



“F5 is a great partner that always provides excellent support and first-rate products to its customers, including major Internet content providers like CCTV.com.”

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CCTV.com Streams Beijing 2008 Content to 25 Million Online Users with F5 Solutions

Industry

Internet media

Challenges

- Maintain infrastructure reliability during high traffic period of the Beijing 2008 Games
- Ensure fast and secure user access to web content
- Protect against DDoS attacks
- Optimize server utilization

Solutions

- F5 BIG-IP Local Traffic Manager
- F5 BIG-IP Global Traffic Manager

Benefits

- Maintained high performance and availability for streaming website during a huge spike in traffic from the Beijing Games
- Protected against potential attacks
- Reduced the number of servers required

Overview

CCTV.com is the Internet arm of China Central Television (CCTV), the largest broadcaster in mainland China. Operated by the Chinese government, CCTV currently has 16 national channels, most of which provide 24-hour broadcasts, serving 95.9 percent of China's population of 1.3 billion. Some of CCTV's programs are also available in more than 130 countries and regions around the world, and according to the World Brand Lab in July 2008, the CCTV brand ranked 65 of the world's 500 Most Influential Brands.

CCTV established CCTV.com in 1996. The website has become one of the largest portals in China. Backed by CCTV's resources, CCTV.com produces 500 hours of new programs every day and provides live online streaming of 12 CCTV programs.

In December 2007, CCTV.com signed a partnership with the International Olympic Committee to stream 3800 hours of the 2008 Games' content over the Internet, including the opening and closing ceremonies and all sporting competitions. By implementing F5[®] BIG-IP[®] Local Traffic Manager[™] (LTM) and BIG-IP[®] Global Traffic Manager[™] solutions, CCTV.com was able to prepare its network to handle the tremendous increase in online viewers that was expected. CCTV.com delivered

an excellent user experience throughout the Games, even during extreme periods of peak traffic.

Challenges

The Beijing Games marks one of the biggest events in China's recent history, and it was expected to attract an unprecedented number of viewers both domestically and internationally. As the major Internet provider of the event's content, CCTV.com needed to upgrade its infrastructure to support the huge number of users expected during the Games.

It also needed to provide speedy website access to users throughout China, while at the same time managing the sudden spikes expected during major events, such as the opening ceremony.

Additionally, due to the sensitivity of the event and the website's connections with the government, CCTV.com faced a high risk of online attacks, requiring its network to have comprehensive security capabilities.

Solutions

CCTV.com considered several vendors and ultimately selected F5 solutions for product functionality and reliability. Beijing Teamsun Technology Co., Ltd. (www.teamsun.com.cn) worked closely as a partner with F5 to



secure the project. CCTV.com implemented F5 BIG-IP LTM as well as BIG-IP GTM, which had been previously deployed to support the Olympic website.

The BIG-IP GTM devices were deployed respectively within the networks of China Netcom and China Telecom which are the country's two main fixed-line carriers. Collectively these companies represent the bulk of China's entire Internet installed base. BIG-IP GTM ensures global high availability and the best possible user experience by routing users based on network and user conditions.

BIG-IP LTM 8400 devices and BIG-IP LTM 6800 devices were set up in 10 major Chinese cities to ensure the ability to connect CCTV.com's users to the nearest available servers. BIG-IP LTM provides a range of functionalities, such as caching, compression, connection management, and TCP and content offloading that optimize server performance and dramatically speed page load times for CCTV.com's users. These features also optimize server utilization and reduce the number of web servers needed. The unique,

full proxy architecture of BIG-IP LTM significantly reduces the risk of DDoS attacks on CCTV.com's servers.

Benefits

By preparing its infrastructure for the massive increase in online users with F5 solutions, CCTV.com was able to deliver its coverage of the Beijing 2008 Games to a vast viewership and maintain the website's high performance and availability.

High performance for 25 million users

According to CSM Media Research, the number of unique visitors to CCTV.com reached 25.13 million during the live telecast of the Games' opening ceremony. This number is eight times more than the website's average daily traffic and set the record in CCTV.com's 12-year history. Despite the heavy traffic to the site, CCTV.com visitors were able to watch the Games online without any performance degradation or service interruptions.

Tapping into future growth

According to China Internet Network Information Center (CNNIC), China had 253 million

Internet users by mid-2008, overtaking the United States as the world's largest online population. Despite this, the country's Internet penetration rate is only 19.1 percent, lower than the world's average of 21.1 percent. This indicates that there are huge growth opportunities for Internet companies in the country.

As a result, CCTV.com is poised for greater growth in its role as a major content provider. By providing the best online user experience available, the company is positioned to reap even greater success in the market as more and more users make CCTV.com their preferred Internet content provider.

Guo Tao, General Manager at Beijing Teamsun Technology, explains that China's major players in the growing Internet market in China will continue to work with F5 as networks evolve to meet future demands. Guo says, "F5 is a great partner that always provides excellent support and first-rate products to its customers, including major Internet content providers like CCTV.com."

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