our consultants who are constantly on the go visiting clients throughout Central America. That kind of support was important to us," noted the CTO.

Specifically, with help from 01ZERO's engineering group and F5's Professional Services, the company deployed F5's FirePass® SSL VPN solution to provide consultants and remote employees with secure and fast access to the bank's applications across a wide range of devices, including laptops and PDAs.

Additionally, the company also deployed four BIG-IP modules:

- BIG-IP® Local Traffic Manager™ dynamically disperses application connections for employees across multiple clustered servers, sending each one to the server that is best able to handle the added load. This helps users experience less latency, faster

transactions and, overall, a much better connectivity experience.

- BIG-IP® Global Traffic Manager™ automatically routes connections to alternate data centers if the company's main data center in Honduras goes offline or becomes temporarily overloaded. With this solution, the company can better leverage data centers in Guatemala and Costa Rica as alternative routing facilities.
- BIG-IP® Link Controller™ prevents disruptive—and costly—downtime due to the region's frequent data link failures. By automatically switching traffic to alternate connections, the company's infrastructure is much more resilient in the face of natural disasters or other connectivity challenges.
- BIG-IP® WebAccelerator™ caches server-based page content, so users of web browsers and applications don't have to repeatedly request page content from the server, decreasing the total number of server access requests and improving user performance up to 10x.

In the deployment phase, 01ZERO and F5 worked together to understand the specific traffic management and security capabilities that would be required to support the company's mix of Oracle, Lotus, and Microsoft applications, along with the other solutions the organization relied on.

Benefits

The company is extremely pleased with the outcome of their F5 upgrade to their network. Company personnel describe F5's dynamic rerouting of email when a link goes down as working "beautifully." The organization has also realized faster network recovery from disruptions, now in hours not days, with less administrative time and risk associated with operations as well. Network uptime is now more than 99 percent. And business continuity is assured, even in the midst of events such as earthquakes that can substantially limit individual countries' Internet access capabilities.

Faster Network Recovery, with Less Network Risk

With the F5 solution now in production, network downtime has been minimized even when disruptions occur. For example, during an earthquake the bank lost a critical physical network element hosted in Honduras that connected the network to the Honduran telephone system and processed outbound email. The physical system was lost due to the disaster, and no suitable replacement could be secured in a timely fashion. "Without the BIG-IP LTM virtual servers," the CIO said, "the outage could have lasted days while a replacement was sourced and installed, but instead, outbound email was restored in just under two hours."

More Than 99 Percent Uptime

With BIG-IP LTM and BIG-IP GTM, the bank's network can now automatically circumvent any broken links that would have previously plagued its operations. Before the F5 deployment, sporadic outages disrupted email and applications access, resulting in an average network uptime of just 97 percent. Now, the company estimates it to be more than 99 percent. Company personnel explain that the problem before wasn't just the outages themselves but also their unpredictable frequency. "With a large financing deal pending, for example," commented the CIO, "both the bank and its funding client could be left 'incommunicado' for hours, possibly days, or even a week, while having to resort to phone and fax as alternative means of communication." To restore connectivity, network administrators would have to change DNS settings, wait 12 hours for them to refresh, change server routes and policy maps, and then change it all back again when the link was restored. "With F5's BIG-IP system, the bank also avoids the serious risks inherent in making fundamental changes to a production environment."

Business Continuity Assured

During an earthquake off the coast of Honduras, all the country's international optical fibers that provided Internet connectivity were severed. Reconnecting the fibers would take weeks. Previously, the financial services company's Honduran operations would have suffered the lack of Internet connectivity along with the rest of the country. Instead, the BIG-IP system rerouted Internet access and traffic to Costa Rica, where it was relayed back into Honduras via microwave links. "As a result," recalled the CIO, "our users in Honduras were completely unaffected by the outage, not even aware that this workaround had occurred."

Flexible, Secure Remote Access

With F5's FirePass SSL VPN solution, the company's many users who rely on mobile devices while traveling and meeting with customers can now access the bank's network, applications, and other online resources easily, quickly, and securely. For example, users can log into the network using the Windows logon process instead of a separate VPN application. FirePass also transparently supports a range of end-user devices, so users can easily access the network via their PC desktops, laptops, or PDAs. The company's CTO reported that F5's FirePass solution ultimately helps both users and network administrators be more productive in their job functions.

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