AX Series Selected for Financial Trading Systems Requiring Millisecond Response Time and Stability

Simplex Inc. provides IT support to financial institutions' front office operations. This includes a variety of services ranging from dealing systems for institutional investors to Internet trading systems for individual investors. Of particular note, they have garnered an overwhelming market share in terms of cloud services for financial trading systems, exemplified by foreign exchange (FX) margin transactions. Simplex chose A10 Networks' AX Series as their cloud service platform for financial institutions that require peak performance and stability.

> *"Not only are excellent performance and stable operation provided, but costs and operational load can also be reduced. The AX Series' superior virtualization feature is perfect for the cloud environment."*
>
> **Takuho Kishi**
> Professional, Retail Solution Group
> Simplex Inc.

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Issue: Concerns About Declining SSL Performance Due to Longer SSL Keys

The main purpose behind financial institutions' investment in IT has shifted significantly from improving operational efficiency and cutting costs to realization of management objectives and increasing yields. Simplex Inc. defines IT investment to maximize yields for financial institutions as a financial frontier, and provides solutions dedicated for this area. In particular, a massive market share has been attained regarding cloud services for financial trading systems such as those used for foreign exchange (FX) margin transactions.

"The selection of new products to resolve existing issues was triggered by the load balancers that are used for part of such service platforms reaching their capacity." This is how Takuho Kishi described the issues faced at that time while reflecting on the main factors behind reconstruction of the system. The primary issue was the deterioration in SSL performance due to the increase in the recommended SSL key length. Simplex configures the entire site with SSL encrypted communications because of the highly confidential nature of the data handled by financial trading systems. Therefore, the shift from 1024-bit to 2048-bit SSL adversely affected the performance of the whole site.

"Rapid and concentrated access affects financial trading sites whenever the market fluctuates. Small delays in the network or decision-making can affect trades, so ensuring that the performance can withstand the peak access requirements is the minimum condition to be met in order to provide service."

Mr. Kishi also commented on the licensing system for the SSL acceleration. A licensing model based on transaction volumes per second was adopted for the SSL accelerator of the load balancer used at the time. Accordingly, licenses needed to be purchased whenever a service was added or the number of users increased.

Simplex Inc.

Simplex's Solution for Application Delivery

Critical Issues:

Japanese IT consulting firm specializing in financial systems seeking a high-performance and reliable load balancer for financial trading systems protected with 2048-bit SSL encryption that require millisecond response time and stability

AX Selected Due To:

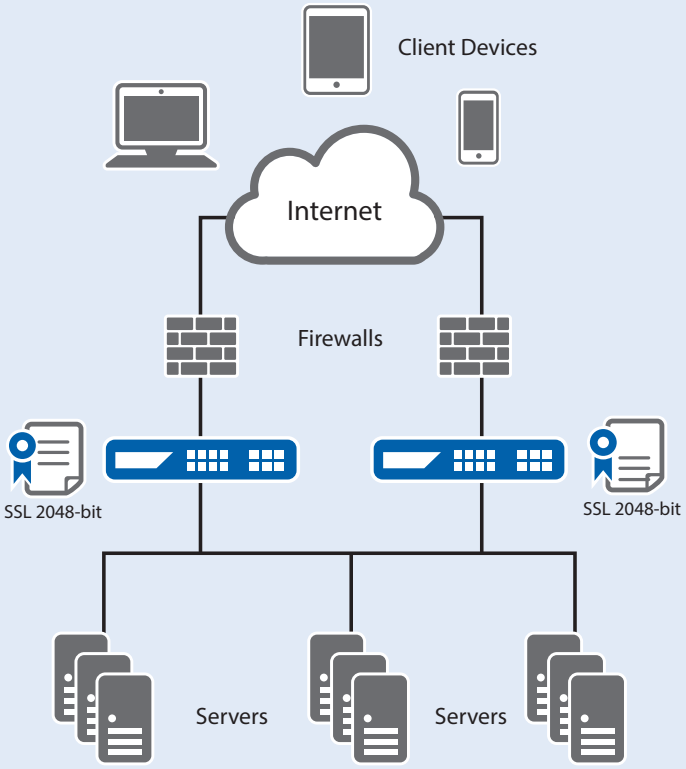
- Price and Performance:
  - Balance between performance and cost
  - AX's ability to provide 8 folds performance at half the cost of existing devices
  - Ability to manage 2048-bit SSL traffic

Product Choice:

- 64-bit AX 2500

Results:

- Delivered enhanced performance and stability
- Reduced operational loads due to the enhanced monitoring feature by Web-based GUI
- Simplified operation because of the separation of the data and control planes
- Prepared to quickly accommodate the introduction of new services in future
- Ability to create more flexible cloud service using the Application Delivery Partitions (ADP) feature



Verification: Best Value with Performance and Cost Improvements as well as Superior Functionality with Virtualization

When it came time to select the new equipment to be installed, the first candidate – quite naturally – was the successor product from the same vendor as the existing product. A10 Networks' AX Series was also added to the list for comparative purposes. Mr. Kishi told of his impression on the comparison as follows.

"An integrator introduced me to the AX Series, which has been building market share throughout the world. In particular, I focused on the balance between performance and cost. As a result of actual verification, I ascertained that an eight-fold improvement in performance could be gained at half the cost of the competing products."

Once an AX Series product is bought, all the functions can be used without incurring extra license fees per function or performance, so there are no concerns about additional expense. Multiple services must be provided via one infrastructure for cloud services, but by using the Application Delivery Partition (ADP) feature, a virtual load balancer function can be realized as part of the standard functionality offered by the AX Series. Previously, access was sorted using a proprietary script language for the former vendor's product, but a script language known as aFleX is provided for the AX Series as well, so it can be processed in the same manner.

"Initially, I was worried about changing a processing part that uses the vendor's unique function, but was able to proceed reliably thanks to support from the A10 Networks' engineers."

As Mr. Kishi commented, the transition from the old load balancer was actually implemented smoothly. By spring 2013, all of the equipment had been selected, and the cut over took place in June of the same year, demonstrating how smooth the transition was.

Benefits: Improved Performance with Reduced Operational Load Is Evident

The advantages of installing the AX Series—namely enhanced performance and stability—were immediately evident. Reportedly, the enhanced monitoring function that enables the performance to be simply confirmed is also helpful in reducing operational loads.

Mr. Kishi explained, "In order to provide stable cloud computing, the performance of each service must be confirmed. Monitoring the AX Series via a Web GUI is very straightforward and helpful. Operations have been simplified as the data and control planes are separate." When using the former load balancer, the maintenance workload affected service performance, so it had to be performed at off-peak times. There are no such problems with the AX Series, and the maintenance schedule is much more flexible.

Mr. Kishi evaluated the latest replacement as follows: "The AX Series' virtualization function and performance has enough leeway to enable a platform to be established that can quickly respond to future service developments."

He continued, "As regards cloud services for financial institutions, access volume changes with market fluctuations, so customer access is concentrated into peak periods. Thanks to the AX Series, handling with enough leeway is now possible even when concentrated access results in several thousand hits per second, and I believe a system that can quickly accommodate the introduction of new services has been prepared. Further down the line, we would like to establish an even more flexible cloud service using the ADP function that can be set up per application or client."

Product Profile: AX Series 2500 Application Delivery Controller

The AX 2500 is a 64-bit 1U Advanced Application Delivery Controller (ADC) in the award winning A10 Networks line of hardware appliances. The AX 2500 offers high value for key Server Load Balancing, Virtualization and IPv6 Migration projects. The AX 2500 also has the option to add an expansion card for additional SSL or compression performance.

Like all AX Series hardware appliances, maximum performance and advanced software features are included, ensuring no budget surprises or need to purchase licenses during unforeseen peak loads.

Reliable operation with maximum uptime can be guaranteed with high quality hardware specifications and components, including a PCI expansion slot for additional SSL or compression performance. The AX 2500's server grade processor, Error Correcting Code (ECC) memory and solid-state driver (SSD) deliver data center robustness, all backed by world class support.

The AX 2500's reliability and performance provide scalability for enterprise class applications.

About A10 Networks / A10 Networks, K.K.

A10 Networks (NYSE: ATEN) 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**.

A10 Networks, K.K. is the Japan office of A10 Networks and manages the Asia Pacific region including Japan, Taiwan and Southeast Asia. It holds a mission to deliver innovative application networking solutions, while proactively incorporating feedback and requirements from customers in local markets. For more information, visit: **www.a10networks.co.jp**.

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Part Number: A10-CS-80106-EN-02
Oct 2014

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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.

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