

A10 Secures and Optimizes Application Delivery for Mobile TeleSystems India

Company

Sistema Shyam TeleServices Limited (SSTL)

Industry

Telecommunications

Network Solution

A10 Thunder ADC

Critical Issues

- Existing system structure and applications vulnerable to external attacks
- Scalable infrastructure solutions needed to accommodate growth
- Slow page response times impacting application usability
- Legacy network availability and performance limiting the business

Results

- Eliminated application vulnerabilities
- Deployed Thunder ADC appliances to support data center expansion requirements for the next 3 years
- Accelerated server replies substantially improved end user experience
- Swift migration from legacy products to Thunder ADC due to feature parity and easy to use migration tools
- Uptime and capacity demands achieved in conjunction with consolidation of legacy products, with features such as WAF implemented

“A10 Thunder ADC was chosen through a stringent technology and commercial evaluation process and the ensuing product performance has ratified our decision. A10 Thunder ADC has served our enterprise need of application delivery controller and WAF effectively. We are able to ensure critical applications availability at defined SLAs & KPIs using Thunder ADC. We are confident that the current system will serve the growing needs of our enterprise for the next 3 years without any incremental investment.”



Rajeev Batra
CIO, MTS India

Introduction

Sistema Shyam TeleServices Limited (SSTL) provides wireless telecommunication services under the MTS brand in India. Its products and services include voice and data, prepaid mobile broadband, high-speed data services on national highways, Wi-Fi, SMS services, auto-renewal based subscription service, live TV, video on demand service, SMS portal, caller tunes, voice portal and entertainment. In India, MTS has over 10 million wireless subscribers and operates across 9 telecom circles, covering more than 60% of the data user footprint in India.

SSTL is a joint venture between Sistema Joint Stock Financial Corporation of Russia (“SISTEMA JSFC”), the Russian Federation and the Shyam Group of India, with over 1,500 employees currently working in the organization. The company’s objective is to leverage the advancements in Information and Communication Technologies (ICT) to contribute towards progressive socioeconomic change, especially in the fields of healthcare and education.

Challenges

MTS’s network is currently used by employees, dealers, vendors and partners. Applications are hosted at the company’s data center using a standard hierarchical zone-based architecture, with virtual router forwarding segmented and configured into areas such as DMZ, production, and management. Applications are accessed through both an internal and public interface and load balancing is done via multi-availability zones. Web applications used include IIS and Apache over Linux, and physical machines deployed include HP Superdome servers, Oracle Exadata/Big Data and VMware hypervisor to optimize hardware resources.



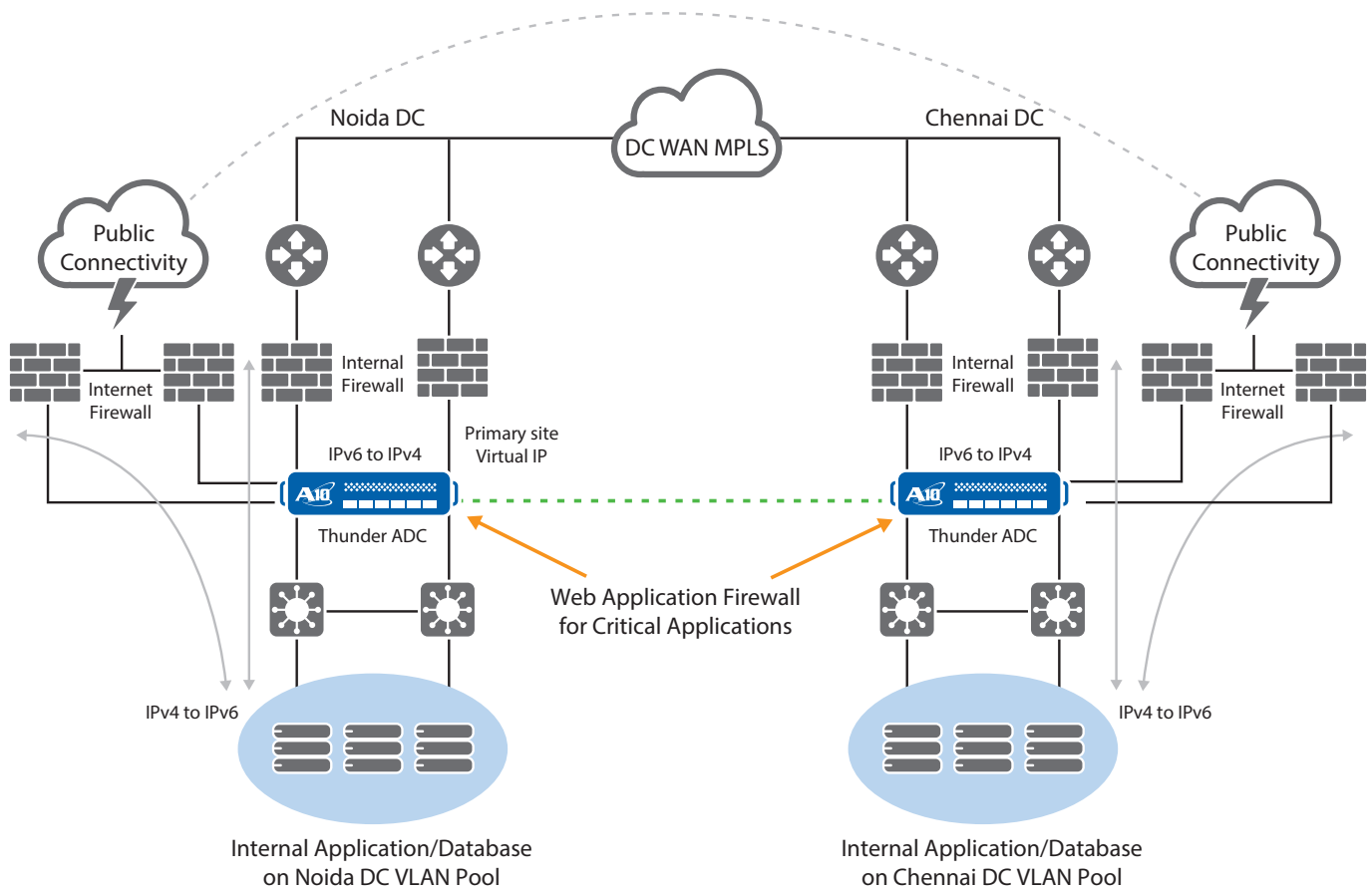


Figure 1: SSTL's network architecture

According to SSTL IT Infrastructure Planning team, there are approximately 1,500 concurrent sessions for CRM hosted in the data center alone, in addition to around eight other services including value-added service (VAS), NESS Application Portal (NAP) process and web recharge. Key challenges faced include slow page response time and the vulnerability of applications to external attacks. "We needed the applications' availability and performance to be up to mark and to meet security compliance standards," the team mentions.

Selection Criteria

MTS had considered a number of ADC vendors for evaluation. "A10 had no additional feature and performance licenses which was one of the key points in our commercial evaluation. During the proof-of-concept, we were also able to see much improved performance enhancements by enabling web acceleration features like web caching, compression and connection reuse," the IT Infrastructure Planning team explains.

"There were some L7 feature requirements that were very easily deployed natively or with the help of aFlex® scripting technology. We saw that approximately 40-60 % of backend server connections were reduced by deploying acceleration and L7 services on the A10 Thunder ADC. We were pleased to see that the performance of our website was enhanced in line with our expectations."

The multi-tenancy and security function is also one of the interesting features MTS will use in the future to enable the company to scale without purchasing additional appliances. Zero added licensing fees is also an advantage as MTS can use the feature as the business requires.

MTS has seen rapid year-on-year growth for the company and wanted to choose the solution which can match their growth rate for the coming three to five years without requiring future investment.

Solution

MTS selected A10 Networks Thunder ADC line of Application Delivery Controllers with advanced SSL hardware acceleration for its data centers in Noida and Chennai. Four Thunder ADC appliances were deployed to load balance multi-application servers and utilize features including L4-L7 load balancing, web acceleration via web caching, compression, connection reuse, A10 Networks aFlex® Deep Packet Inspection Scripting Technology, access lists, session capturing and Web Application Firewall (WAF).

Results

"By enabling web acceleration and L7 feature deployment, we were able to see our website response was incredibly enhanced. Application performance has increased significantly with a faster response time. The Web Application Firewall was effective and eliminated vulnerabilities to our applications," says MTS IT.

Another benefit from using the Thunder ADC was the ability to leverage features such as WAF and aFlex TCL scripting. This enabled MTS to consolidate multiple load balancers into fewer pairs. Applications previously hosted behind Radware, Cisco ACE and other appliances were migrated to the A10 Thunder ADC appliances.

MTS IT adds, "The migration from other ADCs to A10 was easy and configuration took very little time. Application Delivery Partitions (ADPs) is a unique feature that we are using now. ADPs have great flexibility and are used, for example, for resource allocation, scale and role based access control."

Success and Next Steps

Based on projected traffic growth, MTS says that the company intends to increase content on A10 Thunder ADC appliances and have resources shared accordingly.

"All the applications must move to IPv6 and we need to implement Server Load Balancing-Protocol Translation (SLB-PT). Also, we have plans to provide more data services, and more VAS services need to be hosted behind our ADC," says MTS IT, reaffirming their confidence in A10 Networks.

About A10 Application Delivery Controllers

The A10 Thunder ADC line of Application Delivery Controllers is built from the ground up to deliver the qualities that big data demands – traffic management features to help enable specialized servers to be always available; massive scalability that keeps pace with big data analytics demands; and increased protection from the heaviest Distributed Denial of Service (DDoS) bombardments. For management and oversight, the A10 Networks aGalaxy® Centralized Management System provides a consolidated interface to manage and monitor A10 devices. A10's varied product offerings for scaling, optimization and monitoring provide the most efficient hardware and virtual form factors, which help ensure that data center resources are used efficiently. The combination of high performance in a small form factor results in lower costs through reducing power usage, rack space consumption and cooling requirements. For more information, please visit: <https://www.a10networks.com/products/thunder-series/thunder-adc>.

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.