A10

A10 Thunder ADC Improves Server Performance and User Experience for Softbank Cloud Users

SoftBank

Industry | Service Provider

Network Solution

A10 Thunder® ADC

Critical Issues

- Proxy performance deterioration due to surge in customer use of cloud applications

- Cost overruns and scheduling problems due to mounting costs of system integrators

Results

- Lower cost to expand customers' proxy servers with quick and inexpensive service

- Automated setup changes through API connection

- Reduced OpEx

Among its many offerings, Softbank Corporation provides both fixed-line and mobile communication services as well as internet connection serves.

The company offers a variety of gateway services to customers who use corporate network and VPN services. A10 Thunder® ADC—a next-generation application delivery controller built by A10 Networks—has been adopted as the platform for this gateway service proxy function.

> *Complicated Office 365 operations have been simplified through automation thanks to the provision of API.*
>
> — Mr. Kunihiko Iwaki
> Manager, Service Planning Section 1, Solution Service Department
> Network Service Division
> ICT Innovation Division Enterprise Business Unit

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The Challenge: Degraded Proxy Performance Due to Surge in Use of Cloud Applications

Guided by its management philosophy, "Information Revolution – Happiness for Everyone," the Softbank Group aims to be a corporation that people everywhere consider essential. Under this philosophy, it operates various businesses, such as the smartphone-centric mobile business, internet operations for "Softbank Hikari"—a robotics operation that's exemplified by "Pepper," its renowned humanoid robot—and its "Softbank Power" business that provides energy.

Accordingly, Softbank Corp. deploys a wide range of services over and above its core mobile and internet-related services. These services are indispensable for business and include mobile, audio/fixed-line telephones, network/VPN, cloud, security, data center and digital marketing—not only for individuals, but also for corporate customers.

In the case of network/VPN services for corporate customers, a variety of network services including closed network services, such as IP-VPN and wide-area Ethernet and network equipment monitoring, are available. Kunihiko Iwaki, the manager of the Service Planning Section I within the Network Service Control Department of the ICT Innovation Division, noted, "Recently, the use of cloud applications, such as Office 365 and Suite (formerly Google Apps for Work), has increased rapidly due to a surge in the number of network service users." As a result, a new problem has been the reduced performance of the proxies that function as gateways.

> *Mr. Iwaki explained, "When using services that require many sessions, such as Office 365, there is an internet bottleneck since all access passes through the proxy, and this can affect performance. Thus, we needed a new system to improve performance."*

Improved Performance with A10 Thunder ADC's Flexible API

In reality, Softbank Corp. needed a system that would reduce the load on the proxy resulting from the rapid uptake in cloud application usage, while being integrated for each individual client.

Many corporate users install security functions, such as web filtering as a gateway, and reasonable specifications are required even if only to process these. Additionally, processing cloud application sessions affords its own set of performance difficulties. Installing many new servers in order to speed up the processing sessions may not be possible within the clients' budgets. "We received many requests to provide high-performance proxies as a gateway service rather than installing individual ones for each company to offload processing," added Mr. Iwaki.

Softbank Corp. turned its attention to the A10 Thunder ADC offered by A10 Networks. They had already installed these as load balancers, so they have become familiar with using the command line functions. Kentaro Someya of the Cloud Engineering Control Department within the ICT Innovation Division of Softbank, commented, "I had heard that the A10 Thunder ADC performed well even as a proxy from an in-house engineer who had installed them for individual integrations." It was also well suited to providing this service for multiple clients as it is equipped with a multi-tenant function based on its application delivery partition (ADP).

It also supports fully open API, another point of concern for Mr. Someya who explained, "We have been providing SDN and NFV services to expand virtual technology into the network domain, so having an API that can be linked externally was very important. A10 Thunder ADC's incredible flexibility was an important consideration for us, because the API on many other network devices proved insufficient."

After the actual verification period, A10 Thunder ADC was selected as the platform for proxy functions to add further value to Softbank Corporation's network services.

The Solution:
A10 Thunder ADC

A10 Thunder ADC is a next-generation application delivery controller (ADC) mounted with advanced security functionality, such as Web Application Firewall (WAF) and DDoS protection, while affording increased application speeds and availability.

In addition to these functions, A10 Thunder ADC* can also be used as a cloud proxy solution that resolves issues arising from cloud application sessions. Sorting traffic in accordance with the address domain name ensures optimal performance for cloud applications and networks.

These diverse functions are supported by the exemplary performance of the shared memory architecture of our unique OS, the "ACOS Harmony Platform."

This OS incorporates fully open API and enables flexible cooperation with virtualizations in network domains, such as SDN and NFV.

The Benefits:
Reduced Lead time at about Half the Cost Through Service Implementation

Currently, A10 Thunder ADC operates as a proxy function provided as a network service for corporate users, and normal traffic via the internet is redirected to a server that performs web filtering so that traffic for specific cloud applications, such as Office 365 and Suite, can be accessed directly. The proxy itself has been rendered redundant, and an environment that ensures high availability has been prepared.

Moreover, Softbank's recent adoption of A10 Thunder ADC has enabled domain information for Office 365, which is frequently added to or changed, to be automatically reflected to the proxy via the API. The result is that it has significantly reduced the load for manual maintenance.

This setup has been highly evaluated by Mr. Someya, who said, "Complex procedures have been extensively simplified through automation thanks to the APIs provided." Mr. Someya also recounts how man hours have also been significantly reduced, with costs cut by about half as compared to the previous environment. Lead times, too, have been reduced by a couple of months.

Mr. Iwaki also commented, "We were able to offer the services demanded by our clients thanks to A10 Thunder ADC."

Mr. Someya was highly impressed not only with its functionality and performance, but also the excellent support A10 offers, such as the direct provision of setup information from A10 regarding traffic sorting to Office 365 setup as well. He said, "We received specific setup examples, which we referred to while preparing and fine-tuning the environment. An engineer also provided careful support, and we appreciate it very much." Lastly, while A10 provided the team a manual, Softbank found the API operation information clear and straightforward, which only contributed to its smooth installation and efficient operation.
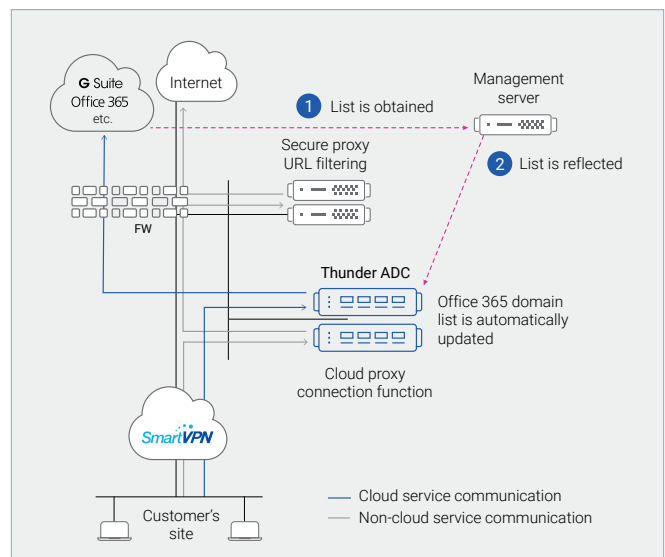

Figure 1: Communication path for secure internet access

*Note:
Cloud proxy/SWG feature is supported only on Thunder SSLi or CFW platform from ACOS version 4.x or later.

The Next Steps:
Continue to Add More Value
to Gateway Services

Softbank Corp. plans to implement new functions with even greater value by identifying customers' needs in the gateway area while submitting proposals to customers to further bolster the use of proxy functions that are currently included. For example, SSLs need to be visualized for security checks. However, inclusion within next-generation firewalls is expensive, so mounting in the gateway area is also considered as a possibility. Finally, further service enhancements are also anticipated through the expanded use of the A10 Thunder ADC solution as well.

About Softbank Corp.

Founded in 1981, and headquartered in Minato City, a suburb of Japan, Softbank Corporation is a Japanese multinational conglomerate holding company. Founded as a telecommunications company, SoftBank now has its hand in a number of different verticals, including e-commerce, finance, broadband, marketing, and more.

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About A10 Networks

A10 Networks (NYSE: ATEN) provides secure application services for on-premises, multi-cloud and edge-cloud environments at hyperscale. Our mission is to enable service providers and enterprises to deliver business-critical applications that are secure, available and efficient for multi-cloud transformation and 5G readiness. We deliver better business outcomes that support investment protection, new business models and help future-proof infrastructures, empowering our customers to provide the most secure and available digital experience. Founded in 2004, A10 Networks is based in San Jose, Calif. and serves customers globally.

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