

A10 THUNDER AND MICROSOFT LYNC

Thunder ADC Next-Generation Application Delivery Controller (ADC)



Lower Latency and Streamline Microsoft Lync Server Deployments

A10 Thunder™ Series Application Delivery Controller (ADC) is certified by Microsoft to deliver availability (load balancing), application acceleration and security for Lync Server 2010 and Lync Server 2013 deployments. Microsoft Lync Server is a unified communications platform that connects millions of people together every day. Combining instant messaging, voice and video, Lync allows users to share information securely from any location. A10 Thunder ADC enables Lync deployments to:

- Scale with server load balancing
- Improve the user experience with acceleration
- Eliminate downtime with high availability

Additionally, lower latency Network Address Translation (NAT) between public and private segments and high performance ensure that VoIP jitter and performance issues are avoided for Lync users despite poor network conditions or unexpected traffic surges. Thunder ADC appliances include superior hardware for additional reliability and optimization capabilities for all Lync services. For ease of use, the Thunder ADC graphical user interface (GUI) includes application-aware templates for rapid deployment of enterprise applications.

Microsoft's Server Load Balancer Requirements for Lync

In a high availability configuration, Microsoft Lync and Thunder ADC ensure high performance and resilient unified communications. Microsoft requires a hardware load balancer as a mandatory device in certain configurations, where it may be optional in other configurations. For example, according to Microsoft TechNet¹:

"If high availability is required for any of the following scenarios, a hardware load balancer must be used on Edge Server pools for the following:

- *Federation with organizations using Office Communications Server 2007 R2 or Office Communications Server 2007*
- *Exchange UM for remote users using Exchange UM prior to Exchange 2010 with SP1*
- *Connectivity to public IM users"*

The following scenarios require dedicated hardware load balancers²:

- If organizations need to load balance client-to-server HTTP traffic. DNS load balancing does not support web traffic.
- If hardware load balancers are already deployed on the internal Edge or external Edge interface. Mixed deployments of DNS and hardware load balancing are not supported with Lync.

Advanced Application Delivery and Load Balancing Features

Thunder ADC provides Application Delivery Partitions (ADPs) that enable enterprises to load balance multiple Microsoft applications, including Lync, Exchange and SharePoint, from a single ADC appliance. With separate administrative and resource partitions, Thunder ADC allows organizations to consolidate multiple load-balancing instances on a single appliance, reducing hardware and operating costs.

Thunder ADC is dual-stack ready, offering native IPv4 and IPv6 support as well as Server Load Balancing – Protocol Translation (SLB-PT). All additional application delivery features are provided with Thunder ADC without extra licensing fees, including aFlex® Layer 7 traffic scripting, aXAPI® (RESTful XML management API), dynamic routing protocols, web application security, and more.



Key Application Delivery Features for Lync

Ensuring application availability is key to user application adoption and retention. For seamless operation, Thunder ADC offers:

- **Improved Response** – High performance improves responsiveness of services such as presence, desktop sharing and enhanced HD video conferencing. Thunder ADC provides load balancing for optimal traffic distribution to multiple Lync front end servers and audio/video (A/V) conferencing servers at any given point in time.

¹ Hardware Load Balancer Requirements, <http://technet.microsoft.com/en-us/library/j1656815.aspx>

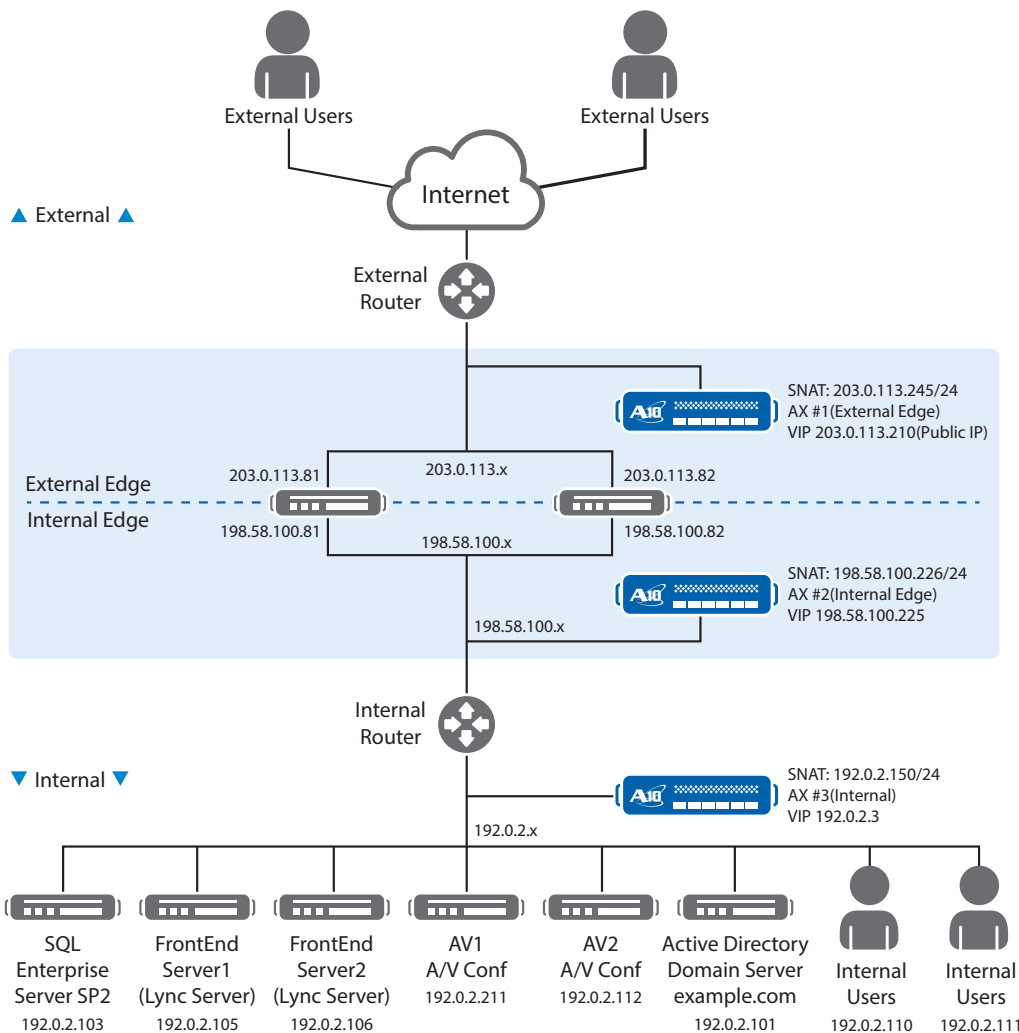
² Lync Load Balancing Requirements, <http://technet.microsoft.com/en-us/library/gg615011.aspx>

- **SIP Health Checks** – Voice can be heavily affected by jitter, which is caused by latency in the network. Thunder ADC acts as a proxy between client and server and will ensure an even flow of traffic to avoid service degradation.
- **Persistence** (also known as Affinity) – When clients are using multiple services such as Desktop Sharing and IM, efficient traffic management dictates that these aggregated services need to traverse multiple different servers. With persistence, all requests are directed to the same server based on source IP.
- **SSL Offload** – Since Lync relies on HTTPS (SSL) to encrypt critical enterprise data, Thunder ADC can move the burden off SSL encryption and decryption from the Lync server to the ADC, freeing up processing power.
- **Global Server Load Balancing (GSLB)** - If employees are dispersed in multiple locations, Thunder ADC can improve efficiency by directing Lync traffic to the closest data center. GSLB can also be used for business continuity by distributing traffic across multiple data centers. By supporting multiple high availability options, users can access data seamlessly even in the event of a server or site outage.

- **Enhanced Multi-level Security** - Thunder ADC can act as a full proxy between the clients and the Lync front end servers. All TCP connections are terminated at the Thunder ADC appliance, ensuring that all connections on the back end are initiated from the ADC. Because of this, Thunder ADC eliminates various network-level attacks. Integrated Distributed Denial of Service (DDoS), DNS Application Firewall (DAF) and Web Application Firewall (WAF) protection shield Lync servers from application-layer threats. Access control lists (ACLs), connection limits and connection rate limits can be used to control traffic. aFlex scripting is also applicable for security functions. If, for example, an attack is in progress and no vendor security update is available, aFlex can be used to search and identify packets that match an element of the specific attack payload, and then mitigate it by dropping the traffic.

Thunder ADC Platforms

- **High-performance Hardware Appliances** – The Thunder Series of hardware appliances fits all size networks with models that scale to meet the most demanding requirements. Equipped with dual power supplies, solid-state drives, and specialized acceleration processors in most models, Thunder appliances offer high reliability and exceptional performance.



Typical Lync Deployment with AX Series Load Balancers

Typical Lync Deployment with Thunder ADC Load Balancers

External/Internal Edge Servers

- Enable external users to communicate and collaborate with internal clients. Multiple external edge servers can be deployed in a pool of servers for redundancy.
- The external/internal edge server also enables connectivity to third-party IM services such as Skype, AOL, and Yahoo.

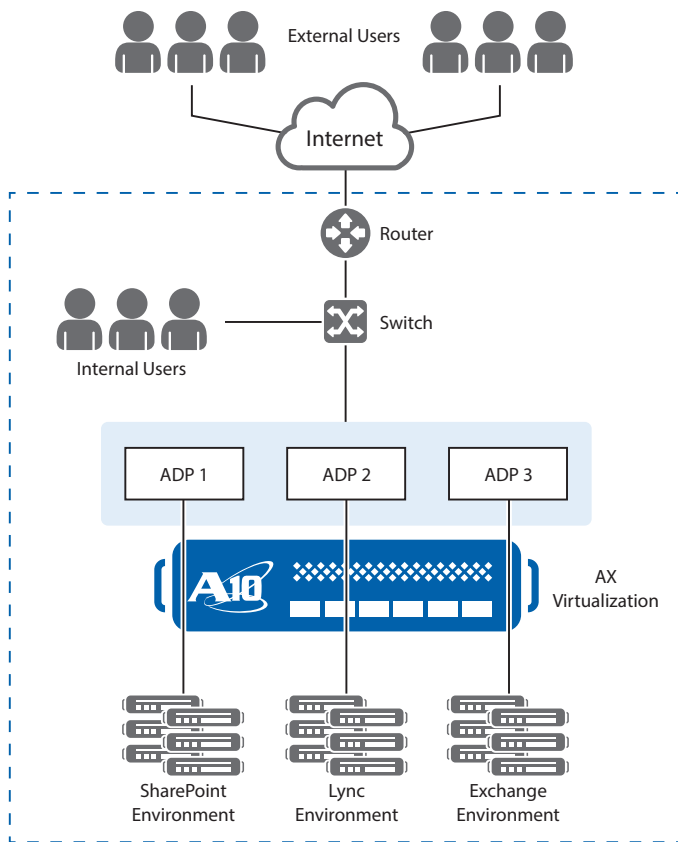
Front End Servers

- Also known as the internal servers, these provide user authentication, registration, presence, IM, web conferencing and application sharing.
- Front end servers are deployed in the front end pool and configured identically to provide scalability and failover support to Lync clients.

- **Flexible Virtual Appliances** – The vThunder™ line of virtual appliances enables organizations to deploy best-of-breed application delivery in virtualized data centers and cloud infrastructures. Thunder Hybrid Virtual Appliances offer the combined flexibility of virtual appliances with the power of optimized hardware appliances.

Reducing Costs with Multi-tenancy for Multi-application Deployment

Because of its 64-bit architecture and scalability, Thunder ADC can leverage Application Delivery Partitions (ADPs) to consolidate multiple applications onto a single high-performance platform. This consolidation reduces operational and deployment costs for application deployment. One appliance can host configurations simultaneously for applications such as Lync, SharePoint, Exchange, CRM apps and more.



Multi-tenancy enables A10 to load balance multiple Microsoft applications with fewer ADC appliances

Summary

Thunder ADC with Lync offers a proven, compatible and cost-effective solution for Lync deployments. Thunder ADC is certified to support Lync, in addition to other popular Microsoft applications such as Exchange and OCS, and includes powerful support for SharePoint.

vThunder virtual appliances are also VMware-Ready certified and maintain the same Microsoft certifications as Thunder hardware appliances. Certification from Microsoft and VMware ensures that A10 products will interoperate seamlessly with data center applications and virtualization infrastructure.

With an all-inclusive price for features and performance on hardware appliances, organizations can be sure of headroom for traffic growth and reliable operations well into the future, without having to earmark additional funds to upgrade software.

Resources

A10 Networks' Deployment Guide for Microsoft Lync

www.a10networks.com/resources/files/A10-DG-Microsoft_Lync_2013.pdf

A10 Networks' Application Solutions for Microsoft Applications

www.a10networks.com/solutions/application_solutions_microsoft.php

A10 Networks' Microsoft Certified Hardware and Software-based Load Balancers for Microsoft Lync

<http://technet.microsoft.com/en-us/lync/gg131938>

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:

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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.