

Accelerating Interactive Entertainment Media



“We deployed A10 ADCs and the appliances easily handled our rapidly increasing traffic. We were surprised at the dramatic performance increases upon enabling the advanced server load balancing and application acceleration functions that are included without additional fees.”

Mr. Ye Ning
 Technical Director
 Jinjiang, a subsidiary of Shanda Interactive Entertainment

Shanda Interactive Entertainment Limited (NasdaqGS: SNDA) is a leading interactive media entertainment company in China, offering a diverse portfolio of entertainment content including some of the most popular massively multi-player online role-playing games (MMORPGs), casual online games and a variety of cartoons, literature and music.

Jinjiang (jjwxc.net), a subsidiary of Shanda, is the largest and most popular female creative writing web site in China. The users who regularly visit the site to research the original essays generate more than 50 million page views daily from 500,000 independent viewers that typically average up to 49 minutes per session on the site. This volume is increasing rapidly with traffic having increased over 300% since the end of 2007, so scaling growth is paramount to success.

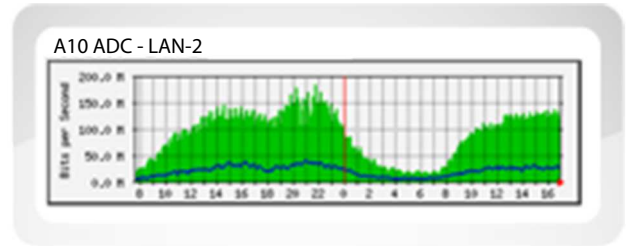
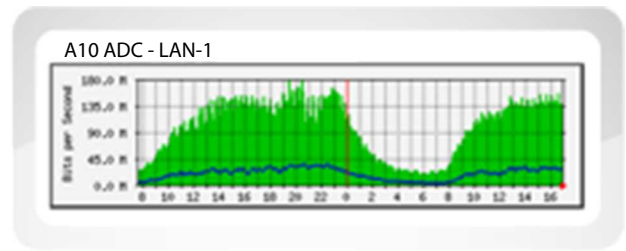
Jinjiang’s network includes a 100% BSD/Linux server infrastructure running eCommerce web applications with MySQL databases on the backend to handle the current load of over 100,000 creative writing purchase transactions daily. Previously, an open source load balancing product called HAProxy was in place, but this was not enough to meet the performance requirements. To handle the rapidly growing Internet traffic and eCommerce transactions, Shanda required a high-performance platform for its web servers to better manage the load. The company considered solutions from F5 and Citrix NetScaler, but after rigorous technical testing, Shanda made the decision to purchase A10 Networks® Application Delivery Controllers (ADC).

Dramatic Performance Benefits with A10 ADC

A10 ADCs immediately solved the problem with the following server load balancing and advanced application acceleration solutions and benefits:

- Uses a high availability pair of A10 ADC appliances to establish a Virtual IP (VIP) address and configures multiple “real” servers to eliminate a single point of failure. Increased overall reliability for online application delivery.
- Reduced the MySQL database load by 70% with the URL-hashing feature, which keeps the same URL persistent to the same server, versus previously forwarding the URL to four different servers, resulting in efficient database operations.

- Leveraged A10 ADCs' compression feature to dramatically reduce network traffic 66% on average. Compression reduces service provider bandwidth costs and accelerates traffic.
- Streamlines network traffic with a number of features. For example, automatically filtering invalid data packets from DDoS attacks arriving through open firewall connections. Also, connection reuse/multiplexing features allow the back-end servers to work more effectively, and reduce TCP setup and teardown overhead.
- The ultimate flexibility to protect against malicious attacks and abnormal traffic with A10 Networks aFlex® deep packet inspection techniques, allowing complete control of the packet header or payload.



Internal Interface: These two LAN charts show uncompressed content from the internal servers to the A10 ADC.

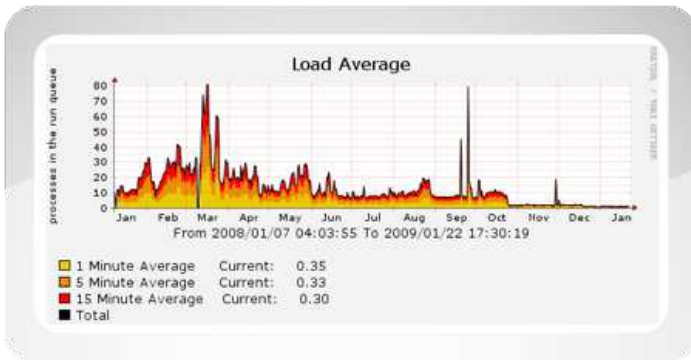
- Green block LAN = uncompressed content from the servers sent to the A10 ADC
- Blue line = traffic from the A10 ADC to the internal servers

Success

After deploying the A10 ADC, Shanda now has a comprehensive application delivery platform for server load balancing, application acceleration, availability, reliability and security. All features are included without additional licensing fees so that Shanda can take advantage of the entire suite of features without additional budget. By reducing database load and site traffic by over 60%, protecting against malicious attacks, and reducing bandwidth by 40%, the A10 ADC allows Shanda's servers to operate more efficiently, which is critical to any organization that experiences such rapid growth and attention. With the A10 ADC, Shanda can ensure that Jinjiang's popular creative writing essays will always be available to be purchased and read.

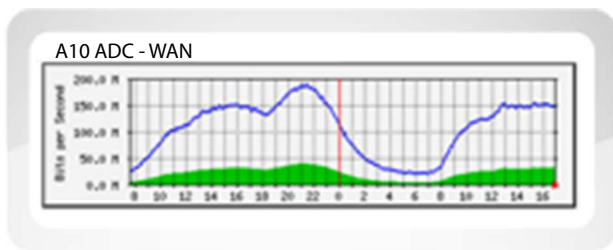
About A10 Application Delivery Controllers

A10 ADC is a scalable, high-performance application networking platform that delivers enterprises, web properties and Internet Service Providers (ISPs) with superior reliability and an energy-efficient footprint for low total cost of ownership (TCO). With A10 ADC, customers of all sizes benefit from application availability, scalability and performance, increased infrastructure efficiency and a faster end user experience. The A10 ADC has a comprehensive Layer 4-7 feature set and flexible virtualization technologies such as A10 Networks aVCS™ Virtual Chassis System, multi-tenancy and more for public, private and hybrid cloud environments. In addition, A10 leads in IPv6 migration technologies with many large-scale deployments worldwide.



This chart represents the load on one of Shanda Interactive's MySQL databases. The A10 ADC was implemented in late October 2008, and before the A10 ADC, when the HAProxy was in place, the SQL server's queue length was consistently higher at typically over 15%. After leveraging the A10 ADCs' URL-hashing feature, the URL is now forwarded once, versus four times previously, so the queue length decreased to less than 3%, increasing overall performance for the database.

Also, by leveraging the compression feature, the A10 ADC saved more than 40% bandwidth. These charts show internal to external compression examples.



External Interface: This WAN chart shows compressed content sent from the A10 ADC to clients. You can see the dramatic savings in bandwidth (green line) when compared to the internal side below.

- Green block WAN = compressed content sent to clients from the A10 ADC after compression applied
- Blue line = external client traffic sent to the A10 ADC

A10 ADC delivers an industry-leading return on investment (ROI) by leveraging A10's 64-bit Advanced Core Operating System (ACOS), with a scalable shared-memory parallelism architecture that surpasses the competition in scalability and flexibility.

For more information, visit: www.a10networks.com/products/application_delivery_controllers.php

About A10 Networks

A10 Networks is a leader in application networking, providing a range of high-performance application networking solutions that help organizations ensure that their data center applications and networks remain highly available, accelerated and secure. Founded in 2004, A10 Networks is based in San Jose, California, and serves customers globally with offices worldwide. For more information, visit: www.a10networks.com

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To learn more about the A10 Thunder Application Service Gateways and how it can enhance your business, contact A10 Networks at: www.a10networks.com/contact or call to talk to an A10 sales representative.