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>
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ICBC Online Banking Keeps Up with Immense Traffic During the Beijing 2008 Games Using F5 BIG-IP WebAccelerator

Industry
Financial services

Challenges
- Manage explosive growth of online banking traffic during the Bejing Games
- Optimize HTTP traffic to avoid network congestion
- Ensure fast and secure online banking access for users in all host cities
- Quickly and efficiently resolve technical issues as they arise

Solutions
- BIG-IP Local Traffic Manager
- BIG-IP WebAccelerator
- Premium 24x7 service and Chinese language technical support
- Hardware backup and Technical Account Management service

Benefits
- HTTP traffic optimized by 40 percent
- Consistent and satisfactory user experience despite traffic spike
- 24x7 Chinese language technical support
- Ability to replace faulty hardware within four hours
- Better application performance

Overview

Industrial and Commercial Bank of China (ICBC) is the largest of China's "Big Four" state-owned commercial banks. It is the largest bank in the world in terms of market value and one of the world's top 10 banks by assets.

ICBC (www.icbc.com.cn) has 170 million individual customers and 2.72 million corporate customers, with online banking users numbering 50 million. The bank also has 106 branches and subsidiaries as well as more than 381,000 employees around the globe.

ICBC recognized that it needed to prepare for the huge increase in online banking demand expected during the 2008 Games in Beijing. Through careful planning and the implementation of F5 solutions in advance, the bank maintained an excellent user experience throughout the Games and is well-positioned to handle the anticipated rapid growth of online banking in China in the coming years.

Challenges

In recent years, ICBC's online banking service has experienced a boom and now accounts for 42 percent of ICBC's total transactions. This growth placed enormous pressure on ICBC's existing infrastructure and network.

ICBC made significant investments to expand its network bandwidth, but the resulting high bandwidth costs made this solution not sustainable or scalable in the long term. Because most of ICBC's web traffic originates from HTTP users, the bank concluded that the best solution was to optimize HTTP traffic.

Currently ICBC has an installed base of 50 million users for its online banking service. During the 2008 Games, about 500,000 overseas visitors and one million domestic travelers were expected in Beijing. ICBC's self-serve terminals, including POSs and ATMs, covered 98 percent of the core Games venues areas in the city. These facilities served 72 percent of the bank's customers in Beijing during the Games, adding to the burden on its network.

The 2008 Games also led many of ICBC's enterprise customers to request more flexibility in banking services, resulting in a significant increase in the demand for online banking during the Games in Beijing. Due to the sensitivity of the event and stringent security requirements typical of the banking industry, ICBC needed to deploy a reliable

and highly secure solution to run mission-critical online banking services during the Games.

Along with Beijing, six other Chinese cities, including Shanghai, Tianjin, Qingdao, Shenyang, Qinhuangdao, and Hong Kong, hosted a number of events. These cities operate on networks belonging to different Internet service providers, including China Netcom and China Telecom, which are the country's two major fixed-line carriers. This added to the complexity of providing a consistent, high-quality user experience for users in different cities.

Solution

In 2003, ICBC had implemented F5® BIG-IP® Local Traffic Manager (LTM) solution to optimize the load balancing of its application servers. With the expected traffic spike during the Games, ICBC decided to upgrade its existing solution to the high-capacity BIG-IP LTM 8400 platform.

HTTP and HTTPS traffic accounts for a large proportion of ICBC's online traffic. To accelerate user access speeds to its online banking system, ICBC deployed and F5 BIG-IP® WebAccelerator™ 4500 device in both the bank's central data center and its local branches. F5 worked closely with its partner Digital China (www.digitalchina.com.hk) to complete this project.

As part of a special support arrangement during the critical Games period, F5 also upgraded the service level of all ICBC facilities from the existing Standard Level 3 (5x8) service to the highest Premium L1-3 (24x7) service level. In addition, F5 deployed a Chinese-language hotline service to provide immediate response to ICBC's needs.

In order to minimize disruptions from unforeseen hardware failures, F5 provided a replacement service that enabled ICBC to replace faulty hardware within four hours. During the Games, F5 provided onsite technical support by dispatching certified F5 engineers to customers. Technical Account Management (TAM) service was extended to ICBC to assist in managing and coordinating the resolution of its important cases.

Benefits

Deploying F5 solutions enabled ICBC to simplify its IT system and network while improving the user experience for its online banking customers.

40 percent faster access

According to ICBC's tests, BIG-IP WebAccelerator optimized and accelerated user access to both static and dynamic web pages by a significant 40 percent.

Comprehensive support

Upgrading its network and systems ahead of the Beijing 2008 Games enabled ICBC to prepare for the spike in network traffic and online banking activity during the event. F5's 24x7 technical support, hardware backups, and TAM management services also gave ICBC the assurance of the fastest response time possible for any emergencies.

Ready for future growth

According to China Internet Network Information Center (CNNIC), by mid-2008 China had 253 million Internet users. However, only 23.4 percent of them use online banking services, far lower than the 39.1 percent in Korea and the 53 percent in the United States.

In the post-Games period, ICBC's online banking services are expected to grow quickly. "Partnering with F5 enabled the bank to provide the best technology and services to its customers and future-proof its network for the challenges and opportunities to come," said Ding Zhe, General Manager of Security and Applications at Digital China.