

A10 AND BLACKBOARD DELIVER RELIABLE AND OPTIMIZED LEARNING TECHNOLOGY

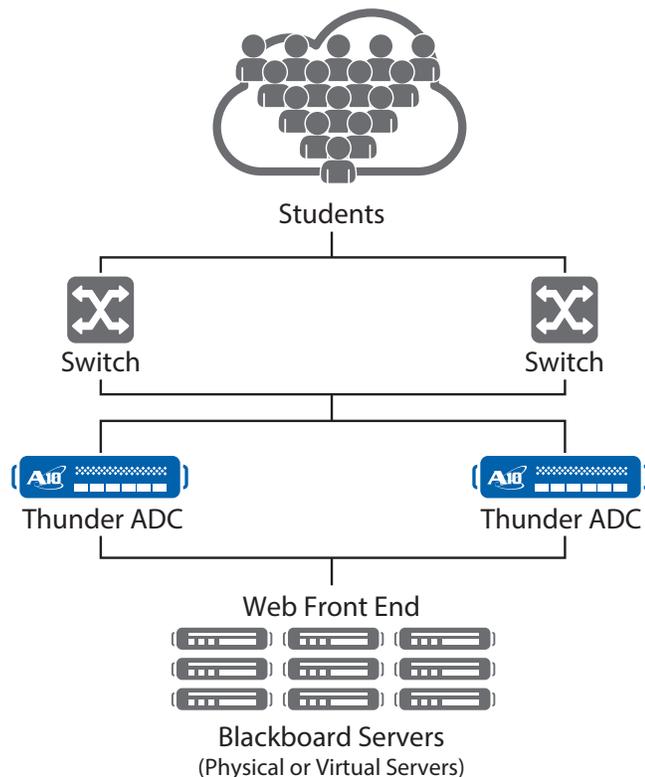
Blackboard Learning Management System

Blackboard is a leading provider of enterprise software applications and related services to the education industry. Millions of people use Blackboard every day at academic institutions around the globe, including colleges, universities, K-12 schools and other education providers.

Utilizing a Web front end, the Blackboard Learn platform empowers students and faculty with a range of essential capabilities that include:

- Course Delivery
- Content Management
- Community Engagement
- Outcomes Assessment

Blackboard also features a range of collaborative options, such as discussions and blogs. The application enables external communication with the social networking site Facebook through a Facebook application, essentially creating a mashup. The collaborative elements, the mashup and Web-based nature of Blackboard are all examples of the integration of cutting edge Web 2.0 capabilities.



Thunder ADC for the Blackboard Learn Platform

A10 Networks® Thunder® ADC line of application delivery controllers (ADC) is a 64-bit, feature-rich platform powered by A10's Advanced Core Operating System (ACOS®). ACOS guarantees extra headroom to accommodate traffic surges, intensive Layer 7 application inspection and future traffic growth.

Thunder ADC adds value to Blackboard environments in three key areas:

- Application delivery, load balancing and availability
- Application acceleration and offload
- Application security

Together, Blackboard and the Thunder ADC ensure the most responsive and optimized Learning Management System (LMS).

Application Delivery, Load Balancing and Availability

Ensuring application availability is key to user application adoption and retention.

Thunder ADC offers:

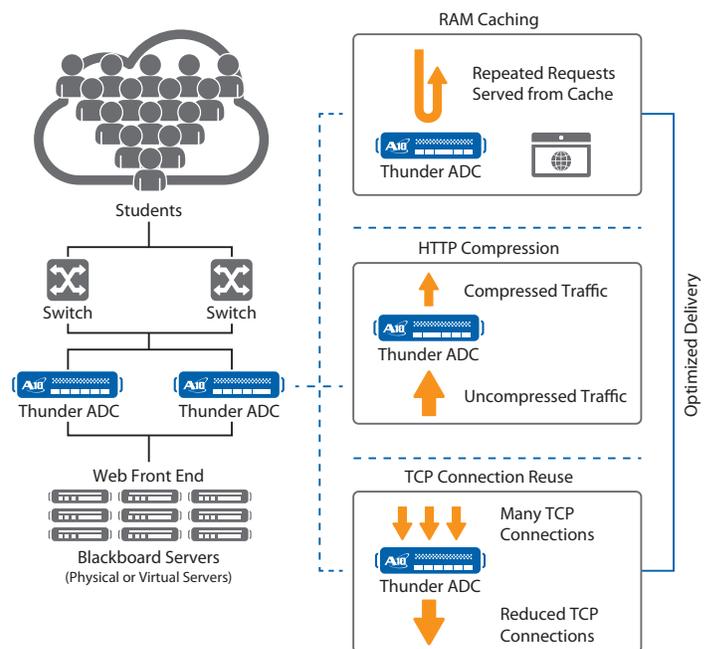
- LMS internal communication between Blackboard components using Common Object Request Broker Architecture (CORBA)/ Internet Inter-ORB Protocol (IIOP) to eliminate hard coded, single points of failure
- Health checks, scripted or built-in, to ensure only valid servers issue content
- Load balancing for optimal traffic distribution to multiple Web servers
- Global Server Load Balancing (GSLB) for site failover

With Thunder ADC availability options, users can access data, seamlessly, in spite of server or application outages.

Acceleration and Offload

In order to ensure efficient application delivery, connections require transmitted data to be optimized and computationally intensive functions to be offloaded from Blackboard Web servers. The Thunder ADC sits between the student and the Blackboard server farm, offering:

- Security processor-based bulk decryption offload
- RAM caching for static and dynamic content serving of frequently requested objects
- HTTP compression to reduce data transfer size and improve performance
- TCP optimization with connection reuse
- Flexible Layer 7 application traffic control
 - "Find and replace" for content, for example HTTP to HTTPS link conversion in content
 - A10 Networks aFlex® scripting to inspect or adjust traffic in the header or payload



aFlex scripting is a versatile tool for administrators that can solve today's complex issues, as well as those that may come in the future. For example, aFlex can recognize specific browsers, content types, and languages to make custom load balancing decisions.

Security

The Thunder ADC can act as a full proxy between clients and Web servers. All TCP connections are terminated at the Thunder ADC appliance, ensuring all connections on the back end are initiated from Thunder ADC.

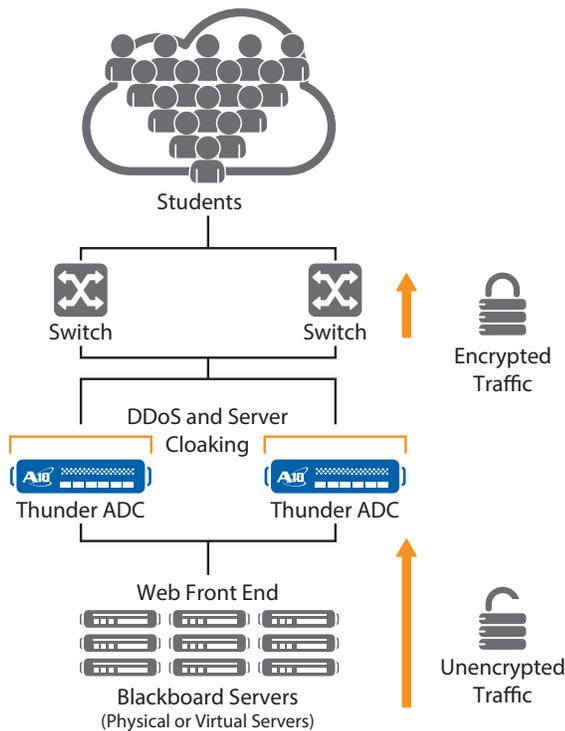
In this process, Thunder ADC eliminates various attacks such as Distributed Denial of Service (DDoS) and other network level attacks. Access Control Lists (ACLs), connection limits, and connection rate limits can be used to control traffic.

aFlex scripting is also applicable for security functions. For example, if 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.

Summary

Thunder ADC with the Blackboard Learn platform offers a proven, compatible and cost-effective solution to LMS deployments. Backed by first class support and maximum flexibility deployment, issues can be solved quickly.

With an all-inclusive price and no additional licensing, organizations can be sure of head room for traffic growth well into the future, without having to earmark additional funds to upgrade software.



About Blackboard Inc.

Blackboard is the world's leading education technology company. We challenge conventional thinking and advance new models of learning in order to reimagine education and make it more accessible, engaging and relevant to the modern day learner and the institutions that serve them. In partnership with our customers and partners in higher education and K-12 as well as corporations and government agencies around the world, our mission is to help every learner achieve their full potential by inspiring a passion for lifelong learning. For more information about Blackboard, follow us on Twitter @Blackboard.

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

Corporate Headquarters

A10 Networks, Inc
3 West Plumeria Ave.
San Jose, CA 95134 USA
Tel: +1 408 325-8668
Fax: +1 408 325-8666
www.a10networks.com

Part Number: A10-SB-19145-EN-01
July 2015

Worldwide Offices

North America
sales@a10networks.com
Europe
emea_sales@a10networks.com
South America
latam_sales@a10networks.com
Japan
jinfo@a10networks.com
China
china_sales@a10networks.com

Hong Kong
HongKong@a10networks.com
Taiwan
taiwan@a10networks.com
Korea
korea@a10networks.com
South Asia
SouthAsia@a10networks.com
Australia/New Zealand
anz_sales@a10networks.com

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.