Global e-commerce leader Alibaba Group is the largest e-commerce company in China. The company plans to expand its operations significantly, and needed to support several e-commerce sites in different parts of the world. By using F5® BIG-IP® Global Traffic Manager™ (GTM) and F5 BIG-IP® Local Traffic Manager™ (LTM), Alibaba was able to consistently provide high-quality and secure services to its 24/7 worldwide customer base.

**Business Challenge**

Founded in 1999, Alibaba Group has grown to include the core businesses described below.

- Alibaba.com, the group’s flagship company and the world’s leading B2B e-commerce company, serves small and medium-size enterprises (SMEs) in China and around the world. It has more than 40 million registered users from more than 240 countries and regions. The company has offices in more than 40 cities across Greater China, as well as in Europe and the United States.
- Taobao is China’s largest consumer e-commerce company. It incorporates Alimama, China’s largest online advertising exchange platform. With a registered user base of nearly 100 million, its transaction volume was RMB 99.96 billion (US $14.6 billion) in 2008, up 131 percent from 2007.
- Alipay is China’s leading online payment service with more than 150 million registered users.
- Yahoo! Koubei is China’s leading classified listing website. It provides more than 20 million registered users with local information across 2,000 cities in China.
- Alisoft is the group’s internet-based business management software company. It targets SMEs in China and has more than 40 percent of the Chinese SaaS market.

Alibaba Group wanted to efficiently expand its services. The company’s growth plans were in response to an evolving and demanding e-commerce business, with

**Overview**

**Industry**

e-Commerce

**Challenges**

- Ensure globalized deployment
- Facilitate 24x7 service provisioning and scalability
- Achieve granular control at the application layer
- Improve application acceleration and security
- Reach green IT objectives

**Solution**

- BIG-IP Global Traffic Manager
- BIG-IP Local Traffic Manager
- iRules

**Benefits**

- Faster interconnected global portals
- Resolved interconnectivity problems
- Enhanced security, reliability, and content delivery speed
- Seamless user experience
- Reduced server load and energy consumption, meeting green IT objectives

"F5 Application Delivery Networking solutions enabled us to build globalized data centers that are secure, reliable, and fast.”

Wang Zhilei, Operations Director, Alibaba B2B
websites in different parts of the world including North America, Japan, and Hong Kong. The expansion involved adding several more offices in the United States and Britain and raising headcount by 5,000 for a total of about 17,000 people.

A major part of the planning process was to make sure the expansion was completely supported by a rapidly scalable IT infrastructure that could also manage security challenges. Alibaba needed to build a globalized content delivery network (CDN) to improve service to its customers around the world and handle the increasing traffic to all of its sites. Advanced traffic management and application layer health checks were vital to ensuring availability of its web portals around the clock.

In addition, the traditional layer 4 switching Alibaba had in place was unable to adapt to the increasingly changing application environment. The group needed granular control of traffic at the application layer.

Finally, Alibaba wanted to achieve green IT so they could enjoy lower costs through server resource reduction, less energy consumption, and bandwidth savings.

All these improvements were needed to maintain the group’s big goal—creating a seamless experience for 300 million plus registered users who depended on around-the-clock access to the company’s sites.

**Solutions**

Alibaba Group found exactly what it needed with F5 solutions. The group started by deploying BIG-IP GTM at Alibaba’s B2B portal for its globalized CDN. This was a good choice for Alibaba, as it accelerated websites in North America, Japan, and Hong Kong. At the same time, it provided a CDN for Alibaba’s Taobao, Alipay, Alisoft, and Koubei portals. Another huge benefit BIG-IP GTM provided was resolution of interconnectivity challenges between China’s leading fixed-line carriers. Because cities in China operate on networks belonging to different Internet service providers, it was often difficult to give customers a consistent, high-quality experience in every city. BIG-IP GTM gives Alibaba holistic traffic control by collecting performance and availability metrics from data centers, ISP connections, servers, caches, and users to ensure maximum performance. As a result, interconnectivity challenges are no longer an issue and the group enjoys high availability at its data centers.

The next step for the group was to bring in F5 BIG-IP LTM to improve application performance and meet security requirements. BIG-IP LTM optimizes performance for the group’s Alipay and Alisoft portals, making them more secure, highly available, and faster. And, BIG-IP LTM brought in functionalities like SSL offload, caching, and TCP optimizations, which greatly reduce server load and save energy consumption to enable the group to meet its green IT objectives.

Since flexibility was a primary goal for Alibaba, it was natural to bring in F5’s iRules™ scripting language. iRules gives users control to directly manipulate and manage all IP application traffic. Using iRules, Alibaba is able to intercept, inspect, transform, direct, and track inbound and outbound application traffic. Its applications become more manageable and controllable.

The end result is a customized solution for Alibaba that meets its growth needs and sets the structure in place for future expansion. Simply put, F5 solutions enable the group to meet its business goal of continuously evolving its e-commerce applications and building globalized data centers.